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THE

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AND

NORTH-WESTERN CULTIVATOR;

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WISCONSIN FARMER,

AND

NORTH-WESTERN CULTIVATOR.

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VEGETABLE CHEMISTRY.



THE PLANT.—CONSTITUENTS.—No. 5.—Having already glanced at the importance of the oils and their general uses in the economy of nature, and in the world of art, we next propose to treat of them somewhat more specifically.

Of those found in plants, there are two divisions or classes—the *Fixed* and the *Volatile*—each characterized by peculiar properties, adapting it to special and varied uses.—The chief distinguishing characteristics are marked by the terms of designation—the former are permanent except at high temperatures, the latter readily diffuse and escape by volatilization at the temperature of the atmosphere. Furthermore, the *fixed* oils are insoluble in alcohol, obtained, almost exclusively from seeds and fruits, have, usually, neither odor nor flavor, are obtained by expression, and for the most part employed as food; while the *volatile* oils are soluble in alcohol, are obtained from all parts of the plant, have a decided odor, and hot, pungent taste, are extracted by distillation, and are useful only in the arts. For convenience, the two classes will be discussed separately.

THE FIXED OILS

Are divided into *oils proper* and the *fats*—the distinction being based upon *consistency*.—Thus an oil may be termed a liquid fat, or a fat, a solid oil; fats always conveying an idea of hardness, and oils of fluidity. And, since consistency is largely dependent on temperature, the same substance may properly be an *oil* in one latitude and a *fat* in another; this is also true of them in summer and winter. For example, what is called palm-*oil* by the natives of Africa, is termed palm-*butter* in our latitude; and so the lard-oil of our country would be hog's *fat* in the colder climate of Lapland. For convenience therefore, we will abolish all distinction based upon consistency, using the term fixed *oils* for all substances distinguished as above.

The Fixed Oils are found, as said before, in the seeds and fruits of many plants, occupying little spherical cells—so compact often as to appear partially opaque under the microscope—from which they are forced out by pressure, sometimes aided by heat, and again by fermentation.

Purification.—The portion first expressed is called *virgin*, because of its relative freedom from coloring matter and other impurities, and is of course preferable for all domestic uses; while for many purposes in the arts, the portion afterwards obtained, by the added means referred to, is just as good.

The seeds and fruit of some plants, as the flax, the poppy, &c., contain also so large a proportion of mucilage, as to demand some method of separating it. Heat is one means, and accordingly it is customary to dry them, before subjecting to pressure; the mucilage is solidified, and the oil flows out quite pure.—Sometimes, as in the purification of the oil of mustard, sulphuric acid (oil of vitriol) is used in the proportion of 1 part to 100 of oil. The two are mixed in an earthen vessel and allowed to stand; the acid chars the mucilage, carries

down the coloring matter, and leaves on the bottom and sides of the vessel a dark colored deposit. If, after a few days, the oil should not have acquired the desired clearness, the process may be repeated. The oxides of lead are also used in the purification of some of the oils, as will appear under the head of *uses*.

Chemical Analysis of the Fixed Oils reveals a most interesting composition—interesting, not only in view of the predominance of the combustible elements, carbon and hydrogen, but also as an evidence of the tendency of matter to assume saline forms of combination.—Who of our uninitiated readers have supposed the common oils we use every day to be a *salt*, analagous in composition to epsom and common salt? Yet this is true, a peculiar compound, consisting of carbon 6 parts, hydrogen 8, and oxygen 6, (C^6 H^8 O^6) and called glycerine, from *glukus*, sweet, corresponding to the alkaline magnesia and soda of those two medicinal preparations.

The acids combined with this glycerine are three in number, differing somewhat in the proportion of the constituent elements, and often found together in the same specimen of oil. The names of these organic acids are *stearic*, *oleic*, and *margaric*—of their several compounds with glycerine, *stearine*, *olein*, and *margarine*. Possessed of different degrees of consistency, they are easily separated, one from the others.

Stearine, or stearate of glycerine, is a white, opaque, crystalizable substance, solid at ordinary temperatures, but becoming fluid at 140° to 144°; is completely insoluble in water, but dissolves in eight parts of boiling alcohol, separating from it almost entirely on cooling; while ether dissolves a large proportion of it at the boiling point, but retains only 1-200 when cooled. To illustrate the consistency of stearine by an example taken from the animal oils, (and these several compounds are identical whether derived from the animal or the vegetable kingdom,) if a vial of lard be exposed to moderate summer heat, a portion will readily become fluid, and float upon the top while the remainder settles to the bottom as a solid. This latter is stearine, and is that substance of which *stearine candles* are made, the fluid portion being expressed by subjecting hair or woolen sacks filled therewith, to pressure between hot iron plates; the fluid portion is used as lamp-oil, and the solid stearine is melted, and after saponification with lime, subsequently separated by sulphuric acid, it is washed, melted, and run into moulds.

Olein, oleate of glycerine, is that more fluid portion, and may be described as a colorless liquid, solidifying below about 54°, and insoluble in water, but very soluble in alcohol, ether and the essential oils.

Margarine, margarate of glycerine, corresponds more nearly with stearine, both as to elementary composition and physical properties. Olive oil furnishes an illustration.

The relative proportion of the several proximate compounds varies considerably for the oils of different plants, but by the test of consistency may easily be determined.

Uses of the Fixed Oils.—Under this head we might discuss their properties as food, and medicine, and their application in the manufacture of soaps, candles, varnishes, and paints.

1. As articles of *food*, let it suffice in this connection, that they are essential to the generation of animal heat, and the production of animal motive power,—the world of animals could not spare them from the list of aliments.

2. As medicines they hold important rank, being valuable stimulants, revulsives, and purgatives, and are used, in conjunction with other agents, in the form of ointments, liniments, lotions, plasters, pills and fluid draughts. Castor oil and Croton oil are especially important, the former being, (as every one knows, who has ever been a child) a mild and pleasant laxative, and the latter a powerful purgative.

3. For the manufacture of soaps they are quite indispensable; and now that we know their composition, the theory of soap-making is perfectly simple. The glycerine already referred to as a simple, colorless, inodorous, sweetish liquid, insoluble in water, but soluble in all proportions in alcohol and ether, is a weak base, easily separated from the several enumerated acids by offering to the latter some other base for which they have a stronger affinity. Potash, soda, strontia, baryta, lime, and even several of the metallic oxides are such bases, and when added to any of the aforesaid oils, will quickly decompose them, forming stearate, oleate, or margarate of potash, soda, &c., instead of stearate, &c. of glycerine, which last is thus set free. It appears, therefore, that soap also is a salt.

4. *The use of the Oils for the manufacture of candles*, and for purposes of illumination in other forms, is based upon their inflamma-

ble qualities, and finally the large preponderence, as intimated before, of carbon and hydrogen in their composition. The philosophy of their use is simple ;—the wick, by its burning, melts the hard oil, and by its power of absorption, or capillary attraction, draws it up to a point where it vaporizes and the hydrogen inflames, forming by its combustion a hollow cone of light, dark in the centre because the oxygen of the air failing of access to that part, only partially consumes the carbon of wick and oil.

5. *The manufacture of varnishes and paints* requires a certain drying property, not possessed by all classes of oils ; and hence the subdivisions, *drying oils* and *unctuous oils*, the former hardening upon the surface, forming thereby an impervious coating, upon the surface of the body to which they are applied, and the latter continuing soft and semi-fluid, however much exposed to the air. The drying is due to the absorption of oxygen.

Of the class of drying oils, that which is obtained from the seeds of flax, and called *linseed* oil is an interesting example. The proportion contained is about 25 per cent.—the means employed is pressure aided by heat. In the raw state it does not readily dry, and is, therefore, usually prepared by boiling for several hours, with the addition of a little litharge or protoxide of lead, in the proportion of two to four ounces per gallon. Sometimes acetate of lead (sugar of lead,) and sulphate of zinc are added with advantage. The boiling has the effect to separate the gummy matters contained, but is open to the objection of producing a brown color unfavorable to white paint. Accordingly when quick drying is not so essential, the *un*boiled oil is used instead.

For the preparation of *printers' ink*, the oil is first boiled for a time and then set on fire, when, after burning for half an hour, it is extinguished, and afterwards mixed with a due proportion of lampblack.

The Unctuous Oils, such as palm, almond, and olive, are not only used for making soaps, and for purposes of illumination, but also as a means of softening leather for uses requiring pliancy, and for oiling machinery with a view of preventing friction, as explained in a previous article ; all of which uses demand an oil that will not easily oxidize—to prove which it is only necessary to employ *linseed* for oiling your time-pieces instead of *sweet* oil as now.

ESSENTIAL OR VOLATILE OILS

Are all soluble in alcohol, forming *essences*, (hence the name essential,) and are largely employed in medicine and as perfumery.

Not only are they found in all parts of plants, the bark, fruit and flower, but sometimes different plants, as the orange, contain different oils for the different parts, one kind being found in the leaves, one in the flower, and another in the fruit. Though not so volatile as water, they nevertheless readily vaporize, and on this account are obtained by mixing the bruised plant with water and subjecting to the action of heat ; the water vaporizes and carries over into the condenser a portion of the oil which floats on the surface and is easily removed.

As to specific gravity, some are lighter than water, others heavier. Some also, as camphor, are solid. Uusually, however, they are limpid and have not the greasy feel of the fats. They burn readily and with a sooty flame.

As to *composition*, they are divisible into two classes—those which consist solely of carbon and hydrogen, and those which also contain oxygen, and sometimes a little sulphur, and even nitrogen. The former are, therefore, termed *hydro-carbons*, and a number of them are identical in composition, containing not only the same elements, but also the same number of atoms of each of the elements, and hence are called *isomeric*, from *isos*, equal, and *meros*, part. Oil of turpentine, oil of lemons, oil of juniper, oil of black-pepper, and oil of parsley are examples.

Of *the second class*, some are highly pungent and acrid, owing to the presence of sulphur. Oils of mustard, garlick, onion, horseradish are illustrations. Peppermint, lavender and camphor contain oxygen, but no sulphur.

Both classes are remarkable for their odor and the delight of the olfactories of man and other animals, appears to be the chief end of their creation—thus affording good evidence that the Infinite One is equally mindful of our material and our spiritual necessities. H.

HEALTH comes of itself ; but we are at great pains to get our diseases. Health comes from a simple life of nature ; disease from the artificial life being contrary to nature.

A NEW style of rotation of crops, as pursued by some farmers, is one year nothing, and the next year weeds.

Domestic Manures—Part 5.

Flesh, tendons, scraps, &c., unfit for food; the *refuse of butcheries* generally, and the *carcasses of animals* dying of disease, constitute so valuable a manure, that the quantity available, however small, ought to be esteemed a treasure worth saving by every farmer. And yet they are left, almost without exception, to waste their richness on the air, while the fields wherein they lie so greatly need the gaseous elements they afford, for the better nourishment of starving crops of grass and grain.

One would suppose the consideration of health sufficient to prompt a burial of such decaying substances; but if not, surely the matter of economy added, to some small regard for public health, should be enough. If thrown upon a bed of rich mould, charred sawdust, or swamp muck, mixed with quicklime, and covered to the depth of a few inches with like material, the absorption on their part, of the ammonia, sulphuretted hydrogen and other gaseous products of animal decomposition would, in the course of a few months, without further effort, prepare a large bed of manure not easily surpassed in value.

Blood, also, constitutes a most excellent fertilizer and is worthy of more care on the part of butchers. The amount allowed to go to waste in our large slaughter houses is certainly unpardonable—especially since it may be so cheaply preserved by mixing with dry mould, peat, or loam. The time must come when the market value of blood will make it an object for slaughter-house keepers to provide heaps of these materials for compost and carefully mix them for the use of neighboring farms,—for the present, farmers would be permitted in most cases to save it free of cost other than the necessary labor, which at the most could be but trifling.

In Europe it is customary with some to dry the blood and sprinkle the powder upon the fields as a top-dressing; while others sprinkle it, in the proportion of 1 part to 4 or 5, upon dried earth well pulverized, and then apply this after the method for plaster-paris.

Horns, hair and wool agree so nearly in their composition and manurial application as not to require separate notice. They contain a mere trace, as it were, of mineral matter, and being especially rich in nitrogen and sulphur, are particularly valuable, even when compared with flesh and blood. The following is their composition as determined by Professor Johnson:—

ELEMENTS.	HORN.	HAIR.	WOOL.
Carbon	51.99	51.58	50.65
Nitrogen	17.28	17.94	17.71
Hydrogen	6.72	6.69	7.03
Sulphur and Oxygen	24.01	23.84	24.61

In England and other parts of Europe, these substances have been highly esteemed from time immemorial; it is only in *this* country that the fertility of the soil is supposed to be inexhaustible—that manures are thought to be inappropriate and useless, except to barren knolls and desert wastes. H.

Ship Canal.

Captain Paulding, who was sent out by our government, to examine into the feasibility of a canal across the Isthmus of Darien, has recently made a report (to the Navy Department) which appears to be highly favorable to the enterprise. The only serious difficulty in the way of its accomplishment is the climate, as it affects labor. So far as the isthmus itself is concerned, no serious obstacle to engineering skill seems to present itself. The whole extent from the Atlantic to the Pacific Ocean is made up of swamps, hills and plains, and the highest point of land where the railroad passes is no more than two hundred and eighty-six feet above the level of the sea. On the whole route, most, if not all, the hills through which the canal would pass, would be required for embankments over the plains and swamps. The length from shore to shore is 45¼ miles. The prism of water is to be 150 feet wide at the bottom, 270 feet wide at the surface, and 31 feet deep; the locks to be 400 feet in clear length of chamber, and 90 feet in clear width. The summit level will be 150 feet above mean tide of the Atlantic and Pacific Oceans. The summit cut will be about four miles long; the deepest cutting on this level will be 136 feet, and the average depth of the cut will be 49 feet. The river Chagres yields an ample supply of water for the canal at all seasons of the year. The summit level will be supplied by a feeder about 24 miles long, which will tap the river Chagres about 21 miles above the town of Cruces, where the level of the river is about 185 feet above mean tide, and about 35 feet above the summit level. The cost of this canal, including the requisite harbor improvements at each end, will not exceed $80,000,000. The bays on each side of the isthmus will afford ample room for the commerce of America and Europe.

NOTE.—Would not a work like this be a crowning glory to the nineteenth century, worthy of the admiration of all time.

HONEY BEES.—A practiced apiarian recommends that bees should be covered up in the winter, giving a small vent for the air. They live on one third less food by so doing.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NO. I.

SELECTING AND PURCHASING FARMS.

The matter of selecting and purchasing a farm, for a home, with the view and purpose of bestowing the labor and pains of years upon it—of making it a pleasant and satisfactory dwelling-place for one's family, a centre and lodgment for one's hopes, plans and labors for life, is indeed a subject of such grave importance, and fraught with so many material consequences, as to render it well worth consideration, especially in a new country, where so large a portion of the people are constantly making such selections.

Probably ten thousand farms, at least, are annually selected and purchased, in each of the principal North-Western States, by actual settlers, many of whom are inexperienced, not only in a new country, but in the requisites of a good farm, or desirable location. Many others already located, for one reason or another, are contemplating changes. Let us then, talk a little upon so important a subject, and one that concerns so many.

The first great question with all parties, looking for a home is, Whree shall we find it? Shall we stay in an old State, or shall we emigrate to a new one? Shall we look for higher priced land, in the older neighborhoods of a new State, or push for the frontier? These are important questions, that all suggest themselves and many more, and must of course be answered by each, in reference to the circumstances of each case.

If one is affluent, and more fond of an easy life and quiet enjoyment, than anxious for additional riches or active life, then the old States, or at least the older portions of the new, are preferable. But where there is one such, who is wealthy enough to choose his place of residence, without reference to cost, there is probably at least a hundred, who have to cut their garments according to their cloth, and often short enough at that. For the young and vigorous in health, with moderate capital, except industry and resolution, the frontier undoubtedly opens the most inviting field for settlement, and the fairest prospect of eventual wealth. True the privations and unpleasantries, may at first be somewhat greater; but most of these, even, in this latter day of settling new countries, are more imaginary than real, and rapidly pass away, when met with resolution and perseverence. A few families of friends and acquaintances, joining in a colony, can penetrate a new district, and settle it without even being lonesome, or dreaming of hardships, especially if it is an opening, or prairie country, not too remote from timber. If such a knot of pioneers are resolute and business-like in their beginnings, and locate in a good district of country, plenty of others will soon follow them, and help to make up a community, with its schools, churches, mills, &c. But to settle in colonies, is not always convenient, as large tracts of unoccupied and cheap lands, are latterly not often met with, except they are quite remote; nor are colonies easily made up, of congenial spirits, to occupy them; hence, most selections and settlements, are made by individuals.

In selecting a single farm, in an old or new district, if one would eventually find himself surrounded by good and prosperous neighbors, such as will prove a benefit to him pecuniarily or otherwise, he must aim to get into a good district of country, naturally, where there is not only good land for himself a farm, but plenty more for others. Individual enterprise, or factitious reasons, may for awhile sustain a district, or location, even under very adverse natural circumstances; but sooner or later, natural causes are apt to predominate, and give their cast to all around them; therefore aim, in determining upon a neighborhood or location in which you will settle, to work with nature, instead of against her, it will be found much the most advantageous in the end.

We have often seen people, of tolerably good sense in all other things, for the sake of locating near or adjoining to a connection, or may be merely an old acquaintance, induced to buy poor, and perhaps miserable land, and perchance at a high price; this we call decidedly poor policy in a majority of cases. Not that we would undervalue connections or acquaintance, but because we think we have found by experience, that the difference is less among all well-bred people, on getting a little acquainted, than is usually imagined. Probably all that makes our own particular friends, or acquaintance, better than other folks, is the mere fact of knowing them better, and not for the reason that they really are any better, and inasmuch as the matter of getting acquainted with new parties, is so natural and easy, it does not strike us as good policy, to depend

too much upon outside friends, or to spoil a good farm, any more than "a good story, for relation's sake." The good wife usually has the most to do in inducing this kind of location; she dislikes to leave a loved mother, sister, or other dear friends, frequently looking more to present social pleasures, than to final pecuniary prosperity. Now this is all very natural, although not always equally wise.—The prudent should not usually allow their better judgments to be warped or clouded by their affections or weaknesses, and for the simple reason, that life is made up of stubborn facts and necessities, and all the more stubborn, if not seasonably and wisely cared for.

Most locations and settlements, like matrimonial engagements, we are aware, are the work and result of accident. Still this may constitute no good reason, why the more prudent and judicious may not exercise some judgment in the matter. In conclusion then, upon this branch of our subject, we would advise all who are situated so that they conveniently can, to look well around them, before locating and purchasing a homestead; a few days, or dollars, judiciously spent in this way, will be likely to prove a good investment, even if one returns and buys at the same point from which they started. For then, they will be better able to judge how well they have done, and be more likely to be and remain contented, which of all things, next to actually being well off, is the next in importance. A discontented spirit, that prompts to uneasiness, and perhaps to frequent changes, is of all things to be deprecated. We think the old Franklinian maxim, that two moves are as bad as a burn, is never more fully illustrated, than in the case of farmers selling out, and changing locations. Like a removed tree, they are apt to be shorn of nearly all of their life-giving roots, and not unfrequently of many of their branches. Nothing will hardly justify it in fact, but the changing from an old, worn-out, or over-done state and soil, to a new and vigorous one.—Hence, the great importance of locating wisely and well, in the outset, if possible, to avoid the necessity, or desire even, of after moves.

Those who contemplate selling out, and moving off from a farm, will seldom or never, bestow the labor, pains and expense necessary to fit it up as it should be, for a comfortable and pleasant home, and those who do fit up thus properly, and afterwards sell, seldom or never get paid, for the expense and labor of the outlay.

Often have we seen a well-started farm, here in this new country, sold out for the temptation of a few hundred, or a few thousand dollars, and the seller fooling himself with the belief, that he had made a great sale, and got money enough to start again, in some newer region of the country, much more independently. Aye, and we have often seen these expectations fail, and the expense of looking new locations, breaking up the old establishment, moving to the new, and getting settled again, so diminish the *slippery* pile of money, as to leave the party much poorer than before, as well as much farther removed from even the prospective comforts of schools, meetings, society, railroads and markets. Let those who are independent and well off, where they are, even if they do not own all the land that joins them, strive to realize their good fortune and be content, ere from the desire of doing better, they jump out of the "frying-pan into the fire."

Thus much as to where to buy farms. A few words now in relation to what to buy. Buy lands of course, says the reader. Yes, to be sure, but recollect that all land, is not land, in the farming sense of the term, but often only mere acres, put in to fill up the gaps, and to prevent unsightly holes and breakages in the face of nature. All countries have plenty of such land, though few have less than the west; still it is to be met with here, in almost every neighborhood.

We say then, to all parties choosing, as far as possible, to select good land for purchase, either at government or private sale, even if the quantity is less. One acre of good land, is worth more for tillage and farm use, than five that is poor. One acre of corn, that it costs ten dollars to grow, and the crop is worth twenty-five, pays better than five acres, costing nearly the same per acre to grow, and yielding little or nothing over cost. Yet simple as this fact is, it is often lost sight of, in the desire to have large fields, instead of large corn.

Nothing except a smooth body of water, is more deceptive to the eye, than the smooth and handsome prairie and opening lands of the West. So true is this, that forty and eighty acres of land, come too often to be considered as nothing for a farm, even for a poor man, notwithstanding, that it often contains three or four times as much land, in every productive and available sense of the word, as the

poor, rough, hill-farms of the east. This mistaken conception about Western lands, leads to great and egregious mistakes, not only in buying, but in cultivating farms.

The disposition among Western farmers, whether new comers, or old, to desire too much land, is as natural and strong a trait of character as the love of money, or the fondness of boasting. This inordinate love of acres, arises in part from a natural pride and love of the soil implanted in the human heart, but more particularly from a belief (too well sustained in the past) that there is a large margin for speculation, in the rise of unimproved farm lands.

But in all the older, and in fact in many of the newer portions of the West, it requires no extraordinary vision to see, that that chance has now mainly gone by. When unimproved, and unproductive lands, come to be held at ten, fifteen and twenty dollars per acre, the interest on this sum, added to the taxes and expense of looking after it, accumulates more rapidly against the holder, than any but those who figure closely imagine. Lands at $10 per acre, with an interest running against them at twelve per cent. (and money is always worth that in a new country) amounts to $1.20 per annum ; this by the taxes, taken one year with another, will be increased to at least $1.50 per acre. Well, says the speculator, this is not much ; true, it is not much, when reference is had to but one year ; but roll it up through a series of five or ten or more years, at compound interest, and then see. At $10 per acre, thus figured, it amounts in five years, to a fraction less than $20 per acre ; in ten years to about $40, and in fifteen years to $80 per acre. Who would wish to speculate long on unimproved land, at this rate? And yet the West contains millions of acres of such lands, often owned too, by resident settlers, who have perchance, twice or thrice as much as they can till, well ; and which they keep perhaps for a generation, for they know not whom, and at such a fearful loss ; too often to, paying high rates of interest themselves, on money they absolutely owe, and may be secured on the self same land. When such a man dies, however, his heirs and administrators wonder at the hollow shell of his wealth. Alas, they forget the canker worm of *interest*, or unproductive capital, which is the same, has been gnawing at his pecuniary vitals, ceaselessly, night and day, and from year to year. What power can withstand its adamantine wearing? Not even the solid rock.

Avoid then, all ye new beginners, waste and surplus lands ; buy what you absolutely need for a farm, nor more nor less than you can till seasonably and well ; leave the rest to the next man who comes ; it is better to have a good neighbor to join fences with you, and to help sustain a district school, than a vacant lot on speculation.

If you have money left, after buying a suitable tract of good land for a farm, instead of investing in additional and unneeded acres, rather improve well what you have ; it will make you richer in the end, as well as eminently more useful, respected and happy.

As to the precise quality of land to be selected, of course, that must depend somewhat upon the purposes and tastes of the purchaser. If a stock or dairy man in his fancies, he will of course need a grazing farm ; if a grain grower, gardiner, or orchardist, then of course he will want what is best adapted to those specific purposes. But for whatever purpose, remember the old saying, that "a whistle cannot be made out of a pig's tail," nor a good farm, out of an absolutely poor piece of land; at any rate, not without a most unwarrantable outlay.

It is even less difficult, and less expensive usually, to supply the lack of timber or water, or both even, than to make over and remedy the defects of an absolutely poor soil, or rough and broken surface, made doubly objectionable latterly, by its interference with the application of machinery to its tillage.

To buy much land on a credit, with the idea of relying upon the crops to pay for it, has generally been found to be a fallacious plan ; and mainly for the reason that all new lands or farms, are apt to need all their surplus profits for some years to be applied upon them in the way of improvements, and are even more apt to require additional outlays, and to make new mortgages, than to pay old ones.—Therefore rely not too much upon what can be done in this way ; all crops and nett profits, are apt to turn out less in the final sale and result, than they promise on paper, whilst debts are apt to accumulate faster, and to come due sooner, than we expect. Time always seems short to those that owe. Credit is the most delusive bait, that was ever yet thrown out to catch unthinking and over-greedy mortals, and should be shunned in all possible

cases, as carefully as a rattlesnake. Its poison may not be as rapid, but not the less deadly for that.

That farmer is not the richest who owns the most acres, perhaps plastered over with mortgages, or who is in the largest business, and owes the most money, and has the most owing to him. But the man who has a snug farm, large enough for his own use, and no more—who has the industry and patience, to till it as it should be, in all things—who has the prudence to keep out of debt, and the good sense to know when he is well off, and to find satisfaction and happiness, in his daily toil and duty, that is indeed the rich, the happy man, and the true philosopher, who amid the wreck of bubbles around him, will stand until the end, and when at length, like a ripened sheaf, his time comes, he will be gathered in the harvest like a christian, and the reaper will say, "Well done, good and faithful servant."

Having discoursed thus briefly, of the selection and purchase of a farm, we will in our next, dilate somewhat upon, what we believe the best modes of arranging and making it up—which by the way, is at least as much of an art, as making a pair of boots, or shoeing a horse. Hence it is worthy of study and consideration.

Who has not seen the finest natural patterns spoiled in making up, and also the roughest of nature's handiwork sometimes made beautiful under the skillful touch of taste and labor.

P.

Nutritive Qualities of the Onion.—It is worthy of notice as an extensive article of consumption in this country. It is largely cultivated at home, and is imported, to the extent of 700 or 800 tons a year, from Spain and Portugal. But it rises in importance when we consider that in these latter countries it forms one of the common and universal supports of life. It is interesting, therefore, to know that, in addition to the peculiar flavor which first recommends it, the onion is remarkably nutritious. According to my analysis, the dried onion root contains from twenty-five to thirty per cent. of gluten. It ranks, in this respect, with the nutritious pea and the grain of the East. It is not merely as a relish that the wayfaring Spaniard eats his onion with his crust of bread, as he sits by the refreshing spring; it is because experience has proved that it helps to sustain his strength also, and adds, beyond what its bulk would suggest, to the nourishment which his simple meal supplies.—*Johnson's Chemistry.*

Perseverance.

If you wish to accomplish anything in this life, you must work your way through the crowd. If you stop for every one who crosses your path, you will soon find yourself far in the rear; no one will thank you for the favor, but when they turn around and find themselves far in advance of you, the probability is you will be complimented on your want of patience and perseverance.

Whenever an obstacle is thrown in your way by the envious, never stop to move it or to contend with your opponent, but walk straight over it, and keep on in the path before you, and you will eventually reach the goal. Never whine over difficulties; remember everybody who accomplishes anything worthy of note, has serious obstacles to overcome. Work is never done by repining; it is accomplished by hard labor, patience and perseverance.—While one is mourning over difficulties, another is working to overcome them. Time shows the result in the lives of the two men.

If you have marked out a high moral and intellectual standard, you will not find your path strewn with roses, but you must expect to tread upon thorns. If you stop to rest whenever you feel weary, or to bind up every little wound, you will find yourself an old man before you have accomplished half your journey.

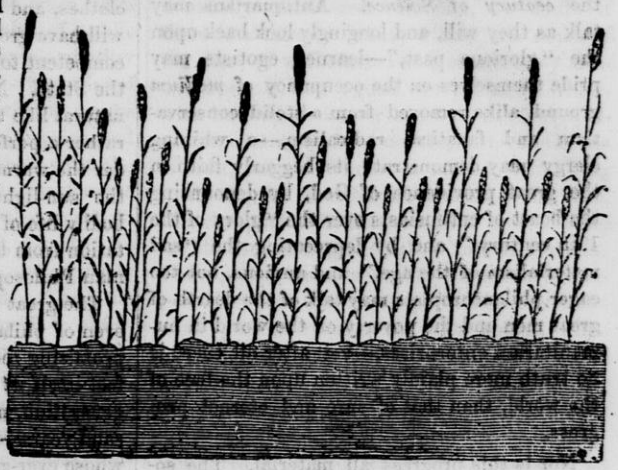
Let *onward, upward,* be your motto. Never stop to repine or dispute with your opponents, or be held back by critics or gossips; keep on, and you will soon be out of their reach, while they will turn to worry some less persevering traveller. When you are once safely out of reach, then you can turn back and take a survey of the path you have trodden, and see some traveller with bleeding feet beside the very thornbush where you so lingered for rest, another is being annoyed by the same cur that barked at you on your way, while a third is climbing over the very blocks that were thrown across your path. Yes, friend, be sure you are on the right track, and then go ahead. Never imagine you can fall back upon your talents. Patience and perseverance will accomplish more than all the latent talent in the world.—*Ballou's Pictorial.*

Be Saving.—Economize in these times, that is clearly a duty, but let your retrenchments be in the right line. Smoke less cigars, drink no wine, beer, or spirituous liquors,—the most moderate indulgence in these habits involves an individual expense of from fifty to one hundred dollars a year,—and it would be better for your health, and every consideration, if you were to throw the money thus spent, into the fire.

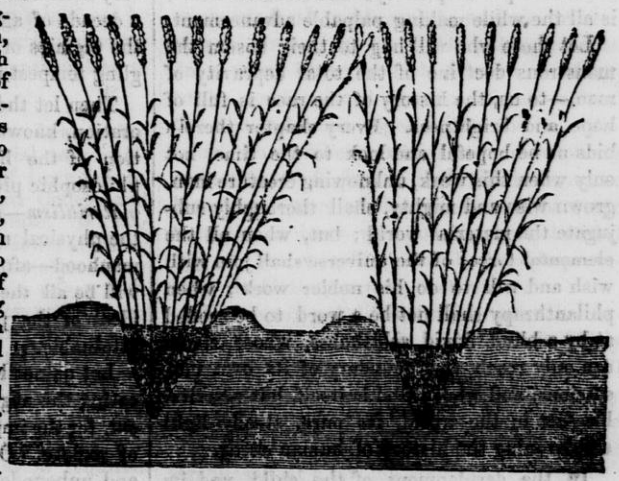
Times of general calamity and confusion have ever been productive of the greatest minds. The purest ore is produced from the hottest furnace, and the brightest thunderbolt is elicited from the darkest storm.—*Lacon.*

Advantages of Using a Grain Drill.

The experience of the last few years has shown the great value of the Grain Drill to the farmer. Especially has the fall and winter of 1856–7 demonstrated its utility; the wheat, as a general thing where sowed by hand, having been nearly all frozen out, but that which was drilled having withstood, in a great measure, the action of the frost. The Drill saves from one to two pecks of seed to an acre, and increases the crop from fifteen to twenty-five per cent.—It makes an equal distribution of any given quantity of seed, covering it a uniform depth, leaving a narrow furrow with a ridge on either side, which catches and holds the snow in winter, and in the spring the earth washing from these ridges into the furrows covers the roots. It economises labor and time. A boy with a pair of horses, will drill, with ease, ten to fifteen acres a day. The accompanying cuts show the difference between broadcast and drilled wheat. In the one will be noticed the irregularity of its growth and heighth, while in the other its growth is uniform, vigorous, and of the same height; and, standing in rows some eight inches apart, the sun has a chance to shine in and around, and the air to circulate through the grain, rendering the straw clean, bright, and firm; and the depth to which the seed is covered—from two to four inches at the option of the operator, the Drill being regulated to drop at any depth—gives it a strong, vigorous, and firm root, and is consequently not so liable to lodge or fall down, besides making it easier to harvest.—*Valley Farmer.*



WHEAT SOWN BROADCAST.



WHEAT SOWN IN DRILLS.

NOTE.—We have a very favorable opinion of drilling in seed instead of scattering it broadcast upon an uneven surface, and have often wondered why our good farmers did not practice it more extensively. It requires a good and clean condition of the soil for the drill to do its work well, which, of itself, is an important thing, as there is no doubt but much of our wheat is dragged in, in a shallow, imperfect manner, upon an unpulverized and grassy soil, and the crop often materially diminished thereby. We would like to hear the opinions of our good farmers on the subject, especially those who have had experience. As far as our observation goes, we are led to believe that it is less practiced in Wisconsin than five years ago, notwithstanding the agricultural fairs are crowded with numberless patents of new machines.

Who among our farmers can give the results of actual experiments for a series of years, with drill-sowed and broadcast, side by side. Such information, it strikes us, would be valuable, and probably a good deal in favor of drilling.

The above cuts aim to illustrate how much more evenly drill-sowed grain comes up, grows and ripens, than that sowed broadcast—an important fact, if mainly true. P.

Society has other than Material Tendencies.

NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

The present may with propriety be termed the *century of Science.* Antiquarians may talk as they will, and longingly look back upon the "glorious past,"—learned egotists may pride themselves on the occupancy of *medium* ground, alike removed from a stolid conservatism and fanatical radicalism,—a whining clergy may demonstrate its beggarly faith in the great providence of God, by denouncing the boast of enthusiasts over the "glory of the 19th century," and by deprecating the "sad materialism of the age," and anxious, but too eager philanthropists may talk of the dearth of great men and the poverty of the world in humanitarian enterprises,—yet after all there is no truth more plainly written upon the face of the world, than that of sure and eternal progress.

Nor is this progress all material. The social world has also its law of development, and to men of philosophic eye and trustful heart, is all the while making palpable advancement.

Let those who will hug to their bosom the monstrous doctrine of the total depravity of man,—to us, the history of the race is full of hope and brightness. Every chapter therein bids us be hopeful and look to the time, not only when this weak, unknowing creature man, grown wise and mighty, shall thoroughly subjugate the material world ; but, when all the elemental forces of the universe shall join with wish and will to do his nobler work ; when philanthropy shall not be a word to be scoffed at by a blind, frigid selfishness, whose vision can only reach the boundary of its own possessions, and whose God is itself, but a veritable *fact* in the world, its pure, steady light emblazoning the history of human *deeds.*

In the development of the child, and its growth up to manhood, the physical has precedence as to time, before the material—the boy becomes a man, physically, a long time before he becomes a man intellectually and morally ; this is the order of nature for the individual. But the race is only made up of individuals, and the evident order of nature is the same for humanity and the man. The human race must get its growth physically, before it can attain to the highest condition of intellectual and social life. Herein lies the ground of our national hope. After a few centuries of stint, from immurement within the cold, damp walls of the dark ages, the body corporal of society has, all suddenly, taken a new start, and is having a most wonderful growth. Already it looks giantward, is fast outgrowing its old clothes, and ere the dawn of the 20th century will have grown to be a very Hercules, fully competent to cleanse the Augæan stables of the State. Nor is this growth forced and unnatural like that of plants in a hot-bed, but rather a perfectly legitimate development under the warming and quickening influence of the sun-light of science. Nay, the present bodily life of society is a new one—a resuscitation from the old by the elixir of the Baconian Philosophy.

The great practical error of most men, and even of philanthropists is, a stern and uncompromising requirement that society shall perfect itself *at once ;* they will hardly wait one generation, much less a century or a few thousand years—forgetful of the lesson of the oak, whose ever-growing strength is imperceptibly added, day after day, year after year, and century after century, until, finally, at the end of a decade of ages, it lifts its noble head above the pigmies of the forest, and holds the struggling tempest in it brawny arms.

Then let the world rejoice at this new invigoration, knowing that this quickened circulation of the life-blood of society—which unphilosophic pietists believe to be the *fever of materialism*—is both normal and necessary to the physical maturity and vigor of perfected manhood—after which its social development will be all the more easy, and the beautiful ideal of the philanthropist the more readily attainable.

Let us not be understood, however, as advocating the neglect of direct means, *in the present,* for the improvement of the social condition of society. On the contrary, we hail with joy and unbounded satisfaction the dawn of the era of social progress, so auspiciously heralded by the recent inauguration by Lord Brougham, of the British "National Association for the Promotion of Social Science," designed to fulfil the same office for society, that the older and correlative association does for science, and embracing as subjects for its consideration, the whole range of Political Economy ; or, as specifically enumerated by the noble Lord—"the accumulation and distribution of public wealth—the prosperity or suffering of the people—the quiet of the country—the diffusion

of knowledge by education—the moral improvment of different classes—the action of the law and its administration on the community—the benefit that may result from individual exertions unconnected with the State, and the increased efficiency of such efforts when made by bodies of men—the just limits of public interference with private concerns, whether for encouragement or repression—the duties of the State with respect to undertaking works beyond the power of individual enterprise, and the limits of those duties—together with the right and expediency of public interference with parental authority." May the world do reverence to the venerable Lord, for that he has so rightly calculated its needs, and so wisely adapted the means to the end. There he stands before England and the world, truthfully interpreting humanity's inarticulate speech, and authoritatively demanding on its behalf, that the philosopher, the philanthropist, and the professional statesman, shall counsel together as to the best methods of promoting its highest interests. The future will hallow his memory,—let the present follow his leading.

Whether a similar Association might not be instrumental for great good in our own ocuntry is a question for American philanthropists to consider. H.

AGRICULTURAL COLLEGE IN IOWA.—We have recived a copy of a memorial to be presented to the next Legislature of Iowa for the establishment of an Agricultural College and Experimental Farm in that State. We beg leave to suggest to our friends in Iowa, whether they could not best promote the object they have in view, by combining their effort with the friends of the State University, and making their school a branch of that institution, which, if we are rightly informed, is to be based on a plan far better adapted to the wants of the present age, than the course pursued by the older colleges of the country. We have few men, if any, better qualified by their practical knowledge of farming, and the education required by farmer's sons, than the Chancellor of the Iowa University, who, we know, would give to an Agricultural branch of it that interest and attention necessary to place it upon a sure foundation.—*Country Gentleman.*

WATER AND MORALS.—A very slight declivity suffices to give the running motion to water. Three inches per mile, in a straight, smooth channel, give a velocity of three miles an hour. Now, what is true of water is equally true of morals. The best of men only need a slight push from adversity to obtain a down hill momentum. Be careful, therefore, how you lose your equilibrium.—*Maine Farmer.*

Ice Houses.

The season has again come when ice houses should be taken into consideration, by all who are situated properly to have them, and we imagine the number to be much greater than is usually considered. In fact, we doubt if there is a cheaper luxury within the reach of the most of well-started and comfortably situated people, than a good, convenient ice house, with its ample summer stock of the frozen element, costing little or nothing, after the house is built, but a few hours annual labor in filling it, during the most leisure season of the year. But cheap as it is, how manifold and valuable are its uses during the sultry heat of summer. Through its instrumentality the cream is tempered to just the right point to produce the most perfect results, and the butter, when properly, churned, can be cooled and packed at will, as well, under a July sun, as during a cool morning of October. Not only can it be thus made, but it can also be equally well preserved and served on the table in an eatable shape ; cool, hard and sweet.

It is equally welcome and valuable to preserve our fresh meats, and to cool our drinks ; also to temper our custards and ice creams. In a word, it can be made a famous auxiliary to the comforts and luxuries of the table of the rich and poor, especially in the rural districts, where other luxuries are not so plenty as in cities. A glass of iced milk is a greater luxury and more wholesome summer beverage than the choicest wine, or the best distilled cup of tea or coffee ; an absolute improvement, in fact, upon pure, cold water.

But we will not dilate further upon the luxuries of ice, especially as it will not be likely to be appreciated just at this season, but will now pass on to show how cheaply and readily any ordinarily ingenious farmer can, (in the absence of a carpenter), build an ice house for himself at a few dollars expense.

TO BUILD A CHEAP ICE HOUSE.

Select a shady, cool location, as conveniently near as may be, and erect upon the surface of the ground a square, board pen, or building, from ten to twelve feet each way, and about eight feet high. Inside of this, at a distance of fifteen inches, set up another line of light posts or scantling all around, on which put another set of common boards as high as the outside set, and so arranged as to leave an open space of the aforesaid fifteen inches all around. Saw out a door space, some two feet

wide, upon the handy side, for an entrance, and roughly case it so that it will hold saw-dust, when proceed to fill, compactly and closely, into the aforesaid open space between the two board walls, on all sides. When completely filled to the top, put on a shingle, board, thatch, or straw roof, just as best suits convenience, only so that it is tight to the rain, fit a *battened* door to the opening, and the thing is complete for use for years to come.

Now where is there an active man who, with a hand saw and a hammer could not erect such a building in good shape, in a day or two at the most? In localities where saw-dust cannot be obtained, wheat chaff or finely cut straw may be made to answer a passable purpose, although not equal to old tan bark or saw-dust as a non-conductor of heat.

TO FILL AN ICE HOUSE

when built, is an equally simple process; still, it is one that must be done just about *so so*, or the heat of summer will sweat it out, and leave but an empty void behind. First, place some kind of sleepers, (no matter what if level), upon the bottom, on which put a rough floor, some six inches from the ground, and still on this put a layer of straw, or saw-dust if convenient, another six to ten inches thick, and on this pack the blocks of ice, cut as square and regular as possible, (done best with a saw, when the ice is about fifteen inches thick), leave a space between the ice and the inside partition of about eight inches, which fill with close packed straw or saw-dust. When a layer is thus completed, put on another layer of dust or straw sufficient to fill every space between the blocks and interstices of the ice, then pack in another course as before, and so on till the house is full to within a foot or so of the top, which remaining space fill with saw-dust, chaff, or fine straw, and the work is done for the season, except closing the door, which, to make it more perfectly air tight, should have a couple of strips nailed up and down upon the inside of the jam casings, and against them should be placed short curbing boards, one above the other, to admit of filling in an extra quantity of chaff or dust to prevent the air from getting under the ice. The great secret of keeping ice consists in keeping the air from circulating through it from the bottom and sides, the air that strikes down upon it from the top affecting it but slowly. They should have drainage from the bottom for what melts, as the bottom ice will melt at once by standing in the water.

If we have made ourself understood, we think we have demonstrated that an ice house is not only a good and desirable thing for every farmer as well as merchant or professional man, but that all can have them who will take a little pains; and we will further venture that those who once try them, will not willingly dispense afterwards with their use. Try the thing, ye enterprising, and see how you like it. P.

California Items.

Mammoth Trees.—We find in the *California Farmer* an account of a visit by the Editor to the Yoremity Valley, from which he and his party ascended a six mile hill to visit a Great Forest, which contains, as he believes, the largest trees in the world. They are Pines. Hear his description.

The first tree we measured was "Rambler," and measuring it three and a half feet from the ground, found it eighty feet in circumference, close at the ground 102 feet, and carefully surveyed, 250 feet high. Tree No. 2, nearly fifty feet in circumference. No. 3, at the spring, ninety feet, three and a half feet from the ground, and 102 feet at the ground, and 300 feet high. Nos. 4 and 5 we call the sisters, measuring eighty-two and eighty-seven feet in circumference and 225 feet high. Many of the trees had lost portions of their tops by the storms that had swept over them. After measuring the first five trees we divided our company, two taking the south-east direction, and two with myself the northerly, and keeping record of each tree measured, which resulted as follows:

The whole number measured was 155, and these comprise but about half the group, which we estimate cover about two to three hundred acres, and lie in a triangular form.

After giving a table of 100 trees, the everage measurement of which was over 50 feet in circumference, (which we have not room for,) he says:

The groups of trees which we measured consisted of many of peculiar beauty and interest. One of those which measured one hundred feet in circumference, was of exceeding gigantic proportions, and towered up three hundred feet, and yet a portion of its top, where it apparently measured ten feet in diameter, had been swept off by storms. While we were measuring this tree, a large eagle came and perched upon it, emblamatic of the grandeur of this forest as well as that of our country. The cones that lay in masses beneath this tree were twelve and eighteen inches long, and some of them longer. Near by it

stood a smaller tree that seemed a child to it, yet it measured forty-seven feet in circumference. Not far from it was a group of four splendid trees, 250 feet high, which we named the four pillars, each over fifty feet in circumference. Two gigantic trees, measuring seventy-five and seventy-seven feet were named Washington and Lafayette; these were noble trees. Another group of these we named The Graces, from their peculiar beauty. One mighty tree that had fallen by fire and burned out, and into which we walked for a long distance, we found to be the abode of the grizzly; there he had made his nest, and it excited the nerves to enter so dark an abode. Yet it was a fitting place for the bear. Another tree, measuring eighty feet, and standing aloof, was called the Lone Giant; it went heavenward some three hundred feet. Another monster tree that had fallen and been burned out hollow had been recently tried, by a party of our friends, just riding, as they fashionably do in the saddle, through the tunnel of the tree.—These friends rode through this tree, in the saddle, a distance of 153 feet, and the same feat can be done now. The tree has been long fallen, and measured, ere its bark was gone, and its sides charred, over a hundred feet in circumference, and probably three hundred and fifty feet in hight.

The mightiest tree that has yet been found, now lies upon the ground, and fallen as it lies, it is a wonder still; it is charred, and time has stripped it of its heavy bark, and yet as we measured it across the butt of the tree as it lay upturned, it measured *thirty-three feet* without its bark, and there can be no question that in its vigor, with its bark on and upright, it measured *forty feet in diameter*, or one hundred and twenty feet in circumference. Only about one hundred and fifty feet of the trunk remains, yet the cavity where it fell, is still a large hollow beyond the portion burned off; and upon pacing it, measuring from the root 120 paces, and estimating the branches, this tree must have been *four hundred feet high*.—This we believe to be the largest tree yet discovered, and this Forest we claim as the *Parent Forest of the World*.

California State Fair.—The weather was very warm during the progress of the Fourth Annual Fair at Stockton; the number of visitors was large, and the exhibition was creditable for a young State of only 400,000 inhabitants, and that has but just entered upits agricultural career.

The address on the occasion was by Henry Eno. It occupies nine columns of a tolerably sized Sacramento newspaper. It is quite interesting, though it would have proved quite too long for an Atlantic audience. The orator boasted that California is already in advance of some of the oldest States in respect to its agricultural products. The State raises wheat for the consumption of its people, and some to spare. In 1856, it produced 2,937,236 bushels of wheat; 3,229,330 bushels of barley; as well as a large quantity of oats, corn, and potatoes. And then, it furnished 248,982 pounds of wool; 452,173 pounds of butter; and 246,113 pounds of cheese. We must add 87,703 horses, 520,276 head of cattle, besides numerous sheep, swine and mules. Of fruit trees the State had 1,071,713, or grape vines 1,317,957. Previous to 1849, there was scarcely a grist mill or anything of the kind in that country. Now the State can boast of 131 grist mills, 373 saw mills, 17 tanneries, 15 iron foundries, a sugar refinery that can manufacture 400 tons of sugar and 20,000 gallons of syrup per month, and 133 quartz mills, propelled by steam or water power.

We may add, that at an earlier exhibition, California presented a watermelon weighing 44 pounds, potatoes weighing 4 1-2 pounds each, onions as heavy, a beet of the weight of 40 pounds, and measuring forty-two inches in circumference, a cabbage with twenty-five well formed heads, another with thirteen heads, and of the weight of 35 pounds, a corn stalk 30 feet in height, tomatoes weighing 2 pounds each, etc., etc.

Note.—The above mentioned aggregates and products, show that California is some, at least. But the 30 feet corn stalk is what takes us down. Still it is not as wonderful as trees as large in diameter as a good sized farm house, and twenty rods high. It must indeed be a great country, naturally, and rapidly becoming so agriculturally. P.

Can Sugar be Made.

Messrs. Belcher & Co., extensive sugar refiners of St. Louis, state—or it may be only stated for them—that it is impossible to grain the syrup of the Chinese sugar cane. If it be true that they have made this statement, or that it has been printed by their authority, it will not be borne out by experiments made in this vicinity.

Mr. Lovering, of the well-known firm of J. F. Lovering & Co., perhaps the most extensive, as they certainly are the most celebrated, sugar refiners in this country—has made from canes grown upon his own premises, in this ward, as we are informed, an excellent article of sugar, dry and and of good color; and he estimates that the cane will produce one thousand pounds per acre. As a sugar production this will do very well; while the experiment proves that whatever may be the character of the syrup in Missouri, affected as it doubtless is by the soil and climate, it possesses sufficient granulating properties here to make the manufacture of sugar a source of profit.

We hope to have, more in detail, the facts connected with Mr. Lovering's experiment. It is of great importance, at this time, that they should be be laid before the public.—*Germantown Telegraph.*

Striped and Spotted Prairie-Squirrel or Gopher.

This little animal, so well known on our prairies, resembles the common chipmuck, (*Tamias striatus,*) and is of about the same size, or a little longer. It abounds in the prairies of Michigan, Wisconsin, Minnesota, Iowa, Northern Missouri, Middle and Northern Illinois, and Northern Indiana. In Illinois, it is most abundant in the Northern part of the State; and it does not exist at all below latitude thirty-nine degrees, if it does as far south as that. It is not found east of the prairie regions, nor oak openings, of Indiana and Michigan, except rarely in the northeastern corner of Ohio. At the North, Richardson found it towards latitude fifty-five degrees, in the British Possessions; it has been seen as far west as Fort Laramie, on Platte River.—Audubon and Bachman state that it is found abundantly on the Upper Missouri, and that it is said to extend along the prairies east of the Rocky Mountains into Mexico.

In Iowa, Wisconsin, and Northern Illinois, where this animal is abundant and much complained of by farmers, it is universally called "gopher." The true gopher (*Pseudostoma bursarius*) being also found in Iowa and Illinois, the two animals are frequently confounded; and such is the profound contempt of some farmers for any systematic study of natural history, that, though repeated descriptions of both these animals have been published in various agricultural journals, they go on correcting each other's statements, after a fashion, in preference to learning first what they are writing about. One, who knows only the true gopher, burrows of which are miles in length, very naturally laughs at another for saying he drowns out hundreds of gophers, (meaning prairie-squirrels,) by pouring a pailful or two of water into a burrow; while the latter must be very careless, to state that gophers cut the roots of trees, gnaw vegetables, and injure fields by throwing up hills. The pseudostoma undoubtedly has the best right to the name of "gopher," and should retain it. Our farmers would obviate needless and frequent confusion, if they would not apply the same name to the present species, for which the designation "Striped Prairie Squirrel," would be far more appropriate; and which, in fact, is highly characteristic, being in itself a description of the animal. To call it "Ground Squirrel, as is sometimes done, is bad, because the Tamias striatus is well known as the "Striped Ground Squirrel." In Northern Illinois, I have heard the German farmers very generally call it "Fence Mouse," which name they also apply to the Tamias striatus.

This species is emphatically a prairie animal. It never inhabits timber lands when there is prairie in the vicinity. Though it may be found in oak openings, it is never in heavy timber; and, when living in these openings, it is always most abundant on the edges of open ground, or where the trees are most scattering.

I am not aware that this prairie-squirrel ever inhabits ravines, in preference to level ground, though Spermophilus franklinii sometimes appears fond of burrowing in banks.—The favorite habitation of this species is on dry prairie knolls. It is naturally gregarious, and though never observed living in such companies as the prairie-dog, twenty, or sometimes even fifty or a hundred may be found within the area of an acre, two burrows being frequently within a few feet of each other, though one is never inhabited by more than a pair. In passing near a knoll inhabited by them, numbers may be seen standing upright at the entrance of their burrows, so straight and motionless as to be easily mistaken for as many sticks. But, as you approuch one, he will disappear, by a movement so rapid that he can scarcely be followed by the eye; and, if it were not for the whistling chatter accompanying his disappearance, you might think your vision had deceived you, and that nothing had been there. But, upon stepping back several rods, it is more than likely that he will have resumed his position before you are aware of it. If you remain close to his hole, he will only thrust out his head and eye you suspiciously.

The striped spermophile leaves its burrow with great caution, and only for a short distance. At the slightest alarm it silently glides back through the grass, yet with great rapidity, keeping close to the ground, and never leaping. Its burrow reached, unless closely pursued, it stops for a moment at the entrance, sitting upright on the tarsi, and then suddenly pops into the hole, uttering several quick, clear, whistling notes. Unless it has been very much alarmed, it will always thrust out its head again to reconnoitre; and boys, taking advantage of this practice, often catch these animals by slipping a noose arranged over the hole, the moment one has entered.—When one is shot near his burrow, the body can seldom be secured, for, like the prairie-dog, unless cut to pieces by the shot, he will manage to tumble into his hole.

Before the production of the young, in May or June, the old male leaves the female, and appears to lead a solitary and more or less wandering life, digging a temporary burrow, or occupying a deserted one for a few days, wherever he may take up his abode. These summer burrows may often be found, and sometimes of considerable extent; several of those which were examined were more than 20 feet in length, being simple galeries from six inches to a foot below the surface—deeper in sandy soil—opening at both ends, with the nest placed in a small side-chamber; others were of much less extent, sometimes with but one entrance, and sometimes without nests.—The winter burrow, in which the pair hibernate and the female brings forth her young, is

deeper and more complicated, having always two entrances, or more. In this, in a side-chamber of suitable size, excavated above the level of the rest of the burrow, is a large spherical nest of soft grass, entered by an opening on one side. This nest is sometimes of the size of a half bushel, the interior being generally lined with softer material than the outside. The young are produced at the end of May or early in June. I have observed from five to nine brought forth at a birth, and I am informed of two instances in which ten were found in a nest; but the number is variable, the usual number being six or seven.—The young at birth are naked, blind, and remarkably embryonic. Dr. Hoy, who observed them in confinement, says that they have no hair on the body before they are twenty days old, and that the eyes do not open till the thirtieth day. They continue to require the nourishment and care of the mother for a much longer period than most rodents. During summer, they begin to dig shallow burrows, and leave her before winter, to shift for themselves.

Among farmers, this spermophile has a bad reputation, in consequence of its injuring corn-fields by digging up the newly-planted seed, in spring. Persons residing on newly broken prairie inform me that they sometimes suffer severely from the prairie-squirrels. It is said that large corn-fields have to be replanted, where they have been at work, while, in some districts, every corn-field is seriously injured by them. No sooner is the corn planted, than they begin to work at the edges of the field next to their burrows. They show much intelligence in following the rows, sometimes digging up every hill for several rods, and this before, as well as after the corn has sprouted. They are industrious and take up a great deal of corn in a day, which, apparently, is always carried to the burrow. In such districts, farmers agree that their injury to corn-fields is on so extensive a scale as to render the destruction of the prairie-squirrels a matter of serious interest. They also do more or less injury, by digging up garden seeds, such as peas, melons, &c., and, though rarely, are more seriously injurious, by destroying apple and osage orange seeds in nurseries. I am not aware, however, that they are ever accused of gnawing bark, destroying growing vegetables, or, in fact, of injuring the farmer in any other way than by devouring grains and seeds. In consequence of this reputation for mischievous habits in the corn-field, farmers all appear to think it a good deed to kill a spermophile.

NOTE.—It will be recollected that we published an article in the April No., page 124 of last year, from the pen of Prof. P. R. Hoy, setting up the good qualities of the Gopher as an exterminator of field mice, &c., making him an absolute blessing to the farmer. The article attracted considerable attention from our numerous readers, but as yet we have not found one who agrees in opinion with the Professor, but on the other hand, all coincide in believing that they are unmitigated nuisances about corn-planting time. Our own experience has also led us to have little doubt of it either; they are a *blessing* that we would be very happy to be relieved of, so far as our farming experience has gone. We would recommend their destruction early in the spring, before breeding. P.

The Sorghum Sugar Queston.

On page 411, Vol. XII., of the Scientific American, and in subsequent numbers, we expressed our opinion that crystalizable sugar was not obtainable from the Sorgho cane. We did so, having the authority of eminent chemists and practical refiners to support our opinion; and as far as they had examined, they were right. But neither they nor we had gone quite far enough, for we have received a sample of beautiful crystalized sugar, prepared by Mayland Cuthbert, of Philadelphia, also some samples of the same from E. G. Ward, of New Bedford, Massachusetts, equally good. We carefully examined them, and were at a loss to account for it. Has the great problem of converting syrup into sugar been solved? thought we; it cannot have been. We were in an inexplicable difficulty concerning this phenomenon until we saw a communication in the Prairie Farmer, from Dr. Ostrander, of Lexington, Illinois, whose experiments, if confirmed by subsequent investigations, seem to solve the difficulty. He says:

"I purchased a sugar (crushing) mill of two iron rollers, five and a half inches in diameter, and fourteen inches long, and had new gear wheels cast, both of a size, to give equal motion to the rollers. I commenced grinding and boiling, and soon found that six gallons of juice would make one gallon of superior syrup. I then built a mill with wooden rollers, eighteen inches in diameter, and went at it in good earnest, and found that it now took eight gallons of juice for one of syrup. Upon investigating the cause, *I found there were two juices, distinct from each other, in the cane, viz.: a crystalizable and an uncrystalizable saccharine juice.* The iron rollers expressed both, the wooden rollers only one. The juice run from the iron rollers granulated easily, while the juice from the wooden rollers could scarcely be said to grain. My cane was twice frozen solid before it was worked or cut."

The above announcement will stimulate additional researches into the nature of the Sorgho plant, and we shall hope to see Dr. Ostrander's position carefully tested. If found to be correct its future value for sugar-making will become a question of importance in an economical point of view.—*Scientific American.*

Hungarian Millet.

BY D. B. DIXON, OF MUSCATINE, IOWA, IN PATENT OFFICE REPORT FOR 1856.

The Moha de Hongrie, (*Panicum germanicum,*) imported by the Patent Office in 1854, and described in the Agricultural Report of that year, was first grown in this region in Mantua township, Monroe county, and is here commonly known under the name of "Hungarian Grass." It is luxuriant in its growth, and produces hay of the finest quality. Horses and cattle eat it with avidity. Farmers in every part of the country should give it their attention, as it will make more and better feed than any other kind of grass now known in the United States. Our Western farmers, in particular, should learn its value; for its destiny is to change the agricultural products of this portion of the Union, and substitute cows, horses, mules, and sheep in place of hogs.—We have raised hogs, heretofore, from necessity, simply because our only reliable crop was corn, and other domestic animals required hay, or its equivalent, which we could not produce with cheapness and certainty.

A good crop of Hungarian grass is about 3 tons of hay and 30 bushels of seed to an acre, while it will often go beyond, and seldom fall below this. Such crops were grown last season, notwithstanding the drought.

The seed may be sown in this region from the 1st of May to the 15th of June, at the rate of a bushel to three acres. It should be put into the ground in the same manner as oats, harrowing before and after sowing. The time for cutting is when the seed is nearly ripe, and the whole plant of a fine yellow color. If cut too early, the seed will not be perfect, and if too late, it will shell out in curing; the stalks will also be too woody. It may be cured in the same manner as other hay. As fodder, after threshing, it is fully equal to Timothy; and when fed out with the seed in, as it generally should be, it is better than good sheaf-oats.

I am sowing, this year, 100 acres of this grass, from which I expect to raise at least 3,000 bushels of seed.

NOTE.—We hear equally flattering accounts of this grass, from many of our Iowa exchanges. Some of them set it much higher on the score of quantity, alleging that it yields six instead of three tons to the acre. They further claim that it strikes a deep root, and therefore grows well upon the high and dry prairies, even in dry seasons. If so, it certainly is what timothy will not do.

Its cultivation will at once supply the place of the miserable marsh hay, which really has little more flesh or fatty nutriment in it, than basswood shavings.

We saw a specimen of this grass at the U. S. Fair, (exhibited by Gen. Wilson, of the Iowa *Farmer.*) It had a tall and millety aspect, but also an abundance of leaves and seed. It is in fact a species of millet, and like that article has to be annually sown. Consequently it cannot afford much if any early or late feed; this the clover and timothy must undoubtedly still supply. Still we are led, from all the testimony on the subject, to believe that it is another of the new things, that is worth the attention of our farmers, and that too, as early as convenient. We for one intend sowing a quantity of this seed the coming spring. It will undoubtedly be abundant for sale at our Seed Stores before sowing time.—Meantime we shall, from time to time, publish any new light on the subject that may come up. P.

OUR CLIMATE.—"Here let us say a word in favor of those vicissitudes of our climate which are too often made the subject of exclusive repining. If they annoy us occasionally by changes from hot to cold, from wet to dry, they give us one of the most beautiful climates in the world. They give us the brilliant sunshines of the south of Europe, with the fresh verdure of the North. They float our summer sky with gorgeous tints of fleecy whiteness, and send down cooling showers to refresh the panting earth and keep it green. Our seasons are full of sublimity and beauty. Winter with us has none of its proverbial gloom. It may have its howling winds, and chilling frost, and whirling snow storms; but it has also its long intervals of cloudless sunshine, when the snow-clad earth gives redoubled brightnes to the day—when at night the stars beam with intensest lustre, or the moon floods the whole landscape with her most limpid radiance. And then the joyous outbreak of our spring, bursting at once into leaf blossom, redundant with vegetation and vociferous with life and the splendor of summer—its morning voluptuousness and evening glory—its airy palaces of sun-lit clouds piled up in a deep azure sky; and its gusts of tempest of almost tropical grandeur, when the forked lightning and bellowing thunder volley from the battlements of heaven, shake the sultry atmosphere, and the sublime melancholy of our autumn, magnificent in its decay, withering down the pomp of a woodland country, yet reflecting back from its yellow forests the golden serenity of the sky. Truly we may say that in our climate, 'heavens declare the glory of God, and the firmament showeth his handiwork. Day unto day uttereth speech and night unto night showeth knowledge.'"—*Washington Irving.*

BY mixing with the world we often imperceptibly lose our prejudices while engaged in analyzing them.

The Talk for Country Girls.

Mrs. Victoria Fuller, in the *Ohio Cultivator*, in a sisterly way, thus talks to country girls :

The farmers' daughters are soon to be the life as well as pride of the country ; a glorious race of women which no other land can show. I seek not to flatter them ; for before they can become this, they will have to make earnest efforts of one or two kinds. There are some who depreciate their condition, and some who have a false pride in it, because they demand more consideration than they merit. A want of intelligence upon all subjects, and of refined education, is no more necessary in a country than a town-bred girl, in this age of books and newspapers.

Many girls are discouraged because they can not be sent away from home to boarding schools ; but men of superior minds and knowledge of the world would rather have for wives, women well and properly educated at home. And this education can be had wherever the desire is not wanting. A taste for reading does wonders, and an earnest thirst after knowledge is almost certain to attain a sweet draught of the "Pierian spring." There is a farmer's daughter in this very room in which I am writing, a beautiful, refined and intellectual woman, in whose girlhood books were not as plentiful as now, and who gained her education under circumstances that would have discouraged any but one who had as true a love of study.

I will state why I think the country girls are yet to prove the hope of the country. The women of towns and cities are becoming so universally unhealthy, and so almost universally extravagant, foolish, and fashionable, that men are almost in despair of obtaining wives who are not invalids, or providing them with what they demand after they have married them. Unless the young man has the fortune (good or bad) to be the inheritor of wealth, he must spend the best bloom of his youth to acquire enough to "start upon," as people are expected to begin now-a-days.—Many even in high places would go to the country for their choice if they met there equal refinement and intelligence. Women are preparing to take a noble stand in history, and they can not do it in ignorance.

Town girls have the advantage of more highly polished manners and greater accomplishments ; but country girls have infinitely more to recommend them as rivals of their fair city sisters. They have more truth, household knowledge and economy, health, and consequently beauty, simplicity, affection, and freshness of impulse and thought. When they have cultivated minds, there are more chances in their favor for good sense and real ability, because so much is not demanded by the frivolities of society. The added lustre of foreign accomplishment could easily be caught by such a mind from a very little contact with the muses.

I would not speak as though all our farmers' daughters were deficient in education. Many brilliant scholars and talented women may be found among them. In New England this is especially so ; but I would seek to awaken the ambition of all to become that admired and favored class which they ought to be, if they will but unite refined culture with their excellent graces.

A sweet country house, with roses and honeysuckles trained to climb over it ; with good taste, beauty, and intelligence within ; toil enough to insure health, and leisure to court acquaintance with books and flowers and the loveliness of nature, with peace, plenty, and love, is surely one of the paradises which Heaven has left for the attainment of man.

Alas ! how few attain so much, except in imagination.—[Ed.

Material for Men.

A long time ago, a little boy twelve years old, on his road to Vermont, stopped at a country tavern, and paid for his lodging and breakfast by sawing wood, instead of asking for it as a gift. Fifty years later, the same boy passed that same little inn as George Peabody, the banker, whose name is the synonym of magnificent charities—the honored of two hemispheres—the millionare.

Far back in the teens of the present century a young man asked for employment in the Springfield armory ; but he was poor, and modest, and had no friends, so he went away without it ; but, feeling the man within him, he sought work until he found it. An age later, he visited that armory the second time, not as a common day-laborer, but as the ablest speaker of the House of Representatives for many years, and not unlikely our future chief magistrate—N. P. Banks, now Governor of Massachusetts.

Have courage, then, ye boys who have true and manly hearts ; repine not because your parents are not rich, and cannot send you to college. But rather rejoice if you spring from the industrious and intelligent middle, or even the humbler classes of society, who rely upon honest and useful employments, for a livelihood.

Industry and active callings, are often a better school to develope character, than affluence and wealth. An examination of the biographical dictionary, will reveal the fact, that nearly all the great and good men and women of the world, so far, have sprang from poverty and obscurity. Presidents and Governors seldom have sons fit to succeed them ; but more frequently raise up cigar smoking bloats, and consign them to dishonored graves during their own lives,—and all the natural result of idle-

ness and habits of spending, not of earning money.

Therefore take courage, boys in seedy coats, and homespun; for if you take good care of yourselves and shun loafers and loaferly company, and whiskey and tobacco, their uniform accompaniments, and strive to be men, you yet may become such, even far more eminent than you expect.

There is always a great lack, not only of the right kind of boys, but of the right kind of men, to take the responsible places in the world—no lack of those who deem themselves fit, but invariably a great dearth of those who really are. Present appearances among the *rising* generation do not strike us as very promising either, for the future. Therefore take courage, ye boys who would be men, and remember what we say. P.

THE AMERICAN INDUSTRIAL ASSOCIATION.—The above named society was formed in the month of May, 1856, ; its objects are to improve the condition of the working classes in this city, by finding employers for the unemployed poor, in the West, and sending them to their several destinations. Its aims are excellent, because they are founded on the principle of immediate practical benefit and relief to the unemployed, by sending them where they can be useful to themselves and others.—The executive committee is composed of some of the most respectable persons in our city, and the Rev. D. R. Thomason, 67 Greenwich street, is corresponding secretary, and will promptly attend to applications by employers in the West, furnishing evidence of good standing in their communities, and enclosing two postage stamps. This society is supported entirely by voluntary contributions, and deserves, we think, the patronage of all those who wish such a cause success, and who are able to assist in furthering its objects.—*Scientific American.*

MISSOURI WINE.—In Missouri there is a German colony occupying nearly a whole county, where the vine is the principal object of culture. The vintage this year is reported to have been remarkably successful, and the yield will be about 100,000 barrels of wine.

Who believes it?—[ED.

A STEAM carriage was lately tried in the streets of Manchester near Pittsburg which was managed as easily as an omnibus and attained a speed of nine miles an hour.

SOPHISTRY is like a window curtain—it pleases as an ornament, but its use is to keep out the light.

STOCK REGISTER.

Horse Victory at Last.

Our national glory, in the horse racing department, is at length vindicated. Mr. Ten Broeck's Prioress—*our* Prioress—has met thirty-three of the English enemy on "the great Cesarewitch Handicap" arena, and they are vanquished. The intelligence will fly over our country, and every patriot, from the fastidious owner of a "high stepping mare, down to the minutest stable-boy, will hold up his head again, and hurrah for our side. We concur in this conclusion. We are glad to see our yachts triumph in foreign waters, our reaping machines cut all before them on foreign fields, and our horses distance whatever competitors other nations may place beside them. (*Mem.*—We only wish they had done this before.) We hope to record these successes in every department of skill and enterprise, because they reflect credit, not on our things, but on our *men*. And in this light, we are particularly pleased with this final triumph of Prioress. It shows the pluck of Mr. Ten Broeck. His horses have been beaten in some half-dozen contests—and very bad beatings some of them were, too—one has died of the cholera, and another is so disabled that he is withdrawn from all engagements. Under this series of reverses, Mr. Ten Broeck has been advised, commiserated and politely sneered at, to an extent that would unnerve most men.—But he has continued, in face of all odds, with true pluck, putting his horses on every course and making them do their best. This victory, therefore, is of a two-fold nature—a triumph of Prioress over her thirty-three rivals, and of her American owner over a most formidable list of discouragements. The latter touches our national pride quite as much as the former. Here's to the great Cesarewitch victory. —*Boston Journal.*

ANIMALS IN WINTER.—Farmers do not sufficiently sub-divide their yards in winter.—Large and small animals are turned in promiscuously together, and as every farmer knows, the large ones are very ferocious and domineering towards those much inferior, but careful not to provoke the wrath of such as are nearly equal. Turn those together which are of similar size, and they will be more quiet all round. Calves generally are too much neglected, and come out small and puny in spring.—A good manager has constructed a spacious stable for calves in one of his sheds, moderately lighted, and well sheltered from all currents of wind. This apartment is kept clean, the calves fed on good hay, and supplied with good water. They present a very different appearance from other calves in spring.—*Tucker's Annual Register.*



Green Mountain Boy.—Black Hawk Morgan.

This substantial, muscular, *Frenchy* looking Black Hawk horse, is owned by M. and H. Chase, of Sun Prairie, Dane Co., Wis. He took the first premium of $50 for trotting, at the State Fair at Janesville the present year; and notwithstanding the track was very muddy, taking him in over the hoofs perhaps for half the way, he made his mile in 3.15, and hardly seemed fatigued or sweat even under the collar.

We understand he made his mile on the Madison track at the last September races in 2.56 and won the purse for the best trotting stallion in the State.

The foregoing feats establish the fact conclusively, that he is a horse of bottom and speed, and the probability is that his stock will prove valuable. This probability is much strengthened by his pedigree, which is established by the following certificates furnished us by the owner.

BRIDGEPORT, Vt., April 25th, 1853.

This may certify that the young Chestnut Stud which I sold to John Ward was sired by the Black Hawk Horse owned by D. & D. E. Hill, of Bridgeport, Vermont. His dam was a full blood Morgan, and was sired by the celebrated Gifford Morgan.

Attest: JOEL RANDALL.

This may certify that the young Chestnut Stud owned by John Ward, and raised by Joel Randall of Bridgeport, Vermont, was sired by the old Black Hawk.

Attest: DAVID HILL.

We also copy a statement credited to the Boston *Cultivator*, as bearing upon the value in which this stock is held where raised and best known.

"We have before us a list comprising a por-

tion of the Black Hawk stock, which have been bred and sold in the town of Bridgeport, Vermont, where the old Black Hawk has been kept since 1844. From this it appears that thirty-eight animals, and an interest in the thirty-ninth to the amount of one-half, have brought the sum of $22,737, or an average of $500 and a fraction each ; their ages ranged from three months to six years ; most of them were colts (entire,) but some were geldings and some fillys. This is wholly from actual sales in this town, and has no reference to stock on hand. It shows in a favorable light the estimation in which the stock is held where it is best known.

Watering Sheep in Winter.

That sheep can do with less water than other domestic animals, is well known. That they should be *forced* to do with a less quantity than they desire, or compelled to do without any, except what is accidentally supplied by melting snow or rain, no reasonable or merciful man can believe for one moment. In some experiments on South Down sheep, at Rothamstead, we found that in the summer months each sheep eat 3 lbs. of clover hay, and drank about 6 lbs. of water daily. Thinking that they drank more than was favorable for the deposition of fat, we confined them to a less quantity of water for one week. The result was that during that time they eat less food and *lost weight.* This result satisfied us that sheep knew better than man, though he were scientific, how much water they required.

But we need not quote experiments. The common sense of every man tells him that sheep, as well as all other animals, should be abundantly supplied with good, fresh water.—Cows and sheep, if possible, should have free access to it *at all times.* For, unlike the horse, they will not always drink at stated times, however regularly observed. A well, pump and troughs would seem, therefore, to be necessary appendages to every well managed barnyard or sheep fold. Kind reader, *act* on this matter, and your sheep and cows will bless you, if not in words, at least in wool, milk and profit.

Rules for Fattening Animals.—1. Let them have good, clean, nourishing food. 2. Feed them with the utmost regularity as to time—for "hope deferred" wastes flesh by fretting. 3. Feed often, and never give a surplus. 4. Let the pen or stable be kept clean and sweet—dirt or filth is always adverse to thrift. 5. Let the air be fresh and pure. 7. They should have *rest* most of the time, and only very gentle exercise. 8. Keep them tranquil, and avoid fright and anxiety. If these are carefully observed, they will make a vast difference in results.—*Tucker's Annual Register.*

HORTICULTURAL.

The most important horticultural employment for the winter is the study of the science during the leisure afforded by the season, and to prepare, as fully as possible, in all respects, for the opening of spring. The pleasant days may be turned to good account in the way of pruning and trimming up such trees as need it, and in watching and warding off rabbits, mice, and other destroyers.

Nurserymen can push their business of root-grafting, inside, to good advantage, if their stock has been properly laid in for the purpose. But new beginners will find their true interest in devoting the stormy days and long evenings to the study, not only of horticultural, but agricultural books, a good list of which can be seen upon the inside of the back leaf of the cover of this number. They are, many of them, excellent works, and worth, when understood, ten times their cost. Those who would like a fine selection of them "without money or price," should rush us up a premium list of subscribers. Those who take hold of it energetically can do it in a short time, and be pleased at their success, as well as ourselves, besides getting a stock to keep them reading for a year or two. P.

Dahlias from Seed.—Miss M. C. P., of Freeport, Ill., inquires how to propagate Dahlias from seed, and how long before they will bloom. The seed can be sown in the Spring, and small tubers will be produced the first year. These taken up in the Fall and replanted in Spring, will sometimes, though rarely, produce feeble flowers the next year. If taken up the second Autumn and again replanted in Spring, a better bloom will be produced, but three or four years is required to bring them to maturity. They are in this respect like the potato. But this plant has been materially changed by propagation—its stamens having become almost entirely changed to petals, and perfect seed is seldom produced. On this account, propagation from seed is now rarely attempted.

Again, when sown, inferior varieties are usually more numerous than good, as it sports into kinds widely different from the parent.—Better leave this to amateur cultivators, who have already produced almost everything desirable in a dahlia, save a few colors which they are still striving for. Procure the roots, or potted plants, in the Spring, from seed stores or nurserymen, and you can increase the stock rapidly by separating and planting the numerous roots produced annually.

MESSRS EDITORS—Having for a few years past devoted some time and attention to the cultivation of fruit, I propose, if it meets your approval, to furnish you, in a series of short communications, the results of my experience. This I have concluded to do, not from any ambition to appear in the public prints, but from a belief that, in our State, differing so materially as it does, in soil and climate, from the Eastern States, it is only by testing and experimenting for ourselves, that we can obtain a list of fruits of the different crops suited to cultivation with us. In order to do this successfully, it is necessary that we should receive the benefit of each others experiments; and I know of no better way of communicating this information than through our own paper, the *Farmer*.

There are far too many who raise fruit that are unable to give any information in regard to it; and far too few that give its cultivation the attention it deserves. Let us illustrate the usual manner by an example: Farmer A., after years of neglect, concludes that he will start an orchard on his farm. In the spring he hurries to the nursery most convenient, (if some tree peddler has not previously received his order), without any further knowledge of his wants than that he wishes to purchase a certain number of trees. He readily takes such as the nursery man offers, if they are only of a *large size*. When he sets them out, he does it in a hurried and careless manner, without any previous preparation of the ground; and as he cannot *spare* the small portion of his farm that he has set apart for the orchard, he will, the first season, grow a crop of wheat, barley, or oats on the same, and at least every alternate year thereafter, instead of devoting the same to thorough cultivation with root-crops only. The labels are soon burst from the tree, and no memorandum of the same is preserved. The trees recive no attention except to be kept well trimmed up, lest the crop should be injured, or some ground near the tree should be unproductive.

With all this neglect and want of cultivation a portion of the trees will live, make a slow growth annually, and eventually commence bearing. His neighbor B., who has recently purchased a farm in his vicinity, wishing to set out an orchard, but not being acquainted with fruit any further than to know that some trees are not only much superior to others in productiveness and flavor of fruit, but also in hardiness, visits A. to examine his orchard and fruit, and obtain the results of his experience. They go to the orchard, examine the trees and try the fruit. After passing by the Green Everlastings, Romanites, Phœnix, &c., they find a Rambo, Swaar, Yellow Bellflower, or some other variety equally valuable, that B. concludes he would like to cultivate, and inquires the name, when A. is obliged to confess his ignorance, and perhaps thinks for the first time, that it would be a gratification to himself and a benefit to his neighbor, if he had made and preserved a plat of his orchard, with the the varieties marked thereon. Is not this too frequently the case?

With this introductory digression, I will proceed; and as it is necessary, in giving the results of our experiments in fruit culture, that a description of the soil, expenses, &c., should be given, I will remark that my garden is on a level tract of what was once a burr oak opening. The soil is a sandy loam, ranging in depth from a foot to eighteen inches; the subsoil is a yellow loam, from two to three feet in depth, and underneath this a bed of sand. The soil is so porous that it is readily worked soon after a shower, but is not easily affected by drought.

As I saw, in a recent number of the *Farmer* an article in regard to Strawberries, I will, in my next, take that subject, and give you my mode of cultivation, varieties cultivated, and my own conclusions as to the best. PASTINATOR.

TO PROTECT TREES FROM MICE.—On taking up the *Homestead* of this week, my attention was drawn to an article on this subject. If you please to add the writer's long experience of a cheap and an effectual protection, it is at your service. Every observer will notice mice never girdle trees where the soil is *bare*, where they have nothing for nests, or for shelter.—Therefore, you have only, before the falling of snow, with a hoe, to scrape from the tree, about eighteen inches in circumference, all the grass and leaves, as a sure safeguard against their ravages.

NOTE.—To bank up a small mound of earth six or eight inches high about the trees, before freezing up, is a still better protection, besides giving the tree a valuable support against the winter winds. The mound should be removed early in the spring. P.

THOSE who apply themselves too much to little things, commonly become incapable of great ones.

The Flower Garden

Has not occupied so much space in the *Farmer* for the last year, as we intend it shall during the year to come. Not that we regard it as one of the essentials of life, but one of the embellishments that well pays for cultivation. None are so poor but what they can afford the expense and painstaking necessary to twine the flower and the vine around their cottage doors; and if it be but the humble morning glory, or four, o'clock, or the wild creeping honeysuckle of our western thickets, they add a charm to the humblest cot, as well as to the proudest palace. All admire flowers, and all ladies should study and practice their cultivation. We have quite a number of pretty cuts, illustrating the choice shrubs and flowers which we purpose to insert, from time to time, in our horticultural department.



THE DOUBLE CRIMSON CURRANT.

(*Ribes sanguineum*). The single crimson variety is well-known; the double is more showy, and its pendant racemes when in flower, render it a striking object. Like the single crimson it is not entirely hardy, unless shaded from the winter and spring sun; with this precaution we have never known it to be injured in 43° north latitude. On a dry soil with dry bottom, it has usually passed the winter without injury, even if unprotected in this way. The blossoms are larger than the single variety, the racemes from three to six inches in length; and the effect of the shrub, when laden in spring with their fine pendant blossoms, is very rich and striking.

LIME FOR PRESERVING APPLES.—The effect of lime appears two-fold—as an antiseptic, and as an absorbant of unnecessary or improper moisture. Apples may be kept by the following process, in excellent condition: Procure tight barrels, place a layer of wheat chaff on the bottom, over this sprinkle lime and then deposit a layer of apples—then again a layer of chaff and lime, and of apples till the barrel is full. To prevent lime-dust touching the apples, a little chaff may be strewn over it before the apples are placed upon it. A quart of lime for a barrel will be sufficient. The fresher it is, the better it will accomplish its purpose. If an apple decays in a barrel packed in this way, contamination of others is prevented by the chaff and lime, and the gases generated by putrefactive fermentation are absorbed, and the confined air kept sweet.—*Country Gentleman.*

A GOOD IDEA.—It is a shame, with our climate and soil, that we do not raise apples, pears, and peaches enough for our markets.—There is no reason why *forest* trees alone should be set along the highways. Many kinds of fruit trees could as well be set there as in the gardens or orchards. Travelers, boys and birds would get some of the fruits, but with common care, more than enough would be left to compensate the owner. It would be decidedly mean for travelers to strip trees of their fruits, which were set out for their comfort.—They help themselves from wayside orchards; would they do more from trees set by the side of the highways?—*Ex.*

GRAPE GROWERS.—The grape growers of the West are receiving large accessions to their numbers from Europe. A ship arrived at Philadelphia a few days since from Genoa, bringing one hundred and twenty-five passengers, who all came to this country with the intention of proceeding West and engaging in the culture of the grape, with a view to the production of wine.

ANY one desirous of keeping seed from the depredations of mice can do so by mixing camphor gum with them. Camphor placed in drawers or trunks will prevent mice from doing any injury in them. They object to the odor of camphor and keep at a distance from it.

MECHANICAL.

Patent Office Reports.

The Agricultural and Mechanical Patent Office Reports for 1856, have recently come to hand; the Agricultural is embraced in one volume, and the Mechanical in three; the last of which is devoted entirely to illustrations of the different machines, principles and designs patented during the year 1856.

The Agricultural Report is a book of the usual size and made up of various interesting materials, from the able editorial pen of D. J. Browne. Also valuable essays, among which one upon the quadrupeds of Illinois, by Rob't Kennicott, (splendidly illustrated) is highly interesting, not only to Illinois, but to the whole Northwest, as ably portraying the Natural History of her animal inhabitants. The article on the Gopher in this number is an extract from it. We shall from time to time copy the history of other animals particularly interesting to our readers, for their good or evil qualities.

Another equally interesting article upon the birds injurious to agriculture, by Ezekiel Holmes of Maine, will be widely read and highly useful. Its illustrations are also numerous and beautiful. We purpose having some of them re-engraved for publication. But the crowning charm in the way of illustration is Peabody's new Haut boy Strawberry; a more tempting or luscious picture never caught the eye since the days of Eden. We hope yet to see the reality in full perfection among us.—And from all we hear in relation to them, we see no reason why they may not be successfully cultivated in our Northern climate nearly as perfect and large (six inches in circumference) as in Georgia, the place of their origin.

Articles on Drainage, Fertilization, Manures, Cotton, Grape growing, and wine making, etc. make up the balance of the Volume. As a whole it is much ahead of any of its predecessors, and highly creditable to the department and the Nation. Probably over one hundred thousand copies have been printed, so that they cannot fail of a wide circulation.

The Mechanical Report, as before stated, is much the most voluminous, embracing three good sized volumes. A hasty glance through them shows the rapid strides that are being made in all the industrial and labor-saving departments. A synopsis of some of the more important features is all that our space will allow us. 4,960 applications for patents were made in 1856, and 2,502 granted, among which may be found the following items, showing somewhat the way the public mind is running, and which are the prominent hobbies of the times.

Of bee hives 4 were patented, churns 10, corn shellers 12, harvesters and mowers (the great hobby of the times) over 100, corn huskers 7, seed planters and sowers (the next great agricultural hobby) over 60, plows over 20, potato diggers 4, hay rakers 13, straw cutters 9, threshers 6, locks 26, vices 10, wrenches 11, knitting machines 7, looms 17, sewing machines (another of the *rages* of the times) 26, India rubber 16, heating furnaces 21, gas regulators 15, lamps 19, stoves 17.

Steam enginery and its appendages comes in as among the most prominent and revolutionizing features of the times, showing that a large amount of our best mind is being directed to its improvement in every feature.—Among the patents in a single year it comes in for over 100. Let us hope that among others they embrace new and more perfect safeguards against its occasional destructiveness, nine-tenths of which is undoubtedly wholly unnecessary.

In boat and ship building—another of the great interests of the world—we find towards 100 patents, showing an undoubted rapid improvement in this direction, that is telling heavily upon the improvement and progress o the race. Among other things there is 11 patents on fences, and 15 on gates; 17 on carriage axles, and 80 on other parts of carriages. 49 upon railway cars (and in our opinion still leaving room for many more,) pumps 24, wind mills 14, mills and mill stones 18, *hoop* machines 6, (altogether too few we should suppose to supply the *growing* demand,) saws and saw mills for wood and stone nearly 100, shingle machines 14, brick machines 19; 17 patents on the manufacture of boots and shoes, 12 for pairing and slicing apples, 17 on bedsteads, 22 washing machines (to be added to the thousands before invented and few or none of which are used,) 13 patent pens, 11 photographs, and 16 printing presses, wind up the more prominent of the useful, while more than 100 in the way of pistols, guns, and their appendages of destruction follow.

The foregoing are among the more prominent patents, saying nothing about multitudes

of lesser note. Altogether they go to show an activity still continuing in the inventive world in no way abated from the past, nor in any way warranting the probability of an exhaustion of the subject. The field of useful human invention will probably be exhausted when the love of novelty, of wealth, and distinction cease to act upon, move, and stimulate the human mind. Altogether the Patent Office Reports for 1856, are rich fields for investigation and study, not only for the Farmer and Mechanic, but for the Statesman and Philosopher. They embody abundant evidence of the progressive greatness of our age and country, and shadow forth more clearly the future that lies before us. Let the thoughtful and studious, who are fortunate enough to receive copies, give them a careful perusal.

Our members of Congress, who have large quantities for distribution, are usually happy to forward them to such as address them by letter. P.

Portable Grist Mills.

The *N. E. Farmer* thus answers a correspondent's inquiry:—There are several kinds of horse portable grist-mills, but we cannot say which is the best. We have seen some of the cast-iron mills in operation where they made good meal at the rate of three or four bushels an hour, or perhaps something more than that, but this gave us no knowledge of how long they would wear, or what the cost of running would be. The "Little Giant," "Magic," and "Young America," are cast-iron; "Felton's Patent Self-Sharpening Grist Mill," we have never seen at work; "Brown's Grist Mill" is made of the French Burr Stone, and always works well, but is somewhat more expensive than others. Our opinion is, however, if you wish to grind *two hundred bushels of corn annually*, that it would be a matter of economy to procure a good mill—not a cheap one in the common sense.

NOTE.—For the information of those who are interested, we would say that we are now using one of the "Young America Mills," and that it will grind its ten bushels of feed per hour with perfect ease, and the beauty of it is that when it gets dull, (if it ever does) it is so made that a new set of grinders can be put on in a few minutes. A spare set is furnished with the mill, without extra charge; thus making it twice as durable and good as the Little Giant, or any other cast-iron horse mill that is made. In fact we see no reason why a Young America will not last a farmer a lifetime, and if he is feeding much, pay for itself every year.—[EDS.

NATURAL HISTORY.

ENTOMOLOGY—ITS ÆSTHETIC USES.

[Continued from page 368.]

"How wondrous, too, their varied *form*—
Some queer, fantastic, others beautiful—
All with organs well adapted."

Not alone through delicately tinted, or gorgeous colorings, does our favorite science woo her votaries; with countless, inimitable forms she is also ready to delight the wisdom-seeking, beauty-loving soul.

We look at the profusion of beauty with which the Infinite One has garnished the earth and emblazoned the sky, until he seems self-delighted with the world's carpet of green, its herbarium of manifold plants and beautiful flowers, its sparkling mirrors of water, and tapestry of clouds—all so gloriously tinted by his own hand with the magic pencil of wonder-working sunlight—and spontaneously exclaim with rapture—What an *Artist* is our Father!

Again we look, and are filled with wonder at its wealth of *forms*. That carpet of green is made up of countless individual spires, no two alike, yet each a perfect specimen; those plants and flowers, from the sturdy oak to delicate blue-bell, present their millions of beautiful models; those mirrors of water, through never-ceasing motion delight the eye with leaping waves or circling wavelets that no art can imitate; those ever-shifting clouds are a never-ending joy and study; and with a new enthusiasm we again exclaim—God is also a *Geometrician!*

Nor is this wealth of forms confined to the more palpable objects in nature. The numberless multitudes of tiny insects that people water, earth and air, nay, the myriad races of microscopic animalcules are even more demonstrative of the infinity of God's wisdom and skill. Let us spend a little time, therefore, in studying the

GENERAL ANATOMY OF INSECTS.

Ingenious artizans have thought it the *ultimatum* of human skill in mechanics to construct a perfect watch so small that a queen might wear it in her signet ring. Yet how insignificant when compared with that which formed an infusoria—so infinitessimally small that 40,000,000,000 may sport in the same drop of water, each with as much room proportionally as have the fishes of the sea, yet each a perfect being, with organs all complete! But, of insects visible to the naked eye, the

varied form and perfect mechanism are a most interesting study. With some the mimicry of larger animals is so complete as to seem a real burlesque. The *Scarabœus macrepus* with miniature fore legs and kangaroo hind ones; the *Hispa* with bristling spines and quill-like points aping the hedgehog; the *Orthophagus taurus*, whose advance reminds one of a fiercely charging mad bull; the *Lucanno Cervus*, with branching antlers, making one fearful for his safety as he attempts a passage through the thickly-growing grass; and the sturdy, rhinoceros-horned *Oryetes* are examples.

Others by their form and physiognomy appear symbolical of human character. For instance, there is the little busy bee whose stirring look and buzzing wing have marked him as the emblem of active industry the world over; and there the beautiful moth or butterfly, borne by radiant gossamer wings from flower to flower, the symbol of dainty indulgence and the innocence of ethereal spirits; while yet others emblemize the infernal elements by their dismal hue and demoniac air, their dreadful jaws and cruel fangs; of which it might well be said—

"Their shape would make them, had they bulk and size,
More hideous foes than fancy can devise;
With helmet heads and dragon scales adorned,
The mighty myriads now securely scorned,
Would mock the majesty of man's high birth,
Despise his bulwarks, and unpeople earth."

Again, the *instruments* with which some are provided are objects of wonder to the curious student. *Instruments for locomotion.*—These are as wonderful and various as we can conceive it possible for the Infinite Mind to have formed them. And the ceaseless activities of those organs or instruments—what a stillness would reign in the world without them! Some are like

"The Forest's leaping panther,
Fierce, beautiful and fleet;"

some slow and awkward, like the sloth, clumsily wagging their way along; some with a stately dignity, as if governed by a royal prudence; some gaily and jollily as though life were a hey-day and they were bound to make the most of it; others sullenly and threateningly, with fiendish air, their weapons of death brandishing even man into terror.

And then the wonderful mechanism by which they walk, run, and leap as do quadrupeds; fly with the birds,

"A thousand ways,
Upward and downward, thwarting and convolved;"

crawl or glide with the reptiles; or swim like the finny tribes—imitating every movement of larger animals; while others so far out-vie even man in skill and ingenuity as to make him forget his high estate and almost envy these *minims* of nature. Who has not a thousand times admired the facility and adroitness of those spiders which

"Spread their nets, whether they be
In poet's tower, cellar, barn or tree;"

so quickly, and seemingly without effort, ascending and descending, themselves the darting shuttles which weave so quickly, and so perfectly, their beautiful web—wondered at the fleetness of that little mite so common in strawberry beds, which, though the garden-clods are Appenines or Alps in comparison to its size, "gallops over them with a thousand times greater proportionate speed than the swiftest race-horse"—or been provoked to immoderate laughter by the "hot haste" with which the ermine-moth caterpillar, when frightened from his luxurious feast on dandelion or marigold takes to his "eight pairs of heels" in precipitate flight?

We repeat it—until able to easily jump across Lake Michigan—with head inverted, walk up the azure dome of the sky—or vault, at one bound into the saddle of the clouds, man, with all his boasting must yield the palm to the flea, the grasshopper and the fly!

Size is the ordinary measure of power; yet how baby-like is that strength of the elephant, by which, with mechanical aid, he has been known to launch a ship, compared with that with which the tiny ant leisurely walks off with a load an hundred times its own weight. To look at the gossamer, almost invisible, wings of the most fragile butterfly, one would imagine them too frail for even ether, twice-refined, much more for the boisterous waves of our tempestuous atmosphere; and yet we have seen them making headway against a wind so strong that the hawk and the eagle faltered in their course.

The *persistency* of insect force is equally remarkable. You would hardly expect those luxurious wanderers, whose idle flitting

"From bed to bed, from one to t'other border,"

is only

"To tipple freely in a flower,"

to illustrate untiringness as well as power of flight. Nevertheless, there are migratory butterflies whose bold endeavor shrinks not from a flight across the mighty deep—scorning

"The woods, the rivers, and the meadows green,"

of native lands. The ant too, and the preda-

tory beetle will persist for a whole day in the exercise of miraculous strength without seeming to be fatigued; while that royal butterfly, the "Purple Emperor" is wont to mount with the ascending sun, career aloft in zenith hights, descending thence, attendant on the "king of day."

But the locomotive instruments of insects are not confined to pedestrian feats upon the earth, and ærial navigation. There are numerous *aquatic* tribes, prepared with reference to water-walking, water-diving and water-swimming; while not a few are competent to all these performances, indulging in each as occasion may require. Another remarkable feature of insect locomotion is the facility with which many of them take any desired direction,—forwards, backwards, rightward, leftward, upward and downward are all the same to them. How often have we watched the rapid movements of the fly and water-skipper, darting with equal rapidity in every conceivable direction. When we examine them minutely, we find every variety of ingenious contrivance—limbs whose joints are adapted to every possible gyration—wings of like construction—sails—paddles and canoe-feet—machinery the most complex, yet marvellously subject to *insect will*. H.

The American Hare.—Hunting.

"When huntsmen wind the mellow horn,
And from its covert start the fearful prey ——"

we always feel like taking his part. and, setting the eager hounds clear off the track. Call us chicken-hearted if you will, but from the time, when, a little boy, we used to get spanked by our older brothers for slipping out first in the early wintry morning, and letting the little captive rabbit escape from his prison trap, we have always been averse to "sporting" of every kind—feeling much,

"At heart, like courtly Chesterfield,
Who, after a long chase o'er hills, dales, bushes,
And what not, though he rode beyond all price,
Ask'd next day, 'If men ever hunted twice?'"

To the hunting of wolves, bears, panthers, wild-cats, &c., we do not object; but for six men and fourteen yelping dogs to beset one poor, frightened hare, seems to us ridiculous —and *mean*.

The cut above is designed to represent the European hare; but the American is so nearly like it, with the difference of being smaller, that the engraving answers our purpose equally well.

The "rabbit," as it is improperly called in this country, is naturally an innocent animal, wishing nobody in the world any harm, and only "pitching into" fruit trees when forced to do so by pinching hunger. In the South, where the winters are mild, and the little animal can pick up his dinner here and there from fruits and grains, the bark of the trees rarely suffer.

But here in Wisconsin, where the severity of the season makes it more difficult for him



THE HARE.

to get his daily rations, he often satiates his appetite with the tender bark of young apple-trees, and must therefore expect to take the consequences. Moreover, his flesh is sweet and decidedly palatable, so that the temptation is two-fold. And, then, racing over the hills and across the prairies through the snow, is undoubtedly an exciting and health-giving exercise; so that, though

"Poor the triumph o'er the timid hare—
Scared from the cover, and now to some lone seat
Retired: the rushy fen; the ragged fringe,
Stretched o'er the stormy heath; the stubble chapt;
The thistly lawn; the thick, entangled broom;
Of the same friendly hue, the withered fern;
The fallow ground laid open to the sun,
Concoctive; and the nodding sandy bank,
Hung o'er the mazes of the mountain brook;
Her best precaution being vain ——"

if the boys will all agree to be *humane*, we consent to the chase. H.

JOHN P. GRAY, of Fair Play, Wis., has invented a new steam plow, which does away with the use of the traction engine, and thereby renders it lighter and more manageable; the motive arrangement being two right and left screw shafts working in the ground. It might be called a land propeller.—*Scientific American.*

EDUCATIONAL.

How shall the Farmer be Educated?

NO. 1.

There is nothing, connected with the great educational interests of our country, more deplorably true, than that the agricultural classes, in the matter of facilities for scientific and literary progress, are falling behind the mechanical, the commercial, and professional. The mechanic has his Mechanic's Institute, with a fine library, illustrative apparatus, scientific lectures and school of design,—the merchant his Commercial College, and magnificent Mercantile Library,—the professional man his munificently endowed University, with medical, legal, and theological departments appended—and the youth of the cities have their free Common Schools, High Schools, and Night High-Schools; but where are the well-organized, Common Schools, the Night High-Schools, public libraries, courses of scientific lectures, scientific clubs and agricultural colleges, for the farmer and the youth of the rural districts?

Now it cannot be argued that the interests of the farming classes are less important, or necessity for general intelligence or scientific knowledge on their part, less imperative,—all this is so evident that even the half-thinking can hardly fail to see it. Such reasoning might have been considered valid fifty years ago, when our great grand-fathers supposed that farming involved only a few plain principles, so simple in themselves, and so perfectly easy of application, that the farmer, "though a fool, need not err therein." Nay, within your own recollection, good reader, if the shadow of your days approaches the noon-mark of life, the term *science* of farming was uncoined—lying in the rough ore of human language and human history, waiting for the genius of a Davy, a Chaptal, Boussingalt and Liebig to mint and give it current value among men.

Many of you remember distinctly the "bottom field" where your fathers planted corn for twenty years without interruption, and without seeming to notice that during that time the product had fallen from 100 to 50 bushels per acre—the old "Bull plow," with wooden mould-board, a few degrees in advance of the Morocco or Roman iron-shod, forked stick,—and the old barn, conveniently located on the bank of the stream, so that all *troublesome manure* might be thrown into its waters, and thus *got rid of* without further expense! It may be—no, we will not insult you by the supposition that *possibly* some of you have neighbors who "farm it" in that same style, even to this day, when the light of science has scarcely left a nook or corner in the whole civilized world unilluminated. Still there are a few people, even in Wisconsin, no doubt, who think all this talk about scientific farming is a humbug—who honestly believe that no improvement can be made in the practice of their fathers—and who are quite as much opposed to the innovations of the FARMER, as they were to canals, steamboats, and railroads successively. We are charitable enough, however, to believe that the number of such is proportionally small, and is every day growing smaller. The demonstrations of science are so rapidly growing in number and increasing in strength, that soon the rejection of its helps will be considered proof positive of either the insanity or total depravity of him who opposes.

The mere fact that the most complex processes of the material world are involved in the growth of the plant it is his business to rear, is sufficient proof that the whole field of natural science requires to be cultivated by him. The plant, in its general and special composition must be known,—the nature of the soil must be understood,—scientific experiments must be instituted as a means of determining the most economical method of developing the latent powers of the soil, and of bringing it to the highest degree of productiveness,—the manifold relations of climate, embracing its ever active elements, thermometric, barometric, hygrometric, electric, &c., must be carefully studied and duly appreciated,—in a word, the whole vast range of physiological, chemical and physical law must be mastered before he will have attained the *highest* results of a *perfectly rational practice.* Talk as you will, there is no department in the whole college of the sciences so vast in the area it covers, so important in the results it seeks to attain, so invested with dignity and crowned with glory, as this Agriculture that is to be. We are a nation of farmers, producing the food we eat ourselves, and satisfying the hunger of starving millions besides. But the elemental treasury is not inexhaustible: the lands of Virginia, and the soil of the whole South, was once rich and fertile like ours; but generation after generation has fed upon its

fruits, and to-day the planter is compelled to make up for the want of fertility by a more vigorous use of the lash; and the land once valuable, aye, the very soil that inurns the ashes of our ancestral heroes, is fast becoming a barren waste.

Every year the arable lands of the United States deteriorate in value to the amount of $13,000,000! and chiefly for the want of practical skill in their management. And the matter is constantly growing worse. Is it not high time that something were done to stay this wasting process? or shall this deterioration go on until the beautiful lands of the wide spreading West shall have been blighted and wasted by a like system of what is falsely called *husbandry*? That is the plain practical question to be answered by the farmers of Wisconsin. Shall we, as a State, continue to lose thousands of dollars annually on our cultivated lands, when the means lie within our reach to put a stop to the desolation?

There is but one remedy—to educate the tillers of the soil—to educate the growing youth who are destined to become farmers, in the noble science of agriculture; so that they may be as familiar with the beautiful process of vegetable growth, the essential conditions, and the best mode of meeting those conditions, as the well-skilled engineer with the various parts of his machinery, the philosophy of its construction, and the law of its operation. Nothing less than this will guarantee to our soil a perpetual fertility.

But *how* shall we accomplish this great work of educating the yeomanry of our State—of elevating them as a mass to the recognized dignity of nature's true noblemen?

This is certainly an important question, and in several successive articles we propose to answer it, treating first of Clubs, secondly of Schools and Academies, and thirdly of Agricultural Colleges. H.

Sound Advice.—In a celebrated satire, (the Pursuits of Literature) much read about twenty-five years ago, I remember one counsel there addressed to young men, but in fact, of universal application. "I call upon them," said the author, "to dare to be ignorant of many things." A wise counsel, and justly expressed, for it requires much courage to forsake popular paths of knowledge, merely upon a conviction that they are not favorable to the ultimate ends of knowledge.—*DeQuincey.*

From the State Journal.

Educational Facilities—To Whom Furnished.

NO. 1.

BY MRS. HOYT.

We are neither constitutionally nor professionally a grumbler; and yet, each day there are murmurings bubbling up from the depths of our soul against the great wrong involved in the world's system of education.

The window where oft we sit to write, presents two classes of objects, so discordant as to make the contrast always painful.

There is the beautiful Mendota—its emerald cup full of clear, sparkling water, now shining in the sunlight, now lashed into foam by the fury of the storm—but ever suggestive of the impartiality of God, who has made it to heave in the ocean billow, to flow evermore in the swelling river, to leap in the cascade, to murmur in the brook, to haste down the mountain in the singing rill and laughing rivulet, to course through numberless hidden fissures in the rocky earth, and float on unseen wings of vapor above us—*free* and life-giving, alike to the sportive gnat, the solemn elephant, and godlike man.

There, too, looming up in the distance, and just within the range of our feeble vision, is the imposing external of the University of Wisconsin—constructed of the material, and based upon the soil made by our common Father; chartered for the education of the "*youth*" of our noble State, and feigning to look out from its lofty eminence, like an impartial matron, upon her two hundred thousand children with an equal affection for all; yet opening the doors of her halls to such alone as were fortunate enough to have been born inheritors of the "*lordly* right!" Every time we look at it there is revived a feeling of sadness—the reflex of that impulsive indignation in which we used to indulge, when, in the youthful past, we looked with longing eyes from the narrow walls where we could not get enough to learn, to the honored halls where there were the—to us—forbidden resources of an education our lazy little brothers would not have. For the State University of our native, as of our adopted home, made provision for but part of her great natural family; and, as usual, we *girls* were on the disinherited side.

The years that have passed since then, have in no degree effaced our sense of the injustice

of such unequal distribution of educational facilities. A nation so strong and rich as our beloved own, with three quarters of a century of unparalleled success in all that makes a people prosperous and happy, yet too poor to give to more than half her children that knowledge that is the true bread of life! so slow in understanding the divine injunction, "This ought ye to have done, and not to have left the other undone."

Let those who are capable of an unprejudiced view of facts, look at things as they have, and do now exist.

The State University, with its foundations laid for a high and liberal culture, a munificent endowment as a material basis, its comfortable and pleasant buildings filled with needful apparatus, cabinets and libraries, is already in actual operation, with an able and well-sustained Board of Instruction. The Female Seminary of our city is no less an actuality—but with no permanent foundation, because no material basis on which to rest—without room whereon to set the sole of it foot, (except indeed, *a part at a time*), it is struggling on against all sorts of disadvantages, with this one clearly defined privilege—living if it can, dying if it must!

Now from these two institutions are coming those who will represent the men and women of their day. The boys will go forth, as is meet, to do the rough work of the material world; to open up the great highways through which to pioneer the civilization of science and the arts of peace to the ends of the earth. The girls, as hand-maidens of the great All-Father, to co-work with him in the guidance and development of youthful mind—to so impress, protect, and beautify the unfolding leaves of the little soul-bud, that the full-grown flower may be a pefume and a joy throughout eternity.

Is it unphilosophical to suppose that He who "sees the end from the beginning" attaches more importance to the character of this work than we do to the quality of those agents through whom He has ordained its accomplishment? Nay, is it presumptuous to believe that the great Heart of the Universe throbs with disappointment, when seeing how inadequately are apportioned the gifts of that complete development through which alone the race has the possibility of reaching a higher plane of being? Society—by which we mean the world—needs nothing so much as women—true, earnest-hearted, self-relying, self-respecting women.

Women need nothing so much as education—by which we mean development—and there is no advocacy of a position to which any just mind can demur, when we say, in their behalf, they have a right to a better than they have ever received. Theirs is a work in the accomplishment of which no less than the best use of their best powers is needed; and yet we hazard the assertion that there are few who have found themselves surrounded by the serious duties of womanhood, without feeling keenly the humiliation of a position they were not fitted to fill.

Who is so stupid that he marvels why this is so? or so ignorant that he asks where lies the sin of this great wrong?

Go look at the rent-roll of the vast educational estate of the world, and from its never-to-be-effaced records read the balance sheet, at sight of which manly boasting may well "hide its diminished head."

When will the world learn wisdom and practice justice? The wisdom that sets no barriers of prejudice or assumption as hindrances to the largest possible development of the *whole* people; the justice that dispenses to men and women equal advantages, before it sits in judgment upon unequal performances.

Never before has the subject of Education engrossed the attention of so many minds of every grade of ability and culture. Theoretically it has almost become a hobby. It has its *shibboleth*, its watchwords, and we sometimes fear that "mental development" and "the march of mind" may yet take the place of "manifest destiny" and "our country right or wrong."

There is great danger that the true end and aim of all right education will be overlooked in our eagerness to secure intellectual advancement. Education has been considered as an end, not as a means. The popular idea of an education is, the acquiring of a certain amount of information—a certain amout of mental discipline; the aim has been to make good thinkers, or good reasoners, not to make *good men*. This is clearly seen when we carefully examine our systems of education, the routine of study, and the arrangements and appliances for acquiring knowledge. In the first place, our systems of education are not based upon a clear recognition of the essential nature of the being to be educated.

It is said that in Chinese maps of the world, the "Celestial Empire" occupies the centra' and larger portion, while Europe and America are represented as small Islands, and placed in

the corners by themselves. So, in our systems of education, mind and intellect, have occupied the foreground, and been represented in magnified proportions, while the physical, the moral, the emotional parts of our nature have been in a great measure overlooked or placed in the background as of but little importance. As a consequence, among educated men, (so called), we often find moral dwarfs or monsters, physical imbecilities, hermaproditic malformations; a well-developed intellect matched with a puny frame, or perhaps a mind and body erect and noble, united with a perverted conscience and a depraved heart. Now, a true education is a *full* and *proper* development of *all* the faculties and powers of the individual; not only a full but a *proper* development, a development based not merely upon the *nature* of the faculties, but also upon the relation the individual sustains through those faculties to everything in the universe—to time and eternity—to God Himself.

Education, then, is a means of promoting personal cultivation and improvement, social regeneration, and public national growth and life; and any system which fails to provide for all of these ends, is essentially defective, and cannot be relied on to make truly educated men and women.—*Wisconsin Journal of Education.*

THE AGRICULTURAL COLLEGE.—In our September number, in referring to the time when the terms end and commence at the Agricultural College, an error was committed. The first term of the institution ended on the last Wednesday of October, when a highly satisfactory examination took place.

The next term commences on the first Wednesday of December. Accommodation will be then extended to one hundred students. Applicants must be present on Tuesday morning preceding, and if possible on Monday. Fifty, and perhaps sixty new students will be received. They must be over fourteen years of age, and pass a good examination in Arithmetic, Grammer, Geography, Reading, Writing and Spelling, in order to be admitted.

[Michigan Farmer.

VERMONT.—Vermont is a model State, one among the thirty-one, and very lovely. One of its papers says of it:—"There is but one city in this State, and not a soldier. We have no police; and not a murder has been committed in this State within the last ten years. We have no museums or crystal palaces; but we have homes, genuine homes, for which the father works, votes and talks—where the mother controls, educates, labors and loves—where she rears men, scholars and patriots."

For Western emigration.—ED.

COVETOUSNESS, like jealousy, when it once takes root, never leaves a man but with his life.

MISCELLANY.

NEW YEAR'S MORNING THOUGHTS.

'Tis New Year's morn, and all is still;
And while I silent sit, sober
Reflection throws her mantle o'er
My mind, and thus in breathless
Whispers says—"Another year is gone;
Another arch in the bridge of life
Has fallen, and with it how many
Lives have perished! Ye who still survive,
Review the past—review your deeds,
And ask why you've escaped.
Is it for your own good works?
Can you claim superior skill
In guiding the frail bark of life
Down Time's rapid tide, in which are
Rocks and shoals innumerable?
Nay, verily; but He who sees the
Sparrow fall, hath still upborn you,
And, if in Him you trust, will ever."

As thus I musing sit, the future
Breaks upon my view. Anticipation
Steals my thoughts, and thus she seems to say,
"Past errors may forgiven be, yet
Better far, never to commit them.
Therefore be wise in future; commence
Anew thy life, firmly resolved to
Pass the present year—if life is spared—
In doing good; then shalt thou be blest,
And have indeed a *Happy Year.*"

Her words are wise, her counsel good,
And may it be well received; may all
Pursue the paths of Peace,—guard well their
Thoughts and acts, and aim at happiness,
So living, when our Father calls,
Cheerfully the summons we'll obey.

—*New England Farmer.* AQUILA.

THE SAFEST INVESTMENT.—In the long run, those men get to be the richest, as all experience proves, who invest most of their surplus capital in good mortgages and real estate. It is astonishing how fast a fortune accumulates, even at six per cent., if dividends and rents are invested quarterly, or even semi-annually. Investments in real estate securities rarely or never bring loss; and hence there is no drawback on the compounding of interest. The fact is notorious that of the Philadelphia families which were rich a century ago, only those remain rich who keep the bulk of their wealth in real estate. No business man can afford—for any long period—to pay ten per cent for money; to demand such high rates is, therefore, not sound policy in the capitalists; and the history of the rich in this, or any other city, if traced back for a hundred years, affords abundant proof of this. It is wiser, believe us, not to "kill the goose that lays the golden egg."

DYING CONFESSION.—The infamous Cæsar Borgia, on his death-bed, exclaimed:—"I have provided, in the course of my life, for everything except death; and now, alas, I am to die, although entirely unprepared."

How true of many.

The Wells of the Desert.

The French papers have interesting accounts of newly bored artesian wells in the desert of Sahara, in Algiers. They are six in number, and some of them are 275 feet deep. The appearance of water in each case produced the greatest excitement among the desert tribes. Their joy over the first well was unbounded, and the news of the event spread towards the South with unexampled rapidity. People came from long distances in order to see the miracle. The Marabouts, with great solemnity, consecrated the newly created well, and gave it the name of "the well of peace."

At another place, as soon as the rejoicing out-cries of the soldiers announced the rushing forth of the water, the natives drew near in crowds, plunged themselves into the blessed waves, and the mothers bathed their children therein. The names immediately applied by the people, such as "the well of bliss," and "the well of gratitude," sufficiently attest their feelings. It is said that these wells will work an important part in the social revolution of the tribes in their neighborhood. Having been obliged, like their ancestors, to wander from place to place as the desert springs dried up, they will now remain around the constantly flowing wells, cultivate the land, and take the first steps towards civilization.

Stuck Up Folks.

"I don't like these people—they are so dreadfully stuck up," was the remark overheard the other day. What are "stuck up" people? thought we, and we looked around to see if we could find any.

Do you see that man over yonder, leaning up to the post at the hotel piazza, twirling a shadowy walking cane, now and then coaxing the hair on the upper lip, and watching every lady that passes, not that he cares to see them, but is anxious to see if they observe him?—he belongs to stuck-up folks. What is the occasion? Well, he happens to have a rich father and a foolish and vain mother, who have taught him that he isn't "common folks" at all, and that poverty is almost the same as vulgarity; and so he became stuck-up. He doesn't take the pains to learn any thing, because he doesen't feel the need of kowing any more. He does not work, for he is never required to, and he is so extensively stuck-up that he hasn't the least idea he will ever come down. He doesn't know, however.

There goes a young woman—lady, she calls herself—with a most condescending air to no one in particular, and a pervading consciousness that all "creation and the rest of mankind" are looking at and admiring her. She has never earned the salt she eats; knows a little—very little—of a good many things, and nothing thoroughly of anything; is most anxious lest she should be troubled to make a selection out of fifty young men, all of whom are dying for her, she supposes. She is one of the stuck-up folks, and that is about all she is.

The oldish gentleman over the way, barricaded with about a yard of shirt collar, guarded with a gold headed cane, with a pompous air—do your see him? well he is one of those stuck-up, too. He has been so about ten years, since he got off his leather apron and began speculating successfully in real estate.

There are other folks of this class, some by having at some time been constable, a justice of the peace, an alderman, and in various ways they got stuck-up notions. They are not proud people, for they do not rise to the dignity of pride; they are not distinguished folks, for they have not ability of character enough to make them so. They are just what they appear to be—stuck up. Let them stick!—*Ex.*

Work.—There is a perennial nobleness and even sacredness in work. Were he never so benighted, forgetful of his high calling, there is always hope in a man that actually and earnestly works; in idleness alone there is perpetual despair. Work, ever so mammonish or mean, is in communication with nature; the real desire to get work done, will itself lead one more and more to truth, to nature's appointments and regulations, which are truth. Consider how, even in the meanest sort of labor, the whole soul of man is composed into a kind of real harmony the instant he sets himself to work. Doubt, desire, sorrow, remorse, indignation, despair itself, all these, like hell-dogs, lie beleaguering the soul of the poor day worker, as of every man; but he bends himself with free valor against his task, and all these are stilled, all these shrink murmuring far off into their caves. Blessed is he who has found his work; let him ask no other blessedness.—*Carlyle.*

Sleeping Car.—The Albany *Argus* says—The train over the Central Railroad, which came down from Buffalo last Saturday night, was composed in part, of one of the most luxurious cars we have ever seen. It has three tiers of berths on each side, and is so arranged as to be used as an ordinary passenger car in the day time, while at night it can be, as if by magic, converted into couch bedsteads, and capable, under this arrangement, of accommodating fifty-six persons.

This Railway carriage was the attraction, in this city, yesterday. Hundreds of our citizens went to the Central Railroad Depot to see it, and all who had an opportunity to examine its arrangements were surprised to find so much luxury in so small a space. The lower tier is made by rolling together the seats. The upper tiers which are stationary, are hung with drapery. They are called Woodruff's patent couches.

Receipt for Curing Beef and Pork.

This receipt which originated with us, and has now had many years of trial, we believe to be unsurpassed as a pickle. Nearly all the modern receipts which have appeared in the different agricultural journals, partake, in some instances almost identically, of the ingredients and proportions set forth in ours, which we first laid before our readers some fifteen or eighteen years ago. At this period in the season, when farmers and others will soon be packing their winter's, and we may add, their next year's supply of meat, it may be of service to republish the receipt, which is as follows:

To 1 gallon of water, take 1½ lbs. salt, ½ lb. brown sugar, ½ oz. saltpetre, ½ oz. potash.

In this ratio, the pickle to be increased to any quantity desired.

Let these be boiled together until all the dirt from the salt and sugar, (which will be not a little), rises to the top and is skimmed off. Then throw the pickle into a large tub to cool, and when cold, pour it over your beef and pork, to remain the usual time, say from four to six weeks, according to the size of the pieces and the kind of meat. The meat must be well covered with the pickle, and it should not be put down for at least two days after killing, during which time it should be slightly sprinkled with powdered saltpetre.

Several of our friends have omitted the boiling of the pickle, and found it to answer equally as well. It will not, however answer quite so well. By boiling the pickle, it is purified—for the amount of dirt which is thrown off by the operation from the salt and sugar, would surprise one not acquainted with the fact.—*Germantown Telegraph.*

Going to a Better Country.—A Christian does not turn his back upon the fine things of this world because he has no natural capacity to enjoy them, no taste for them; but because the Holy Spirit has shown him greater and better things. He wants flowers that will never fade, he wants something that a man can take with him to another world.—He is like a man who has had notice to quit his house, and having secured a new one, he is no more anxious to repair, much less to embellish and beautify the old one; his thoughts are upon the removal. If you hear him converse it is upon the house to which he is going. Thither he sends his goods; and thus he declares plainly what he is seeking.—*Cecil.*

In Jail.—There are now twenty-one persons confined in the criminal wards of the jail in this county, and fourteen in the debtors' ward.—*Prairie Farmer.*

Query.—Is there another State in the West but Illinois that imprisons for debt?—Ed.

Bushels in Boxes and Bins.

The following will be found exceedingly valuable to many of our mechanical readers:

A box 24 inches by 16 inches square, and 28 inches deep will contain five bushels, or 10,752 cubic inches.

A box 24 inches by 16 inches square, and 14 inches deep, will contain two bushels and a half or 5,376 cubic inches.

A box 16 inches by 16.8 inches square, and 8 inches deep, will contain one bushel, or 2,150.4 cubic inches.

A box 12 inches by 11.2 inches square, and 8 inches deep, will contain half a bushel, or 1,075.2 cubic inches.

A box 8 by 8.4 and 8 inches deep, will contain one peck.

A box 8 by 8 and 4.9 inches deep, will contain one gallon.

A box 7 by 4 and 4.8 inches deep, will contain half a gallon.

A box 4 by 4 and 4.2 inches deep, will contain one quart.

True Hospitality.—It would be well, especially in these times, for the ladies to treasure up the words of our American sage, Emerson, to his wife:

O, excellent wife! encumber not thyself to get a curiously rich dinner for this man or woman who has alighted at our gate, nor a bed chamber made at too great cost. These things, if they are curious in them, can be got for a few shillings in any village; but rather let the stranger see, if he will, in your looks, accent and behavior, your heart and earnestness, your will and thought, that which he cannot buy at any price in the city, and for which he may well travel twenty miles, and dine sparingly and sleep little to behold. Let not the emphasis of hospitality lie in bed and board, but let truth and love, and honor and courtesy flow in all thy deeds.

Dancing a Moral Agent.—Mrs. Dr. Harriet K. Hunt, says:

That beautiful, graceful accomplishment of dancing, so perverted by late hours and the indecency of fashionable attire, has outraged many sensible people, and led them to deprive the young of one of the most simple and healthful enjoyments, because it has been abused. For myself, I can testify not only to its healthful, but its recuperative power. The fortieth, nay, the fiftieth year of my age, found me enjoying this life-cheering exercise. It should be one of the best and earliest amusements of children, and care should be taken by parents that it is understood as an amusement.

One should not dispute with a man, who, either through stupidity or shamelessness, denies plain and visible truths.—*Locke.*

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

THE HOME.



F an individual, the life-time, though so brief a portion of that infinite duration to which it is linked, is, nevertheless, that period in the history of his being upon which the character of his immortality depends. Much in the same way, the home, so poor and small, even in its largest magnificence, when compared with the great world, is still that point, in all the universe, around which cluster the deepest interests of this earthly life—being the nucleus from whence radiates to every human heart, whatever of life and health makes up the sum, and determines the quality of its happiness.

How important, even in its worldly and only material aspect, is that place where we grow up the physical organizations, with which are so intimately connected our every emotion, thought, word and action. The air we breathe, the water we drink, the food we eat, the beds upon which we rest, the rooms in which we sit, the grass on which we walk,—all these, with a host more subtile or more palpable, are influences that, by insensible degrees, are advancing to a beautiful and healthful symmetry, or dwarfing and debasing the body through which must live, act and unfold the less or larger soul. Where we keep in mind this relation of the sensual to the spiritual, how considerable, and for what nobler reasons, becomes every item in the daily routine of convenience, or necessity. With what dignity and value does it invest the mere surroundings, mechanism and furnishing of a home, to do all and look upon all that belongs to its establishment, as sacred to that development of virtuous principles and affections through which, alone we may be educated to a higher being and purer abode.

But this is not all: nay, *this* is not home. All physical comforts may be supplied, all physiological laws obeyed; its inmates grow strong and healthful, go out and in, and, in the ripeness of years, lie down and die in what was never, in any true sense, *a home*. For other than these gross, material elements must be brought in, and there transmuted into the true gold of life—an ever-burning, out-beaming affection—before the altar whereon is inscribed that most precious word is worthy to be called Home.

"Where the heart is," says one to whose truthfulness of expression all hearts respond. "Home where the heart is." Yes, that is it. The place where we go, or, rather, where we stay for those waters of which, if one drink he shall never be all-thirsty again: for who that has once pressed glad lips to the bowl of a pure and fervent home-love, can ever forget the fullness of that life-completed hour. The silver cord may, indeed, be loosed, and the golden bowl broken, but the fountain has been opened, the sweetness of whose overflow will touch with refreshment and spread with greenness the most arid wastes of any after experience. There is nothing like it in this wide and many-sided world—like this home that is all a home may be. It is the dwelling place of all that makes earth tolerable, or life desirable. How unendurable were toil and the ceaseless hardships to which the race is subjected, how unsatisfying its successes and largest gains, if there were no homes to which might turn the weary or the elated heart. But blessed be Him who has given to humanity this holiest and most permanent of institutions—these homes that stand open day and night; that are never shut against the poor, the unfortunate, the erring, or even the wicked; whose voice of loving entreaty to one and to all is, "Enter in and here find rest, take counsel, and gather strength for every virtuous resolve and god-like aim."

For every need of the body, for every demand of the heart, how adapted and complete is the home. Hither go the warm loves and hopes of young man and womanhood made one in the bond of an indissoluble affection. From thence, while it cherishes and adorns the old, come forth the new, budding from baby into childhood bloom: and the light of that home is to all, Father and Mother, Grand-parents and little children, to all it is the same—the most beautiful thing of earth.

It is only in the true home that we find those nurseries of morality and intelligence without which all after-training is in part vain; only there that politeness becomes a rule and kindness a habit; that sympathy is sure or affection perennial. There is no man, no woman so pure as not to need its hallowing influence; no child so good it does not require the assis-

tance of its heaven-appointed ministrations.

All that a home may be! Reader, dost thou know of such an one? A home where dissatisfied looks and ungentle words do never come; where no kind office is left unperformed; no heavenly charities neglected, or grudgingly given. A home whose sky is always clear, whose sun is bright, whose breezes soft, whose fruits fail not, whose years like sheaves full-ripe, are garnered all, safe to the harvest of the final Home.

All that a home *may be*, is this, and all that more no words can tell—only the heart that hath it can understand.

May such a home, dear reader, with long life and heroic effort in every good work, be yours and ours.

Influence of Song.

Most of us have experienced the luxury of tears when listening to an old man, who having led a long, long career of vice and crime, was at length banished from the country; and who, while undergoing his period of banishment amidst the wilds and jungles of a distant land, heard, in the summer eventide, a sweet voice singing in his own language the very song which had lulled him to his infant slumbers, when he knew crime only by name, and knew it only to abhor. It has been sung, too, by the cradle of an infant sister, one who died young, and is now in heaven; the mother, too, was no more.

But the song—the old song had not lost its influence over him yet. Back came trooping upon him the old memories which had so long slumbered down there, in the unconsumed depths of the heart; the mother and the father; the household gathering; the old books; the old school house; the time worn church, half hidden by the old yew trees, where he had first heard the Bible read, all came back upon him as fresh as if it were but yesterday; and, overpowered by his feelings, he gave vent to them in a flood of tears. And then the old man grew calm, and his latter days were his best days; and when the term of his punishment had expired, he came back to his father land, and there, in that old village graveyard, amid whose grassy hillocks he had played and gamboled, and where the mother and her little one were sleeping, he lay down his weary limbs, and sank peacefully away into a common grave.—*Eliza Cook's Journal.*

Intercourse with Children.—The most essential part in our intercourse with children is to be perfectly true ourselves. Every other interest ought to be sacrificed to that of truth. When we in any way deceive a child, we not only show him a pernicious example, but we also lose our own influence over him forever.

THE NEW.

Ring out, wild bells, to the wild sky,
The flying cloud, the frosty light;
The year is dying in the night;
Ring out, wild bells, and let him die.

Ring out the old, ring in the new,
Ring happy bells, across the snow;
The year is going, let him go;
Ring out the false, ring in the true.

Ring out the grief that saps the mind,
For those that here we see no more;
Ring out the feud of rich and poor,
Ring in redress to all mankind.

Ring out a slowly dying cause,
And ancient forms of party strife;
Ring in the nobler modes of life,
With sweeter manners, purer laws.

Ring out the want, the care, the sin,
The faithless coldness of the times;
Ring out, ring out my mournful rhymes,
But ring the fuller minstrel in.

Ring out false pride in place and blood,
The civic slander and the spite;
Ring in the love of truth and right,
Ring in the common love of good.

Ring out old shapes of foul disease,
Ring out the narrowing lust of gold;
Ring out the thousand wars of old,
Ring in the thousand years of peace.

Ring in the valiant man and free,
The larger heart, the kindlier hand;
Ring out the darkness of the land,
Ring in the Christ that is to be,

In Memoriam.

Domestic Arts.

[Under this head we hope to furnish every number of the Home Circle with suggestions and facts belonging to the culinary arts, worthy our best consideration.] Ed.

MODES OF PREPARING MEAT. NO. I.

Beef—boiled, and Soups.—As the cold season has now finally come, and we, on our tables—as in our warmer clothing and larger fires—are consulting the demands of our bodies for more substantial and warmth-giving foods, we will offer a few thoughts on the preparation of meats for the table.

And first of Beef, because it is in so large and general use during this season: and *boiled*, because, as will be seen, it is, thus prepared, more nutritious, besides requiring less close attention than when cooked in any other way.

Economically, it is better to boil than to bake, or roast beef, because by that process we save from *one-fifth* to *one-third* of the actual weight of the article, over what it must necessarily lose; and, provided it be done in the best way, boiling loses nothing, by compar-

ison with what are generally considered the more savory modes of dressing meats.

The loss, in baking and roasting, arises chiefly from the evaporation in a heated oven, or before a blazing fire, added to the large melting out of fat.

The principal parts of all meats are albumen and fibrin. This may easily be seen by cutting up and slowly boiling bits of beef, or other flesh. The water will soon become cloudy, and after a while covered with whitish looking flakes, resembling the half-cooked white of eggs, which, in fact, it is—pure albumen. Or, cutting the flesh into small pieces, we may wash and squeeze them in a small quantity of cold water, then slowly heating this, observe more clearly the albumenous property of the meat, while the fibrin, in this case, as in the slow boiling, will be left a tough, almost colorless, and quite insipid mass.

Now we have all observed, doubtless, how much dryer and better flavored are eggs—to those who do not like them water-soft—when put into hot water and boiled rapidly half a minute or so, than when cooked about as much by lying long in half-warm water.

If put into the boiling fluid, and removed as soon as done, the albumen or white of the egg suddenly hardens under the delicate lining of the outer shell, and prevents the water oozing in through its thousand pores—the egg, after its first plunge, being cooked entirely by steam, therefore so mealy and nice.

Now this is just what takes place in boiling meat. All round and through the fibrous part of our beef is this albumen in precisely the state in which it exists in the uncooked egg, and to its presence or absence is largely owing the good or ill name it—the beef—gets when brought to the table.

To save this, then, and, as well as we may, all the juices of the meat, we should put it at once into water boiling, and kept boiling a few—say five to fifteen minutes, according to the size of the pieces—by which sudden heat the fibrin contracts a little firmness, and the albumen, suffering a small loss, hardens all through the outside, making the inner lump impervious to water, which is now cooked entirely by steam, retaining all its natural juices and consequent flavor.

Much more might be said in favor of boiling, over other methods of preparing large bits of meat for table use, to which we might add good words for beef itself, in its generous nutritive and stimulating qualities, but we defer for longer time and space.

One question, only, which might be asked, we answer: "If the object is mainly to so cook the albumen by sudden heating, as to prevent its larger escape, and retain the other juices of the meat, why may not this be done by exposing it to a quick heat in the oven, or before a blaze?" First, because in no other way can the whole surface of the meat be brought into so direct and sure contact with the required heat, as by plunging it into a boiling fluid. This, seizing upon every particle of the surface, turns it immediately, and as no dry heat could, into a very coat of mail for the defense of the whole internal part against any thing more injurious than the needed vapor of water. Besides, if such dry heat or blazing were applied sufficient to accomplish the needed result, a large part of the roast would be lost, by such burning being rendered unfit for use.

We hope all who have not paid attention to it before, will give this mode of cooking meat a fair trial, being careful always to boil in as small a quantity of water as will well cover the piece, and take up as soon as done.

The more we had intended saying on the properties of beef-teas, soups, &c., we are sorry to find must be deferred to another number.

A Mother's Love.—We are indebted to Lamartine's exquisitely fine pen, for the following graphic illustration of a Mother's Love:

In some spring freshet a river widely washed its shores, and rent away a bough, whereon a bird had built a cottage for her summer hopes. Down the white and whirling stream, drifted the green branch with its wicker cup of unfledged song; and fluttering beside it, as it went, the mother bird. Unheeding the roaring river, on she kept, her cries of agony and fear piercing the pauses of the storm. How like the love of the old fashioned mother, who followed the child she had plucked from her heart all over the world. Swept away by passion, that might be, it mattered not; bearing away with him the fragments of the shattered roof-tree, though he did, yet that mother was with him, a Ruth through all his life, a Rachel at his death.

Quaint old Fuller says:—"Let him who expects one class of Society to prosper in the highest degree while the other is in distress, try whether one side of his face can smile while the other is pinched.

FOR THE CHILDREN.

NEW YEAR'S HYMN.

AIR—"Happy Land."

There is a happy day,
Near, near at hand,
When white the snow-flakes lay,
All o'er the land.
O how they softly lie,
On the fields and on the sky,
When New Year's day is nigh—
Here, here at last!

Come to the cheerful fire;
Come with glad sound;
See, see, it blazes higher,
Come, come around.
Here let us sweetly sing
Songs but New Year's day can bring,
Round and round let it ring—
Here, here at last!

Bright, bright this happy day
Beams every eye;
White, white the snow-flakes lie,
On field and sky.
Hark, hark, the New Year's bell!
Ring it long, and ring it well,
Loud let our chorus tell—
Here, here at last!

MY DEAR YOUNG FRIENDS—*Farmer Boys and Girls*: As you will see by looking at the head of this page, the *Farmer*, that has before been all written for the grown-up folks, has concluded to give you children a page all to yourselves. This you may depend upon, and every month as it comes from the office so fresh and clean in its new green cover, you may be sure of finding your page full of something you will like to read. In such a little room we cannot tell you long stories, or give you much history, but then we can say enough about many things to give you subjects to think, or talk of, these long winter evenings, besides helping you to understand what you may read in books. Sometimes there will be a hymn, or song, to which I guess any of you could make up a tune, the words will be so easy to fit. The one we write for you this month any one of you can sing to that sweet air, "Happy Land," that I am sure all good children have, or can learn very easily. Sometimes your page will be a Fable, or something of that kind, the meaning of which you must always find out for yourselves, if possible; but if it is really too hard, you can get some of the older folks to help you, but not till you have read it carefully, once, twice, and again. We don't think of anything that would please us better than to know at the end of the year, that you had all understood and liked your page of the *Farmer*. Sometimes, too, there will be puzzles, charades, &c., all of which it will be nothing but fun to guess, or hunt out, as you crack nuts and roast apples before a blazing winter's fire.

Then there will be sketches of sea and land, cities and countries, rivers and mountains far away, all of which you must look up on your atlas, or school maps. Well, we will have a nice time chatting together, for we expect many of you will write to us, telling us what you think or would like. But we cannot say good-bye this time, without remembering it is the holiday week, when from Christmas to New Year we visit, and receive friends, sleigh-ride, snow-ball, skate and slide, making merry for ourselves and all around us, for the beginning of the year is always a gay and happy time. What do we care, and all the better, if old King Winter does come howling around our houses, leaving his frost-breath upon the windows, his snowy robe and foot of ice upon every river and hill? Care, indeed! when we all know how to cheat him of half his grimness by gathering with bright faces and cheerful words around our pleasant firesides; talking, laughing, reading, singing, or thinking by turns. Yes, the best way to get rid of this old fellow, this long, cruel, biting winter, is to entertain him as well as we can—so, heaping coals of kindness upon his head, melt him away as fast as we can. But not just for our own pleasure has God given us these comfortable homes, and all the nice things that help to make the winter pass pleasantly. Not all for fun out doors and joy within does holiday week come round year after year. There are many who have none of those good things that make our own homes so bright and happy. Many who would be glad and rejoice to have the little or the much that we can spare. Let every child, then, who reads this page, see that no empty hand it might have filled lays itself upon the conscience of the new-born year. So shall we all be happier when next the closing year looks into our eyes, and, with its stern, cold voice, asks, "what have *you* done?"

INDOLENCE leaves the door of the soul unlocked, and thieves and robbers go in and spoil it of its treasures.

THE universe is full of magnificence and beauty, and it should be our constant study to discover it.

EDITOR'S TABLE.

Our New Dress and New Face.

We think our readers will readily discover, on reading this number, that we do not intend to *curl up* for the little *flaw* of hard times, and use old type and materials in order to get up a cheap paper. No, not so; but instead of it we have given our friends MILLER & STARR, of the NORTHWESTERN TYPE FOUNDRY, Milwaukee, a cash job of making us an entirely new and beautiful font of type, better than which, cannot be found in America. We also pay an increased price for our printing, in order to secure the very best, and are, moreover, doubly fortunate in having our press-work in the hands of one the best printers in the West or East, (Mr. J. B. NORTON). Altogether, we think our typographical appearance will, at last, fully meet the views of our most critical friends, after making due allowance for the quality of paper we have to use in so low priced a magazine.

Among other things, our young men talked us into a new title page, for the designing and engraving of which we are indebted to our friend Hickok, of Milwaukee, who, by the way, is a clever genius at his art, as this specimen of his work will show. How much of an improvement it will be regarded, we leave for our patrons to decide, for we are not, on the whole, very partial to change, except when absolutely necessary, preferring the familiar face of an old friend, to the novelties of a new one. But then, the world, and all things in it, are but the type of change; and we must, in some measure, follow suit, to escape the appearance of downright oddity. Whatever minor changes may be made in our externals, one thing is fixed in our plan, and that is, not to let the *Farmer* run down in interest or circulation while we are interested in its management. If no misfortune befalls us, we intend that the *Wisconsin Farmer* shall yet become the welcome visitant of nearly every reading household in the State. Friends, relax not your aid.

Our Premium Book List.

We are glad to find that the Premium Lists of Books we are offering, are exciting considerable additional interest among our agents; probably not more from the value they set upon them, than from their love of *beating*; a strong and commendable trait in human character. The list will be found on the inside of the back leaf of the cover, and embraces nearly everything in the line of Agricultural and Horticultural literature.

Notwithstanding the admitted hardness of the times, our prospect seems good for not only retaining nearly all our old subscribers, but of getting many new ones. Thus our patrons will see that we do not dodge on account of the hard times, but come out in an improved appearance all round—new embellishments, new type, better paper and printing.

We hope to be met in the same spirit, by our good friends and agents, and to be able to demonstrate that a temporary panic need not effect our circulation. We think, from present appearances, that by the first of March, when our premiums become due, to report considerable larger lists, from many places, than ever before, proving conclusively that good farmers with their 80 or 160 acres of land, are not afraid, in *any times*, to invest *a dollar* in a good, home agricultural paper.

State University.

The first term of the current year of this Institution closed on the 16th of last month. The portion of the examination which we witnessed was both interesting and creditable to all parties, evincing a thoroughness on the part of both Professors and Students that must eventuate in good scholarship. The classes are considerably larger than last year. The boarding arrangement in the Institution seems both economical and excellent, affording good fare, agreeable and profiitable social surroundings, and for the low price of $2 per week,—thus making the University one of the best, and one of the cheapest Institutions for a thorough education to be met with in the country.

The winter term commences the 1st Wednesday of this month, and will have the especial attraction of a particularly interesting course of Chemical Lectures by Dr. Carr.

Young men of Wisconsin, this is your chance for a good and cheap education. See advertisement.

Madison Female Seminary.

The Second Term of this Institution commences on Monday, the 4th inst. It is justly establishing the reputation of an excellent school, and we are glad to see that it is well patronized. See advertisement of Joseph C. Pickard, its able Principal.

Bacon's Commercial College—

Is another invaluable institution of our city and State, and is turning out large numbers of graduates monthly, well qualified for any department of business life. See advertisement.

The Editor among the People—First Tour.

Pursuant to announcement in the Nov. No., we left our sanctum on the 18th, stopping first at Waukesha, where, notwithstanding the fierceness of the storm, through the generous efforts of our friend Dr. Leonard, of the Waukesha *Republican*, we were greeted by a very respectable audience of the farmers of the County, and a goodly number of wide-awake villagers. All (outward) things considered, the night was one of the dreariest we ever experienced; but, through the kind attention of our cordial host, C. C. Olin and lady—whose fire, by the way, seemed warmer and apples larger than we often have the pleasure of enjoying—we were so refreshed and encouraged, that the cold blustering morning of the 19th found us "like a giant refreshed with new wine." Waukesha is a rather handsome town and with its well-ordered College, its extensive quarry of superior limestone, and rich adjacent lands, offers many inducements to the settler in the new West.

At Racine we were treated to another snow-storm on the evening of our lecture, and were not favored, therefore, with as large an audience from the country as was desirable.—Among the friends of Agricultural Science and popular education generally, whom we there had the pleasure of meeting for the first time, we would make honorable mention of Messrs. Case, ex-Mayor of Racine; Clement, of the *Journal;* McMynn, founder of the far-famed Racine Schools; and Dr. Hoy, the indefatigable and scientific Naturalist. Under the leadership of such men, in their several departments, the City of Racine could hardly be without distinction. The extensive manufacturing establishment of Mr. Case is good evidence of what may be accomplished by the energy and persevering application of one man and would amply repay the visit of any one interested in Threshing and other Agricultural Machines. Racine has one of the best harbors on the Lakes, and is rapidly growing in wealth and importance.

At Kenosha we failed to lecture because of pre-occupancy of the ground by two other performances;—shall be there again some time during the winter.

Burlington is a pleasant little village, largely dependent for its growth and prosperity upon its water-power, so energetically and profitably employed by P. M. Perkins, whose extensive grist-mill and woolen factory run night and day, making excellent flour and splendid cloths—of better quality indeed, than we had supposed were manufactured out of New England. Mr. Perkins is also a farmer, and gratified us not a little with a fine exhibition of Merinoes, Durhams, Suffolks, and Morgans—premium stock at the State Fair. We were also agreeably entertained by the family of Mr. Trowbridge, whose superior cheese is coming to be as famous in the West as the Hamburg in the East.

At Elkhorn we were cordially met by E. Elderkin, Esq., Sec. Wal. Co. Ag. Soc.; but the only two available halls in town having been pre-engaged by Messrs. Griffith and Hewlitt for Shakspearian Readings and a lecture on Temperance, we were obliged to postpone our appointment, and went, accordingly, to hear both the lecture of the eloquent Mr. H., whose inimitable, side-splitting anecdotes revive an hundred laughs within us even now, in spite of our will to be serious—and the accomplished Mr. G., whose excellent "reading" of the Poets made us wish the art of Elocution were not so difficultly attainable—at least that it had its scientific professors in all our schools and colleges. It was here too that we met the humorous Robert Richmond, famous in Walworth for always keeping for sale one or two spans of the best horses in the State, and for having run a four-mile gauntlet across a neighboring prairie, in ten minutes and a quarter, with a huge bull-dog so close behind that he had no time to strike with a long hoop-pole hastily picked up for the purpose! May he get a good price for his splendid blacks, and live long years after the bones of that confounded dog shall have mouldered into dust. Elkhorn is a beautiful village with a charming park in the centre, and is inhabited by stirring, wide-awake people, as may be gathered from the fact that, during the forenoon of the day on which we left, our friend Elderkin, as a clever compliment, added 34 names to the list of 75, who were already subscribers for the *Farmer*. Walworth, as an Agricultural County, certainly ranks No. 1.

Next we visited Delavan, (after a pleasant sleigh-ride of half an hour, and getting beautifully upset in a snow-bank) another good-looking town with an increasing population, and the seat of the State Deaf and Dumb Asylum; which, together with Mr. Mansfield, P. M., who by the way is one of the most cordial, generous and gentlemanly members of the John Bull family that we have ever had the pleasure

of meeting—we took occasion to visit. The buildings are very fine, and the proficiency of the pupils in attendance more than delighted us. The Institution is certainly an honor to the State; but while we would be glad to gratify the people of Delavan, we couldn't help commenting on the absurd policy of locating the State Institutions so scatteringly that one must travel a thousand miles in order to visit them all.

Finally we arrived at Darien, an embryonic city, destined to "supercede its predecessor," farther east, unless the latter make a vigorous and persistent effort. The most convenient produce market for the towns of Darien, Walworth, and a portion of Sharon and Delavan; located in the midst of one of the best farming districts in the State; and engineered by a number of ambitious, energetic Yankees, it can hardly fail to *go ahead*. Several fine warehouses are already finished, and during the past year a large number of dwellings, storehouses, shops, a mill and a fine brick schoolhouse have been erected. Three lumber yards are doing a good business, and all in all Darien is most decidedly a progressive little village.—The scenery is picturesque and a number of building sites command a view whose diameter is 15 to 20 miles.

The evening of our lecture was somewhat rainy, but the Town Hall was nevertheless well filled with an attentive and appreciative audience. At the close, a proposition to form a Farmers' and 'Mechanics' Club was warmly seconded by speeches from Messrs. Seaver, Williams, Jeffers, Stone and others, and a committee appointed to draft a Constitution and By-Laws. Our special entertainer was Mr. Bissell, who, with his admirable lady, made our stay so like a *home visit*, that we shall ever hold them in pleasurable remembrance.

And so we ended our first circuit, somewhat wearied in body, but more hopeful in heart than when we commenced, and fully assured that our labor will not be in vain.

See New Advertisements—

Of Young America Corn Mill, Palmer & William's Self-Raking Reaper, and Badger State safe, all of them the best articles in their way that are manufactured and sold in the United States. See award of premiums and testimonials by the page, to prove it.

They are all of that class of No. 1 articles that we use ourselves, and like to recommend to others.

The Annual Meeting and Election of the State Agricultural Society.

Was held according to notice at their rooms in this city, on the 2d of December.

The attendance was light, decidedly, and confined mainly to the more staunch and steadfast members of the Society, among whom the most harmonious feeling prevailed, as well as the firmest purpose to persevere in their efforts, through dull and discouraging times as well as in the more bright and promising, to the end that Wisconsin may become eminent for her agricultural and mechanical enterprises, and in no respect behind her neighbors.

The matter of obtaining permanent grounds for the use of the Society was one subject under consideration, and was referred to a committee for consideration and report. Something of the kind seems quite desirable, as it is found to cost a large sum annually to fit grounds, even in an imperfect and unhandy manner; and if, perchance, a storm comes on, as at the last fair, woe to all concerned, Officers, Exhibitors, Company and Creatures. The State needs a show ground beyond a doubt, and a dime apiece, among all the tax-payers, will purchase and fit one up in perfect shape; after which the getting up of a fair would be a matter of pleasure and economy, instead of pains, labor, and waste, as at present. May the thing be done. We are not so particular where, so that it is central, approachable, and convenient.

The officers elected were as follows: Hon. J. F. Willard, of Janesville, President; Hon. Edward Pier, of Fond du Lac, Vice President; D. J. Powers, Secretary; Col. David Atwood, Treasurer; and Hon. Temple Clark, of Manitowoc, a member of the Executive Committee; so that the Official Board for the ensuing year stands as follows:

President—J. F. Willard, Janesville.

Vice Presidents—A. D. Kirkpatrick, Dayton; O. F. Bartlett, East Troy; Edward Pier, Fond du Lac.

Secretary—D. J. Powers, Madison.

Treasurer—David Atwood, Madison.

Additional Members of the Executive Committee,—Adam E. Ray, Little Prairie; Geo. H. Williston, Janesville; Geo. Messersmith, Dodgeville; D. Williams, Springfield; L. W. Joiner, Wyoming; S. S. Daggett, Milwaukee; N. P. Davis, Pierceville; Temple Clark, Manitowoc.

The meeting adjourned to meet again on the first Monday in February, at which time the plan will probably be digested and laid for the next year's campaign.

The Dane Co. Agricultural Society—

In regular, Annual Session, on Dec. 2d, (first Wednesday,) was called to order by D. S. Curtiss, Vice President.

Resolved, That the Society proceed to elect officers for the ensuing year as provided by Constitution. Whereupon the following gentlemen were elected by ballot:

President—W. R. Taylor, Cottage Grove.

Vice Presidents—L. B. Vilas, Madison; J. Greening, Mozo Mania; J. W. Hoyt, Madison.

Executive Committee—Wm. Coleman, Oregon; E. D. Montrose, York; S. W. Field, Fitchburg.

Secretary—E. W. Skinner, Madison.

Treasurer—J. H. B. Matts, Verona.

Resolved, unanimously, That the thanks of the Society be tendered to the Hon. P. W. Matts, for the able and indefatigable manner in which he has discharged the duties of President for the entire period of his office.

The Socity then adjourned *sine die*.

J. W. HOYT, Sec.

Sugar Cane Seed.

Numerous inquiries are already being made of us about this seed for next year's planting. As yet we have no reliable information on the subject, as we have heard of but little that has ripened in the upper West. But there must be a great plenty of it South of us beyond question; and it will undoubtedly soon be offered for sale in abundance by our principal seed dealers, and at low prices; it ought not to cost over one or two shillings per acre for the seed, at the highest. We will duly post our readers on the subject, as fast as we learn any thing in relation to it.

Inasmuch as the matter of its manufacture into syrup or sugar is still an experiment, we think that people will do well not to plant too largely except in special cases. It is best always to embark carefully in new things, however promising. Well beaten roads are the only ones that can be traveled safely without special caution.

We notice that there is to be a Convention of the Sugar Growers of Illinois at Springfield, early in January. If they develop any thing new, we will lay it before our readers. We hope that they will tell us where a plenty of good seed can be obtained.

The Times.

Business prospects seem to be improving slightly all over the country. We see no reason why the improvement should not go on, until times will probably be comfortable again by opening spring. Meantime let all practice industry and economy, earning what they can, and carefully saving what they have already got, (except discreetly giving to the poor what they can spare), and wait patiently for the return of confidence and decent times again. They will come to the prudent and careful, sure; but to the idle and wasteful, never.

South American Pheasant Fowls.

We intended to have acknowledged the receipt of a pair of pretty chickens, under the above name, from Joseph Axon, Esq., of Poynette, Columbia County. They are of medium size, dark and speckled color sprightly and shy. Whether they possess any intrinsic excellence over the common kind, with which we have placed them, we will be better able to judge after a season.

An amateur in these matters doubts their being what their name purports.

Wisconsin Journal of Education.

We are happy to learn that the management of this very valuable work has been entrusted by its Board of Publishers, to A. J. Craig, Esq., one of the most thorough and experienced edueationists and active business men of the State. That his enterprise will lead him to illustrate and popularize its pages for more extensive family reading, and thereby largely increase its circulation and sphere of usefulness, we have no doubt. It should have a circulation of 20,000. Terms $1 per year.

Messrs. Atwood & Rublee of the *State Journal* are to print it for the ensuing year, which guarantees the best possible mechanical execution that can be had in the West.

The typographical art is rapidly improving in Madison, and all will admit the need of it. We think the balance of the State will hereafter have to look out for its laurels.

Market Report.

We shall present a very complete and full Market Report, from month to month, beginning with the February number, embracing all the principal points, to our readers, as well as the prominent articles of traffic. We think we can make it a highly useful and interesting feature.

Binding for 1856 and 1857.

We are now prepared to bind any quantities of the volumes for the last two years. All will do well to bring or send in their sumbers. Many can do this by members of the Legislature, and have them returned in the same way.

Price *only* 40 cents per copy, in neat muslin covers.

Veterinary Surgeon in Madison.

R. Yielding, a scientific and practical Veterinary Surgeon of experience, at the American House stables. See advertisement.

WISCONSIN FARMER,

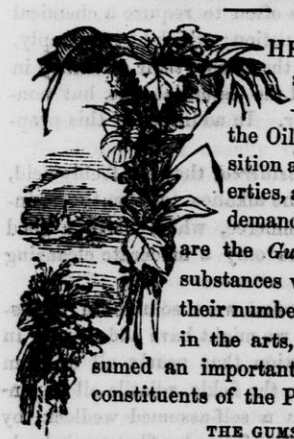
AND

NORTH-WESTERN CULTIVATOR.

Vol. X. MADISON, FEBRUARY, 1858. No. 2.

D. J. POWERS AND PROF. J. W. HOYT, Editors.

VEGETABLE CHEMISTRY.



THE PLANT.—CONSTITUENTS.—No. 6.

—Closely allied to the Oils, both in composition and chemical properties, and therefore, next demanding our attention, are the *Gums* and *Resins*—substances which by reason of their numberless applications in the arts, have already assumed an important rank among the constituents of the Plant.

THE GUMS.

Though differing considerably in their nature and properties, nevertheless all agree in being tasteless and to some extent soluble in water—some, like gum arabic being perfectly so, while others, as common cherry-tree gum, only soften and swell up, forming a gelatinous mass—in being insoluble in alcohol, and in forming viscid and glutinous—*mucilaginous*—solutions, extensively employed as *pastes*.

Most of the gum found in commerce is an exudation, in the form of rounded, semi-transparent drops, or "tears," hardened by exposure to the air. In some cases these exudations are spontaneous, in others they result from the borings of insects, or are secured by the agency of men who make it a business to supply the market demand. But the gum which exudes is really but a small proportion of that which during the several stages of its growth is produced in the laboratory of the plant. The sap of nearly all plants, and the seeds, bark, and twigs contain it in greater or less quantity; while of some it constitutes the chief portion of the fluids, whether considered with reference to weight or utility.

The Gum of Fruits is sometimes confounded with a peculiar substance called *pectine*, which latter is commonly known as *jelly*, and abounds in nearly every variety of fruits proper, as also in the carrot, parsnip, and other like roots.—The jellies found in such abundance on the tables of all good house-wives consist chiefly of pectine.

Viewed with reference to their *solubility*, chemists have divided gums into three species; some of the ordinary gums of commerce consisting solely of one kind, while others are made up of a mixture of them all.

Arabin, of which gum Arabic and gum Senegal are types, is readily soluble in *cold water*, and is extensively used in the arts as a fluid paste, and in medicine as a mucilaginous drink.

Bassorin, sometimes called Bassora gum, and represented by gum tragacanth, becomes *gelatinous* in cold water, but does not *dissolve* in *either cold* or *hot*.

Cerasin, (from *cerasus*, the botanical name for cherry,) is found in and constitutes the gum of the cherry-tree, and is remarkable, not so much for being only soluble in *hot water*, as for acquiring, by such solution, after solubility in *cold*.

Chemical analysis of the Gums proves them to have the same elementary composition, viz:

Carbon,	45.10 per cent.
Hydrogen,	6.10 "
Oxygen,	48.80 "

from which it appears that the formula (C^{12} H^{10} O^{10}) is identical with that for starch and lignin or woody fibre. How wonderful is that chemistry of God, by which, out of simple charcoal and water he produces substances so totally unlike in all their physical properties, chemical characteristics, and human uses!

The Gums are also interesting, chemically, because it is through them, as it were the *pupa*, that the lower *larva* compounds must pass to the higher *imago* of sugar, and probably other yet more complex bodies.

A word of the Uses of Gums.—1. In *dietetics* they are important, and take physiological rank with their isomeric brethren, starch and lignin. Rye flour contains 11 per cent., kidney beans 19, peas 63, potatoes 3.3, wheat flour and cabbage each 2.8, Indian corn 2.2. They are nutritious, and belong to the respiratory class of foods, or those whose office is to produce animal heat.

2. *In the arts* their chief use is for the preparation of a convenient adhesive mucilage—an office which they so admirably fulfil, and one which is by no means unimportant in this fast age, when the rush and whirl of business will hardly allow of the delay essential to *its* use, much less the selection and softening of a wafer, or the yet slower and more tedious process of sealing with wax.

It was well enough in the olden time, when men journeyed with oxen and horses, and sent their messages by carriers, to spend half an hour after the leisurely written document was concluded, in lighting the candle and gravely stamping the melted wax with a "coat of arms" or other device. But the man of the last half of the nineteenth century—who laughs to scorn the fleetest horse, and begins to talk lightly of steam-power and lightning, would as soon think of traveling the continent on a spavined mule, or navigating the Mississippi in a sap-trough. Self-sealing envelopes are a type of the age; and the *gum*—what treasures of thought and feeling does it not secure against the intrusion of an unscrupulous inquisitiveness! What secrets lock up from the prying look of solicitous matron, anxious maiden and curious lover! Squint away, old lady in the country post-office there, and you young man starving to know whether more or less loved than your fellow—squint away, but the squinting shall be without hope; for that paper pocket is a "*shut sack*," and ye may no more look into it, than into the heart of him, or her, who wrote it!

3. In *medicine*, as already suggested, they are valuable in the form of mucilaginous drinks, in all cases of inflammation of the alimentary canal; soothing the irritated surface and protecting it, for a time, from any direct, irritating agency.

THE RESINS

Are so like the oils, both in composition and chemical properties, that some outhors treat of them under one head. They are not oils, however, but rather products of the oxidation of oils, as might be gathered from the fact that the latter by exposure to the air—by oxidation, literally become the former—a fact before referred to, under the head of *drying oils*.

In Physical Properties, they resemble the gums so closely as often to require a chemical test for their distinction; which test is simply, combustibility of the resins, their solubility in alcohol, ether and the essential oils, but non-solubility in water. In addition to this property of solubility,

Chemically considered, they are feebly acid, combining with the alkalies to form the resinous soaps of commerce, which make a good lather, but possess only a moderate cleansing power.

We said the resins were soluble in the essential oils, and, we might have added, it is in this state of solution that nearly all of them originally exude; the fickle, volatile oil no longer restrained, in a self-assumed wedlock, by the strong bands of woody fibre and bark, quickly escapes and leaves good resin in *tears!* In this state of solution they are often called *balsams*, and have an extensive use in the arts and in medicine.

But the resins specifically considered, are so unlike in their properties and uses, that a few of them may with interest be examined individually; in which case, we will divide them into *Resins Pure* and *Gum Resins*.

1. *Of Pure Resins.*—These are in no degree soluble in water, but perfectly so in absolute alcohol; and although several of them are also soluble in oils, and thus obtained, (*Oleo—Resins*) nevertheless, the readiness with which the separation is effected, saves them a rejection from our list of *pure*.

Common Resin—Turpentine Resin, Rosin,

or Colophony, as it is variously called, is an incidental product of the distillation of the turpentine of pine trees; the oil passes over with water and leaves the resin pure. One hundred lbs. of turpentine yield about 12 lbs. of the oil, and 88 of resin. Light brown, semi-transparent and brittle, breaking with a conchoidal, or shell-like fracture, it softens at 160° and melts at 275° Fahr.

Used for a great variety of purposes in the arts—chiefly for the preparation of *waxes* impervious to air, as grafting-wax, shoe-maker's wax, &c., and for rubbing the strings of musical instruments.

Chemically considered, colophony consists of three distinct acid resins, to-wit: *pimaric*, which usually predominates, *pinic* and *sylvic*, requiring chemical processes for their isolation.

Copal, has a slightly yellow color, and is very hard. Soluble in ether and absolute alcohol. The Copal Varnish of commerce is a solution of this resin in oil of turpentine, and is perhaps, more extensively used in the arts than any other.

Benzoin, obtained by making incisions in the Laurus Benzoin and known in the East as *frankincense*, is usually variegated like some kinds of marble, though quite white when pure. Used chiefly in cosmetics.

Lac is a product of several plants in the East Indies and exudes through punctures made by the *Coccus Lacus*, an insect, which also incidentally furnishes to the resin a valuable coloring matter known as *lac-lake* and *lac-dye*. So profuse is the flow of the lac through these punctures that the twigs and small branches are completely incrusted, and when broken in pieces are sold under the name of *stick-lac*. When properly purified, by melting, straining, &c., it has a light orange color; whereas the commercial article is oftener of a dark brown. Poured in the melted state upon smooth surfaces, it spreads out, becoming thin plates, which when broken up find their way into the shops as shell-lac, or *shellac*.

Heavy cloths, as woolen, dipped into melted shellac and bent into any shape retain that form when cooled, and are quite unyielding; hence its modern use in surgery for the manufacture of *splints*. Any number of thicknesses of the cloth may be immersed in the fluid resin, and while yet warm and plastic, applied and perfectly fitted to the broken limb, which is thereby furnished with a support fully equal to the thin wooden splint, with the advantage of being more perfectly adapted to the parts, and costing about one-tenth as much.

Lac is also used as *sealing-wax*, being mixed with turpentine to render it more inflammable, and with vermillion, white lead, ivory-black, or bronze to give it the desired color.

The fine *French polish*, so conveniently applied by the house-wife with a cotton cloth to worn furniture, is an alcoholic solution of shellac, with a little oil.

2. *Gum-Resins.*—These are so called because they possess the characteristics of both the gums and the resins—a portion dissolving in water, and a portion in alcohol. India Rubber and Gutta Percha are notable examples.

Caoutchouc, or India Rubber, is originally a milky juice, obtained by making incisions in the bark of certain trees in South America and the East: the water gradually evaporates or is made to do so by the application of gentle heat, when about 30 per cent. of the gum-resin remains. In this state it is quite pure and white, but is often blackened by smoke in the process of drying. The particular plants which chiefly furnish it are the *Siponia cahucha* and the *Ficus elastica*. Deep gashes are cut into the base of these trees (after the manner of tapping maple trees with an axe and gouge) and the flowing juice is caught in earthen vessels, whence, if not intended for immediate evaporation, it is transferred to bottles and kept from the air. The Caoutchouc proper consists of oil-like globules, which, being lighter than the water in which they are suspended, after standing awhile rise to the surface, like cream, and may be skimmed off.—This cream-like substance is then (if purity be requisite) agitated with water to which salt has been added, with a little hydrochloric acid, and allowed to stand until the cream rises again; the process being repeated, until no more gum is dissolved. It is then compressed between folds of paper and dried under the receiver of an air-pump.

The gum-elastic of commerce generally, is prepared, however, with much less trouble and expense. It usually occurs in the form of brown-colored, hollow pears, which the natives prepare by smearing over clay mounds of that shape with successive layers of the milky juice, and evaporating the water in the sun, or over a moderate fire. The clay is then softened by water and emptied out.

Its properties of elasticity and flexibility at moderate temperatures are familiar. At about

250° it melts, becoming a viscous fluid, and does not for a long time recover its original character. Combustible, burning with a bright, smoky flame. Insoluble in water and alcohol, but readily so in ether, the essential oils, and sulphide of carbon.

The uses of Caoutchouc are numberless.—What article of manufacture can be mentioned, from the patent umbrella down to the baby-whistle, that is not made of it?—particularly since the important discoveries of Chas. Goodyear, by which, with the addition of sulphur, combined by heat, (*vulcanizing,*) &c., we are now able to give it any degree of hardness desired. Knife-handles, combs, brushes, portmonies, tooth-picks, pen-holders, pens, inkstands and walking-sticks; horse-whips, carriage-trimmings, traveling-bags, baskets, book-covers, daguerreotype cases, water-pipes, gas-pipes, water-buckets, milk-bottles, patent nipples, breast-pumps, stethoscopes, ear-trumpets and syringes; hats, caps, boots and shoes, over-coats, cravats, gloves, suspenders and breeches; bonnet-protectors, cloaks, corsets, false bosoms, petticoats, hoops, bustles, whalebones and life-preservers,—all these are the recent products of its manufacture, and in every-day use by people of all classes, in all civilized countries; while it is just beginning to be discovered that speculators and politicians have been for a much longer time in the use of gum elastic consciences!

Gutta Percha much resembles caoutchouc, and is obtained in like manner from trees in East India and China. It is much harder, however, and is non-elastic; melts at 250°, and so far softens in hot water as to be moulded into any shape, which it retains on cooling. Highly inflammable, and soluble only in the essential oils and ether. Elementary composition (Carbon 87.8, hydrogen 12.2 per cent.,) quite identical with caoutchouc; both are hydro-carbons. Its uses are also numerous and constantly increasing. Taken together, India Rubber and Gutta Percha have marked a new era in the history of the domestic arts; so that it would hardly be amiss—for more reasons than one, perhaps—to call this the *gum elastic century!*

H.

A NEW material for paper has recently been received from London at New York. It is the residuum of beet root after being pressed for syrup, and is the first parcel that has been imported into the United States.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NO. II.

ARRANGING, DIVIDING AND MAKING UP FARMS.

Doubtless this is a subject that most men, and especially practical farmers usually think they pretty well understand, at least how to make up a farm to suit themselves. Still we deem it a matter worthy of a passing notice from every one, no matter how experienced, and particularly worthy the long and careful study of the new beginner and the inexperienced. Doubly important for the sake of having things right in the first place, as well as for the reason that it is so difficult to alter them after they are once fixed.

Perhaps we are more conscious of the great importance of starting right, because of our own experience and suffering, having bought a second hand farm a few years ago that had been begun by accident and without reference to surrounding circumstances. Our predecessors had situated the buildings, fields, fences and every thing else to correspond to the points of the compass, wholly disregarding the public highway, which passed in front of the buildings directly cornerwise with every thing else. The consequence has been, that in order to get square and respectable in front (where hundreds were daily passing) we have had to uproot and tear down everything, even to the removal of the orchard and eighty rods of full grown crab apple hedge. It has been nearly or quite as much work as to have made the improvements in the beginning, and a great deal more aggravating.

Hence what we felt and knew theoretically before, we are now ready to enjoin with double earnestness on account of our unfortunate experience. It is important for all as far as possible to make their farms up right in the beginning, in order to save subsequent alteration, loss and chagrin.

We have always considered that one of the greatest pleasures experienced by a new country pioneer arose from the conscious satisfaction he finds in taking a new clean pattern of eighty, or one hundred and sixty, or more or less acres, new and clean from the hand of God, and out of which to make him a farm and a homestead. We have never felt or found a prouder satisfaction than when we have been employed in stretching our fences over the new, smooth and beautiful prairie, enclosing it

in for the first time from the range of the Indian and the Buffalo. It seemed to us that we were absolutely doing something toward making up the world for man's habitation—making marks that would last after we were gone. And this last consciousness that we were making marks for others as well as ourselves, has rendered us doubly anxious to make them well. And what we would wish is, to inspire all others in the outset, duly on this subject, that they are but the tenants of a day upon the soil, and that their pride and sense of duty should prompt them to strive to turn over the heritage to others in as good taste and shape as possible. To do this, those who undertake to *improve* farms, must study the best modes for every thing, not only in the outset, but constantly, as they progress. A furrow should not be plowed, a stake drove, or a fence made, however temporarily, without a well digested plan, lest it be soon to be done over again and with loss. Even the first log cottage should not be reared without due reflection, for we have often seen it placed upon the pleasantest spot, and exactly where a good house will need to be erected after a little, and the cottage torn down to make room for it, even before the family have any other place to live.

In locating buildings upon a farm, great care should be observed to so place them as to have the different portions of the farm as accessible and convenient as possible, with the tillable lands upon the one hand and the pastures and out lots upon the other, so that a central alley or lane splitting back centrally through the premises, will afford a good approach to the cultivated fields upon the one side and the grazing, meadow and wood lots upon the other.—Sometimes a public road divides a farm so as to secure nearly the same advantages and render a centre alley needless. Upon the tillable side of the alley should be situated, if practicable, the house, the garden, and the orchard. The fields as properly and evenly divided as possible to facilitate a convenient rotation of crops, of corn, grain, grass, and roots, thus requiring four fields if practicable.

These lots all opening upon the centre avenue (with their gates of course,) will render them accessible at all times, without interfering one with another. When the grass or clover is cut and secured, then there is a good pasture at command without destruction of surrounding crops. The same when the sowed grain is harvested, the field can be gleaned by the pigs and sheep until not a kernel of grain is wasted nor a weed left to scatter its seed, leaving the land in the best possible condition for the plow. The orchard and garden should also have their separate and complete fences from the first, and the best possible fences for them are hedges of some kind, as they are proof against boys and *loafers*, who had rather steal fruit and melons than raise them. The wild crab-apple tree of this country, will, in the absence of any thing better, make a substantial thief proof hedge within five years from planting, thus if set when the orchard is, it will afford a good protection by the time the latter comes into bearing. We are enclosing our own with buck-thorn, and expect that it will make a splendid hedge within five years from setting the plants.

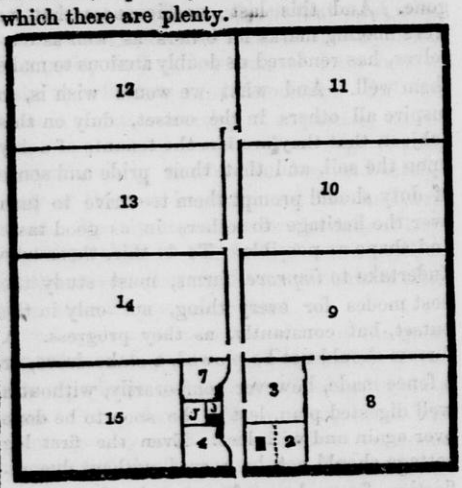
This suggestion about orchard protection may not be fully appreciated by those who have not yet had western experience with bearing orchards; but it will be when that time comes. There is a lawlessness about such things in this Western country that would shame a New Zealand savage, and lucky is the man who gets a ripe specimen from a fruit tree for the first two or three years after it begins to bear, (at any rate he is luckier than we are.) The wild plum would undoubtedly make a pretty good hedge, besides bearing a power of tolerable plums from year to year.

Upon the barn side of the street or alley there is also an equal necessity of appropriate and convenient arrangements for all the various purposes of the farm. The planning of the barns, out-buildings, sheds and yards, so as to afford the utmost convenience, protection and economy, requires ample study, judgment, and good taste. We have seen log and straw hovels rigged by tasty hands that were absolutely more comfortable and convenient than other's barns and sheds, built at considerable expense. Due regard should be had in the arrangement of yards to save manure as much in this country as in any other. Not that our soil as yet perhaps needs it quite as much, but because it soon will, if neglected and overtaxed with heavy crops of corn, oats, and wheat, as is customary.

When the lay of the land admits of it, barns with well constructed basements are on many accounts preferable, not only because they have a great deal of additional room, but because it is so much better calculated to counteract the

extremes of our varied climate, being cool and free from insects in summer, and equally warm and comfortable in winter, admitting, if well constructed, of the storage of vegetables and the handling of wet feed and water from a pump without freezing—a great desideratum, by the way, in watering stock as it should be. A good well, situated in a basement where it will not freeze, will, if rigged properly with a wind mill, supply all needful water in the trough for any amount of stock, thus saving all wanderings to remote creeks, or thirsting for want and licking snow. Contiguous to the barn-yard should also be a capacious and well enclosed stack-yard, all the better if with a six feet picket fence, as then the fowls and every thing about the premises can be kept out if desired, and what is almost equally handy, they can also be kept in, during the seeding and such other times as they would be likely to do mischief about the farm, especially as at such times the stack-yard would be likely to be clear of grain—thus subserving a valuable double purpose, protecting the crops in or outside as the case may be. It should be located beside the cattle yard as before said, so as to render it handy to stack the straw where it can be fed without extra moving. This stack yard is not a common, but a highly useful appendage to any farm, making as it does a safe storage for the crops of whatever kind, where the grain, the corn and the surplus hay can be safely deposited and safely kept until otherwise disposed of. How many a farmer who reads this will be able to recall to mind the amount of his own crop that has been wasted, even the present year, after being ripe in the field and before it could be secured, especially the corn, so much of which usually goes to waste and destruction before being husked. If once hauled into the stack yard and properly put up, it could stand secure until the more leisure warm days of winter before being husked, and without being *tolled* by any thing but the mice.

Upon the most convenient and safe side of this stack yard may be advantageously located the granary, the corn crib, the tool house and chicken shed; the latter so constructed that the chickens can be let into the stack yard or out of it as convenience may dictate—there often being a convenience in it. It is well in arranging these latter buildings, especially the granary, to situate them so that they will not be likely to take fire in case of the burning of the barns or sheds. Inasmuch as it is likely to contain the accumulated treasures of the farm for the whole year's labor, it ought to be as secure as possible—care and prudence in the outset often being better than insurance, especially in a *bogus* company, of which there are plenty.



PLLN OF A FARM.

Herewith we present a sketch of the manner in which we would subdivide a square farm of 160 acres, so situated as to present no impediment to such arrangement. Upon the road-ride in the centre, as before stated, we would locate an avenue running back far enough to strike the backmost lot, and about two rods wide. And on this as indicated on the plan, we would locate our various lots and enclosures, and subdivide as nearly as possible like the plan, the description of which is as follows;

Lot 1 is the house lot, nearly square, and containing one acre with the house in the centre, and the whole grassed down to a lawn and interspersed with trees, shrubbery and flower beds, thus removing dust and dirt at least several rods from the house on all sides, making a splendid play ground for children, clothes yard in the rear, and all in all the most naturally elegant and cheap surrounding that was ever yet seen about a pleasant country house and home. Who among the ideal cannot see it in imagination, with its rich dark evergreens, drooping shrubs, trailing vines and variegating flowers.

No. 2 is the vegetable garden, of just the same size and form as the house plot. It is unnecessary for us to say that it should be bordered with grapes, currants, gooseberries, raspberries, pie plant, horse radish, asparagus and what else you please; each can fill that

part of the picture to suit themselves. It is within a step of the house, and only divided from it by a fancy lattice, white-washed fence, or ornamental hedge of Abor Vitae or Privet.

No. 3 is the orchard, containing four acres and affording room to plant and grow two hundred fruit trees without crowding, which if they are grown as they should be, is a great plenty for a farm of ordinary size. In fact we deem it good policy not to have the orchard lot too large, but to have it exclusively devoted to its purpose as soon as the trees are fairly grown, and only to special uses while the orchard is growing, such as root and hoed crops. Any farmer ean, if he will, properly and deeply plow a plat of ground of this size and plant the trees upon it as they ought to be, and not only that, but take such care of them as they should have afterwards, never plowing among them with anything but one horse, with a short whiffletree, so made as to present nothing but smooth leather (well greased) to rub against the trees. Cattle and sheep should never see the inside of the orchard except through a good high fence; while pigs are good customers, and no matter how often they are in, when there is no growing crop for them to injure.

We have taken particular care to locate the orchard back from the road, so as to throw no especial temptation in the way of the passers by, knowing fully, as before said, that there are many who need but little temptation to overcome their *virtue*. They will not be so apt to steal the trees out of the front yard or the squashes out of the garden, although they annually steal the well nailed on boards from off our road fence to the tune of a dozen or so.—But there is no use of complaining, inasmuch as this is a *great country*, where people not only enjoy, but *take the largest liberty*.

No. 4 is a small clover lot, of an acre and a half, for a pig and calf pasture. In the corner of it next to the barn and connected with it by an inside door, is a carriage house and hog pen—all convenient and handy to the house, so that both pigs and calves can handily be fed, either from the alley or barn yard. This little lot will be found exceedingly handy, and should be so well fenced as to make a secure *prison* for the hogs and pigs whenever desirable. In the chamber of the building can be had ample storage for corn and other feed for the swine.

No. 5 is the large barn yard, of about three-fourths of an acre—large enough to admit of division, if need be, for sheep, with their shed upon the rear end; it can be connected by gates with all of the surrounding lots and yards.

No. 6 is the small yard where the colts and small *fry* generally, that are not stabled, can have sheds and shelter in winter, and where the cows can be yarded night and morning for milking, convenient and handy to the house.—All of these yards should be enclosed with high and tight fences to ward off the bleak winds, for which foresight the cattle will show deep gratitude both in good nature and thrift.

No. 7 is the stack yard, containing an acre and a half, (could be *ensmalled* a little where land was scarce.) As before stated, it will be found to be a great *institution*, if properly fitted up, with good high picket fence and gate, protecting every thing inside from all creation, and when necessary, every thing outside from all mischievous fowls. In the hither corner is the *chick* house and granary, of such construction as may please the fancy. We deem this the best location for these appendages, first because we want the granary where the grain goes handily into it from the thresher, and at the same time handily into the wagon or barn, still so far removed as to make it safe from fire in case the barn should burn; (the mode of construction to make it fire and rat proof we will discuss in its order.) The object of having the chicken house in this location is to secure a connection with the stack yard when desirable, by having the house so constructed that they can go into the yard or street, or both if desirable, and so they can be shut in or shut out by merely closing one set of doors and opening the other.

The remainder of the plan explains itself, being simple divisions into fields of uniform size, except the two in front. The six equal sized lots contain twenty acres each, and the others, one about thirteen and the other about fifteen acres. These uniform and regular sizes as far as possible, are highly important for many reasons,—First, by knowing the exact size of your field, you can make accurate calculations as to the quantity of seed or manure required, as well as the quantity produced per acre. Most people guess at these matters, (and often guess wildly too, we think, from the stories they tell.) Guess work will do for half-way, scatter-heeled farms, but will never do for such as calculate to know what they are about. Farmers who guess at the size of their

fields and at the probable yield of their crops, and contract debts on the strength of their guessing, most usually come out at the *little end of the horn.* Therefore in planning and subdividing your farms, don't start on a system of guessing, but measure and calculate carefully, and if you cannot do it sufficiently careful, get a surveyor to help you, for remember that when you have once fixed your lines, and perchance planted trees upon them, that it is difficult and expensive changing. In fact not often done, unless it happens to fall into thorough hands, who overturn, uproot, and change things to what they should be.

In its proper place we will treat on the best modes of fencing our *model* farm; also of the matter of planting ornamental fruit and forest trees, of rotation of crops, &c., &c.

In presenting the foregoing simple plan, we of course do not expect to hit all circumstances and cases, or even half of them, nor to instruct wise old heads who know it already, but offer it simply as an illustration on general principles of what can and should be done, at least as far as possible, in the way of arranging and fitting up farms tastefully and handy for use. Those who look upon this plan need not allow themselves to suppose that they must, in order to carry it out, make all of the fences required in a single year. No, that is not necessary.—But what is necessary is to establish a plan for each and every farm that one undertakes to improve, and to establish it as early and unchangeable as possible, and then work at it step by step as opportunity offers. Such a course persistently pursued, will in the end produce a much better result than mere random operations without purpose or plan beyond the present hour. P.

HUGHES' TELEGRAPH.—Mr. Hughes has recently sold the patent right of his improved telegraph for $125,000. A New York paper says that it is in every respect an improvement on any of the present systems—quadrupling the rapidity with which dispatches can be transmitted, needing but one wire, and occasioning less wear and tear of the machines.

A LARGE factory intended to be used for consolidating milk, has been erected for a New York firm, on the farm of Messrs. Carpenter, at Stanfordville, Dutchess County. Mr. Borden, the inventor of this process, has established a condenser in Litchfield County, Connecticut, capable of reducing 5,000 quarts per day.

Correspondence of the Farmer.

Chinese Sugar Cane.

MESSRS. EDITORS:—I see an occasional article published in the *Farmer*, giving your readers the result of experiments made by different individuals about our State, in raising Sorgho Sucre, &c. As yet I do not learn that any one in this State has succeeded in making sugar from it, a desideratum of no small import.

I propose, in common with others interested, to give the result of experiments made in this vicinity. Ira A. Rice, Esq., of this town, planted seven superficial rods of ground which was highly manured; it was planted in rows the same as corn, the hills about three feet distant, and was well tended; all the suckers allowed to grow and when cut it stood about 14 feet high. At a short distance from it you would suppose it was sown broadcast; it was a perfect mat, and altogether too closely planted; from this, through a very imperfect machine, he got 100 gallons of juice—this boiled down to 20 gallons, produced a very heavy syrup of superior flavor, pronounced by good judges equal to the best golden syrup made from Southern cane. This and many other experiments in this vicinity, with corresponding results, fully satisfies us that we may as well raise our own sweetning as our bread.

I do not hear of any ripe seed being raised in our county, except my own, which every man can raise as easy as he can raise ripe 8 rowed Yankee corn. To do this, plant your Cane in hills, four feet distant, on highly manured warm land; tend it well, let not more than four stalks stand in a hill, keep off all the suckers during the season, and I will warrant you ripe seed. That which you raise for seed will not produce syrup or sugar, for so soon as the seed begins to turn, the stalk becomes pithy, and as the seed ripens it looses its sweetness and juice, and becomes dry like the inside of a corn stalk.

I have about 10 pounds of perfect seed which I raised from two small papers sent me from the office of the *Farmer* last spring, out of which I intend to plant four acres next spring and the balance distribute gratuitously among my neighbors. If I had suckered all my cane I should have had three times as much seed. Out of about 30 hills that were not suckered, not a ripe seed did I get save from one stalk, and as my cane was all planted in one little patch, and now and then a hill in different

parts of the patch suckered, and that hill producing ripe seed, while others either side of it which were not suckered did not, I conclude that this experiment proves conclusively that we can raise ripe seed. More on this subject hereafter. Yours, Truly,

S. E. CHAPMAN.

WATERFORD, Racine Co., Wis., Dec. 7, '57.

Correspondence of the Farmer.

MESSRS. EDITORS :—I am not a learned editor, as I am quite verdant in the "things that be," and deeply feel the need of a little more learning—in short, making that a business for a livelihood which I do, I feel daily more and more the need of every man being thoroughly educated for his calling.

That there is a great lack of the first principles of agricultural knowledge in every farmer's education, all must admit. Men plow in the fall, sow in the spring, and reap in the summer, with no knowledge of the whys and wherefores, except that their fathers did so before them, while of the leading principles of vegetation they are entirely ignorant. Yet the theory of vegetation is not mine to teach, but I would aim to point out some of the neglected points in this, the nineteenth century, of the education that the masses are receiving, and turn the attention of the directors of our common schools to a selection of such teachers as will enlist the sympathies of parents in general and scholars not a few, till they all see for themselves, that there is a great "want of progress in rural taste."

How many of our farmer's boys and girls ramble over our beautiful prairies, plucking the flowers and wreathing them into garlands of beauty, without one solitary idea of the beauty each contains, but, searching far and near, no beauty in any, till each the other has outdone in quantity, thus displaying the very thoughts and actions of the grey hairs that have gone before them—speculations, love of gain, more, more, till they die.

Now, Mr. Editor, what is to be done in this fast age? Young America is getting ahead of himself. Who is to put on the brakes? Is it you, or I, or some one else, who is willing to be dogged for conscience sake? But will we, can we, see the youth of the land come up educated and into the field of education, all speculation, money, money, and not able to contribute one idea to this want in the state's past neglect? To such, a field of corn or grass are about the same thing. But a parterre, a lawn, a graceful, drooping willow, or a stately oak has no charm of beauty for his soul. His is all locked up in great professions, and when he dies, will the world be any better or wiser for his having lived in it?

To spare a dollar for suitable shade or ornamental trees for the door-yard or road-side, would be great extravagance, or where they can be had for the digging, can find no time to assist nature in what she has so well done—We know that there has been a vast amount of thought and study expended in horticultural detail, as applied to nature, but there is such a wide field for knowledge connected with it in both the animal and vegetable kingdom, that its delights never end. And is there "a man with soul so dead," or "speculations in his eye" so firmly, that he can spare no time, and see no need for a thought or moment's labor in this direction?

The man of thought will give "a local habitation and a name" to the most distant star; then why can not our children be taught to localize and specify the characteristics of our native plants? And if the Astronomer "sees God in the clouds and hears him in the wind," why cannot they also be taught the beauty of his handiwork and architectural skill in the petals of flowers they so carelessly destroy—thus teaching them to "look from Nature up to Nature's God."

There is need of a reform in this vast field of action, that the rising generation may see and study the otherwise hidden things of nature. Of the many teachers now employed in the West, how many were examined in their botanical qualifications? I'll venture not one.

To show how some of these evils can and should be remedied, will be my future aim; and to point out some of the hardy trees, evergreens, shrubs and flowering plants adapted to our cold and windy climate, thereby enlisting the sympathies of farmers, tradesmen and mechanics in the one great neglect of our country, the "want of reform in rural tastes."

Yours, &c,. W.

JANESVILLE, Wis.

FROM the year 1852 to 1856, both inclusive, the actual loss of life on the ocean was four thousand three hundred and sixty-three. Out of two thousand five hundred and fifty-eight ships, only two hundred and sixty-eight were lost in either gale, storm or hurricane.

Agricultural, Manufacturing and Mining Statistics of Wisconsin for 1856.

Through the politeness of Gen. Ruggles, of the State Department, we have been favored with a copy of the Secretary of State's report, containing the Statistical Report made under the law of last session, requiring the assessors to collect information in relation to the productions of the State.

As we anticipated, it reveals many interesting and important facts, concerning the leading interests of the State. Unfortunately, eighteen of the fifty-one counties of the State, have made no report whatever. Most unfortunately, especially, as two of them are the oldest and richest counties in the State, (Milwaukee and Grant,) while Sauk, Ozaukee, Pierce, Waupacca, and La Crosse, five more of the comparatively well settled counties, are among the delinquents. The remaining eleven unreported counties, are pretty newly and scantily settled, to-wit: Adams, Bad Axe, Chippewa, Clark, Douglass, Lapoint, Marathon, Oconto, Polk, Portage and Wood. Still they would have added largely to the aggregates reported, if they had been included.

But the thirty-one counties that are reported, show a very creditable result for so new a State as Wisconsin. Our space will only allow us to give a synopsis of the more important items. And first in the alphabetical order, in the line of products, comes apples; and we think those who have doubted the possibility of raising apples in the State, will be surprised at the quantity reported; especially when it is remembered, that the season of 1856, succeeded the hardest winter on fruit trees and buds, that was ever known. The whole quantity grown in the State, is reported at 35,145 bush. Dane Co. contributed 1,102 bush. of the amount; Green 1,340; Jefferson 1,848; Kenosha 6,103 (the largest amount;) Lafayette 3,806; Racine 5,105; Rock 3,200; Walworth 5,351; Waukesha 4,037, and divers other counties lesser amounts. Probably the superiority of 1857, as a fruit season, together with the additional age of the trees, will nearly double the product of 1856, showing that Wisconsin is really growing a goodly amount of apples already. We predict that she will keep on, against "wind and tide," and hard winters, until within ten years, she will be raising large quantities for export, to the newer regions, after having supplied all home wants; let those who doubt wait and see.

Beans and Peas 34,706 bush. (one of our farm neighbors raised about 1,600 bush. beans the past year;) Clover seed 124,079 lbs.; Corn 5,100,790 bushels. Some of the principal counties raised as follows: Columbia 357,726 bush., Dane 525,809, Dodge 201,626, Fond du Lac 204,606, Green 429,647, Jefferson 292,971, Lafayette 327,705, Marquette 255,543, *Old Rock* 658,615, the *biggest pile*, Walworth 549,000, Waukesha 262,072. The whole crop divided by the acres, shows a yield of less than eighteen bushels to the acre. After making all allowance for *seed corn*, this average tells rather small for Wisconsin farming, and undoubtedly tells the truth, besides. We have never believed that our farmers raised more than half a crop of corn as an average; between bad seed, gophers, weeds, bad tillage, and late harvesting, the crop is too often a beggarly affair for the labor it costs. These statistical facts will persuade more of the truth of what we say, than would otherwise believe it. Our fields properly managed, upon our new and usually rich soil, should average at least thirty bushels to the acre.

Grapes turn out a yield of 8,182 lbs., another encouraging argument for Horticulturists in Wisconsin. We know that the quantity has been more than doubled the past year; for nearly as many as above stated have been sold in the streets of Madison alone, and of the growth of Dane and Sauk counties. Grass seed 1,023,177 lbs.; hay 519,547 tons; 59,616 tons of it in Dane Co., Fond du Lac Co. 40,546, the two largest.

Oats 6,312,304; the largest product in Rock 716,652; 36 bushels to the acre, on an average. The entire average yield of the State is over thirty, (not bad if correct.) A much better show of oats than corn, which probably arises from the fact that they will stand bad farming better.

Potatoes 2,318,694 bushels on 22,858 acres; and average yield of 100 bushels per acre.—Waukesha Co. takes the palm in this article, producing 218,439 bushels; (there are other reasons beside her soil why she should excel in *perate* raising.)

Rye 220,531 bushels. There will be more of this raised in proportion, than now, within a few years, unless people take better care of their soil. It is a favorite crop on worn-out land.

Wheat, the great staple of the State, amounts up to 8,717,756 bushels, grown on 521,393

acres, averaging almost seventeen bushels to the acre. Not bad for Wisconsin farming.—We doubt if the report is correct, as we think the average too high. Here *old Rock* leads the other counties again—even *old Dane*, with nearly twice the territory. Rock produces 1,072,415, Dane 1,049,149, Columbia 591,348, Dodge 586,378, Fond du Lac 673,497, Green 396,286, Jefferson 447,498, Kenosha 330,530, Marquette 386,227, Walworth 783,292, Waukesha 599,183. Probably the report of all the counties in the State, would have shown nearer eleven than ten millions of bushels, upon which basis we may calculate that the crop of 1857 could not have been less than 14,000,000 bushels—by far too much for present prices.

Butter *rolled* up to 6,655,686 lbs. Racine produced her 637,218, the largest amount.—Dane follows next 509,150. Fond du Lac 403,403, Jefferson 372,080, Rock 499,650, Walworth 441,541, Waukesha 497,086.

The Cheese crop, 444,933 lbs., is small indeed; Fond du Lac taking the lead 55,499 lbs. Rock next 51,896, Walworth 46,330. Both of the last mentioned crops should be vastly increased in quantity, as well as improved in quality, although they hardly will be except as the cultivated grasses and more thorough farming is practiced and attained to.

Cattle count up to 289,561—a small number indeed for a State of 800,000 people, and almost wholly farmers. About one *cattle* to three persons, and only one to 45 acres of assessed farming land. There is evidently some mistake in these cattle figures, as Racine Co. is put down as containing 141,272, while Walworth has but 23,600.

Hogs are put down 177,810 on hand against 153,746 slaughtered. Dane Co. takes the lead in the *hoggish* department, having 14,351; Rock, Walworth and Jefferson about 12,000 each, and Washington county is put down at the same but evidently a mistake.

Horses and mules all told 74,843, valued at a fraction less than $100 apiece (a big price we think as an average.) Rock has 7,469, Walworth 6,357, Dane 7,196.

Sheep 312,215, valued at about $2 per head. Walworth contains 46,552, Waukesha 38,971, Rock 26,347, Kenosha 23,288, Jefferson 22,783, Fond du Lac 20,972, Dane 24,932.

Dogs are not enumerated, but we think they would crowd the sheep pretty hard in numbers (as they do in the midnight chase.) We would like to have seen their numbers reported and also the number of sheep they have killed.—We will venture the fact would surprise every body, and raise a universal *howl* against the whole canine race. We hope to see the law amended this winter so as to include these items, as well as a few others on the wasteful side.

The wool product of the State is 929,806 lbs., valued at an average of about 26 cts. per lb., and averaging about 3 lbs. to the head.—The amount of wool that is grown in the State thus averages not much over a pound to each inhabitant, or about one-tenth of what is probably consumed in the State, and about one sheep to each 40 acres of land assessed. Here is another chance for improvement and economy. The land lies idle and unproductive that might grow millions of pounds to sell instead of only one-tenth of what we use.

Manufactures are small, especially when Milwaukee city is left out. 77,341 pairs of Boots and Shoes.

Sugar (before the days of Sorghum) 1,327,644. In this there is also undoubtedly a big mistake, as Waukesha Co. is put down 735,572 and Jefferson 137,718, or only about one-sixth as much.

Whiskey 301,512 gallons (not nigh enough for home consumption, unless immensely watered.)

Pig Iron 2,500 tons (all at Mayville, Dodge Co.) value $50,000.

Lead smelted 17,569,932 lbs., valued at $572,840. Grant county is lacking, which would probably largely swell the amount, but altogether not worth so much as the wheat crop of numbers of the old counties for the same year.

The foregoing is a glance at the most prominent features of the report, and notwithstanding it is most obviously full of errors, and many of them large ones—and further that it is a mere tabulated statement of figures, yet it reveals a mass of important facts, that can be obtained in no other way, and that are in themselves invaluable to all who would really know anything more than guess work of the fundamental interests of the State. It is the commencement of a system of *production* account between the State and the people that is indispensable to be perfected and kept up if we would have anything like a correct understanding of what we are doing.

The imperfect working in this first instance undoubtedly arises from the novelty of the thing, and only requires a little

experience to bring it to the same degree of perfection to be met with in other well settled operations.

Let the practice of collecting the fullest possible statistics be contined, say we, until we through them know precisely what we are doing from year to year, with this difference however, that the collector of taxes should also collect the statistics instead of the assessors, as in that case we would be able to get the report of them immediately after the close of the year, instead of nearly a year later. P.

Draining Lands.

Draining lands for the purpose of removing the excess of moisture in the soil, that is produced by springs or rains, is becoming more and more popular from year to year. Mr. John Johnson, near Geneva, N. Y., says:

At elections, vendues, and all gatherings of the people, draining is the main topic of conversation, and the wonders it has done on the crops. One tile maker told me the other day, that he was burning the fifteenth kiln since May, and every kiln was engaged before it was cooled. Six years ago he could not sell four kilns in a season. What a change in fifteen years, when I was the only one tile draining, and was ashamed to mention it, as every one I talked to on the subject thought it folly.

In regard to an excess of moisture, drilling in wheat, &c., Mr. Johnson writes to a cotemporary as follows:

No man ever saw a good crop of wheat when there was an excess of rain in summer. I believe it is the same in all countries—at least such has been my experience. I noticed last year, on an adjoining farm, where the wheat was drilled, it came up very much better than mine. In fact, it came up right. I could not account for it at the time, as my land was in as good a state of cultivation as his, and both sown at the same time. His is a good crop for this season, and far above an average crop for this country for some few years past. It never occurred to me until this season, that it was owing to his wheat being drilled in, and to mine being sown broadcast. This season we both sowed at the beginning of September, and my land being fallowed, that never was excelled by anything I ever saw. A drought set in at the time of sowing. His drilled wheat came up luxuriantly, while mine was exceedingly thin. On examining, I found that none of mine vegetated except that deepest in the ground. Then it at once struck me that if I had drilled the year previous, it would in all probability have gained me 500 or 600 bushels of wheat. However, this year we have had plenty of rain since the 18th of October, and my wheat is all right, and I prophecy a good crop next season. But I will drill in wheat after this. Old as I am, I still learn.

Domestic Manures—Part 6.

Leather is also a valuable animal manure; and yet what immense quantities of trimmings and parings go to waste in every city and village in our country. About the premises of every currier, shoe-maker, saddler, harness-maker, trunk-maker, hatter, book-binder and glove-maker in the country, there lie enough scraps to add to the fertility of acres.

Consisting chiefly of gelatine and albumen, both of which yield large quantities of ammonia and other manurial gases, their chemical character is a sufficient guaranty of their value. Moreover their effect is continuous for several years.

When immediate results are not demanded, that is, when their whole force is not required to be expended at once, the best method of applying them is to spread upon the soil and plow them under. Thus applied, a marked effect will be visible for five or six years. If it is desired to exhaust their power the first year, the scraps should be cut up into small pieces and dissolved in oil of vitriol or caustic potash, in which case the liquid solution will be sprinkled on the land after plowing. They are best adapted to sandy soils and light gravelly loam, but are also applicable to almost every variety.

Gather up the scraps of leather, then, of whatever sort, with the certainty of a ten-fold reward—nor forget that each old boot or shoe kicked about your door-yards, if properly used, is easily susceptible of transmutation into the hide necessary to a new one.

Old Woolen Rags have, according to Browne, been in vogue, as manure, in England, since the early part of the 15th century, and perhaps for a much longer time; where they were regarded by agriculturists as especially appropriate to chalky loam, sandy loam and other dry soils. The "Modern Husbandman," published in 1742, even thought it paid well to "go twelve or fifteen miles with a wagon and five or six horses to fetch them," further insisting that "nothing could come up to them in the virtue they contained."

Nor did this quaint old writer much exaggerate their value, since a chemical analysis by Prof. Way has shown that they are capable of yielding even 12 per cent. of ammonia.

The mode of applying them is to chop fine and sow them on the ground already prepared for the seed, burying both together. Their efficacy would of course be increased by mixing them with urine. Their effects are discoverable for four or five years.

And now, although we hardly presume our farmers in Wisconsin have on hand (and we trust they never will have, on their persons!) enough of such refuse to enrich their wheat fields, yet in such quantity as they happen to have them stowed away in their garrets, we insist that they could be more economically stored in the soil of the garden and hop-yard.

H.

Correspondence of the Farmer.

Management of Bees.

MESSRS. EDITORS :—The honey bee has been a great favorite with me, for several years.—Much time and attention has been devoted to its culture. My bees have generally done well in favorable seasons ; but in unfavorable ones, here was the trouble. I have had two great difficulties to contend with—the Bee Moth, and a want of knowledge of the exact condition of the inside of the hive, without which we have to guess and conduct our operations in the dark.

To protect my favorites against the ravages of the moth, a great variety of hives have been used (mostly patent) which, instead of furnishing protection, have proved excellent moth-harbors. I am satisfied that no hive can be so constructed as to admit the bee and exclude the moth. The moth's instincts are as unerring as that of the bee. No *devise* can prevent her from depositing her eggs on the comb or in immediate contact with it. To the FRIEND, who in the last number of the *Farmer*, inquires for "the best safeguard against the moth," I would say my experience has shown it to be a strong stock of bees covering all their combs, and possessing a fertile queen. Such a stock is able and will protect itself against the moth —no others can. Should the bees lose their queen (which they often do, she not living over two to four years) or be reduced by over-swarming, or the effect of an unfavorable season, or any of the many causes always tending to reduce their numbers, so that they fail to cover and guard all their comb, the moth is sure to find a place inside the hive to deposit her eggs. The prosperity of the hive, then, mainly depends upon the care bestowed upon them.

It is a wise and wonderful arrangement of nature, that the moth-worm, or grub, when fully grown, should leave their galleries or web in the comb, and seek some safe and warm place in which to spin its cocoon. It is then easily caught and disposed of. The careful bee-master will be on the alert to assist in their destruction, particularly in the Spring.—A single pair of worms permitted to change into the winged insect, may give birth to hundreds ; which before the close of the season, may supply every hive with hundreds of them. Every worm killed in the spring and early part of the season is better than a hundred in the latter part.

Wrens destroy the moth and worms with great avidity, and boxes should be placed about the apiary for them to nest in.

But to insure success in bee culture, under all circumstances, we must cease to guess, or have any uncertainty about the amount of honey and bees contained in a hive. We must by actual examination know their real condition. For this purpose we must have perfect control of all the combs, so that any of them may be easily taken out without cutting them or enraging the bees. The only hive ever produced in Europe or this country, which fully possesses this advantage, is that of the Rev. L. L. Langstroth. I have been using this hive for the past year with the most perfect success. It is a model of simplicity in its construction, and as fully and perfectly adapted to all the instincts, habits and conditions of the bee as is possible to be made. The combs are not attached to the hives any where, but are built in frames, and suspended in the hive. I have taken a stock of bees, comb and all, out of one hive and put them into another, and in less than ten minutes the bees were at work as though nothing had happened to them.

This control over the comb and the inside of the hive, gives the attentive bee-master perfect protection against the moth. I was absent from home a few weeks last summer. On my return I found one of my stock of bees showed evidence of being troubled by worms. I opened the hive which presented a deplorable scene. Over half the comb was entirely destroyed, and the bottom of this part of the hive was covered two or three inches with web and worms. On the remaining combs the bees were gathered as if awaiting their impending doom. I immediately removed what comb remained, with the bees, to another hive. The bees commenced work with much vigor, but the season was too far advanced to enable them to gather sufficient food for the winter. On the 6th of this month I examined them, and finding their stores getting low, I gave them a

card of honey, containing about nine pounds, which will be sufficient to carry them through the winter. I also examined all my hives, seeing every card of honey, and learning the condition of each stock. I found and destroyed about thirty cocoons containing grubs.

With this hive and Langstroth's work on the bee (which by the way is the best work ever published) a man would be as culpable for loosing a stock of bees, as he would be for loosing his sheep or cattle for the want of care.

I would therefore say to the inquiring friend, and all others, if they wish a "perfect safeguard against the ravages of the moth," and a certainty of success in bee culture, they had better procure Langstroth's book and hive.

R.

Correspondence of the Farmer.

Experiments with the Chinese Yam, Chufas, Japan Peas, and Chinese Sugar Cane in Wisconsin.

MESSRS. EDITORS :—Herewith I send you a few lines, on the experience of some newly introduced foreign plants, such as the Chinese Yam or Dioscorea Batatas, Chufas or Earth Almonds, Japan Peas, and Chinese Sugar Cane. As there is now considerable interest manifested in regard to them, you may lay them before your readers, if you should see fit.

CHINESE YAM, OR DIOSCOREA BATATAS.

This root I have grown for two years. Although I have tried my best to raise tubers as large as are described in some of the newspapers, yet I have not succeeded in getting a larger one than 18 inches long and 1¼ inches thick on the largest end. As many farmers have not yet seen one of them, I will describe one here, and also their habit of growth. The vine resembles a wild morning glory; it will run up on a pole or a string, yet it will do full as well to let it run on the ground. The length of the vine is from 6 to 10 feet generally.—Each vine has one tuber, and occasionally two or three, but where there is more than one, the rest will be smaller. Next to the surface of the ground the tubers are thin, not more than one-half or three-fourths of an inch thick, but they grow larger as they get downward. In digging them, care must be taken to dig a hole large enough to get under them with a spade, to pry them up, as they will only get tighter by pulling them, and they break off very easy and the larger part cannot be got unless dug out. In appearance they look some like a parsnip, or a white Belgian carrot large end downwards. I think they are truly foreigners and won't be naturalized; by their inclination to run downwards, it appears they want to be pulled from the underside in China perhaps.

As to their eating qualities, tastes differ—some pretend to say they are better than any kind of our common or Irish potatoes. For my part give me a Pinkeye, Meshannock, or a Mexican, or some other good kind of common potato, in preference to this *cracked up* Chinese Yam. We have tried them baked, boiled and roasted, but to my taste they resemble a potato that has lain in a warm, moist cellar until August, and the sprouts picked off six or eight times, so when cooked you could fairly see through it, glassy, watery and nearly tasteless.

As to their hardiness and living through the winter, they are like horseradish, for every piece of root that is left in the ground, or every little seed (there are small seeds like a pea on the joints of the vines) that is left from the vines, will sprout again in the spring, and thus the ground will be occupied whether it is sown to grain, or left untouched.

Now, Messrs. Editors, as I have seen it quoted in respectable papers that none but those that have not raised them and have them for sale, would there say anything against them. Now I have quite a stock on hand, and at the prices they are offered at the East, they would amount to quite a little sum, but that does not quite blindfold the truth. The only thing they are good for, or work to some advantage, is this. If you want a piece of land worked deep or trenched, just plant it full of these roots and in two years turn in your hogs, and as they grow down deep in the subsoil and are the largest there, the soil must be worked up if the hogs or yourself want them, there is no dodge there.

CHUFAS, OR EARTH ALMONDS.

This is quite a valuable little root or tuber, as they are large yielders, and are a good substitute for nuts, as they taste some like chestnuts when partly dried. I have raised from half a pint of seed or 70 dried up little roots, nearly half a bushel of nice roots. They grow near the surface in hills like potatoes, about 2 feet apart each way in the rows. I have counted in one hill 331 tubers, all from a single one planted. The top looks some like coarse marsh grass, not like any vines, but like a bunch of coarse grass. They grow in any

soil where potatoes and corn grows, and get ripe in about three months. This root I think will be cultivated to some extent in our northwestern States, where all kinds of nuts are scarce; they are not much trouble to get or raise. I think that none that have a few rods of land should be without them.

JAPAN PEAS.

Of these I have three varieties—green, yellow and red. They are quite small, but yield largely. The stalks are very strong and need no poling; the pods are all near the main stem, and only two or three peas in a pod. I counted 370 pods on one stem. They want rather a long season. I planted on the 7th of June, yet they all got ripe.

USE.—Soak them over night in warm water, next day give them a good cooking, serve them up as Lima beans, and they are superior to them. In the Southern States they are much used for stock in the a green state, the same as we use clover.

CHINESE SUGAR CANE.

I planted on the 7th of June, on clay soil, and owing to our wet and cold spring, the plants did not get started until quite late. It grew seven or eight feet high on an average, when it commenced to tassel out, and the most of it was in blossom when our first frost came. That stopped further growth. I got up a pair of cheap wooden rollers, and used a common horse power to propel them. I run the stalks through the rollers horizontally, and consequently much of the juice would run off with the stalks that had been pressed out. There should have been another roller so as to press twice, but as I had only a small patch (about 130 rods,) I did not think it worth while to get up another roller, or shift those I had for this season, but I shall have a better machine another year, if we raise sugar cane again. I am satisfied that we can raise our own sweetning with a very little expense. I got fifty-one gallons of syrup from my patch, but I did not get half of the sweetning, as I took the stalks of nine gallons of juice (which made a gallon of thick syrup) and put them in the pan and filled up with water; let it come to boiling and took out the stalks; boiled down and got six quarts of syrup. But this is not so good as the other—it has too much of the vegetable taste, but showed me that we did not get quite half of the sweetning.

GEO. P. PEFFER.

PEWAUKEE, Wis., Dec. 25, 1857.

High Taxes and High Interest.

The present high taxes and high rates of interest all through the West, cannot operate otherwise than as a valuable lesson to those who are holding on to unproductive real estate, either in the shape of farm lands, village or city property. For the last few years, no notion has been more prevalent, than that the sure road to rapid and easy wealth, was in buying and holding on to real estate, of whatever nature; no matter whether it had any real value or not, the idea seemed to be fixed, that it would advance in price and be sure to find a buyer. And the course of things has for a time certainly justified such expectations.

But absolutely all present appearances indicate that that order of things has now pretty fully passed away. Under the hot-bed, forcing system of projected railroads, and paper speculations, all real estate, whether valuable or *fancy*, has been crowded up to a figure that leaves a sorry chance for material advance.—We do not wish to scare land and property owners in general, but we are well satisfied of the fact, and will venture to say it, that not one tract of land in one hundred, in the West, and especially in our own State, will realize an advance on present prices, for the next five or ten years, equal to the taxes and four per cent. interest, compounded annually. We are sorry to thus predict, on our own account, as well as that of other people; but it is a truth so forcibly impressed upon our minds, that we feel bound to express it; and if it be well founded, to arouse people as early as possible, to a consciousness of the fact, that they had better sell off all their surplus high priced lands (and $10 per acre is a high price for almost any unproductive lands.) They had better sell as often as decent opportunities occur, to those who wish them for cultivation.—For as we have before demonstrated, Western interest, and Western taxes (we do not mean three per cent. per month, but merely twelve per cent. per annum) amounts to as much as the whole value of all the landed interest of the State every *five years*. Yes, every five years' interest and taxes, eat up the entire real estate of the West. In other words, all unproductive land must *double every five years*, to amount to the interest and taxes. While on the other hand, if properly cultivated, it pays its way and perchance a profit, although usually a smaller one than is supposed. Let all who are holding *Uncle Sam's* acres or corner lots, in

idleness on speculation, think of these stubborn arithmetical facts, and look around them for industrious buyers, who need the property for use, nor let such a buyer go away, because he will not pay an extortionate price for the property.

The breaking up of business in the East, will undoubtedly send a good many explorers and buyers West, in pursuit of farms and homes, unless the enormous prices of the last two or three years have completely scared and cured them of all courage for emigrating.

Let those who would be wise, take heed and loose no opportunity of planting good neighbors upon the uncultivated wastes around them; for verily, Wisconsin needs good farmers, and additional cash capital invested in actual business, to help sustain and pay her taxes.

It is not mere idle *curb stone brokers*, and three per cent a month speculators that we need; they are necessarily a grievous curse to any country, in the end. No, not such do we need; but instead thereof, we need men with money, to settle and cultivate our unoccupied lands. That done, perhaps five years afterwards, it will do to begin to build again upon our vacant scattering city plats.

Let not the high taxes and high interest of 1857–8 be a lesson wholly lost upon the wise.

P.

Correspondence of the Farmer.

MESSRS. EDITORS:—In the last number of the *Farmer* I gave you a short article with some figures in regard to measuriug Hay, Cisterns, &c. Here I give you another article which may be convenient to some farmers who are about building barns, in enabling them readily to determine the size of Bins and Granaries, that they may require.

The bushel contains 2,150.4 cubic inches, and a box 16 inches by 16.8 inches square and 8 inches deep will contain one bushel "struck measure."

A bin 6 by 4 feet will contain a little over 19 bushels for every one foot deep.

A bin 8 by 5 feet will hold over 32 bushels for every foot deep.

A bin 12 by 8 feet will hold over 70 bushels for every foot deep; and

A bin 12 by 11 feet will hold a little over 100 bushels for every foot in depth.

Bins or cribs about twice the above dimensions are necessary to hold corn enough, in the ear, to make the same number of bushels when shelled.

D. S. C.

STOCK REGISTER.

Correspondence of the Farmer.

The Breeding of Horses.

MADISON, Dec. 15, 1857.

MESSRS. EDITORS:—A little leisure, and a desire to direct the attention of farmers and stock growers in a channel not yet far pursued in our young State, prompts me to advance a few ideas on the subject of Horse Breeding.—Most of us have pursued a course not very systematic and certainly not *scientific*. Some may smile at the term scientific as applied to horse breeding, but it is as applicable to that branch of rural pursuits, or in fact to any other, as when applied to medicine, surgery, or mechanical pursuits—science being a collection of facts upon any given subject. Now how much of science do we as a body of producers bring to bear on the matter? Very little, I am inclined to believe, and that we can add much to our own income and much to the state and nation by a more judicious course, appears to me very evident.

Our State is pretty well filled with what is called Morgan Horses, Black Hawks, and a very few thorough-bred, or blood horses, probably not a half-dozen thorough-bred stallions. I know of but three or four in the State, and having attended every State Fair held since the first, have had a good opportunity of seeing them if there. These Morgan horses have their admirers and Vermont and New-Hampshire men bring them, and also many fine-wooled sheep, when they emigrate West. These horses are not devoid of a portion of the merit claimed for them by their admirers, but that they are the best animals of the kind to breed from, I doubt and always have. Horses which for some particular business answer quite well, are often ill suited for general purposes.

They (the Morgans) are small size, easy kept, fair roadsters generally, although rarely fast considering the large number imported from the East, and the extraordinary pains taken in training them. The original Morgan from which they are said to be descended, is claimed to be a *blood horse*. and if such is the case, his progeny, such as have come under my notice, differ very much in appearance from any blood stock I have ever seen, but resemble very much the cross of the Canadian with the common mares of the country. The original

Morgan was foaled in 1793, his sire True Briton, by Imp. Horse Traveler. Consequently the original Morgan was half-breed on the sire side. On the dam's side it is claimed that he was the third in descent from an imported dam —this he may possibly have been—then he could not be more than 5-8. Only four of his colts were kept; they were only a little over 1-4 his blood; of these the Sherman, Woodbury, Revenge and Chelsea or Bulrush are all dead, and the Black Hawk or Hill horse, also dead, had as much perhaps as any one of the original blood which is 1-8. His stock could only have 1-16 unless bred *in and in*. Thus 1-32d of the blood of old Morgan is all any of the colts of Black Hawk can impart to any of their descendants unless bred *in and in*. Truly it is about time the breeders of horses looked for something a little purer than this mongrel blood which denies its reputation when there is much of value from some other stock. Of small size, without sufficient strength for the plow or for an ordinary load of 50 bushels of wheat, and suitable only for the road with a light vehicle, we should seek to breed from better blooded stock, with more size, more strength, and suitable for all the business purposes of life.

Our widely extended frontier must be defended from the incursions of hostile tribes of Indians, by an army of mounted men, and these cavalry horses must be able to outrun and outlast the Andalusian horses on which these Arabs of America are mounted, and whose speed and the horsemanship of whose riders, Kendall in his Santa Fe expedition has so thrillingly described. Mounted on their bareback steeds, they rival in skill the feats of our Circus performers, and extraordinary stories of the speed of their horses are related. Already an Indian war may be said to be commenced, stimulated by the hatred and counsel of the Mormon *leprosy* on our borders, added to their own natural dislike to the white man. They must be met; how are we to do it successfully? Not by infantry—not by artillery. As well send an army of children with popguns; but with an army of cavalry and thorough-bred, as near as possible, both man and horse, capable of overtaking, and of then whipping any tribe of red or white Indians between the Mississippi and the Pacific. The Indian war may be a protracted one and the subject of horse breeding becomes one of national importance in this view of things.

How necessary then that we consider the subject and act upon it with reference to our own profit as well as its bearing in reference to the future.

It is well known that the thorough bred horse can endure hunger, thirst and fatigue, beyond all others of his species. How long could a horde of mounted Indians escape punishment from men mounted on such horses as the immediate descendants of Lecompte, Lexington, Pryor, Medoc and fifty others we could name? They would be rode down and sabred in the first hour of pursuit, if not the first mile.

For our agricultural operations we want weight and activity combined; 15¼ hands with 1150 lbs weight is good fair size for reaper, plow or wagon, and with good blood, say one-half, will carry a 180 lb. man over a distance that would string the carcasses of mongrel and pony stock like mile stones on the road. The next five or six years will show whether these remarks are correct or erroneous. "Blood will tell."

Correspondence of the Farmer.

Good Horses.

MESSRS. EDITORS:—Every year's experience is proving to us our want of superior, serviceable horses in this section of our country, and the spheres and operations in which their services become needed and useful are also constantly increasing; and, hence, good sense dictates that we should make corresponding efforts to improve the character and increase the number of our horses, among the farming community.

With a judicious selection of brood mares, it costs no more to raise a first class colt to the age of 3, 4, or 6 years, than to raise a poor one. The care and feeding of a colt worth three, five, or even ten hundred dollars, is no greater than that required to raise the ordinary colts, worth one or two hundred—the extra price for service of a first class, blood horse, being the only additional cost of raising a high-priced colt; and the same is true with regard to rearing superior animals in other departments of stock.

In New England and New York some of the careful horse breeders have raised and sold the colts of the "Old Black Hawk" when one, two and three years old for as many thousand dollars, when the cost was really but little more than that of ordinary colts. There is a

farmer not more than four miles from this city (Madison) who has three fine colts out of the old original Black Hawk—genuine and no mistake—which would readily sell, with those knowing the facts, for the prices above named—and except for the price of service of the "Old Horse," they have cost the owner and raiser—Mr. Chas. Rice—no more than other colts in the neighborhood, which would not sell for a quarter of the price that these true Black Hawk colts will command. They are worth the trouble of riding miles to see. In the same yard may be seen some fine animals, the second remove, out of old Black Hawk's colts.

I have no interest in this stock, other than an earnest wish to see a more general practice among our farmers of raising first class animals, from good blood parents, though it may cost a trifle more in the first out-lay; the result will pay from four to ten fold profit. In the first place let mares, with the good points and qualities be selected, together with good sires, and our stock of horses throughout the State will soon show the profit, both in their prices and serviceable powers.

There are none of the animal servants of man which perform so many or pleasant duties for him, as the horse; next to our fellowman he is our most agreeable companion. In another article I propose to make a few suggestions in relation to improved horned cattle and their profits, merely to awaken more attention.

D. S. C.

Correspondence of the Farmer.
Prevention of Black Leg.

MESSRS. EDITORS:—The disease mentioned by your correspondent A. B., and called the Black Leg, I believe can be prevented by keeping ashes and salt, mixed in equal proportions, where the animals can have all they wish at all times.

In one of those dark, gloomy years, that many of the first settlers of this State experienced, I lost nine of the finest animals in my herd. Symptoms were similar to those described by A. B., also the appearance after death. Previous to that loss I had given salt occasionally, but since have given as above, and I believe it has prevented the recurrence of such overwhelming loss.

Should an animal of mine be attacked with the above disease, I should make a drink of a pint of beans burned and ground, like coffee, and steeped in a quart or more of water, and give the liquor with as much of the grounds as possible.

IRA BLOOD.

VERNON, Dec. 13, 1857.

Correspondence of the Farmer.
Black Leg.

MESSRS. EDITORS:—In looking over the December number of the *Farmer*, I find an article headed "Black Leg," from your correspondent A. B. I will give you a short sketch of my experience in regard to the above mentioned disease. Sometime in August, 1856, I had a very fine heifer, about sixteen months old. On the morning in question I would not have taken $25 for her, but on the following morning I was obliged to take her hide and be satisfied with that. The post mortem showed the whole surface of the body to be covered with clotted blood, the same as A. B. described. This heifer was fat enough for beef. In about a week I had a chance to see a great many cases of it, for there were fifteen or twenty head of young cattle that died of the same disease in my neighborhood, varying in age from five months to two years and a half.

I will give you my belief as to the cause of this disease, though others may differ with me on this point. My reasons are that they have too much blood—that it becomes stagnated and settles in either one part of the body or the other, because I find on examination that in some of them the disease was wholly confined to one quarter; sometimes in the fore quarter and sometimes in the hind, and in others over the whole surface of the body. I examined three or four head of these cattle very carefully, to see if I could find out the cause of it. I found every one of them to be very fat, and on close examination in the stomach, I find a very high state of inflammation, so much that the food becomes baked and very dry, so that I could pick the fleshy parts of the stomach in pieces as easy as any one could pick wet paper. The lower extremities of the stomach seemed to be rather laxative.

My reason why the disease is not so apt to be in old cattle is, that milch cows are not apt to have it because their food goes to milk instead of flesh and blood, and oxen work off their food so that they do not have any more blood than is required to perform their daily labors.

Your correspondent wishes to know some remedy. I tried bleeding some of these cattle after they were taken sick with the disease,

but it was of no use—I think they were too far gone with it. I don't think there is any cure for it, unless it is taken at the commencement of the disease. I tried bleeding some 30 head of young cattle in the neighborhood where these cattle were dying off so fast, and not one of them that I took blood from had any sickness whatever. But whether this is a preventive for this disease, remains to be found out by practice. If any of your readers can furnish us with a true remedy, we should like to hear from them through the pages of the *Farmer*. Yours, &c., J. E. C.

BRIGGSVILLE, Dec. 12th, 1857.



SAMPSON.

The property of Seymour Brooks, East Troy, Walworth Co., Wis. Calved May 16, 1855. Live weight at 27 months 1832 lbs. Winner of the first prize at the Wisconsin State Agricultural Society at Milwaukee, in 1856, also at Janesville in 1857.

PEDIGREE.—No. (2172,) page 220 American Herd Book; Light Roan, got by John Moore (11619,) out of Selia, by Daniel Boone (11330,)—Lavinia by imp. Carcase (3285,)—Adelaide, by Magnum Bonum (2243,)—Beauty, by George (2017,)—by Lancaster (360,)—by Wellington (680,)—by George (275,) by Favorite (252,)—by Punch (531.)

NOTE.—As we have before stated, the above Bull took the first premium at the State Fairs of 1856 and 1857, in this State. He struck us as one of the finest animals we have ever seen in the State, and in the hands of Seymour Brooks, Esq., (probably our most extensive stock breeder, especially of short horns,) he will be apt to prove a highly valuable stock animal and perchance attain to no inconsiderable celebrity upon the herd book.

He is the first animal of the Bovine Species that has been engraved at our instance in the State. In this matter our stockmen thus far have not shown themselves very enterprising, but as they get better able, we have no doubt but a corresponding improvment will follow in this behalf. P.

HORTICULTURAL.

Correspondence of the Farmer.

Fruit Trees—The Way, and the Troubles of Growing Them.

MESSRS. EDITORS :—How to grow and protect our Fruit Trees from the many ills which they are heir to, is a subject which demands the attention of every fruit grower, and is worthy the investigation of every scientific, practical, or amateur cultivator of plants producing food for man.

The field is a wide one, and has been explored by the earnest theoretic and practical thinkers of the present age, with a view to find out causes and show us how to apply the remedies; but, alas! when we seem to have arrived almost at perfection in cultivation and propagation, hard winters, with their cracking, blacking, peeling, heaving—prepare the way for the numerous disease-loving grubs and borers, enfeebling the tree against the attacks of countless aphis, the insidious bark-louse, clumsy scion-cutters, numerous tribes of leaf-eaters, and not least, the scorching of midsummer sun.

All these viewed as cause or effect, point back to first causes, which must be reached, and the want of which is now manifest, in the great destruction of fruit trees in the past two or three years.

We propose to give, in a few short articles, some hints of errors in practice, and of operations which our experience has proved safe and economical. Knowing that we have vicissitudes of climate to contend with which the Eastern and Southern fruit growers have rarely met, we see the more necessity of growing our fruit trees on a different plan from that hitherto pursued by our Eastern and Southern friends generally.

Of this we would briefly say, that in this age of "hurry," there has been a great desire to count the greatest number of trees in the shortest possible time, and at least cost. All well enough, until done at the sacrifice of some important life-principle, such as cutting roots in small pieces on propagation, making a whole out of a part, using the rib to form the being, when we could not give it the "breath of life" —an undue amount of stimulating food to the young plant, in order that it may outgrow the evil effects of the first wrong act, and soonest pay for labor bestowed—thus having the form without the substance.

Even under the above system of cultivation and propagation, we believe it possible to produce a comparatively healthy, long-lived tree, were it not for the calamitous method of *close pruning*, to produce, "beautiful, tall, high-topped trees." This practice is condemned by every true principle of vegetable philosophy, and in it the cultivator looses sight of the true idea of a fruit tree, such as nature presents to us. We find among our native trees, that the fruit-bearing species are pre-eminently the low-branched, tough, solid wooded specimens.—Take the sweet walnut (carga alba) for example. Mark that scattering orchard of trees, as you pass along the road-side. One tall specimen stands apart, like a monument to mourn "the old woods gone;" no squirrel, or truant school-boy dare venture to scale its swaying trunk, nor need they, for the first blasts of autumn whip its quart of fruit a good rambling distance from its feet—poor feet—seldom sheltered from the burning sun by the head it strives to kep erect—contrast it with that noble tree, whose arms of vast spreading are annually weighed down with its bushels of hickory nuts. The nimble squirrel and active lads go up on one side and down on the other; in its youth some friendly blast gave it possession of a rood, which it has held, and now a herd can repose under its boughs, and the farmer praises it as a fruit-bearing tree. In this example, we not only have the species—and the principle holds good in all fruit trees as a class —but the different characters in the species—characters wrought in the "twig," which we all know is the way to develop noble and generous qualities.

We suppose that in the violation of some of the laws of vegetable physiology, we are to look for first causes, as in the violation of physical laws we become subjects of disease and death.

We believe that "He doeth all things well," and having placed within our reach the elements of success and happiness, we are to work out our own salvation from the snares of life, and not less from the sad decay into which our fruit trees have departed during the last few years.

But we must come back to first principles—no longer expect to force nature to bear us our delicious apples, pears, &c., upon trees of ailanthus growth, of lombardy proportions, with wet feet in clay bottoms. Indeed, we seem to have forgotten that our freehold goes down as

well as up—that there is a law of adaptation which we have violated, and behold, the naked bodies, seared and blackened, groaning in fear of every blast, monuments of our folly, crumbling to the dust, and while we behold, let us pause and view the subject in the light of sound physiological truth, which will point out some way of escape from these evils.

There is much truth in the remark of a successful fruit-grower of the day: "We have been too negligent and have not done as well as we might." Therefore, in our "hints" we do not expect to unfold much that is new, but to brighten our memories, excite our sympathies, and incite to new action. Our motto is, "perseverence in the right direction will bring success." J. C. P.

LAKE MILLS, Wis., Dec. 15, 1857.

The Apple Orchards of Wisconsin.

Notwithstanding the cold winters and drawbacks from poor trees and poorer cultivation, the orchards of the State seem to be progressing with considerable success. This is demonstrated by the large amount of apples reported in the Agricultural Statistics of 1856, for the State. Over 35,000 bushels in thirty of our fifty counties. Probably the whole amount grown was not less than 50,000 bush., and this amount must have been nearly or quite doubled in 1857. We have heard of one man who raised 1,000 bushels.

Then again, the show that was made at our State and County Fairs last fall surprised all beholders, especially at the former place. The Horticultural exhibition under the charge of the WISCONSIN FRUIT GROWERS' ASSOCIATION was really a splendid affair, eminently creditable to the Association, as well as to the State, fully proving that our climate is no absolute barrier to Horticultural success.

Our object in referring to these matters is to impress all who falter, with new faith and courage, to plant at least apple orchards as early and rapidly as possible. We would not be understood as recommending the planting of large orchards, but of doing what is done as well and as early as possible. A farm without an orchard is like a face without a smile, or a dinner without a desert—unfit for the habitation of refinement and good *taste*.

Therefore take courage, every farmer, and be making your calculations to plant at least a small orchard in the spring, if you have not already done it. Twenty-five, fifty or a hundred trees are better than none; and small, thrifty ones are often preferable to large and *scabby* ones. Be shy of foreign *tree pedlars*—no matter how nice they talk, they are usually *suck ins*. Patronize home nurseries when possible. We shall doubtless advertise numbers of the best in the State in our spring numbers.

Correspondence of the Farmer.

Strawberry Culture.

MESSRS. EDITORS:—In accordance with the promise in my last communication, I send you my mode, and the results of my experience in strawberry culture. Perhaps in the commencement, I should remark that I cultivate only in my garden and not for market. In preparing the ground, I give a liberal coating of rotted manures and spade deep so as to form a deep, rich, and mellow soil. I set the plants in rows two and a half feet apart, and from fifteen to eighteen inches apart in the rows.—Between the beds of the different varieties, I leave a space of three feet, and near the beds of pistillate plants, place a bed of strawberry plants. I cultivate between the rows, keeping off the runners, but allow the plants to fill up the space in the rows. The third year I allow the runners to grow and cover the beds, and the following spring set out new beds, allowing the old ones to remain until the crop is gathered, when they are spaded up and the plants turned under for manuring the ground. I find the spring the best time for transplanting. Plants also succeed well if transplanted in a wet time in July or the first of August, as soon as strong and well rooted plants can be obtained from the runners.

I have cultivated the following varieties:—Bishop's Orange, Burr's New Pine, Crimson Cone, Genesee, Hovey's Seedling, Hudson, Large Early Scarlet, McEvoy's Extra Red, McEvoy's Superior, Monroe Scarlet, Prolific Hautbois, Rural Hudson, Royal Scarlet and Walker's Seedling.

Bishop's Orange has proved unproductive, of medium size and flavor. Burr's New Pine is of large size and fine flavor, and a prolific bearer. This I consider the best for garden culture of any of the varieties I have tried, but the fruit is too tender for a market fruit. Crimson Cone; this in appearance is a beautiful berry, of large size, fine color, medium flavor and plants productive. Genesee of good size, medium flavor, but not productive. Hovey's Seedlings—not hardy and unproductive.

I learn that this variety succeeds well at Milwaukee in a clay soil. Hudson is of good size, rather acid and very productive. Large Early Scarlet. This is well known as the standard as a fertilizer. Vines productive, fruit of good size and acid. McEvoy's Extra Red—This is not of as fine flavor as some other varieties, but is desirable on account of its large size and productiveness. McEvoy's Superior is of good size, medium in flavor and productiveness. Monroe Scarlet is very productive, of large size and medium flavor. Prolific Hautbois—I have had a bed of this variety for several years but get no fruit. Rural Hudson is similar to Hudson but less productive. Royal Scarlet—Large size, medium flavor, and unproductive. Walker's Seedling is of good size, medium quality and moderate productiveness.

Of the above varieties, those that I would wish to retain for my own cultivation, I would class in the following order: Pistillates, Burr's New Pine, Monroe Scarlet, McEvoy's Extra Red, Crimson Cone, McEvoy's Superior and Hudson, Staminates, Large Early Scarlet, Genesee and Walker's Seedling.

PASTINATOR.

Correspondence of the Farmer.

The Big Grey Curculio.

T. Cook, in the December number of the *Farmer* describes a grey bug which cut off the buds of his newly planted orchard trees. The description is a good one. I will add that they served my young orchard trees the same way, but did not trouble my nursery. They are not round but humpbacked, or somewhat like the curculio in shape and habits. The snout is long, stiff, and when examined with a glass, shows a long, lean head, which looks hairy or some like a deer's.

They go to work very deliberately and make clean work, eating the bark all away from the wood, but did not eat the young leaves, leaving them to die, which gives the tree the appearance of one which had been girdled. They are capable of destroying the foliage of an apple tree about as effectually as anything I ever saw. My nursery escaped, although not 100 rods distant. The trees afterwards made new shoots, and were not again troubled. My trees were planted close by the Richland City Nursery, in the Valley of the Wisconsin River and on sandy soil.

E. A. ROBY.

RACINE, Dec. 10, 1857.

MECHANICAL.

A few Suggestions about Sugar Cane Mills and Machinery.

The eminent success of the Sugar Cane experiment wherever tried, during the past year at least, for the production of syrup, will unquestionably lead to its very extensive cultivation throughout a large portion of the States the coming year; and inasmuch as the success of the undertaking so largely depends upon correct information and the best possible machinery for the purpose (reference of course being had to the circumstances of the case,) we wish to call the attention of our ingenious mechanics to the subject, as early as may be, to the end that they may be devising and getting up the requisite mills for grinding the Cane as well as the best contrived plans for boiling down the juice to syrup. Thousands of them will be needed in the Northwest alone the coming season; and as far as possible they should be good and suitable for the purpose, as a large per cent. of the proper product of the Cane is inevitably lost, when worked with poor machinery.

In the infantile experiments of last year, accompanied as they usually were, with little knowledge and less faith, it was not to be expected that cultivators would make large outlays for mills; but for the future, it will be quite another thing. Each neighborhood, at least, should and in fact must have a mill of its own; and no matter if each good farmer also has one, when he feels able and disposed.

But the great mass of people are not going to invest in expensive mills even the coming season. First, because they do not yet know what they want, and secondly because the times are hard. Hence the great desideratum for general use, is going to be a cheap mill.—Still one that is too cheap, will after all prove the dearest to those who use it. To every man or neighborhood, that will have two acres of Cane to grind, a first class portable iron mill, costing at least $100, would be much more economical than a wooden one that cost from $15 to $25, because it would exert so much more effectual pressure, than is possible for a wooden machine, and consequently express so much larger per cent. of juice. We presume that the difference in the results between the best iron mills and the best wooden ones that could be made, would be a yield of

from 15 to 25 per cent. the most juice in favor of the iron mill, besides a saving of about the same amount in power, and perhaps not less in speed of working; thus making a saving of from 75 to 100 gallons of syrup on a product of two acres. We do not say this to induce the purchase of expensive iron mills in the outset, by every one, unless they choose. But still we are well satisfied that the true policy of neighbors is to join together, to the number perhaps of four or six, and buy good mills and apparatus for the purpose, instead of tinkering up cheap wooden riggings, like some that we saw last year—absolutely so coarse and rough that they actually *squealed* like an old Mexican wooden wagon when they moved, (how they could make sweet molasses was a mystery to us; they might make vinegar.)

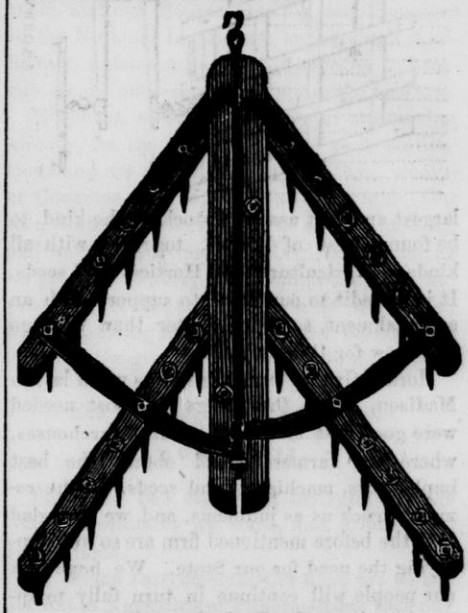
We are on the *qui vive* all over the nation, through the Patent Office and everywhere else, to find out which is the *best mill*, among the many that are offered; and as soon as we can satisfy ourselves on this head, we will have a cut of it, and publish it in the *Farmer*, for the edification of our readers. Perhaps we will get cuts of several of the prominent ones, that all may compare for themselves. We may also present the plan for a cheap, substantial wooden one, for the edification of those who may from choice or necessity, wish to get them up; for be it understood, that there is a vast difference in the construction of wooden ones, with reference to their efficient and easy working.

We mean also to illustrate the most approved styles of boiling pans, reference not only being had to rapid evaporation, but also to construction to save fuel (a desideratum of magnitude upon the prairies,) and further with reference to discoloring or scorching the syrup; another matter of no small moment, when it is manufactured for market.

We are hoping and with strong faith, that our scientific and experimental men will soon teach us how to make *sugar* as well as syrup from the Sorghum. And that the *money-loving and man-destroying*, will soon learn how to make whiskey and good *licker* of it, we have no kind of doubt. Yea, we believe that the article will yet be made so cheap from it, that the *luxury* of getting drunk, will hardly exceed in cost a penny. Then will not the good time of which we read, have come, to all who look for heaven in rum? But for this there is no help, as every blessing has its curse, and knaves to make a bad world worse, are plenty everywhere, who care not when or how, so that they make a penny *more*, they'll sure damnation dare. Well, let them do it. P.

Agricultural Implements.

As this is a good season of the year to be making preparations for the opening spring, it occurred to us that perhaps some of our numerous readers might be either purchasing or making harrows, and that perchance all might not be familiar with all the styles that are in general use; hence we introduce cuts of the Geddes and Scotch Harrows.



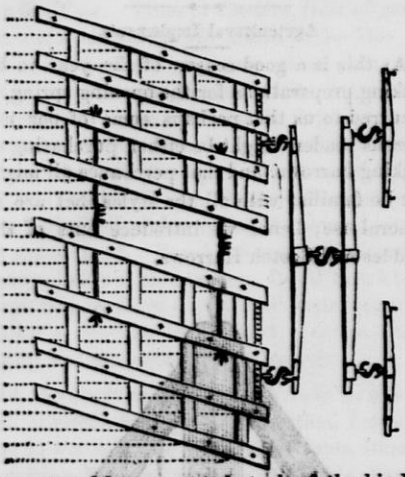
THE GEDDES HARROW.

The Geddes is a great favorite with most who have used it, and is simple and durable in construction, and can be got up in any common shop, by those who are not conveniently situated to purchase ready made. But it will require close workmanship to get them up as well as those that are made in good machine shops. We have used a Geddes the last two years, and find it all that is claimed for it, decidedly better for stumpy or uneven land than the square form.

The Scotch Harrow we know but little about, but see no reason why it should not be a good thing, especially for such as choose to do their work a little *skueing* instead of right square up to the mark.

Both of the above implements, together

with almost every other conceivable kind of harrow, drag, farming implement or machine are kept for sale by VOSE, MITCHELL & Co., Milwaukee, who by the way keep much the



THE SCOTCH HARROW.

largest and best assorted stock of the kind to be found west of Buffalo, together with all kinds of Agricultural and Horticultural seeds. It is a credit to our State to support such an establishment, so much better than Chicago can show for Illinois.

Horace Greeley remarked to us when last in Madison, "that the things we most needed were good first class agricultural warehouses, where our farmers could obtain the best implements, machinery and seeds." The remark struck us as judicious, and we are glad that the before mentioned firm are so well supplying the need for our State. We hope that our people will continue in turn fully to appreciate it, and afford them the patronage necessary to sustain them. We are assured by Messrs. V., M. & Co., that they have no cause thus far to complain. P.

GALVANIC GAS LIGHTER.—This apparatus, (which will be found fully described and illustrated on page 320, Vol. 12, Scientific American) is the invention of S. Gardiner, Jr., of New York City. It consists in placing a fine coil of platinum wire over the burner, which is made red-hot by the passage of the electric force, and the gas impinging on it becomes ignited. By this means any number of burners may be turned on and lighted instantaneously. It is a valuable invention.

TOIL, feel, think, hope. A man is sure to dream enough before he dies, without making arrangements for the purpose.—*Stirling.*

EDUCATIONAL.

Agricultural Institutions—Land Grants by Congress.

We rejoice to see so general a waking up on the part of intelligent men, to the importance of Educational Institutions for the farmer.—Agricultural education is beginning to attract the attention of political economists as well as scientific men.

The National Government has hitherto been strangely partial to Commerce and War, as though they were the great interests of our nation, paramount to all others, and therefore alone worth fostering—forgetful of the great truth that the intelligence of the people is the *sine qua non* of a Republic ; that such intelligence involves somothing more than the education of the professional classes who constitute a very small minority of the population of any country ; that the only hope of security and national prosperity lies in the intelligence of the industrial *masses*—in the elevation of the *million*. But recently some of our Statesmen are opening their eyes to this great matter, so long shamefully ignored, and are beginning to see that a branch of industry which involves more than five billions of dollars as capital, the actual and entire effort of nearly seven-eighths of our whole population, and the happiness and prosperity, nay, the very existence of all, is an interest worth fostering.

By common consent ours is an agricultural country, and the States of our Union have been and always will be chiefly dependent for their wealth and power upon the natural products of the earth. It is our rich valleys and fertile prairies that have made us what we are, as a nation, to-day. We are also a race especially adapted to an agricultural life ; and yet, for want of a knowledge of the principles involved in the practice, the soils of every State in the Union are rapidly depreciating. American agriculture yields the most meagre results, compared with its resources, of any enlightened country on the globe ! And this mortifying fact must stand there on the world's table of statistics until ninety-nine-hundredths of American farmers are no longer grossly ignorant of the *science* of husbandry. Multiplied millions of money might be saved to the country every year by an application of the science of agriculture, as at present developed, and if we had Agricultural Colleges establish-

ed in every State, in charge of scientific and practical men, new and valuable contributions would constantly be made to the present stock of knowledge. Such institutions must be established, and the sooner the better—not such institutions as here and there are attempted to be palmed off upon the people in the form of mere *nominal* departments, but broad, liberal departments or separate institutions, furnished with experimental farms, all needful apparatus, and officered by the best talent in the country.

Institutions like this can hardly be established without aid from the Government. But the would-be wise politicians and pigmy statesmen of the day, while they affect a great and tender regard for the "dear people," instead of looking the question steadily and candidly in the face, examining its claims and yielding thereto a cordial endorsement and hearty support, content themselves, and endeavor to content their constituents, with whining cant about the constitutionality of *such* appropriations.

It is perfectly constitutional to appropriate millions annually for "the common defense," and even to conquer neighboring States; constitutional to make appropriations for the establishment and support of military academies; and even constitutional to aid in the establishment of classical and professional schools for the benefit of the few—the one-eighth of the people—but altogether *un*constitutional to contribute even a few acres of land for the benefit of the many—for the education and elevation of the remaining seven-eighths—"to promote the *general* welfare," and through the intelligence of the rural population of our country, added to their acknowledged virtue, the more effectually "secure the blessings of liberty to ourselves and our posterity."

Over thirty millions of dollars annually are spent by the General Government in maintaining the War Department, while the only branch which includes or to any extent fosters the all-important interest of Agriculture, is turned off with a few thousands. Even the Committee on Agriculture in the Senate has been abolished, so that the people are turned out of doors, and sentenced to be henceforth as heretofore, mere "hewers of wood and drawers of water." How long the "sovereigns" will patiently submit to these indignities and this habitual contempt on the part of their servants remains to be seen.

But light is dawning, and already the murmur of discontent is heard among the million. Agricultural papers, and Agricultural Societies, aided by a few earnest, scientific men found here and there, and increasing in number, have at last found an echo in the hearts of the people, and wise legislators will promptly open their ears and their hearts to their just demands. A Bill has been introduced into Congress, for the appropriation of public lands to the establishment of Agricultural Institutions in all the States, and many of the States are pouring in their petitions for its passage. Our own State will join them, and our Representatives and Senators in the National Legislature have enough intelligence, patriotism and philanthropy to heartily second and earnestly support the measure.

Moreover, several of the States are moving already, for the establishment of such institutions and are determined to have them, whether Congress make appropriations or not. Our own State, we believe, will be of this number, and we earnestly hope our Legislature, during its present session, will demonstrate its appreciation of the true interests of Wisconsin, by first passing a liberal act and then memorializing Congress for the requisite aid. H.

How shall the Farmer be Educated?

NUMBER II.

There are two classes of instrumentalities —Means available at home, and Educational Institutions.

Of Home Instrumentalities none are so important as Agricultural Papers—none that pay so large a profit on the capital invested. The *news*paper has become an *institution*, in America, and the time will come, when periodicals devoted to Agricultural Progress will be as indispensable to the agriculturist, as text-books on science are to the professional man of the present. Already they are receiving a liberal patronage, and are multiplying in number.—The rapid development of all the natural sciences, which taken together constitute the complex science of Agriculture, and the published results of important experiments by scientific men, render them absolutely necessary to the best success of practical husbandry. And yet the great majority of farmers shut their eyes to the light offered by such means, and with sneering contempt, turn away from what they scornfully term *book-larnin!* deem-

ing everything a humbug except the traditions of their great-grandfathers—who though they might have been very good men in their day, can hardly be supposed to have anticipated and enjoyed all the possible knowledge of the world. Grand-fathers! what could they know of the composition of soils before chemistry —that science which discovers to the farmer the nature and composition of the soil he cultivates, the composition of the plant, the laws of its development, and the food requisite to its growth?—what of meteorology, or the relations of the atmosphere to the plant and other climatic influences?—what of Botany, Physiology, Zoology, Physical Geography, Geology and Mineralogy, all of which, three generations ago, had scarcely come to be known by name even? Besides, why are facts and theories *written* and *published*, so much less worthy of confidence than facts and theories *orally* communicated from father to son?

Science a humbug? Then let us go back to the good old time when the best plow in the world was a crooked stick hitched to the tail of a jackass, while his biped brother followed behind to keep its sharpened point in the ground; when the sickle was the only instrument for reaping grain and the scythe for mowing grass; when the old semi-circular Dutch fan shaken by the farmer's hands and thumped with his knees was the only winnower; when all the grain of the world was threshed by the good old club-flail swung over the head and brought down upon the sheaves with arm-wearying thump; when the land might not be plowed more than four inches deep, and the same crop was invariably continued forty years in succession, without rotation and without manure; when the best conveyance for the farmer was an ox-cart, and when the spinning-jenny, the threshing-machine, the reaper-and-mower, the locomotive and telegraph had never been dreamed of.

The farmer must lay aside this stupid cant about books and papers. Books! What were the society of the world without their inarticulate speech? Let them multiply until there be no more room to contain them. They are a mighty influence, going down to the ages with ever-increasing power. And Papers, now become the chief literature of the world! let every household have them, for general intelligence and special instruction. At all events let every farmer, who does not wish to be, at the end of life, two hundred years behind the age, have at least one agricultural paper, whose business it shall be to acquaint him, from month to month, with the growing improvements of the day, the experience of other men engaged in like pursuits, and the principles of his profession. So shall he have in exchange for the few paltry cents it may cost him, the advantage of the whole world's labor, the higher intelligence of his family, and a thousand fold pecuniary reward. H.

Tenth Annual Report of the Board of Regents of the University of Wisconsin.

We are better pleased with this than with any previous Report. It is certainly an able document and will be read with much interest by all the friends of the University. Among other interesting features, the spirit of general liberality which characterizes it is highly creditable and encouraging. We quote a few passages:

ADMISSION OF FEMALE PUPILS.

The completion of the central edifice, will open the way to the admission of female pupils to the Normal and the other departments of the University. It is a question, now much agitated, whether the liberal culture of the female mind is an end most appropriately attained under the existing agency of separate educational establishments, doubling the array, and quadrupling the expense of the instruction. The entire success which has attended the common education of the sexes in the Normal schools and the higher academies of the Eastern States, goes far toward settling the question for the University. There is not wanting collegiate experience of some authority in the same direction, and the whole question is now in process of being conclusively tested at Antioch College, under the Presidency of Horace Mann. It may be alleged that public sentiment in Wisconsin is not yet ripe for dispensing with separate female schools, still the Board deem it right to prepare to meet the wishes of those parents who desire University culture for their daughters, by extending to all such the privileges of the Institution. The residence of the families of the faculty in the buildings, and the admirable conduct of the commons hall, will render the membership of female pupils, pleasant, economical and safe.

MISAPPREHENSION CONCERNING SUFFICIENCY OF FUNDS.

The entire annual revenue of the University of Wisconsin, although respectable as an original foundation, falls very far short of the income of the first class Institutions of learning in the older States of this Union, to say nothing of the Universities of Europe. The interest of the debt, unavoidably incurred by the

Board, in the construction of buildings, is a sensible diminution of the current means of the University, and the payment of the principal of the debt by annual installments, will still further cripple its operations for a series of years. Our neighboring States of Iowa and Missouri have provided their University edifices without charge upon their respective funds; which funds have been invested at rates of interest not less than ten per cent. per annum.

UNEQUAL AND ABSURD RATES OF INTEREST.

It would certainly be difficult to demonstrate the wisdom or the beneficence of that public policy, which awards to the capitalist, whether citizen or alien, the privilege of loaning money at twelve per cent. per annum, while the educational funds of the State are carefully restricted by law, to but little more than a moiety of that rate of increase; the more especially since the security of the loan is not at all enhanced by the restriction. It would seem that if a difference is to be set up, at all, in the premises, the discrimination should be in favor of the educational interest and not against it.

THE CHANCELLOR'S COMMUNICATION

Is also an able and scholarly production, and although we are compelled to join issue on the order of impotrance and precedence of the *practical* as compared with the *learned* professions, yet the following liberal sentiment may be deemed a partial atonement for what appears to us a very natural error:

The term profession is no longer confined to Theology, Medicine and Law. The schools of Engineering, of Didactics, of Technology, of Agriculture, of Civil Architecture and the Arts of Design, the Commercial College, are all properly professional schools, and as such, should be brought within the scope of the University of Wisconsin, equally with those which have heretofore been dignified with the professional name and character.

It is certainly true that the Uuniversity has been the object of no little jealousy and much unwarrantable censure. And yet, we believe that an extra infusion of the spirit of the 19th century, would improve its condition and increase its popularity and usefulness. This is pre-eminently an age of progress. All the arts and sciences are rapidly striding forward towards the goal of a higher civilization of the race, and no institution may rationally hope for the highest success whose policy is not shaped with reference to this fact. But *means* are requisite to ends, and the State should not demand all the fruits of scientific teaching, while at the same time it refuses the appropriation of a single cent for the purpose. H.

Agricultural Department of the Patent Office, and State Experimental Farm.

I have to-day been reading the Patent Office Report on Agriculture, for 1856. By this report it appears that our government appropriated $75,000 for the benefit of agriculture, in the purchase and distribution of seeds, plants, &c., and the publishing of this most useful and elegant volume. Too much credit cannot be given to our worthy citizen of Iowa, Hon. Chas. Mason, Commissioner of Patents, for the able manner he has conducted this department, and the excellent improvements he has made. We ought also to express our gratitude to our Government for the great benefit we have derived from this branch—from this appropriation which is about one dollar out of one thousand of the expense of the Government. I hope our Representatives will duly consider the benefits derived, as well as dollars expended—$1 in $1,000 for Agriculture—$1 in $10 for Commerce, and $1 in $2 for War!

Several of the States have an Agricultural College and Experimental Farm, and others are about to establish such institutions.

Now it occurs to me that an Experimental Farm in every State should be the proper agent to co-operate with the General Government in this most profitable and praiseworthy object. In the report, Mr. Mason says—"It has sometimes been ascertained that persons who have been furnished with the means of raising some choice garden vegetables, finding them excellent, have consumed the whole without a thought for the future, in regard to their neighbors or even themselves." How can the States consistently do less than to have a piece of ground on which to cultivate in the proper manner, the seeds and plants thus furnished? And when the General Government shall give up this most profitable branch of their business, and attend exclusively to war, it would be very appropriate for the State Farm to take care and enlarge this branch, for the benefit of the greatest interest of the nation and of the States. This is but one small item of the benefit of the Agricultural School and Farm.

There is scarcely a State in the Union, had they an Experimental Farm in successful operation, and had they tried the Chinese Sugar Cane two years ago, and recommended its cultivation, which would be from an authentic source, upon which we could put full confidence, and have distributed the seed among the farmers, but what could this year have manufactured all the syrup and molasses, and probably the sugar, for the consumption of the whole country. From this single plant there could have been saved a sum sufficient to purchase a farm in every State, erect College buildings, and make a liberal endowment for professorships.

Iowa will probably pass a bill this winter to establish such an institution.—*Muscatine, Iowa, correspondence of Country Gentleman.*

May Wisconsin follow suit.—[Eds.

MISCELLANY.

Correspondence of the Farmer.

Economy in Farming Operations.

MESSRS. EDITORS:—When times are as hard as they now are, when every thing that the farmer raises is down, and groceries and most of the necessaries of life, (the root of all evil included) are up, it behooves every thinking man, and no class more than the farmers, to look to their receipts and expenditures and see that nothing is wasted. The old maxim that "a penny saved is a penny earned," will commend itself to every one in times like these, and it would be well if our farmers would only put it into practice a little more than they do. Prosperity oftentimes induces slackness and waste, and there is hardly a farm in the State belonging to what we would call a wealthy farmer, that this rule will not apply to. There is enough wasted and lost every year on some farms in this country, to pay the taxes on the place, clothe the family, and keep the children at school the year round; and yet these very men are the ones that complain most bitterly of the low price of wheat, and the scarcity of money.

There are many ways in which our farmers might save money. I will not go into detail, but will only name a few of them, leaving it to the good sense of my readers to add whatever may suit each particular case. And first, I would name the grinding of feed, no matter what it is, whether for horses, cattle or for fattening hogs,—it will pay and well pay the extra trouble. Corn in the ear, oats, screenings from wheat or barley, in fact any thing that is grain, if ground and used with cut hay or straw, for stock, will save from 25 to 50 per cent. (expense of grinding included) over and above the same amount fed unground and uncut.

I have on my place one of the Young America Corn and Cob Mills, and I look upon it as one of the best investments that I ever made. Since I first purchased it I have never been to mill, but have ground all the meal used in my family and fed on the farm, besides doing a large amount of grinding for my neighbors. I have ground up and fed all the screenings from 2,000 bushels of wheat, and I am satisfied that there won't be many seeds that have run through the mill, to show themselves next year in my wheat field. To my hogs and milch cows I feed the small potatoes unfit for market, pumpkins, ground screenings, or cob meal boiled together in a large iron pot, into a sort of mush, and from actual experiments, I am satisfied that there is a very large saving in this way, over feeding the same raw. I put it at 30 to 40 per cent. The hay and straw that is trodden under foot and wasted on some farms in this country, if cut and fed with ground feed, would put many a pound of beef where it is much needed, and many a dollar into the treasury. Corn stalks are also valuable if cut and fed, either green or well cured, but if used as some men use them, I would about as soon have oak brush. The stalks of the Chinese Sugar Cane make a most excellent feed; cattle devour them greedily, and as it yields enormously, and contains a large amount of nutrition, I look upon it as a valuable plant and worthy the attention of our stock raisers.

Another great loss that the farmer sustains, although it is hard to make some men believe it, is from the insufficiency of their barns.—The past two winters have served to open the eyes of some of them, but there are thousands of what the owners call barns, that disgrace the name. A lot of rough logs, covered with loose brush, all open on one side and not much better on the other three, constitute the so-called barns of many large farmers. This is all the shelter that the cattle get through the winter, and is it to be wondered that stock kept in this way, unsheltered and uncared for, present the appearance that they do in the spring? Poor, lean, and stunted, with hardly strength enough left to move about, with their hair looking as though it grew up their backs instead of down, they present a sorry picture, and to the New Englander who has never been West before, it explains at once where the "salt hoss," that the sailors say "takes a man 24 hours to masticate a piece as large as a thimble," comes from.

But I fear I have already extended this over a larger space than I ought, and will close by recommending to your notice the following extract from a report to the Ohio *Cultivator*, by one of the largest stock raisers in Indiana, Mr. Wm. C. Mitchell, which coincides with my ideas of the value of ground feed and especially cob meal. Yours, truly, ROCK.

After experimenting carefully for over thirty years, Mr. Mitchell comes to the following conclusion: "Now I will give you the result

of my experience. Two bushels of corn ground with the cob, fed to a horse, will keep him looking as well, and enable him to perform as much labor as if fed on three bushels of corn in the ear, in the same length of time. I find to feed two beef cattle of equal dimensions the same length of time, that eight bushels of ground corn and cob, will produce as much flesh on one, as eleven bushels of corn in the ear will on the other. In regard to milch cows, I find half the corn ground with the cob, will produce as much milk in a week, as the whole amount in the ear. I find in wintering calves, about half the amount of corn ground with the cob, will keep them growing and looking as well as the whole amount fed in the ear; the same to stock cattle of any kind will produce the same profit; if old the profit is greater.

In regard to feeding sheep, about half the corn ground with the cob, will keep them looking as well or fat them as fast, as the whole amount fed in the ear or shelled. In regard to hogs, there is about the gain of one bushel in five, by grinding with the cob, and wetting the meal, and feed it in good troughs. I find grinding corn very fine is not good, as it produces looseness in animals, and passes off before the nutriment is all extracted; but when it is ground with the cob, the case is very different.

I have fed an ox on corn, and put a hog in the lot with him, and the hog would fat as fast as the ox. I then fed the ox on meal, and he gained much faster, but the hog grew poorer; I then fed corn and cob meal, and the hog found no benefit at all by running with the ox. The same result with geese and pigs.

Experience has taught me that grinding is a great advantage when corn is scarce. Last spring, corn was very scarce and high. Men frequently passed my place with wagon loads of corn in the ear, to get ground with the cob. They frequently came eight or nine miles.—When I inquired the cause of such expense, they told me that corn was very short, and that every six bushels ground with the cob, was worth nine fed in the ear, to their working teams; this I found exactly to agree with my experience.

I am aware that persons who have never tried feeding ground corn or corn and cob ground, will discredit my statements, but the time is at hand when many thousands will witness to the same facts.

WM. C. MITCHELL.

Switzerland Co., Ind., Feb., 1856.

Potato Digger.—A new potato digger has been invented by Jacob E. Hardenburgh, of Fultonville, N. Y., which consists in the combination of an adjustable share and grating, with horizontal and revolving arms, on a suitable framing and wheels, arranged relatively with each other, to dig the potatoes and throw them in ridges on the surface of the ground.

Correspondence of the Farmer.

Chufas—How to Cook Them.

Messrs. Editors:—Last spring you had the kindness to present me with a small paper of roots labelled "Chufas." Well, sirs, I planted said Chufas, and they grew and yielded "an hundred fold," but the worst of it is I don't know how to make use of them or how to fit them for the table. If you, or some kind friend of the *Farmer*, will give me any light on the subject of Chufa cooking, it will be thankfully received by your humble serv't,

J. BELL.

Cottage Grove, Dane Co., Jan. 8, 1858.

Answer.—We do not understand that the Chufa or Earth Almond requires any cooking, more than a chestnut, but only to ripen and cure for a time in a dry situation, when they become very sweet and good—better, we think, than a chestnut. Children will not be long in discovering their merits after they get sweet.—[Eds.

The Future.—Senator Seward looks with a cheerful eye on the future, in its financial and business aspects. In one of his late speeches, he says:—"In my judgment, the acceleration of business is going to be rapid just in proportion to the rapidity with which business has declined; and I expect to see every day, and every hour of the day, marked by a rise in the prosperity of the country, graduated just exactly by the suddenness of the depression. The causes of the disaster are gone. I think there is nothing before us but a great revival of business and plethora of money to revive it in all departments. I may be mistaken in this, but I am willing to stand by it."

Bounty on Wolves.—Iowa county pays this year $549 bounty on wolf, fox, lynx, and wild cat scalps; being $5 for wolf, $2 for fox, $4 for lynx, and $4 for wild cats. Grant Co. which had been paying $3 on wolf skins, resolved at the late meeting of the Board to pay nothing next year. The *Herald* is indignant at this action, and says the leading members of the Iowa county Board are farmers; of the Grant county Board, boys, pettifoggers.

What of Dane? We deem the above bounty but half way effective unless it includes dogs.—[Ed.

Ohio is the greatest wool growing State in the Union. Six millions of dollars' worth has been raised there this year.

Horse-chestnuts are extensively used in France for the manufacture of starch.

EDITOR'S TABLE.

Our New Subscriptions—

Are coming in pretty well considering the hard and discouraging character of the times. Especially is this true of some localities which are getting up even larger lists than last year. Some others to be sure are coming in rather slow, even from some of the best farming neighborhoods. We suppose that the *taxes* are just now superadded to the other burthens of the farmers; but we hope that no one who has a snug little farm or hou ehold, will on reflection feel constrained to conclude that they cannot stand so small an outlay as our subscription price for a copy of the *Farmer*.

We have often been at a loss to understand the force of reasoning of some farmers with whom we meet, who perhaps own good improved farms of one, two or three hundred acres, and have families of boys and girls growing up around them, who insist upon it that they are too poor to take the *Farmer*.—What a notion, when rightly viewed. They might as well omit to plant corn for want of seed, as to fail for such a small pittance to plant good theoretical and practical notions in the minds of their children at least.

We hope our canvassing friends who do appreciate these matters, will, as far as possible, reason or shame such men out of their *small economy*, and add them to our lists *on trial*, at least. If any such feel too poor at the end of the year to pay for the *Farmer*, we will very cheerfully refund to them the amount.—We sincerely hope that in times like the present, every one will do what he can for us.—In fact we feel sure they will, and as the season wears on, we hope our lists will continue to grow, until they gain at least their last year's statue.

The Western Farm Journal.

So it appears that this neat and well conducted Agricultural Journal, (under the charge of the experienced and talented Gallagher,) and under the patronage of the State Agricultural Society of Kentucky, has gone up, undoubtedly for want of patronage. Strange that Kentucky, in every way naturally the equal of Ohio, cannot support one agricultural journal, when her sister so well sustains about half a dozen, and all first class at that. Is a philosopher necessary to tell the reason, or to tell the eventual result?

Our Newspaper Exchanges and their Importance.

We are glad to see that the great mass of our exchanges, both in and out of the State, are holding out bravely against the pressure of the hard times. Notwithstanding the predictions of some of the would-be overwise, who claim that the country is overstocked with periodical literature, and that consequently many of the publishers must, and ought to fail. We doubt if the assumption is true, as a general principle; although there may be cases, to be sure, where the work is overdone.

But generally, what would our country be without its newspapers and magazines? A giant without a voice, or tongue of utterance; a chaotic mass without a regulator. For telegraphs would be of but little account, without the papers to carry the news to all.

Suppose the newspaper press of the country was annihilated in a day, how many have reflected what would be our condition as a people? A cloud of darkness would come down over us, like a dense fog around a ship at sea; beyond the feeble limits of our vision, we should know nothing, hear nothing, except from uncertain rumor. Railroads would soon fall into decay, and scanty letter mails would again return to the backs of horses for transportation; and as during the wars of Napoleon, the front of invading armies would be seen entering our cities and towns, before we should have heard of their approach.

Yes, the world would soon stagnate, and again go back to barbarism, but for its newspaper presses. Its daily, weekly, and monthly issues, penetrate everywhere, and posts up everybody to an equality of intelligence and enterprise. Every body knows the news instanter, to the remotest corner, and acts accordingly.

No one agency has done so much for the development of our own State as its newspaper press. Scarcely had we a name among men, before our newspaper press began to send forth its weekly sheets from Green Bay, (specimens of them may be seen in the State Historical rooms,) and from that day to this, no sooner has a new county been marked out by some adventurous speculator, (ambitious to found its county seat and build a city,) than its press has began the issue of its weekly sheets of news, setting forth all the advantages of the location, real and imaginary, and becoming a wide spreading and ceaseless advertisement, has attracted thither the pioneer, the mechanic and the business man.

The *Wisconsin Mirror* stood up its press beneath a tree, in which the forest owls were yet hooting, and sent forth its tasty and spirited sheet, and lo! Kilbourn city became a place well known East, North and South, until lots went up to a city value.

Even afar off in Wood county, the *Wood County Reporter*, a neat and good paper, published at Grand Rapids, comes to us from week to week; but for it, who would have known there was such a place under the sun? But with it, who can say how soon it will become a city, with its railroads and telegraphs.

Not less do our dailies, and more ponderous weeklies, do for the older and larger cities and towns; but for them what would the passing stranger, or even the resident citizen know of what was going on, or what was going *off*?

In fact, newspapers have become so accustomed to think for us, and manufacture not only private but public opinion for the people, that they would be sorely missed in this respect alone, and the world would undoubtedly go wrong at once, without them. See a recent instance, in which the press, with right on its side, has been stronger than the national government, backed up by the army.

True, editors sometimes get on the wrong track, and sometimes even forget the dignity of their high calling, but their watchful brethren, and correct public opinion, soon brings them back to their proper bearings. Their teachings, as a general thing, when tempered and modified by the good sense of the reader, are safe to follow.

The cottager of a few years ago, when his day's work was done, retired to his *roost*, like the fowls, or set himself down in his chimney corner, (not by the stove) often without a light except the glimmer of the fire, to the cogitation of his own thoughts, or to dream in semi-unconsciousness. What else could he do?—He had no newspapers, and few books; an agricultural paper had never been heard of; he knew little more about the outside world around him, beyond the small talk of his neighborhood, than his oxen or his horse. But now how changed; night comes, and the returning boy from school, brings from the post office perchance a New York *Tribune*, together with one or two State or county papers, and may be a *modest*, green covered copy of the *Farmer*. Do the leisure of that household, doze away that evening in the chimney-corner? We rather guess not; no, not they. The good man *posts up* on Kansas, California and European news; then traverses the balance of the United States, and his own State and county; and if time permits, glances through the *Farmer* to see what is new, novel or wonderful, and goes to bed a better posted man of what is going on in the world around him, than kings of the last century.

Stick then, ye sturdy yeomanry and tillers of the soil, to your newspapers. No matter if you are poor; remember there are none so poor as the ignorant, except it be the depraved, and they too often go together. Stick to your own *County paper*, though it may not be so large or imposing as a New York weekly, but remember that it is the advertiser of your neighborhood and daily business, and tells you what is going on around you, instead of a thousand miles away. If it is not on as nice paper, and as good as you would wish to have it, pay up your subscriptions well, and get your neighbors to do the same, and rely on it, the natural pride of the publisher will prompt him to improve it as fast as possible.

In hard times like these, that call for rigid economy, look carefully around you before you stop your papers, and see if you cannot find some other expenditure or *waste of time*, to the amount of a few dollars, that you had better lop off first; look close and careful, and if it becomes inevitable to shut up the windows of intelligence, between yourself, your family and the world, why then do it, and retire into voluntary exile, perhaps upon your hundreds of acres, poor only *in spirit* and imagination. Rely on it, your children will be wiser.

Changes among Exchanges.

We notice that Brother Brown, of the Ohio *Farmer*, has doubled up his fine blanket sheet into a quarto. For an agricultural paper it is a decided improvement, and in our humble opinion would be a greater one still if he would double it again down to the size of the *Country Gentleman*. That is the size for all the world for a weekly paper to bind, as ours is for a monthly. Anything larger, like Moore's *Rural New Yorker*, when bound, requires a small *leanto* to be added to a western cottage in which to store it. It is strange that all the world cannot be as wise in these matters as Father Tucker and ourselves. We hold that well gotten up agricultural papers, are worth as much to bind into books of reference as for current reading.

The Editor among the People—Second Tour.

Our second tour, like the first, fell upon a most inauspicious time, and but for the success of the third, would have been slightly discouraging.

At Beloit, owing to preconceived notions of the enterprise of her people—who with a strange mixture of a blind radicalism and stolid conservatism, appear quite indifferent to whatever is neither orthodox piety nor rampant spiritualism—we were thoroughly disappointed. Our lecture was delivered to a few merchants and professional men, and a number of young men from the College. True the night was dark and rainy, but we rather incline to regard this circumstance as altogether a favorable one for the people, since otherwise they would be without any excuse for an evident lack of appreciation of that interest which is really and preeminently their chief reliance, as a community. We believe not one farmer was present, although some of the officers of the Co. Ag. Soc. reside in the immediate vicinity. Of the village of Beloit we decline speaking, through fear of doing it injustice.

On Monday the scene changed. We were cordially met at Clinton by Dr. Tinker, and comfortably quartered at his pleasant home.—The Dr. is an earnest, hearty man—ambitious to do some good work for the Horticultural interests of the State ; has planted a beautiful orchard of thirty acres and is sanguine of success,—promises an article for the *Farmer*, on the most successful varieties. In the afternoon we hitched up and went down to the farm of Mr. Seaver, who generously invited us to pitch into his beautiful apples—a home production —*ad libitum*. In the evening, although the night was very dark, a little rainy, and the "going" awfully bad, we had the pleasure of addressing a full house in the Baptist Church, on the Importance of Scientific Agriculture, and were so far successful as to secure the organization of an Indusrtial Club. The zeal of the good farmers of Clinton is certainly commendable, and gave us a favorable opinion of the village, which although it is but one year old is *quite a place*, and promises well for the future. Located at the junction of the Racine & Mississippi and Fond du Lac R. R.'s, it must eventually be a town of considerable importance.

Our next appointment being at Footville, (appropriately so called since we were obliged to reach it on foot,) we arrived in due time ; and notwithstanding the failure of our friends to give general notice, through the efforts of Hon. Mr. Foote, whose hospitality we enjoyed while there, we succeeded in getting together a few of the faithful, in the Methodist church, and preached to them the gospel of Science with good results.

Delayed for a little time, the following day, at Plymouth—whose more poetic name is Bass Creek(!)—we took occasion to visit the curious residence of Mr. John James, who with his family occupies a room hewn out of the solid rock in the side of a neighboring hill. A stone-cutter by occupation, Mr. James has succeeded in cutting out a beautiful room about thirty feet long, twelve wide and ten high, with arched ceiling. The flue was made by boring from the top of the hill, and "draws" admirably. Warm in the winter and cool in summer, without material dampness, it makes so desirable a retreat that we were tempted to buy him out and "retire to private life." He contemplates making further excavations for kitchen and bed-rooms, and will then live like a prince. Moreover he will be perfectly secure against both robbers and sheriffs ! a consideration by no means unimportant in these latter days. We found him an intelligent man and were not therefore much surprised though unusually pleased to find the *Farmer* an esteemed inmate of this fantastic home.

Passing through Broadhead, a beautiful young city of one year's growth, and for some time the terminus of the Southern Wisconsin R. R., after an agreeable ride on the construction train and a walk of three miles down the unfinished track, we came to Monroe, county seat of Green, and were warmly welcomed by numerous friends. A large audience greeted us in the evening at the Court House, among whom were S. M. Humes, Pres. Green Co. Ag. Soc., and other gentlemen who had come ten miles over a rough road, to hear what we had to say—good evidence that old Green is neither dead nor asleep. Monroe, though a little dingy, is beautifully located, and, newly startled by the "iron horse," whose shrill neighing is by this time heard in her streets, will ere long rank *No. one* among the towns in that part of the State. With all the advantages of a splendid prairie on one side, it is densely wooded on the other, with the best timber that we have seen in the West—regular Ohio forests of elm, ash, walnut and butternut. The farms in the vicinity are in a fine condition

and speak well for the enterprise and intelligence of her agriculturists. Among the anomalies found in Monroe is a landlord, J. A. Gleisner, who refused all offer of money, and whose only charge was, that we call again on the same terms! Independent of such unlooked-for generosity, we were so well pleased with his House that we had resolved to say, it has no superior in the State for comfort, neatness and polite attention of servants. May the American flourish like a green-bay tree when certain other hotels we can call to mind shall have *gone up*. To J. A. Bingham, Esq., we owe many acknowledgements, both for his polite hospitality and for the very efficient manner in which he has operated on behalf of the *Farmer*.

The appointment for Janesville having been postponed, we returned, on Saturday, to our *sanctum*, strongly impressed with the magnitude of the agricultural resources of Rock and Green counties, and strengthened in our resolution to persevere in the good work of rousing the farmers of the State to the importance of science, and of enforcing the claims of scientific agriculture upon those who control the legislation of our great and noble Wisconsin.

School Houses.

We notice in a late copy of the Milwaukee *Sentinel*, the description of a splendid School House just completed in that city, and designed for a high school—stated to have cost some $16,000. Notwithstanding Milwaukee may be groaning under high taxes, still outlays of this kind are not only warrantable but creditable, and for the simple reason, that they diffuse a high and lasting order of benefits, much more enduring and valuable than money.

A subsequent number of the same paper, states in a synopsis of the Chief of Police's Report, that 2318 arrests have been made in the city during the year; and over 1,400 of them for *drunkenness*. Let good school houses go up we say, among such black clouds of grog shops, as disgrace nearly all our Western cities. They are nearly the only hope of amendment.

Palmyra High School.

We were recently through another fine school house, just completed by the enterprising citizens of Palmyra, Jefferson County, and found it a very complete thing in its way, outside and in. No pains seemed to have been spared, either in its design or construction, in making it as perfect as possible, for the great work of usefulness for which it is intended.

A. J. Craig, Esq., (principal Editor of the School Journal,) its designer and superintending architect, has done himself much credit, by the judgment and good taste he has displayed in arranging its various departments and details, so as to combine utility, economy and beauty throughout. The citizens have also done themselves no less credit in building so good a house, costing somewhat rising of $4,000. The writer well remembers when $100 was begrudged and hard to raise, to build the first cabin school house in the same locality. But fifteen years has made a difference, more we ween, than the next fifteen will make. Still who knows?

Crawford County Moving.

We learn from an article in the Prairie du Chien *Leader*, that the principal men of "old Crawford," are taking the initiatory steps for a County Agricultural Society. They recently met and appointed a committee of eight to report a Constitution, &c., at an adjourned meeting on the 23th of February. The committee was as follows:

Prairie du Chien—W. E. Parish.
Freeman—A. B. Hubbard.
Eastman—J. Fisher.
Scott—J. R. Spencer.
Seneca—Daniel Smethurst.
Utica—Edward Davis.
Marietta—George Lull.
Clayton—Peter Hoffman.

The above committee appointed a sub-committee, consisting of W. E. Parish, I. B. Brunson and J. H. Green, to prepare a draft of the Constitution for their examination.

Enduring Vitality of Seeds.

A correspondent mentions the fact, that locust seeds planted by him in 1847 without scalding, did not come up until the spring of 1856.

Quite singular to be sure, but the locust seed is encased in a very close, hard shell, that it takes a long time for the ordinary elements to open. It has always been even more surprising to us that scalding water perhaps twice or thrice repeated, did not destroy their germinating qualities entirely.

Various vegetable and tree seeds must endure uninjured in the soil for ages oftentimes; else how can we account for the immediate springing up of so many new things upon our Western prairies and other lands when they are disturbed by the plow or otherwise.

The Legislature.

This body is again in session, and exhibits no unusual aspect. As a whole they are a good looking set of men; as usual almost all new members, and consequently with nearly everything to learn in the way of Legislative procedure.

We understand that a majority of them are farmers, and consequently are supposed to be honest.

Gov. Randall's Message contains many excellent suggestions for investigations and reforms of abuses that cry aloud for redress. It remains to be seen how well they will be heeded. We hope the Legislature will not shirk the responsibility that clearly and largely rests upon them, of looking carefully through all the Departments of the State Government, of Railroad frauds and wild cat banking; if they do, be the consequences upon their own heads.

New Machines.

N. A. Davis, Esq., of Prairie du Sac, is acting as agent for this State, for Hovey's HORSE HAY AND GRAIN RAKE, and SEED HARROW. He represents it as a very superior article, not only for Hay, but as a gleaner of Grain fields, saving often more than its cost in a single season, besides being a pre-eminently good Seeding Harrow. Those who tried it last season in this vicinity, speak highly of it.—We propose trying one another season. They rake from eight to twelve feet wide and cost from $24 to $36.

He is also agent for Stickney's Patent CORN PLANTER, which strikes us as the most simple and perfect among the single hand planters.—We see no reason why it should not work perfectly. Price $5.

Those wishing to address him, will find him as above. He is prepared to sell either the machines or town and county rights.

Are you Insured—

Upon your house and barn and property liable to be destroyed by the flames? If not, why not? Do you think there are no good safe Farmer Companies; and that all are bogus and swindlers, because some have so turned out?

You will find two good companies advertised in our pages, such as we think you can safely rely upon, to-wit: the MILWAUKEE and MADISON MUTUALS. We think we are well acquainted with both companies, and know we are with the latter. We further show our faith in them by being insured over $4,000 in the two, on our property, and feel entirely safe under their policies.

We have never omitted to insure since we have done business, and hold that no man should, who would wish to be considered prudent, or careful.

Look well to your stoves, pipes, ashes, matches, burning fluid, and other pyrotechnics, and withal get insured the first opportunity that offers, in a good company. P.

Programme of Appointments for our Fourth Lecturing Tour.

At the following specified times we shall be pleased to meet all the friends of Agriculture—ladies as well as gentlemen—in and near the places designated. Our agents are especially solicited to procure desirable halls and see that the public are thoroughly notified of our appointments:—

Stoughton, Tuesday, Jan.	26	Hazle Green, Tu'sd'y, Feb.	16
Black Earth, Thursday, "	28	Platt ville, Wednesday, "	17
Mazo Mania, Friday, "	29	Potosi, Thursday, "	18
Arena, Monday, Feb.	8	Cassville, Friday, "	19
Mineral P't, Wedn'day, "	10	Beetown, Saturday, "	20
Darlington, Thursday, "	11	Lancaster, Monday, "	22
Wiota, Friday, "	12	Patch Grove, Tuesday, "	23
Monticello, Saturday, "	13	Pr. du Chien, Wedn'day, "	24
Shullsburg, Monday, "	15		

Seats free. Lectures to commence at seven o'clock.

Acknowledgements.

H. J. Starin and Lady, of Whitewater, will accept our thanks for a choice assortment of their winter apples, nicer specimens than which we have never seen.

Superfine Flour.

We are indebted to E. Illsey & Co., of the Madison City Mills, for a sack of very choice Superfine Winter Wheat Flour. We doubt if its quality could be excelled by any mill in the State. The Messrs. Illsleys do a large business and are thorough business men.

Sargent's School Monthly—

Is the title of a new work, the first number of which we have received. The editor, having been before the public for some time as the popular author of a variety of standard school books, which have been widely distributed and highly useful in their different departments, has acquired a reputation which will doubtless insure success in the new project.

Addressing itself as it does to the teacher and pupil, the old and young of both sexes, and furnishing its readers with a variety of exercises in reading and declamation, also original articles embodying valuable information, we should be pleased to see the work attain a large circulation. Terms $1 per annum. Address Epes Sargent, Boston.

Renewal of the Challenge for a Reaper Trial.

A proposition from Aaron Palmer, Esq., of Brockport, N. Y., the Patentee and proprietor of the famous Palmer & Williams' Self-Raking Reaper, making substantially the same offer as last year, to meet any or all of his numerous competitors with their crack machines in the harvest field next season, for a challenge trial, came too late for insertion in this number, but it will probably appear in our next. It will be recollected that he could find none to accept his challenge last season, to go into the field and try a week side and side. We hope he may prove more fortunate the coming season, and do not see why his seemingly very fair offer should not be accepted by other reaper makers, unless they are afraid of him. But when we publish the proposition we will see who dares accept.

We did most of our harvesting with one of their Self-Rakers last year, and feel bound to say that it worked to a charm after it was properly started, except in some tremendous heavy and tangled oats, and then it did all that was possible. We shall be pleased among others to see the machine that can beat it.

The Eclectic College of Medicine—

Of Cincinnati, O., is one of the best in the country, and may be patronized by our young friends disposed to enter the profession. We know the Faculty personally, and can endorse them as earnest, liberal and scientific men.—The terms, moreover, are more liberal than in any other institution with which we are acquainted; the whole amount of tuition—matriculation and Demonstrator's tickets included—being but $30 per session of 16 weeks. The Spring Session commences on Monday, Feb. 8. Address Prof. C. H. Cleaveland, 139 Seventh street, Cincinnati.

Special Advertisement Notice.

See advertisement of Wood & North in relation to their Patent Adjustable Subsoil Attachment to the common Stubble Plow. It was accompanied by a very flattering testimonial signed by some thirty persons who have used the plow and attachment. It came too late for room this month. We will probably insert it next month. One of their plows may be seen at the Agricultural Rooms.

Deferred.

As is not unfrequent at this season of the year, several communications are laid over until our next—some of them from being too late for their proper department, and others for want of room.

Agricultural Books.

See list of A. O. Moore (successor of C. M. Saxton) on the third page of the cover, and notice the fact that the books are sent by mail, post paid, to all parts of the country, at the lowest New York retail prices. Who can read the list and not make a selection of some one at least, for spring use?

School Journal.

See advertisement of this highly valuable periodical, and also the terms on which we club with it, on second page of cover.

Aztalan Nursery.

See card of J. C. Brayton, Esq., an old and experienced nurseryman. He also advertises SUGAR CANE SEED.

North-Western Type Foundry.

Miller & Starr, Milwaukee. See their card. Also see the beautiful type of the *Farmer*, of their manufacture, a sufficient recommend for any establishment, East or West.

Badger State Safes—

At reduced prices. See their figures, all who wish to buy the best and neatest Safe that is going.

Vose, Mitchell & Co.—

Advertise everything in the way of Seeds, for the Spring business, and will be found good men to patronize. See their advertisement.

John Hand, Esq.—

Presented us with a superb lot of Celery.—He is an excellent English Gardener and Nurseryman, as his establishment just outside of the city, on the Columbus road, will show.

State Agricultural Society.

Recollect adjourned meeting, Monday, Feb. 1, at 3 P. M.

Meteorological Synopsis for November, 1857.

Barometer stood highest on the 25th, 29.618.
" " lowest on the 18th, 28.082.
Average for the month, 28 888.
Thermometer stood highest on the 4th, 57 degrees.
" " lowest on the 23rd, 3 "
Average for the month, 29.26 "
Amount of rain, .57 inches.
The prevailing winds were South-west.
Lake Menona closed on the 23d.
Lake Mendota " 25th.
Departure of the Wild Goose on the 19th.

SYNOPSIS FOR DECEMBER.

Barometer stood highest on the 11th, 29.541.
" " lowest on the 6th, 28.444.
Average for the month, 29.021.
Thermometer stood highest on the 16th, 48 degrees.
" " lowest on the 10th, 17 "
Average for the month, 31 "
Amount of rain, .75 inches.
The prevailing winds were South and South-west.

UNIVERSITY.

LITERARY NOTICES.

STATE AGRICULTURAL SOCIETY'S TRANSACTIONS.—Our new volume, embracing the last four years of 1854–5–6–7, is now completed except the binding, and will soon be ready for distribution. It will be quite respectable in appearance, embracing something over 500 pages, and including several fine engravings of some of the most prominent of the premium animals of the State; containing the principal transactions of the State and numbers of the County Societies for the several years it refers to, together with many valuable scientific and practical essays, addresses, &c., it will constitute a valuable feature in every agricultural and business library in the State.

CHRISTIANITY IN THE KITCHEN—A PHYSIOLOGICAL COOK BOOK, BY MRS. HORACE MANN.—Here is a Cook Book well worth the reading—a book which, while it does not ignore the legitimate pleasures of taste, nevertheless aims chiefly at the health of body and soul, as objects paramount to all other. The Author was well prepared for the important work so ably performed, by arduous labors in the laboratory, and multitudes of careful experiments guided by an earnest and conscientious desire to advance the practical physiology of society. We regret that no space can be furnished in the present No. for a brief review of the book. We have passed it over to the Editor of Home Circle, however, who will delight to do it justice in the future, and will only add, we hope it may find a home in every family in the world. Published by Tichnor & Field, Boston. Price $1,00.

WISCONSIN HISTORICAL COLLECTIONS, 3D VOLUME.—We are indebted to L. C. Draper, Esq., the Corresponding Secretary of the State Historical Society, for copies of this valuable collection. Like its predecessors it is made up of official reports and proceedings, sketches and reminiscences of Western history and border life, and all in all is an interesting and valuable work, both for current reading and after use. It evinces a good deal of industry and careful research on the part of Mr. Draper, and is creditable alike to him and to the society.

THE ATLANTIC MONTHLY—the third No. of which has just come to our table—as a substantial literary periodical for the times, is thus far without rival in America; while the character of its publishers and corps of contributors is a good guarantee for the future.—Taking a manly and independent stand on all great questions of the day and supported by the best writers in the world, the people will themselves be the greatest sufferers if it is not heartily sustained. Published in Boston, at $3 per annum, by Phillips, Samson & Co.

By an arrangement with the publishers, we are able to offer both the monthly and the *Farmer* for $3. Send in your names.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

NOTE.—Before the arrival of the manuscript for the Home Circle from Ohio—where Mrs. H. is spending a few weeks—the *Farmer* had so far progressed that we are only able to publish a portion of what was intended for this month. H.

THEN AND NOW.

From the German.

BY MRS. HOYT.

I remember well—do you?
Then, the days were slow.
I remember not—do you?
Now, how fast they go.
Fairy days! The unforgotten,
Idle days, and slow;
Real days! The all unthought of,
Ah, how fast they go!

I remember well—do you?
Then, the days were flowers.
I remember not—do you?
Now, the days are hours.
Dear old days! The improvis-ed
Days of dream and flowers;
Days of time! The all unvalued,
Ah, how briefly ours!

Would we call them back? Not I:
Days of Now, were Then.
Would we hasten on? Not I:
Now, will soon have been.
Precious days! Past, Present, Future,—
Days of *now* or *then*—
Yours and mine—ah, soon will all
Be the days have been!

The Parents.

Parentage! To what shall we liken it, or with what words shall we approach this so beautiful and sacred theme?

Incomprehensible in mystery, Inspiration has yet clothed it with power, acknowledging it human; universal in influence, Humanity has ever loved its rule, attesting it divine. Its law is the law of liberty; its life is the life of love. To the whole world of society, parentage is as the principle of gravitation to the whole world of matter; to the individual member of society, it is as the law of attraction to the atom; to both the bond, without which the reign of confusion would usurp the reign of order.

When the Divine Author of creation had finished his handiwork of the material sphere—had laid out and fitted up the home of the family of man, and all was good and fair to his beauty-loving eye, there yet remained another, and the noblest of his creative acts to be performed. The Parents of the human race—made in his image and clothed with his di-

vinity—this was his last, best, perfect work, before he became to an intelligent universe the God of Providence. But there is no need that we go back to that first fair home and sinless pair for our conception of the beauty of the one, or our model of the excellence of the other. Homes of to-day! Are they not lovely as were ever Eden's bowers? Hearts of to-day! Are they not pure as when parental love kissed the first-born of time?

Right steadily the world has still been moving on, and through all the centuries of change that lie between us and that distant time, parentage that was, is yet the first and firmest type between the human and divine. In all the universe there is nothing that so symbolizes the loving kindness and watchful providence of God for man, as the ceaseless care and affection of the parents for the family.—This relation of parentage is at once the most dignified and the most tender of which humanity is capable. Its exaltation to the nature it enobles, is of the moral, the intellectual, and the affectional; its satisfaction is the same.—While it confers authority, it teaches submission; where it prompts to justice, it counsels also of mercy; where it must be firmest, it may yet be kindest. All that is beautiful in the life, all that is blessed in the heart is called out, and takes part in the fulfillment of its duties and the exercise of its privileges.

The history of the social condition of the world at any period shows, as general experience proves, that to have become a parent is to have been a more valuable member of society—a more self-respecting individual. And this, in the very nature of things; for the estate of parentage not only refines and elevates the emotions, it also invigorates the moral sense of justice, clothes anew the beauty of truth, quickens the perceptive by stimulating the observing powers of the mind—thus giving to the whole man and woman a *broader*, as also a *happier* range of being.

As parents, the husband and wife have added to the circle of their loves the last completing link. That which was impossible has been made possible, and is, as the cup already full receives the more, baptizing their souls into a yet higher life, and holier love. How pure and how deep is the happiness of well-mated parents! Measured only by the care that is ceaseless, co-equal with the value of the treasure it would guard. Yet is the burden light; and care, and toil, aye the veriest drudgery of life is sweet when the parent's heart is full of love and hope.

Fatherhood and motherhood! O how "sweeter than life and stronger than death" is the gush of that joy when the blossom of a heaven-made union becomes immortal fruit; when first unto the clasping arms and closer clinging heart is revealed the mystery in which its love believed—the new-born baby soul! What a world of hopes, and fears, and loves come rushing up, as the consciousness, at first shadowy and dim, begins to apprehend, and with adorning clearness takes at length upon itself this new reality. So human—so divine—so self-related, yet so individual the life, that, from its first pulse-beat and tiny form, defies the comprehension of those to whose compassion it so tenderly appeals. Now, those who were twain are indeed one in "a deeper care, and a higher joy," since unto them it has been given to be the Father and the Mother of an existence that is heir to a development, evermore approximating the Infinite in beauty, goodness and power.

To have been Parents. Wonderful and beautiful relationship! Unrivalled in its purity and wealth of affection, let the heart be holy that would taste all its sweetness and depth; unequalled in its demands for self-knowledge and control, let the thought be wise that would contemplate its needs, or assume its responsibilities.

The Morality of Dietetics.

The pleasures of the appetite are legitimate pleasures. God did not implant the sense of Taste in man to ruin the beautiful structure of his body, or to impair the noble faculties of his soul. But, like all the other appetites, the appetite for food may be abused. If its proper conditions be violated, the loss of power, premature decay, and untimely death, are inevitable. The life of the offender is deprived of its own enjoyment, and of its power of being useful to others.

Observation and science have brought to light many of the conditions of health and longevity, and an observance of these conditions is one of the first steps towards redeeming the race from its present degradation.

There is no more prolific,—indeed, there is no *such* prolific cause of bad morals as abuses of diet—not merely by excessive drinking of injurious beverages, but by excessive eating, and by eating unhealthful food. Compounds, like wedding-cake, sweet plum-puddings, and rich turtle soup, are masses of indigestible material, which should never find their way to any christian table. It looks ominous to

see a bridal party celebrating nuptials by taking poison. Although some persons may seem to eat these criminal preparations with present impunity, yet a book of reckoning is kept for the offences of the stomach, as well as for those of the heart, and this is one of the deeds done in the body, for which the doer will be called to account.

If asked why I pronounce these and similar dishes *unchristian*, I answer, that health is one of the indispensable conditions of the highest morality and beneficence. Temper, it has been said, lies in the stomach, which is physically if not metaphysically, true. Every intelligent dyspeptic knows that he is a worse man when suffering under a paroxysm of his malady, than in one of his lucid intervals, if we may so call them. Even the lucid intervals of the confirmed dyspeptic are negatively good and useful rather than positively so.—Why is not dyspepsia disgraceful, like *delirium tremens*? When it comes to be so considered, as it assuredly will be when the gospel of the body is fully understood, it will be banished from good society. It is a good omen, that practical physiologists, even now, begin to feel ashamed of ill health, and feel bound to apologize for it.—*Mrs. Horace Mann's Health and Economy in Cooking.*

Eloquent Passage.

For the greatest human intellects there is no exemption from the common doom. I have sometimes thought how sad, yet how sublime, must have been the emotions of that man whose privilege it was to stand by the coffin of Shakspeare and gaze on that sweet and noble face, when death had called out all the strange beauty which never lives there. It was worth a life time to have stood there one minute—to have laid your hand on that broad brow, and started at the cold chill; and so pausing to have called up in memory all the magnificent creations of his genius, and worshipped him there in the silence and the gloom:

> But he is dead and gone;
> At his head a grass-green turf,
> At his feet a stone.

So they all go. Man dies, but nature is eternal. The seasons keep their appointed time; day returns with its golden splendor, and night with its eloquent mystery. The same stars that lit the ghastly battle field of Troy, rough with the dead bodies of ancient heroes—which shone on the marble streets of imperial Rome, and on the sad eyes of Virgil sleepless in the living glow of inspiration—the watch fires of the angels, which, through centuries of devastation and change, have still burned unceasingly—speak to us as they did to Dante, and Shakspeare, and Milton, of the divine glory, the omnipotence, the everlasting beauty and love of God.—*Philosophy of life.*

The transient day of sinful indulgence is followed by a dark, tempestuous night of sorrow.

FOR THE CHILDREN.

Snow Houses.

I wonder if all of you who read this page, know anything about your cousins away up in Greenland? There they wear bear-skin frocks and coats, eat and drink the flesh and oil of seals, and live in snow-houses. Just think of calling a country *Greenland*, when if you should go all over it you would hardly find a tree so high as grand-papa's cane; not a honey-bee, bird or flower in all the land. *Green*, indeed; it ought to be called *White*-land, or some such cold freezing name—for the fields are almost always covered with snow, the air frost-biting, and the hills real, great piles of ice the year long. Yet little children, round-faced, rosy-cheeked, fat little children live there, and a merry time they have, too, with their dogs, and sleds, and snow-houses. Some day we intend to tell you more about them and show you a picture of one of their snow-houses.

The 22d of February.

We had intended, this month, to give you little folks quite a chapter about great men.—But when we looked at the names we had gathered from the history of the world, we found we had not room even to speak of them now. There is one, though, that we cannot pass by, because the 22d of this month is the anniversary of his birth-day, whose name we had placed at the head of our list. Can *any* of you—*can't all of you*—tell his name who was so great and good, that while the world delights to honor his memory, we of America call him "the Father of his country?" If I were near enough, I have no doubt but I should hear hundreds of you saying at once George Washington! while with sparkling eyes and eager voices you turn to Pa, or Ma, or some one older than yourselves, to ask still more than you can remember of his life and deeds. Well, this way, as from books, learn all you can of his character and history; that when we speak of him in the future, you may the better understand what we say, and from his example see what it is to be truly good and great.

A little Sweedish girl once earnestly gazing at the starry sky, suddenly turned to her mother and said, "I was thinking if the *wrong side* of Heaven is so glorious, what must the right side be?"

MARKET REPORT, COMPILED FROM THE LATEST PAPERS.

	N. York.	Buffalo.	Clevel'd.	Chicago.	Milw'kee.	F. du Lac	Stev's Pt.	Madison.	Pr.d'Ch'n	St. Paul.
Flour per cwt	4,80@5,75	....	4,00@4,50	3,50	....	1,50@1,75	....	1,50@1,75	1,50@2,00	....
Wheat	1,15@1,25	....	80@1,00	54	56@60	56@60	....	42@43	40@45	....
Corn	80	....	40@60	27	35@40	30	....	35@38	30@35	....
Oats	40@45	....	28@29	20	25@26	17	....	18@20	20@25	....
Barley	90@95	. ....	50	25@40	35@40	35	....	35@40	....	....
Hay	9,@12,00	....	8@10	....	....	....	....	6@7	....	....
Timothy Seed	....	....	2,00@2,75	....	....	1,25	... .	....	....	....
Potatoes	95,@1,00	....	35@40	40	30@35	20	....	25	35@40	....
Beans	1,40@1,50	....	75@1,00	....	....	....	....	....	3,00	....
Green Apples	3,00@3,25	....	1,50@1,75	....	....	3,50@4,00	....	....	....	....
Dried " ℔ lb	7@8	....	1,00@1,25	....	12½	12½	....	....	15	....
Dried Peaches	15@18	....	....	....	....	....	.. ....	....	....	....
Salt	....	....	1,75	2,00	1,94	....	....	2,50@3,00	2,00	....
Pork ℔ bbl	15,@16,00	....	13,00	12,00	....	18@20	....	....	25@28	....
Fresh Pork ℔ lb	....	....	3½@5	4½@5	....	5@6	....	6@7	....	....
Lard	11@12	....	7@8½	9	....	....	....	9@10	....	....
Beef	6 on foot	....	....	....	5½@5¾	3,00@4,00	.. ....	3,00@4,00	....	....
Mutton	10	....	4½@6	....	....	....	....	6	....	....
Turkies ℔ lb	7½@8½	....	9@10	6@8	.. ....	7@8	....	8@10	....	....
Chickens	9@11	....	6@7	12@15	....	6@7	....	....	....	....
Butter	15@20	....	15@16	16@18	16	17@18	....	15@16	25	....
Cheese	5@8	....	7@9	11@12	....	....	....	....	12@15	....
Eggs ℔ doz	20	... .	12½@14	18@15	....	15	....	15@18	16	....
Common Lumber	....	....	....	.... .	....	10,00	....	....	15,00	....
Clear "	....	....	. .. .	....	....	18,00	.. ....	....	27,00	....
2d "	....	....	....	....	....	14,00	....	....	22,50	....
Shingles	....	....	....	....	1,00@2,50	1,00@2,50	....	....	2,00@2,50	... .

Above we present a tabular statement of market prices, at several of the principal points in our own State, and East and West of us. We think it will prove not only interesting but useful to our readers, as it will be corrected down to the latest dates each month, and will serve to show the ranges and bearings of all our principal products and articles of consumption in the market; thereby enabling every one to judge for themselves, as to the probabilities of rises and falls of prices, and what it is advisable for them to do in the way of buying and selling.

Everything at the present moment, seems to be at the lowest possible rate of prices, in the line of grain and vegetable production; while horses, cattle, meat and merchandise are following suit, by a perceptible and constant depreciation. How long this descending current will continue, must of course depend upon circumstances. Many think the bottom is already reached, so far as grain, at leas, is concerned. We hope so, as it is much below the cost of production in our State. Our own opinion is, that it will improve somewhat from now on to the opening of navigation, although probably not largely. Meantime we would advise all to be saving of all they have, as it is quite too common in times of overplus and low prices, to be wasteful and careless in feeding, scattering and selling, but certainly there is all the more need of economy.

One extreme is often succeeded by another, and great scarcity may prevail within twelve months. Who knows? The above prices are as we find them in the papers of each place.

DESIGNING!

DESIGNING.

ENGRAVING! ENGRAVING!

ENGRAVING!

FRANCIS S. HICKOK,

ARTIST and Engraver on Wood, executes in every form, style and fashion,

ILLUSTRATED HEADINGS FOR NEWSPAPERS,

VIEWS OF BUILDINGS, TOWNS, CITIES AND LANDSCAPE,

Title Pages for Magazines,

Portraits of Individuals, Prize Cattle, Sheep and Horses,

BILL HEADS, BANK CHECKS, BUSINESS CARDS, SHOW BILLS, LABELS, MAPS, SEALS OF SOCIETIES, MACHINERY, ORNAMENTAL DESIGNS FOR BORDERS, &c., FOR

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At reasonable prices, and to give perfect satisfaction.

SPECIAL ATTENTION

paid to views of elegant Buildings, where detail in ornamental work is necessary.

☞ Orders by Mail, Telegraph or Express promptly attended to.

FRANCIS S. HICKOK,
134 East Water Street, Milwaukee.

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Aztalan Nursery.

THE best Hardy Varieties, and Seedling APPLE TREES, from 4 to 5 years growth, at Wholesale and Retail. An assortment of other **FRUIT TREES AND VINES, ORNAMENTAL TREES, SHRUBS and FLOWERING PLANTS.**

☞ GENUINE CHINESE SUGAR CANE SEED, ☜

personally selected by the proprietor, at the farms where grown in Southern Illinois, pure from admixture with Dourra corn, and from hybridity with it, or any other plant of the genus. This seed will be put up in packages sufficient to plant over an acre of ground, with pamphlet of direction for planting, and every process with the cane to its manufacture into syrup and sugar, for $1,00. Will be sent as ordered—if by mail 96 cents additional must be sent in postage stamps. Half packages will be sent, post paid, on receipt of $1,00. Address,

J. C. BRAYTON.

Aztalan, Jeff. Co., Wis., Feb. 1, 1858. xiii

FARMERS, ATTENTION!

MESSRS. WOOD & JO., would call the attention of Practical Farmers to the fact that they are manufacturing

CAST STEEL PLOWS,
with their
PATENT ADJUSTABLE SUBSOIL ATTACHMENT.

Those wanting this last and greatest improvement in Plows, are requested to forward their orders immediately.

N. B.—Those wishing to purchase the right to manufacture and vend our improvement, will please address

WOOD & NORTH,
Rochester, Racine Co., Wis.

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THE WISCONSIN

JOURNAL OF EDUCATION,

WILL hereafter be published at Madison, and will be issued promptly on the first of each month, the obstacles which have prevented its early and regular publication heretofore being removed.

In addition to the usual matter, we shall hereafter have in every number a

HOME AND CHILDREN'S DEPARTMRNT,

consisting of orgical articles by the ablest writers of our own State, and choice selections from the best publications of the whole country, thus making it acceptable and useful to the general reader, as well as the professional teacher.

We shall also commence in the February number, the publication of

VIEWS, PLANS AND DESCRIPTIONS

of the principal School Houses in the State;

ALSO

ORIGINAL DESIGNS AND PLANS

for village and country school houses, embodying the latest improvements in style and arrangement, and costing from $500 to $5,000.

The resident Editor will, during the year, visit different parts of the State, for the purpose of collecting information in regard to the condition of our Schools, and the means necessary to be employed to elevate the standard of education and secure the highest and best results rom the working of our school system. This Journal being the organ of the

DEPARTMENT OF PUBLIC INSTRUCTION,

will contain from time to time the decisions and regulations of the State Superintendent, together with statistics and other information obtained from his office, as well as from the other State offices—thus making it an encyclopedia of facts and principles, having reference to the subject of education.

To meet the increased outlay necessary to carry into effect the improvements promised, we rely upon the hearty co-operation of teachers and friends of education, and shall look to them with confidence for such an increase in our subscription list as shall prove their appreciation of our efforts to furnish a

FIRST CLASS EDUCATIONAL JOURNAL.

We will hereafter furnish the Journal to subscribers at the following rates:—Single copies $1; four copies $3.60; seven copies $5.60: ten copies $7.50; or for $2 we will furnish one copy and Vol. 1 of the Journal neatly bound in cloth; for $5, five copies and Vol. 1 bound. We will also furnish any number of copies of Vol. 1 bound for $1 each.

We have made arrangements with the publishers of the *Wisconsin Farmer*, by which we can furnish the Farmer in connection with the Journal on the following terms; One copy of the Journal and one of the Farmer for $1.75: four copies of the Journal and one of the Farmer for $4; nine copies of the Journal and one of the Farmer for $7.50.

Subscriptions to the Journal to commence with the July or January numbers. Back numbers supplied.

N. B.—Exchanges and correspondents will in future direct their favors, "Journal of Education, Madison." x II tf

La Crosse and Milwaukee R. R.

WATERTOWN DIVISION OPEN TO COLUMBUS.

ON MONDAY, Dec. 2d, 1857, and until further notice, a passenger train will leave Milwaukee from the Depot, foot of Second Street, for Pewaukee, Hartland, Pine Lake, Oconomowoc, Watertown, Lowell and Columbus at 2.15 P. M., arriving in Columbus at 6.54 P. M.

Returning, leave Columbus for Milwaukee and intermediate stations at 7.45 A. M., arriving at Milwaukee 12 15 P. M.

☞ Connections are made at Watertown with stages for Lake Mills, Jefferson, Waterloo, Hanchetvile, Sun Prairie, Cottage Grove and Madison; also at Columbus for all points to the West or North West.

Passengers arriving at Milwaukee from the above places, make connections with the roads to the North, South, or West.

Through tickets can be had at the offices of all connecting Roads.

Passengers will please procure tickets before taking seats in the cars.

D. C. FREEMAN,
Lessee and Superintendent.

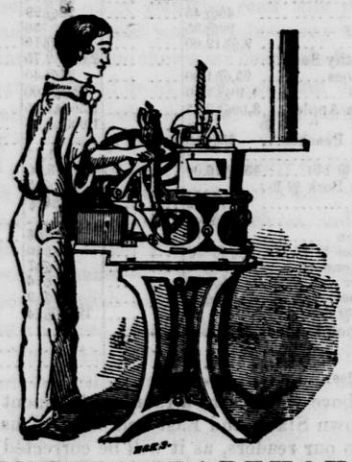
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MILLER & STARR'S

NORTH-WESTERN

Type, Stereotype and Electrotype Foundry,

AND



PRINTERS' WAREHOUSE,

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HAVING completed our arrangements for the above business in this city, we would invite the co operation of the printers of this and surrounding States in its behalf. Our facilities are equal to any Foundry in the country for manufacturing Type and Printer's Material; and for beauty of finish and hardness of metal, cannot be surpassed in this or any other country. The faces of our Type, are all *modern* and most *approved style*, and we shall endeavor to compete with our Eastern brethren in getting up new styles of Type, Borders, Cuts, Ornaments, &c. We are in daily receipt of all new FACES as they are made at the East, and in advance of any other establishment at the West.

Being agents for some of the best Type Foundries and Press and Ink Manufactories at the East, we shall keep constantly on hand a full assortment of every variety of material.

Presses, Wood Type, etc., furnished at Manufacturers Prices.

Orders for Stereotyping, Engraving, etc., promptly attended to.

EDWARD MILLER,
Late of Albany, N. Y.
H. A. STARR,
Late of Starrs' Printing Office.

Milwaukee, Feb. 1, 1858. x II tf

Racine and Mississippi Railroad,

OPEN TO DURAND.

ON and after Tuesday, Nov. 24th, 1857, trains will leave as follows:

GOING WESTWARD.

Leave Racine, Freight and Accommodation at 8.00 A. M.; Passenger at 2.00 P. M.

GOING EASTWARD.

Leave Durand, Passenger at 6.00 A. M.; Freight and Accommodation at 7 30 A. M.

Connecting at Racine with Trains on the Lake Shore R. R for Chicago, Waukegan, Kenosha and Milwaukee; at Clinton with the Chicago, St. Paul & Fond du Lac R. R. for Chicago, Janesville, Madison and Prairie du Chien; at Beloit with the Galena and Chicago Union R. R. for Belvedere, Rockford, Freeport, Galena and Dubuque.

STAGES

connect with noon trains, at Durand, to and from Freeport; at Burlington, for Rochester and Waterford; at Elkhorn for Whitewater: at Springfield for Geneva.

☞ Freight Trains daily each way. Goods forwarded with the utmost dispatch,

ROBERT HARRIS, Supt.

Racine, Nov. 23, 1857. x 1 tf

WISCONSIN FARMER,

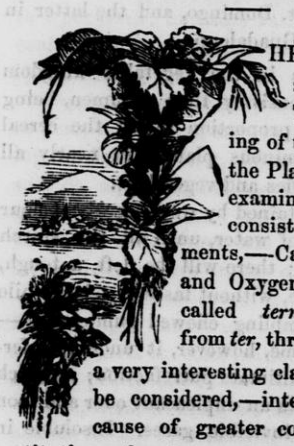
AND

NORTH-WESTERN CULTIVATOR.

Vol. X. MADISON, MARCH, 1858. No. 3.

D. J. POWERS AND PROF. J. W. HOYT, Editors.

VEGETABLE CHEMISTRY.



THE PLANT.—CONSTITUENTS.—No.7. Thus far, in treating of the constituents of the Plant, we have only examined those which consist of but three elements,—Carbon, Hydrogen, and Oxygen, and are hence called *ternary* compounds, from *ter*, thrice. Accordingly a very interesting class yet remains to be considered,—interesting, both because of greater complexity of constitution—the atoms of the above-mentioned elements being grouped in much greater number—and because they contain additional elements, so important that without them all animal life must soon become extinct. Nitrogen, Sulphur, Phosphorus! all-worthy, indispensable trinity—the two former essential to the muscular system of all animals, and the latter an equally necessary constituent of all nerves and the brain.

Nitrogen, Nitrogen! thou who hast so long and so meekly borne the contempt and abuse of stupid men, who stigmatized thee, through many years, with the name *azote* (without life,) when there is really no life *without* thee; who called thee weak, inert, because thou had'st not the all-devouring jaws of Oxygen, nor went'st about like a roaring lion seeking whom thou might'st devour; and who deemed thee fickle because thou wast always on the wing for the supply of thy multitudinous family; how art thou exalted now to the highest rank among thy fellow divinities, and become even the life-guardian of all the animal races!

And thou, O, Sulphur, whose odor and flame are the symbol of hell! where were the skin to shrivel and the flesh to consume in thy fabulous fires, had'st thou never been, to form them? And thou, too, beautiful Bearer of Light! so piously keeping the vigils of the dead, and so coyly and magically retreating from the sacrilegious invasion of profane curiosity; where, but for thee, were the wonder-working brain, whose mighty power energizes the arm of the great working world, so that forests are prostrated, oceans are bridged and cities are builded; through whose mysterious workings the hidden things of nature's great labyrinth are brought to light, the laws of our material sphere revealed, and through which the incomprehensible soul has contact with the universe of worlds and communion with the infinity of other souls? Nay, we will reverence ye all as agents of the All-Father, and co-workers for the up-building of man.

The principal compounds in which these elements occur, and which are essential to animal life, are albumen, gluten or vegetable fibrine, and casein, which are so nearly alike in their chemical qualities and physiological relations, that albumen is assumed as the type, and they are all classed under the head, *albu-*

minous group, or, *nitrogenous* bodies, in allusion to the presence of essential nitrogen.

They all agree in being more readily decomposable than those which we have examined, heretofore, and have the remarkable property of communicating their own tendency to the non-nitrogenous class. Thus starch if kept dry would remain starch forever, but if to moistened starch, a little albumen, or gluten or casein be added, and a moderate temperature maintained, chemical change begins at once, and the starch by quick and wonderful transmutations passes successively into sugar, alcohol, carbonic acid gas and water. These several and similar processes are known as *fermentation*, and will be discussed at some future time. The products of the decay of the albumenous bodies themselves, are ammonia, sulphide of hydrogen, and phosphide of hydrogen; hence the offensive odor evolved by them during decay.

The cause of this tendency to decay is probably found in the greater complexity of this class of bodies, and in the *fickle* character of nitrogen.

As to greater complexity, it will be remembered that the bodies heretofore described consisted of but three elements, and that these were present in a number of the atoms not greater than 12 or 14. For example, crystalized sugar was found to consist of carbon 12 atoms, hydrogen 14, and oxygen 14. How simple when compared with protein (from *protos*, first,) the supposed base of the albuminous group, whose composition is C^{48}, H^{36}, O^{14}, N^{6}; and how yet more simple compared with albumen, which is believed to consist of ten equivalents of this protein, and one, each, of sulphur and phosphorus, its formula being, therefore, C^{480}, H^{360}, O^{140}, N^{60}, S P. Now the law of permutation will show that this albumen has about a million of chances for change, to one as compared with starch; so that they stand to each other related as the complex steam engine, or steam power press to the simple brass pin for fastening clothes.

Albumen, (derived from *albus*, white,) is identical in composition with white of eggs, and occurs in some, and, in small proportions, in nearly every portion of all plants. It is soluble in water and occurs therefore, in the fluid sap, as well as in the solid form in grains.

To obtain vegetable albumen in separate form, wash a little starch of potatoes or corn, and after the starch has subsided, then boil the water; a white, flaky precipitate will be formed, which is the albumen sought. Wash with ether for the separation of fatty matter, and you have it quite pure. Liquid albumen coagulates by heating to 140° Fah., and will not afterwards dissolve, either in cold or hot water,—the latter, however, causes it to swell.

It is also coagulable by alcohol, corrosive sublimate, and creosote, on which account, since coagulation overcomes the tendency to decay, these substances are used for the preservation of those bodies which contain it.—Wood and flesh are thus preservable for an indefinite period.

Albumen is chiefly useful as food, but is also employed in the arts; for giving lustre to paintings, wainscoatings, &c., and for clarifying syrup of plants. The *Hibiscus esculentus*, or okra, and the *Ulmus fulva*, slippery elm, contain large proportions of it, and are accordingly used for clarifying liquors, the former particularly in St. Domingo, and the latter in Martinique and Guadaloupe.

Gluten occurs in the vegetable kingdom much more extensively than albumen, being found in large proportion in all the cereal grains, in leguminous plants, in nearly all fruits, nuts, berries and vegetables.

It is easily obtained by washing wheat flour under a stream of water, until all the starch is separated out; there will be left a tough, elastic substance, without taste or odor, while fresh, and resembling chewed gum-elastic.—After a short time, however, it undergoes fermentation and ultimate putrefaction; in which condition it emits an unpleasant odor and soon passes off into invisible gases. Insoluble in alcohol and but slightly so in water.

Being the chief nutritious element of the different grains, the proportional quantity present, in the several varieties, affords a good criterion for judging of their relative value as food. The following table exhibits the relative proportion of starch and gluten, in different varieties of wheat, as determined by Davy:

Variety of Wheat.	Per cent. Starch.	Per cent. Gluten.
Winter Wheat,	70	24
Spring Wheat,	77	19
Barbary Wheat,	74	23
Sicily Wheat,	75	21

Here, then, we have an explanation of the superior value of winter wheat as compared with the spring variety; the proportion of the gluten contained being as 24 to 19. What the nature is of the peculiar influence exerted by

cold, or, rather, how it is that heat developes the gluten—is hardly understood, but it is a universally recognized fact that the wheat grown in temperate climates is more prolific of gluten and makes better bread than that which is grown in higher latitudes. The famous Italian bakeries get their flour almost exclusively from the Crimea, where the grain is hard and rich in gluten.

But flour which contains but little gluten is not only less nutritious, but is also not so susceptible of being *raised*—cannot be made into so *light* bread; since it is this very gluten which by its imperviousness, entagles the carbonic acid generated by fermentation, forcing it thereby to accumulate and even to lift up the dough, so that porousness and large bulk are the result.

On account of this peculiar mechanical office of gluten, various other grains, such as barley, which contains 6 to 9 per cent.; rye with 1-2 to 1 per cent.; and oats with only 1-2 to 1 per cent., are not susceptible of being made into light bread.

Casein exists especially in luguminous seeds, as peas, beans, &c., and is obtained by washing the flour in water, allowing the starch to subside and then boiling the supernatant liquid in the open air; the casein oontained, combined with oxygen and forms a thin, grayish pellicle, or skin on the surface.

Chemically considered, it is identical with the casein, or cheesy matter of milk; in which state it exists in combination with soda, and may be precipitated therefrom by acids.

Here, then, in brief, we have the great compounds for the formation of which in the laboratory of the vegetable world, the elements labor so unceasingly, in order to that higher vitalized condition of the animal, to which, in the endless circulation of matter, every atom in the universe aspires. H.

CHEAP PAINT.—If any readers wish to use a very cheap and substantial paint, of drab color, without lustre, let them mix water lime with skimmed milk, to a proper thickness to applp with a brush, and it is ready to use. It is too cheap almost to estimate, and any one can put it on who can use a paint-brush. It will adhere well to wood, whether smooth or rough—to brick, stone or mortar, where oil paint has not been used, in which case it will cleave to some extent, and forms a very hard substance, as durable as the best oil paint.—*Country Gentleman.*

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER III.

FENCING—ITS VARIOUS STYLES, GATES, ETC.

Fencing in one form or another, is one of the greatest items of expense in fitting up a new Western farm, and one withal that is more important to be well done than almost any other, for without good safe fences, there is no security whatever for the products of the tiller of the soil.

Every neighborhood has its unruly animals that have learned from long experience how to take advantage of every defective spot and place, especially as the crops are ripening in the fall. And many is the Western farmer who finds on rubbing open his eyes in the morning, that his own or his neighbor's cattle, horses or hogs, have been in his fields over night and done more damage than days of toil can earn or repair. The taste once acquired, will be likely to be repeated nightly as long as there is anything to destroy, even though the fences are at last put up high and well. Now this is a bad state of things, all will admit, especially all who have had experience. The crop of the whole season scattered, trampled and destroyed, and the destroyers absolutely injured instead of being benefitted by the destruction, and what is often worse than all, the good understanding of neighbors interrupted, and petty law suits embarked in because of sundry ears torn off by dogs and other damage done the poor animals. Many is the bitter feud that has thus originated, and swept through neighborhoods with all the rancorous hate and exterminating bitterness of a "punic war." Many other good reasons might be added why good fences are indispensible to good farming or to harmony and good understanding in neighborhoods, but they are so obvious to all, that we will not now dwell further upon them.

The great desideratum with all farmers is, how they can fence cheapest and best, all things considered, and that will be the main desideratum of this article.

RAIL AND BOARD FENCES—COMPARATIVE COST.

The rail or crooked (Virginia) fence was for a long time almost the only style to be met with in the West, and still is, in the newer districts where there is any show of timber, and it is all natural and proper. But when for any reason it comes to cost any where in

the neighborhood of the same price as a good board fence, then the latter is greatly to be preferred—first, because it is much more tidy and neat as to the ground it occupies, and the harbor it affords for brush and weeds. Secondly, it is more substantial and if well made more durable and efficient to turn intruders.—Rails delivered on the ground at $40 per M. and stakes at $20, makes a fence that costs about the same per rod as a four strip board fence, well made, with lumber at $15, to-wit: from 70 to 75 cts. per rod.

For more specific instruction as to the best mode of building board fence, we would refer to articles on the subject in the spring numbers of the *Farmer* for 1856 and 1857, where the matter is more fully gone into than the nature of this article will permit. We would say, however, before leaving this part of the subject, that four boards six inches wide, are sufficient for a common farm fence, although we not unfrequently see five used instead, the lower one dropped down into the grass and dirt to rot, and the upper ones left so close together that a grasshopper could hardly fly through. This is all needless, and the fifth board almost a waste. For a few rods, to be sure, it does not amount to much, but on long strings of fence, it becomes quite an item, and exceedingly well worth saving.

POSTS—BEST TIMBER—THEIR PRESERVATION.

Great care should be observed in selecting timber for posts. Good sound white and burr oak is the best that is ordinarily met with in this country; probably equal, if not preferable to white cedar, especially the saplings usually sold in the lumber yards. It seems a well established fact, that inverting the posts in setting, from the way the timber grew, is a decided advantage in the way of durability.—Charring seems also to materially arrest decay. Setting posts in leached ashes, would undoubtedly prove highly preservative. Undoubtedly many will think, that much of this pains taking may not pay; but when they reflect on the trouble and expense of renewing the posts of a fence, at the end of six or eight years, they will not fail to see, that a little more expense in the outset, would have saved them the labor and expense of renewing, from four to six years longer, at least.

DITCH FENCES—THEIR ECONOMY.

On moist land, a well constructed ditch fence is often undoubtedly preferable, as it not only makes a fence but a drain for excess of moisture, besides the additional fact that posts rot much sooner in damp wet soils. The ditch fence is all the better for having a range of willow or cotton wood hedge planted just at the base of the embankment. With a very little attention it will soon grow to a sturdy thicket and in connection with almost any kind of a ditch make a fence that will turn anything but pigs, for indefinite years to come.

The best style is a double ditch, with the embankment between, and the willows set on both sides of the bank, at the base. As they grow, they may be trimmed upon the outsides and the tops thus thrown together so as to thicken up the fence and at the same time prevent its overshadowing the ground too much. Such ditches can be made complete and the hedge planted for fifty cents per rod, and we cannot see why they will not endure without repair or further expense for an age at least. The golden willow, if willows are used, is probably preferable, as it grows exceedingly fast, and also up to sufficient size to make a firm *bul*wark against the largest animals.

Care should be taken in making these double ditches not to crowd them too near together nor to make the ditch or embankment sides too steep; they will not stand as well against the action of frost and rain. Then the offset from the base of the embankment to the inside line of the ditch should be at least a foot in width, as it is constantly growing narrower both from the scattering down of the embankment and the caving off of the ditch. From 10 to 12 inches is near enough for the willow cuttings. The cheapness and durability of the ditch as a fence, when the ground is sufficiently moist to cause it to turf over and stand until the hedge is grown sufficiently for a substitute, seems to commend it highly, aside from its important uses as a ditch.

PRAIRIE SOD FENCES, AND FAST GROWING HEDGES.

In prairie regions, where fencing is difficult to obtain, or in cases when the poor settler has more muscle than money, we see no reason why he may not enclose and subdivide his farm, even on the dryest land, by making a turf and ditch fence, and immediately setting in a hedge of quick growing trees. The Lombardy poplar for instance, would grow to be a good fence in three years, and the dry sod fence even, if well and early put up, before the grass starts too much in the spring, would last that length of time. On the other side of such a

ditch may be set at the owner's leisure some slower growing and more durable hedge plant, which can be brought to perfection in after years, by the time the poplars get old. Although we see no reason why the poplar hedge would not last forever, by being cut off occasionally, so as to sprout out again.

Such a fence can certainly be made very cheap, when the poplar cuts can be obtained, and for these, one can afford to go some ways, as they can draw enough of the twigs for a world of fence, at a single load; and ever after the first year, they can cut all they need at home. It is not only a cheap but a handsome fence. A farm thus fenced, in the midst of the large prairies, would after a couple of years present a figure of great beauty and attraction. Furthermore it would afford great shelter from the wintry winds, and in a few years an ample supply of wood—not maple to be sure, but when cut, split, and seasoned under shelter, very good and acceptable to a prairie farmer who has to buy mean burr oak at a great price, and perchance go a long way after it. Those who prefer it may plant the locust instead of the poplar, it will take a couple of years longer for it to grow to be a fence, but it will be likely to be more durable and valuable in the end.

POPLAR AND LOCUST HAVE THEIR OBJECTIONS LIKE EVERYTHING ELSE.

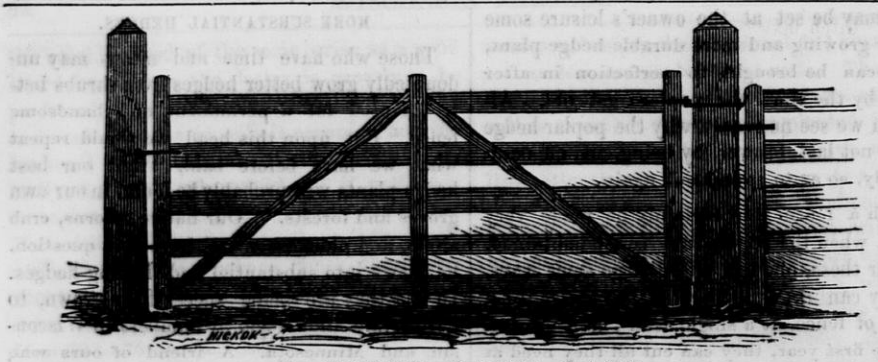
We know that many will object to both the poplar and locust, on account of their propensity to succor up and spread; but such people will recollect that we do not claim that they are devoid of all objections, but simply that their advantages are much greater upon naked, timberless prairies, when used as we have recommended, than the objections that can be urged against them. In fact we have no fears of them upon our own farm, even whlie poor timber can be had instead of them, at an endurable price. Almost any tree looks better than none to us, upon the naked prairies. We think that those who object to these secondary trees intoto, because they do not quite suit them, are much like certain *high toned* theorists, who will not act with any political party because they do not quite come up to their ideal standard of perfection. What we are aiming at in these suggestions, is some cheap and quick fence, within the reach of both the remote from timber, and poor—not only for fence but fuel eventually.

MORE SUBSTANTIAL HEDGES.

Those who have time and means may undoubtedly grow better hedges from shrubs better adapted for a permanent and handsome fence. But upon this head we would repeat what we have before said, "that our best hedge plants will probably be found in our own groves and forests." Our native thorns, crab apple, and plum trees can, beyond a question, be grown into substantial and lasting hedges. In fact they are being successfully grown, to our certain knowledge, by numbers in Wisconsin and Minnesota. A friend of ours who planted both the crab apple and plum in the spring of 1856, informs us that they have grown decidedly well, especially the crab apple. (The plum has few fibrous roots and is much more difficult to transplant successfully, although it can be done, with care.) He simply plowed a furrow and placed the small apple trees in it, in layers, nearly horizontal, with the top above soil. They sprouted up thick and vigorous. He has full faith in their speedy growth to a good hedge.

Great quantities of the plum and crab apple trees can be found in almost every prairie grove and thicket in the State, of the right sizes for planting. We would advise the experimental to look up the shrubs the coming spring, and try fifty or a hundred rods of it more or less. We doubt not but the success that would be met with, would bring the matter into immediate favor. We propose trying it ourselves.

We shall use the plum in preference to the crab, as far as possible, as its fruit within five years, will vastly more than pay the expense of cultivation. Such a hedge will make not only a splendid border around an orchard, but a safe bulwark against all intruders. In planting, we shall top them down pretty smartly to begin with, in order to make them grow low and thick at bottom. We repeat, in conclusion upon this subject, that we hope the experimental will set themselves about discovering and introducing to successful culture our own native hedge plants. Those who succeed in demonstrating this subject wisely and well to our people, will be entitled to more credit than all the politicians in the State. Wisconsin must have *live fences*, as well as *alive farmers*, to make her a first class Agricultural State. And that she will yet have the former, and become the latter, we have no doubt.



A MODEL FARM GATE.

Next to good fences, good gates come in as very important appendages; and no farm is at all fitted without them, in every important passage way. Gates of any kind, however, are not very common yet upon our western farms, and when we do meet with them it is rarer still to find them made with much taste or judgment. Inferring from this fact that probably but few farmers or carpenters even, know how to plan or make a good gate, we have gone to some trouble and expense to mark one out according to our notions, and have it engraved. It is a subject on which we have studied considerable, and we doubt if our plan can be much improved, except by some one who has given the subject exceedingly close attention.

Its main features are as follows: Length 11 feet; pretty wide, in view of driving through with reapers and other similar matters. A wide gateway is much less likely to have its parts injured by careless driving. Hight when hung—4 feet 6 inches—made with five strips, inch thick, and 5 inches wide, placed as follows—the first 4½ inches from ground when gate is hung, first space 4½, second space 5½, third space 7, and fourth space 8½ inches.—The stiles are 3½ inches square, and the braces 3½ by 2½ inches; and the strips are morticed through them all; the strips of pine and the standards and braces of tough hard wood.

To be made easy, it should be done by machinery, but in the absence of it, perhaps it may be easier for most to make the braces of two pieces of thinner stuff, locked on instead of morticing through. Either locked on or morticed through, and properly riveted, they will be found exceedingly stiff and strengthening; the dots seen at the joints, indicate rivets going through with heads upon both sides. They can be got at a small cost at most good hardware stores, and are easily put in by any sort of a workman, with a cold chisel, and will be found to add great strength and durability; clenched wrought nails will do, but are not one-half as good. The hinges are of wrought iron, of the hook and eye kind, with nuts and screws upon them, except the lower hook that goes into the post, which needs nothing to hold it. The eyes that go into the gate, it will be noticed, are put in with the nut so as to draw and hold the upper and lower strips like a joint bolt, adding great strength. The upper hook in the post, has nuts outside and in, on the post, with which the gate can be adjusted to a nicety, as it sags; a very important feature, for one costing so little.

The latch that we prefer consists of two iron pins of about 5-8 inch round iron, driven fast into the stile, and reaching out a couple of inches to catch like the common latch. The eye-hole in the upper hinge is made a little oblong, so as to admit the latches of the gate to raise slightly over the catch. They open and shut very easily, and being two of them firmly fixed, they hold the gate much more substantially than a common latch. Those who prefer it, however, can use a common latch; but we think the permanent pins decidedly preferable. It might perhaps be as well to drop the lower pin to the lower, instead of the second strip of the gate, as it would hold the bottom more substantially.

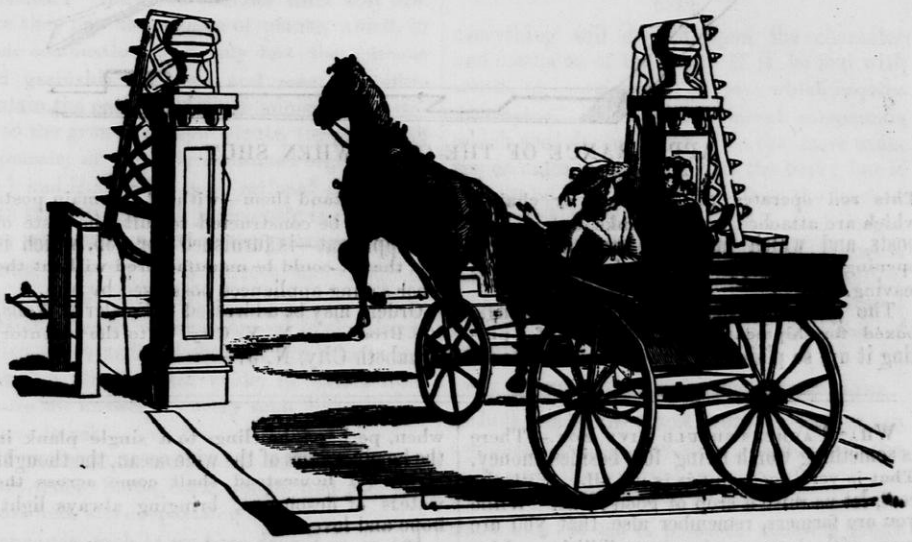
An additional post will be noticed to which the fence is secured at the hinge end of the gate; its purpose is to leave the gate post independent of the expansion and contraction of the fence boards, which in the change of weather is considerable, and thereby constantly changing the hang of the gate. It is an indispensable feature in a well hung gate. A pin goes through this sub-post loosely, and

fast into the main post, leaving the sub-post to play back and forward upon it, but stiffening it sideways. The said pin, and also the hinges and latch pins, are so engraved as to show in the plan.

The main posts, especially the hinge post, should be set firmly in the ground, about three feet deep, and packed solidly around with coble stone and leached ashes. They should also be charred or coated with coal or gas tar, before being set. These precautions will double their durability at least. Upon level ground this gate will swing either way, which will often be found convenient, and the bottom eye to the hinge should be at least an inch longer from the stile than the upper one, so as to elevate the other end of the gate, as it opens either way, thus clearing it in all cases from the ground as it swings, and withal causing it to incline to shut when left loose. It should be furnished with a post on each side to which to latch it open a little more than parallel with the line of the alley, or street; and the whole of course should be painted some good substantial color, brown, chocolate, or white, as fancy may dictate.

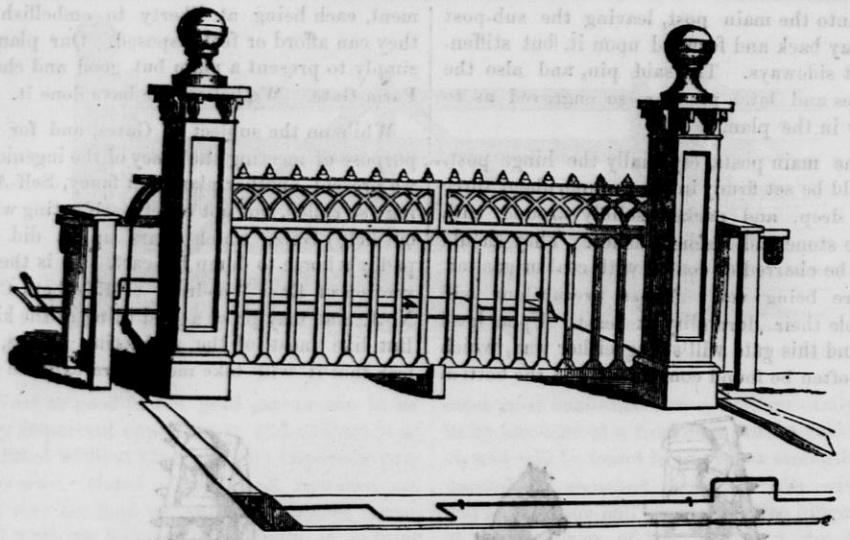
We could say much more that we deem pertinent to the subject, but space forbids. All in all, we think the style for durability and goodness will be hard to beat, while at the same time nothing is expended for mere ornament, each being at liberty to embellish as they can afford or feel disposed. Our plan is simply to present a plain but good and cheap Farm Gate. We believe we have done it.

While on the subject of Gates, and for the purpose of meeting the fancy of the ingenious, we present another plan of a fancy, Self-Acting (so called, but not exactly self-acting without help) Gate, which rears up, as did the paddy's horse to dump his cart. It is the invention of Enos Woodruff, of Elizabeth City, N. J., and may prove a good thing of the kind. But like most of the self-acting things, we fear that it will take more extra expense and trouble to make it and keep it in good *never-failing* working order, than it will save; however, we will not pre-judge, as too many are apt to, what they do not understand. It certainly makes a pretty picture, and for aught we know may make a good and convenient thing. It is described as follows:



WOODRUFF'S SELF-ACTING VERTICAL GATE—OPEN.

This gate does not swing horizontally, but is composed of two separate parts, one being attached to each post by two hinges operating vertically. It is so jointed as to close up something after the manner of a lady's fan, yet in a very firm and substantial manner. As each half of the gate is but four or five feet long, it can easily be made strong and durable. It is balanced upon its hinges by counter weights beyond the posts, and is operated by the whools of a carriage, or runners of a sleigh, which move the rod over which it passes.—



APPEARANCE OF THE GATE WHEN SHUT.

This rod operates the side-bars or chains, which are attached to the cranks outside the posts, and which move the gate as desired, opening it on approach, and closing it on leaving.

The gate represented in the engravings, boxed for shipment, with directions for putting it up, so plain that any ordinary mechanic can understand them—without the main posts which can be constructed to suit the taste of the applicant—is furnished for $35, which is less than it could be manufactured without the labor-saving appliances possessed by him.

Orders may be addressed to Fowler & Wells, 308 Broadway, N. Y. City, or to the inventor, Elizabeth City, N. J.

What Farmers should Live For.—There is something worth living for besides money. That is very good, but it is not all. With the rest, let us raise a crop of good ideas. While you are farmers, remember also that you are men, with duties and responsibilities. Live down the old brutal notion that a farmer must be uncouth, uneducated and unthinking—a mere ploddrapps. You are brought into immediate contact with the great heart of civilization. You cannot get out of the reach of the buzz of the toiling world. The thrill of the wonder-working wires, and the rumble of the locomotive, (the thunder tread of nations,) come to your once secluded hill-side. Move toward a better lile. Do not keep your boys corn shelling all the long winter evenings.—Make your farms a place that your sons and daughters cannot help loving. Cultivate the trees—they are God's messengers.

Care much for books and pictures. Don't keep a solemn parlor into which you go but once a month with the parson, or the gossips of the sewing society. Hang around your walls pictures which shall tell stories of mercy, hope, courage, faith and charity. Make your living room the largest and most cheerful in the house. Let the place be such that when your boy has gone to distant lands, or even when, perhaps, he clings to a single plank in the lonely waters of the wide ocean, the thought of the old homestead shall come across the waters of desolation, bringing always light, hope and love.

Have no dungeons about your house—no rooms you never open—no blinds that are always shut. Don't teach your daughters French before they can weed a flower-bed or cling to a side-saddle; and, daughters, do not be ashamed of the trowel or the pruning-knife; bring to your doors the richest flowers from the woods; cultivate the friendship of birds—study botany, learn to love nature, and seek a higher cultivation than schools can give you.—*D. G. Mitchell.*

A Mountain of Salt.—The St. Louis Democrat records the discovery of a mass of salt in that State, and says:

"The specimen before us resembles a piece of quartz rock, and is a little mixed with a substance resembling iron ore. It has a pure, sweet taste, and when ground te powder is as white as any of the table salt now in general use. If we are not misinformed, this hill of salt will prove an immense speculation to its owners, and will cheapen the price of the article very materially in this city."

Domestic Manures—Part 7.

"*Soap-suds and ashes!* what are they good for as manure?" Worth a good deal more, incredulous friend, than the practice of most farmers would indicate,—worth so much, that, had you prepared a proper reservoir for the drainings from your kitchen sink, the waste water from the wash-house, and scattered the contents of your ash-heap—which, by gradual accumulation has been growing, since the time, you can't remember when—upon your garden and fields, your crops these several years past would have been both better and greatly more abundant.

Ashes? Why, ask yourself what they are. Are they not the residue of plants, which, in their combustion have only lost the gaseous and gasifiable elements, and must therefore contain the entire variety of minerals necessary to the growth of new plants, together with a quantity of partially consumed organic matter? and if so, what more rational conclusion than that, if applied judiciously to the soil, they will serve as food to the growing crop?

But, in order to a correct knowledge of what the elements are, and the relative proportion of each, we must appeal to chemistry, which ever stands ready with its retorts and crucibles, alkalies and acids, to extort from nature the answer to every such question we choose to ask.

If you were to analyze an entire oak tree, roots, trunk, limbs, bark, juices, and all, you would find, after separating out all the organic compounds, such as we have described in the article on the Plant, or rather by decomposing all these, a large class of mineral constituents, denominated *in*organic, such as potash, lime, soda, magesia, silica, iron, &c., &c. And now, if the *ashes* of the oak be examined, they will be found to consist of these elements, in about the following proportions, viz:

Potash	8.43	per cent.
Soda	5.43	"
Common Salt	0 02	"
Lime	74.78	"
Sulphate Lime	1.98	"
Magnesia	4.49	"
Oxide of Iron	0.67	"
Phosphoric Acid	3.46	"
Silicia	0.78	"

Other plants contain, with slight variation, the same elements, though in different proportions; and this is also true of all plant-bearing soils, and unfolds to the mind of the uninitiated, at a glance, the whole philosophy of manuring. For, if one plant contain more of a certain element or class of elements than another, then, of course its healthy and successful growth will demand that these elements be present in the soil in larger proportions; and if a given quantity be assumed for a given soil, then such elements will be more rapidly exhausted than others, and require more frequent and more liberal restoration.

From the above table, it will be observed that lime, potash and soda predominate, and the caustic and alkaline character of wood-ashes so familiar to every one, ought to be as naturally suggestive of the value of ashes as a means of enriching the soil.

AS TO THE FORM IN WHICH ASHES SHOULD BE USED,

everything will depend upon the character and condition of the soil. If it be foul with weeds, or contain roots of grass which require destroying, or contain mineral compounds which need decomposing, then the more caustic, or unleached condition is the best; but if the soil be quite clean and mellow, the leached ashes are the best, although a much larger quantity will be required, if the elements sought to be added are the soluble alkalies, potash and soda—since these are separated out to a considerable extent in the process of leaching.

THE CROPS WHICH ARE IMPROVED BY ASHES,

include almost the whole range of such as are commonly grown; but those which derive the most marked advantage are such, of course, as contain a large per cent. of alkalies. And inasmuch as the ash of *potatoes* contains about fifty per cent. of potash and a considerable quantity of soda, we might expect that crop to be largely improved by their application in all cases where there is already a deficiency in the soil. We have known the crop increased thirty-three per cent. by the application of one or two gills to each hill, immediately after planting. And since ene ton of potatoes contains but about twelve pounds of potash, it must be very evident that the additional one hundred bushels, making three, where only two hundred were grown before, would forty times pay the expense.

But *corn* also, *wheat*, and the *grasses* require a large proportion of potash, and may be improved by the application of ashes,—Fruit-trees are likewise often benefitted.

THE MODE OF APPLICATION

should vary according as the ashes are leached or unleached. The former may be used more

carelessly, where the plant would be endangered by the free use and direct application of the latter.

To grass lands they may be applied, in the leached state—and very sparsely in the unleached—as a top-dressing; for the benefit of wheat and other grains, by sowing unleached upon the plowed ground, and harrowing in with the seed; for corn and potatoes by applying directly on the hill, either immediately after planting, or by sprinkling on the young plant wet with dew; and to fruit-trees, in mixture with lime about the roots—care being taken that their action be not so caustic as to injure the bark.

It is the habit with some who appreciate the importance of the potash and soda contained in ashes, to mix the latter with barnyard manure in the compost heap. This should never be done, as the alkalies of the ash will combine with the acids in union with ammonia, and thus liberate the latter in gaseous form, to the great loss in value of the manure.

THE THEORY OF THE USES OF ASHES IS FOURFOLD.

1. *They supply necessary food to the plant.* This point has been sufficiently elaborated already.

2. *They prepare food* other than that which they furnish themselves, by *decomposing* a variety of mineral and organic compounds, otherwise unavailable; and by combining with numerous organic and inorganic acids, incapable of entering the plant in the separate state. Among the organic are *humic* and *geic*, while *silica*—common sand—is a notable instance of the inorganic. The organic acids are present in proportion to the amount of vegetable matter in the soil; so that we may reasonably expect greater benefit from the application of ashes to such soils as abound therein; while it is only in combination with potash—as silicate of potassa—that the essential silica can enter at all.

3. The alkalies contained in ashes appear to have the power, like yeast, of acting by *presence* upon various organic substances; thus bringing them into a condition for absorption and assimilation by the the plant.

4. Owing to their affinity for nitric acid, potash and soda, they become mediate sources of all-important nitrogen.

Each of these propositions is susceptible of elaboration and proof, but our space will not allow. And we shall be satisfied if any of our readers who have been in the habit of either throwing away their ashes, or trading them off at four-pence a bushel, for worthless trinkets and worse tea and coffee, may be induced to repent, and practice a better economy.

H.

FIBER OF SORGHO CANE.—We have received from P. O. Reilly, of Providence, R. I., a sample of bleached fiber obtained from the Sorgho cane. It is strong and tough, and capable of being employed for making paper or coarse textile fabrics. It was produced by first steeping the cane, like flax, in water for about six days to rot it; then it was boiled in a keir among a caustic lye of five degrees strength (Beaume) for half an hour, but allowed to steep in the same liquor maintained at 80° Fah. for twelve hours longer. After this, it was taken out and washed, then steeped in warm liquor of chloride of lime for ten hours; then washed again, and finally treated with a liquor of Rothes' anti-chlorine, after which it was dried in the sun. From one hundred pounds of the cane thus treated, sixty-two pounds of fiber were secured. As this process for obtaining fiber from the Sorgho cane appears to be as cheap as that which straw undergoes to form it into pulp, this fiber may be a good substitute for that of straw, and we think a stronger wrapping paper may be made from it. It is, at least, worth a trial for this purpose.—*Sci. American.*

AGRICULTURAL DISCOVERY.—A Paris letter writer states that a scientific gentleman discovered two years ago, imbedded with some embalmed bodies, a species of wheat not then in existence. In the time of the early Gallic kings a certain quantity of wheat was placed in the coffins of embalmed bodies. Some of it was sown, and it yielded from sixteen to twenty stalks to a grain, while there was on an average twenty more grains in the head than in the ordinary wheat. A considerable quantity of this ancient wheat was sown on the government farm last fall. Great reports are received of its productiveness. The ordinary wheat of France is believed to be only a degeneration of this ancient grain, deteriorated by centuries of reproduction. This discovery takes France back fourteen centuries for seed wheat, and it is expected will put her in possession of one-eighth more agricultural wealth than she possessed before the discovery.—*Boston Journal.*

THE culture of tea in South Carolina has proved a failure. It grows well enough, but wages are too high in this country. It is profitable in China, but a fellow is hired there for a dollar a month, and boards himself.

Correspondence of the Farmer.

Chinese Sugar Cane.

MESSRS. EDITORS :—In the February number of the *Farmer*, on the 43d page, your correspondent, S. E. Chapman, Esq., uses these words, in speaking of the Sorghum Sucre, or Chinese Sugar Cane.

"I do not hear of any ripe seed being raised in our county except my own, which every man can raise as easy as he can raise ripe 8 rowed Yankee corn. To do this, plant your corn in hills, four feet distant, on highly manured warm land ; tend it well, let not more than four stalks stand in a hill ; keep off all the suckers during the season, and I will warrant you ripe seed. That which you raise for seed will not produce syrup or sugar, for as soon as the seed ripens, it looses its sweetness and juice, and becomes dry like the inside of a corn stalk."

The writer then tells us that he has about 10 pounds of seed, and he intends to plant four acres next spring, and to distribute the balance, gratuitously, among his neighbors.

What I desire is to call the attention of your readers to the errors in this communication, and if I shall prevent Mr. Chapman or any of his neighbors from wasting their land by planting the seed which ripened on stalks which lost its sweetness or juice, and became dry like the inside of a corn stalk, I shall do all I can expect.

The cane cannot be ripened as easily as 8 rowed Yankee corn, but it can be ripened in Dane county; neither is it true that cane which produces ripe seed looses its sweetness, and becomes dry and pithy like corn stalks.—There were circulated from your office, a few packages last spring, and also sold by some of the seedmen, a variety of Sorghum, commonly called "coffee corn," which answers all these conditions, but which is totally destitute of sugar. The seed of the two varieties may be as easily known apart, as either of them may be known from broom corn, which is but another variety of the same class of plants. The true sugar cane seed is shorter than broom corn seed, and plumper. The base, or stem end of the seed is of a bright shiny brown, almost black color, while the chit end is almost white, and covers nearly one-third of the entire seed, and gives you the idea of an eye,—while the coffee corn seed is darker and duller in color, and the eye is of a brown color, and not more than one-third as large as the white eye of the sugar cane, and grows in a much more compact head than sugar cane.

Last spring I planted in my garden in this city three rows about forty feet in length, with seed raised the year before by Hon. H. A. Tenney, at his place. The rows were four feet apart, and I put two seeds a foot apart in the rows. Nearly every seed came up, and where there were vacancies they were filled by transplanting ; and but one plant finally allowed to stand in a place. The planting was done before the last frosts, and about ten days before I planted on the same square, the large eared sweet corn. The cane came up some five days before the corn, but did not ripen any of its seed until about three weeks after the corn was fit to pick for use. From this I infer that if you would ripen the seed of sugar cane, you must plant by or before the first of May, and then the seed will ripen by the first of October, in Wisconsin, not much before.

I cut off my seed heads a few days after the State Fair, and after letting it remain on the heads in a dry room in the house about a fortnight, combed it off, and have about twelve quarts, weighing 17 pounds, of fair seed, leaving the main stalks still standing in the garden for several days longer, and till the first severe frosts commenced. I cut up the stalks and laid them in my barn, where they remained until about the tenth of November, at which time I let Deacon Daniel Gorum of this town take them for grinding.

They had not yet become dry, nor did they show any disposition to become pithy, although they did not probably yield as much juice as they would have done had they been cut and ground at an earlier day. He obtained from about two-thirds of the stalks I raised as much as five quarts of thick, clear, golden syrup, and gave me near a quart. I boiled away a half pint of mine to a candy, but on letting some of it remain in the plate where it had been placed, two days, I discovered that it had grained, and the syrup has deposited granulated sugar in the bottom of the bottle in which it is kept. The syrup is fine flavored, but has a slight vegetable, acid taste. This acid is all that prevents it from granulating as sugar.—The acid must be removed, and probably can be, in the same manner that the acid is taken out of sugar beets, and the true sugar cane, with a preparation of lime. Yours, &c.,

J. G. KNAPP.

MADISON, Jan. 25, 1858.

Business Hints for March.

Now that the "winter of our discontent," is almost over—past, and

"March, various, fierce and wild, with wind-cracked cheeks,"

has come to link the seasons so diverse, and prepare the earth again for Spring, it behooves the farmer to cast about for the best methods of adapting accumulated forces to the demands of this capricious month.

By those who have properly employed the winter months in arranging their plans and preparing their implements, our hints will not be required; but observation has taught us, that the really systematic farmer—the farmer who takes time by the fore-lock, and is always a little ahead of the season, is the exception; yet even this class of farmers will not feel it amiss that we "stir up their pure minds by way of remembrance."

The repairing of Implements and Tools.—This duty should have been attended to thoroughly during the winter months, but if not, then, let it be done now, while the blustering, stormy days likely to characterize the March of this year, interrupt the out-door work. See that everything is in prime order, so that, after the business of the field shall have commenced, you will not be found standing still in the furrow, praying the crank of the seasons to turned the other way! This is the time also, when purchase of tools and implements should be made, if there be need of new ones. Any new improvements designed for the spring and summer campaign will be ready, and should be bought, if you believe, on thorough examination, that they will be more economical than the old ones. We hope none of our readers belong to the old, blue-stocking, pod-auger class, who always reject everything which was not proved by their grand-fathers.

Fences, Gates, &c.—Be determined that you will not oblige yourself to stay away from church every other Sunday, this year, in order to watch the wheat-field, or to stop the plow in the furrow and with bull-dog and boys, chase hungry cattle and long-snouted swine, when the tall weeds are choking the corn.—Prepare the materials for good, safe and substantial fences, so that when the ground will admit, the old may be righted up and renewed; nor forget that gates are much cheaper than *bars*.

Hauling out Manure.—If hitherto neglected, do it at once, so that by proper scattering just before plowing, it may be ready for the improvement of this year's crop. Crops need food just as much as babies!

STOCK.

Animals for Work.—Remember, that food is just as essential to the horse or the ox, as fuel to the locomotive, and for exactly the same reasons. Let your working animals be in good working condition. Fortunately, (for the brute,) this year, both hay and grain are cheap, and there will be no palliation for your embarassment if flocks of crows come *cawing* about, as you drive through the fields.

Milch Cows.—If stinted in the spring, the milk-pail will tell the tale in June or July.

Young Stock.—Calves aud colts should not be turned off to *pick* their living, the moment it is supposed they have escaped the jaws of winter-starvation. Feed them generously, and they will repay you with a more rapid and healthy summer growth.

Seeds for the Garden and Field.—Now is the time to attend to the securing and preparation of seeds. Be careful that you select the *very best* of your own, if they were well matured and preserved; otherwise spare neither pains nor expense in order to have a reliable article. *Poor seed is the worst feature of poor farming.*

Plows and Teams.—Prepare for deep plowing and more thorough working. If stronger teams and plows are requisite, have them ready so as to begin the work the moment the ground is ready.

WORK ABOUT HOME.

A thousand things about the house, the garden and orchard must be done this month. Let them have prompt attention.

The Cellar should be thoroughly cleansed by removing all decaying vegetables, which, if left to decompose, will inevitably affect the health of the family.

The Garden.—Don't allow your business to become so *jumbled up* that you will have no time to prepare the garden soil at the right time—when neither too wet nor too dry. Try deep trenching, thorough manuring, and, if possible, under-draining. We say *try* them, and then charge us with the cost, if the results are not satisfactory.

The Orchard.—Pruning should be done before the sap begins to circulate freely. Fruit-trees cannot be thrifty and healthy unless thinned out by liberal *trimming*. Don't use the pruning-knife and saw too sparingly; if

the apples and plums should not be so numerous this year, they will be very much *better*, and next year, more abundant also. *Slips for grafting* should not be longer neglected; put up in little bundles, lay away in cellar and keep moist, until required.

The transplanting of Fruit and Shade-trees should be provided for before the hurrying time comes on, and the temptation comes with it, to postpone all such "unnecessary improvements" until the next year. Next year may never come, and if you make no provisions for posterity, by preparing to bless them with cooling shades and luscious fruit, how can you expect your children to plant around your final resting place, the rose and arbor vitæ.

H.

INDIAN CORN.—Maize or Indian Corn, originated in America, and is not yet, we think, cultivated to any extent on the European continent. Though the people of Great Britain cannot be made to appreciate its merits very fully, the aggregate exports of corn in 1856, in the form of whole grain, meal, corn starch, farina, &c., amounted to between seven and eight millions dollars, or about one-fortieth of the whole exports of the country, and 6,700,000 bushels, considerably more than half, went to England alone.

Corn has always been an important article in this country, both of consumption and export. The total amount of this produce exported in 1770 was 578,349 bushels; in 1791, 2,064,936 bushels, of which 351,695 were Indian meal. The value of corn and its manufacteres exported from the United States in 1830, was $597,119; in 1835, $1,217,665; in 1840, $1,043,516; in 1845, $1,053,293; in 1850, $4,652,804. The export increases more rapidly than the production. The export of corn quadrupled between 1840 and 1850, while the production did not quite double.

The great amount of invention bestowed on corn planters, corn cutters, shellers, cob grinders, etc., tends each year to increase the amount of production. It has been estimated that, as a general rule, seven pounds of corn will produce one pound of pork; so that in localities where through distance from market or from transportation facilities, the cereal cannot be raised at a profit for sale, it is frequently the material used in fattening the more concentrated form of diet, and on which, consequently, the freight is less. Cob meal, we believe, is most valuable for animals that chew the cud; horses and hogs, as a general thing, deriving less benefit from the cob-grinding inventions. With all animals, however, we believe, there is a perceptible advantage realized by mixing the cob with the denser meal.—*Sci. American.*

STOCK REGISTER.

Lord Spencer's Rules for the Selection of Male Animals for Breeding.

Our farmers have as yet only begun to bestow deserved attentio upon the matter of the improvement of stock. It is just as easy and cheap having good stock, if we regard the physiological laws of the animal, as to have the inferior grades so common in our State. The following hints are worthy of consideration.

The first thing to be considered in the selection of a male animal are the indications by which it may be possible to form a judgment as to his constitution. In all animals a wide chest indicates strength of constitution, and there can be no doubt that this is the point of shape to which it is most material for any breeder to look in the selection either of a bull or a ram. In order to ascertain that the chest of these animals is wide, it is not sufficient to observe that they have wide bosoms; but the width which is perceived by looking at them in the front should be continued along the brisket, which ought to show great fullness in the part which is just under the elbows; it is also necessary that they should be what is called *thick* through the heart. Another indication of a good constitution is, that a male animal should have a masculine appearance; with this view a certain degree of coarseness is by no means objectionable, but this coarseness should not be such as would be likely to show itself in a castrated animal, because it thus might happen that the oxen or wethers produced from such a sire would be coarse also, which in them would be a fault. Another point to be attended to, not merely as an indication of a good constitution, but as a merit in itself, is, that an animal in itself should exhibit great muscular power, or rather that his muscles should be large. This is an usual accompaniment of strength of constitution; but it also shows that there will be a good proportionate mixture of lean and fat in the meat produced from the animal, the muscles being that part which in meat is lean. A thick neck is, in both bulls and rams, a proof of the muscles being large; and there can hardly be a greater fault in the shape of a male animal of either sort, than his having a thin neck. I am inclined to say, that in the new Leicester breed of sheep, which is the breed to which I am accustomed, a ram's neck cannot be too thick. Other indications of muscle are more difficult to observe in sheep than in cattle. In a bull there ought to be a full muscle on each side of the back bone, just behind the top of the shoulder blades; he ought also to have the muscles on the outside of the thigh full, and extending down nearly to the hoof. It will seldom happen that a bull having these indications will be found deficient in muscle.

As I am writing for the use of farmers, it is

quite unnecessary for me to attempt to give a description of what is considered a well-shaped bull or ram; it is also obviously impossible to express in words what is meant by good handling; it is sufficient to say, therefore, that no small animal is fit to be used at all as a sire whose handling is not good, and that the more perfect his shape is, the better.—*Farmer's Her.*

Correspondence of the Farmer.

Black-Leg and Murrain.

MESSRS. EDITORS:—I believe that these diseases originate from the same cause, viz: a disordered condition of the stomach, which sooner or later terminates in inflammation of some part of the body. The disease sometimes attacks a particular organ, as the heart, lungs, liver, or spleen, and sometimes the whole body appears to be attacked at once, the blood stagnating so immediately as to show dark spots all over the surface.

After losing some 20 head of cattle by this fell destroyer—five on one occasion, within 24 hours—I concluded to test the efficacy of salt and ashes; and accordingly made a trough several feet in length, and placed in my stock-yard, with a quantity of the proposed remedy contained. The result is, I have had but two cases during the twelve past years. Salt and ashes are a valuable preventive, I therefore conclude, and recommend to others the course pursued by me.

The measures proposed are also preventive of cholic and worms, and gently stimulate the glands, thereby aiding in the elimination of the worn-out materials of the body, and is in every respect unobjectionable. Let farmers try it. MARCELLUS FINCH.

FORT ATKINSON, Jan. 28, 1858.

Correspondence of the Farmer.

Black-Leg.

MESSRS. EDITORS:—This disease attacks the animal during the summer, and if not arrested immediately, proves fatal in almost every instance. The animal refrains from eating, the eye becomes dim, the legs rigid, a difficulty in breathing, and stands drawn up as though it had the cholic. On opening the skin the flesh is dark or black.

Remedy.—Open the fore leg from three to five inches, cutting to the bone, on the arm or above the knee, and put in equal quantities in bulk of black pepper (ground) and fine salt, and bind up the cut. I have never known this remedy to fail. Yours, &c. J. C. B.

FOND DU LAC, Feb. 1, 1858.

HORTICULTURAL.

Correspondence of the Farmer.

Nine Varieties of Evergreens adapted to the North-West.

MESSRS. EDITORS:—In compliance with your request, to be furnished an article and list of hardy evergreens, adapted to this cold, windy, but pleasant country, I now improve the opportunity to add my mite to that branch of tree-culture, which has been quite too much forgotten, especially on the prairies, where the beautiful and the useful may so easily be united. I send you a list of such as have proved themselves worthy of cultivation with us, prefacing it with some of the reasons why they have been so long neglected, and the cause of so general failure in evergreen planting.

"One man plants with the greatest success; every thing grows which he puts into the ground," is the proverb of his neighbors, as though he had some charm, which chanted the requiem of "good time coming," to all that he does. But many others have no "luck" and think there is no use in setting evergreens, alleging that "they almost always die." But I believe that when this is the case, the circumstance is, generally, attributable to a lack of knowledge in the planter, of those laws which rule to a perfect success in vegetable physiology, some of which, when violated, are as fatal to the plant, as the laws which govern perfect health in man.

For my part, I had rather transplant an evergreen of any of the hereafter named varieties, when properly grown for transplanting, than any tree or shrub in the catalogue of nursery products. And here let me premise that no evergreen is fit for sale to the ordinary planter, until it has been several times removed in its native *habitat.*

Another reason of so much complaint in buying and planting evergreens, is found in the fact that many, especially in our towns and cities, procure their supply from the wagons, brought from the pineries of our own and neighboring States. The trees are taken up by unskillful hands, packed away in an open box, jolted over the roughest of roads, in the dry scorching winds, receiving every now and then a good soaking of cold spring water, (to keep them fresh,) cold enough to take the life of man or beast, applied in that way, not to mention the more delicate nature of a young plant. The consequence is, they receive such

a shock while being transferred to their new home, that but few of them ever survive, and even these are so stunted and dwarfed in their growth, that their appearance is anything but prepossessing, and evergreen planting is forthwith pronounced a failure.

Forest evergreens are seldom made to grow of much size, when removed; even when taken up with much care, 2 to 6 inches high, scarcely more than one-half will survive. The most valuable evergreens, that is, those which prove the hardiest, thriftiest, and most successful, are those grown from the seed, transplanted three or four times, and when they are two or three feet high, they are removed to the door-yard, lawns, or road side, they will scarcely fail to grow, even with ordinary treatment.

I would net discourage the planting of our native trees. No, far from it. "Far brought and dear bought," I know is the rule, but let us expand our own resources first, bring our modest natives into the field, and give them reasons to think that their qualities are appreciated, and I trust that for general purposes we will find a list of natives sufficient to protect us from the wind and cold of our prairies, without seeking shelter under the cloak of foreign protectives.

But, for the list; which I shall introduce by giving first those that may be most desirable as a screen or wind breaker. Fortunately for us, we have some, productions of our own State, which answer well—none better across the water.

No. 1. Red Cedar, (*Juniperus virginiana.*) —Is a native of nearly all the Northern States, seeming to seek us from choice. Adapts itself to almost any locality, though naturally found along roadsides, old pastures, and rocky hills, still none of like habits will be more grateful or render remuneration sooner, than the Red Cedar, when given a good soil, and high cultivation, thereby improving in body, forming itself into a thick, massy clump, almost impenetrable; indeed, it can be made quite so, by the moderate use of the shears.—It is easily trained as taste or fancy may dictate, by the same means. Those who have traveled in Southern Ohio, could not help but notice the taste with which they are there grown. I once saw, near Louisville, Ky., a few specimen trees, with more oddity than real beauty marking them, 'tis true, but proving this point, viz: adaptability of the plant to the soils. One was perfectly square, another round, a third pyramidal, and a fourth as nearly the shape of a great egg as anything could be made, except an egg itself. It is handsome as a single tree, planted in a clump, or in a long row its better is not produced. Its fast growth, easy management, and almost certainty of living when moved, render it very desirable. For a hedge or screen, plant about two feet apart, clip the ends on either side, and in a short time you may have a screen as thick as desirable. Color dark green, though it often sports into various shades of "loveliest green to that of almost blackishness." Can be grown to 20 feet in hight, but for the yard 5 to 7 should be its limits.

No. 2. Arbor Vitae, (*Thuja occidentalis.*) —Is also a native of the north, perfectly hardy, and though it is more desirable as a screen than otherwise, it is very useful as a single tree. A rapid grower, and though not as impenetrable as No. 1, it makes a superb hedge. It is easily removed from a distance, and bears hardships well. Does not hold its color perfectly in winter, as the wind and sun are liable to brown it somewhat towards spring. It will prove an evergreen of much beauty, even when left to itself, but a little shearing improves it very much. Color light green, foliage flat, easily propagated from the seed or layers. There are many varieties of Arbor Vitae, but the American is the only one that will stand our winters. The Chinese is handsomer, being a brighter green and finer foliage, but must be protected.

No. 3. Norway Spruce, (*Abies excelsa.*)—Though not a native of this country, appears perfectly at home on our soil, and is the next in order, answering the purpose well as a "protector," or to plant alone; its wide-spreading, drooping branches, and towering, spiral form, make it a very prominent object, and usually the admiration of its beholders. It delights in a dry, elevated and rich soil; an occasional feeding of well-rotted chip manure is best, spaded in, and scattered over the surface about the tree. Many, when they plant this, as well as others of like habits, trim them up several feet from the ground. This is very objectionable; it spoils half their beauty. Let the branches spread out, and even lie on the ground, forming a beautiful geometrical figure from the base to the apex. Thrifty and perfectly hardy. For shelter from winds, plant two rows eight feet distant, alternating.

No. 4. Hemlock Spruce, (*Abeis Canaden-*

sis.)—Is of such slow growth for some time after planting, that its beauty has been almost forgotten. Who that has seen a well-grown specimen, drooping in perfect gracefulness, the sun dazzling through the dew drops as they fall from every leaf, making it in point of beauty, but a "little lower than—" No. 3, which preceeds it, did not admire it? It is the queen of low evergreens, graceful in every respect, and were it not so difficult to move, and of such slow growth, would be found much more frequently than it now is. Bears trimming well, and makes a fine border to walks.

No. 5. Balsam Fir, (*Abies balsamea.*)—In growth resembles the Norway Spruce; its color is much darker, and retains it perfectly the whole season, the former, when young, occasionally being browned by our spring winds. It is also better adapted to low moist soil than the Norway, yet delights in dry, well trenched localities. Like the Norway, it is difficult to grow it other than in a pyramid form. Where it has room, its branches are very spreading, and having an upward tendency of about two feet each year, gives it a place in the front ranks of fast-growing evergreens. There are other varieties of Spruces (black and white,) natives of our own State, but not very desirable as ornaments, as their lower branches are apt to die.

No. 6. Austrian Pine (*Pinus Austrica.*)—A very rapid grower and to my mind looks well in all situations, except in the limited room of "corner lots,"—its hoary, dark, green foliage, and bold, picturesque look, unfits it for the narrow limits of such localities. But for the country, and roomy yards, it is our most desirable, hardy pine. Growth erect, with spreading, upright branches.

No. 7. Scotch Pine, (*Pinus Sylvestris.*)—A native of Europe, foliage dark, with blueish cast, and a rapid grower on almost any soil. Perfectly hardy, and grows very well; is quite desirable in a collection. There are no specimen trees of the two last varieties of much size in the West, and plants are difficult to get, at the East.

No. 8. Norway Pine, (*Pinus Resinosus.*)—Is not a very desirable variety. It forms an irregular, uncouth head, at various distances from the ground, lacking that symmetry of form found in most pines. I can think of no place desirable for it, except it be in large collections, or grown as a timber tree on the prairies. As such it would be a striking contrast to the geometrical figure of better evergreens.

No. 9. White Pine, (*Pinus strofus.*)—Is a native of this State—a hardy and good variety. The foliage is lighter in color, and much more delicate than that of the Austrian pine. To form a thick and compact head, it should be grown in good strong soil, or its branches will be more scattering, and thus give more body and less shade. It is said to retain its graceful and tapering form in old age, and seldom becomes flattened. It retains its color perfectly through winter. Maximum height, 250 to 260 feet. Yours, &c.,

O. S. WILLEY.

JANESVILLE, Wis.

Correspondence of the Farmer.

Cultivation of the Sweet Potato.

MESSRS. EDITORS:—To those who have been accustomed to use the sweet potato it is needless to speak of the desirability of raising this plant as one of our richest luxuries. But we are professedly, at least, a practical people. Hence when you speak of the importance of raising the sweet potato, the first questions which meet you are these—Will it pay? Can the sweet potato be raised to advantage so far north as this? Is our soil adapted to them?

The result of my experiments the last year will give a full answer to these questions, and I think every one must admit that if the experiment of raising sweet potatoes in this section proved successful last year, it would probably prove successful any year.

My first plants were removed from the hot bed about the 20th of May. Between that and the 15th of June, my neighbors and myself set out some 800 more plants. Some 200 more were set out on the 28th of June, in very sandy soil. Most of my neighbors were afraid to risk a few shillings in such an unpromising experiment. My object was to test the raising of the sweet potato in *different kinds of soil*, and also to see how late they might be set with us and yet mature, as most were of the opinion that our seasons are too short for the sweet potato.

We are now prepared to look at the result of these experiments.

The first result noticed was this, that by the middle of June no difference could be observed between the first and last settings.

2. That when we came to use the potatoes, the tubers from the last settings seemed as mature as those from the first.

3. That the more sandy the soil, the more yellow in appearance and rich in flavor, the potatoes. The smallest and poorest were raised on the richest black loam.

4. That where sand was the predominant composition of the soil, the yield was more prolific than that of the Irish potato.

The sweet potato should always be sprouted in a hot-bed. In this latitude the materials for a hot-bed (horse manure is the best) should be gathered together before the middle of April, near where the bed is to be made.—When they begin to steam well, they should be forked up, thoroughly mixing the colder portions of the manure with the warmer, forming a bed running East and West. The size of the bed must be determined by the quantity of seed you wish to sprout. It should be made a foot larger each way than the frame which you wish to place over it, and eighteen inches or two feet high after being settled with the fork, for it should never be trodden down with the feet.

The bed thus prepared should be covered four inches deep with mellow earth. It is now prepared for the frame, the back part of which should be eight inches higher than the front. It would be well to bank up some around the outside of the frame. This being placed, the potatoes should be carefully put into the bed, two inches or more apart. They should then be covered three inches deep with a mixture of light soil and sand. If during the first week there is a tendency to too high a temperature (which may easily be determin- by thrusting the hand down among the potatoes,) the temperature should be lessened by gentle waterings.

In selecting ground for sweet potatoes, you should avoid that which is very rich. In such land the tendency is too much to vines. Select the most sandy soil, if it slopes to the south, all the better. Plow deep and throw into ridges some four feet apart, or if you choose, by back furrowing across the ridges once in three feet you can form hills. This preparation of the ground should be your last work before setting your plants. These will be ready to remove from the hot-bed when they are five or six inches high, as they will be then sufficiently rooted for transplanting.—If late frosts seem to forbid their being set out at this stage, they can be left in the bed until they have vined a foot or more.

When you are ready to set out your plants, you should place one hand upon the potato, and carefully pushing the forefinger of the other down between the potato and the plants, pry them off. When you have the desired number of plants, take them to the ground which you have prepared, and also a tub of water warmed by standing in the sun. Scoop out a hole in the top of the hill large enough to hold a pint of water; fill this with water, then drop the roots of the plants into it, and they will naturally spread out. Then draw in gently the finest dry dirt until the hole is full. Do not do it so rapidly but that the last dirt thrown about the plant shall be dry. This will keep the ground from baking. The process well done, your plants will need no nursing, even should the time of setting be one of the hottest days in June.

And here, though it be a digression, I would say, if those having cabbage or strawberry plants to set, would adopt this method, it would save them much trouble. In setting out some six hundred last year, in this way, I did not lose on plant, nor did I cover or water one after setting. Try it, friends.

But to return. The sweet potato thus set out needs no further care except good hoeing. The first hoeing, the dirt should be hauled away from the plant so that the rays of the sun shall warm up the dirt about the roots of the plant. At the next hoeing hill up about the plant.

I have already made this article too long.—I will simply add that the variety I cultivated—the *Nansemond*—is one of the earliest varieties of the sweet potato family, and has this advantage above some of the larger varieties—it is fit for use at any stage of maturity after the potatoes are large enough to pull.

THERON LOOMIS.

RAYMOND, Racine Co., Jan. 21, 1858.

PREPARATION OF SEEDS.—Some seeds are so slow of germination, that weeds grow in advance of them, and thus render their cultivation the more difficult. Many of these, such as the carrot, parsnip, &c., may be buried in a bag in the soil a few days before use, and thus swell materially, by the humidity and other necessary conditions found in the soil, before final use. This mode of treatment, in many cases, will do away with the necessity for steeps, and render early germination quite certain. Care should be taken not to have them buried long enough to cause material sprouting, as the new sprout might be broken off or injured during planting.—*Ohio Valley Farmer.*

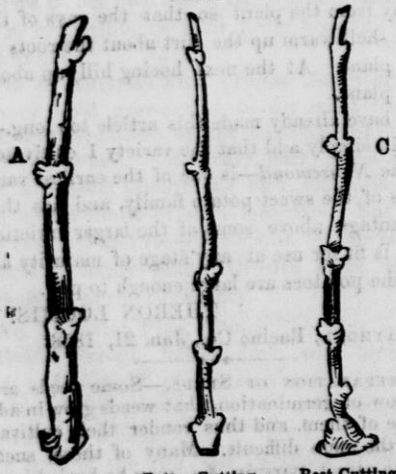
Propagating Grapes by Cuttings.

We copy the following article from a valuable little work on Grape Culture, "The Vine Dresser's Manual," published by A. O. Moore, New York, to whom we are also indebted for the illustrations. (See the work noted in their advertised list, and price.)

It clearly sets forth the requisites to be observed in preparing the soil, selecting the cuttings and planting them. It strikes us as valuable information to all who have not already given the subject careful attention. Too many who plant cuttings, do everything in relation to it in a careless and thoughtless manner, and doubtless not unfrequently wonder at their poor success. More care in selecting and planting will beyond doubt be good policy, and that it is good policy for all who would grow grapes to obtain and plant cuttings of desirable varieties, there is no doubt; it is a cheap and easy way of obtaining them. P.

The safest and most advantageous propagation and multiplication of vines, in planting a vineyard, is through cuttings. They are easier obtained, and are least expensive. I am free to say, that I prefer cuttings to grape roots, even at the same price, and for the following reasons: They remain in that spot,

Fig. 4.



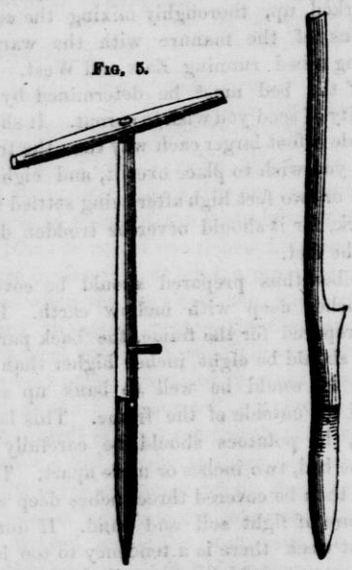
Poor Cutting. Better Cutting. Best Cutting, with bud on old wood.

where they were first planted, and there at once permanently form their roots. These first virgin roots, especially at the foot, can never again be supplied by any second growth. And again, grape roots are always, when planted for sale, set out in the very richest ground, such as is loamy and well cultivated; and it is easy to imagine, that a vine, taken from such old, rich soil, and then transplanted into the raw, newly-spaded vineyard ground, must necessarily receive a shock to their growth, which must render them more short-lived than vines grown from cuttings. A cutting remains in the vineyard, and its virgin roots are not torn off or injured. This I regard of great importance. Grape roots *may* bear one year earlier than cuttings; but beyond that much-coveted, and at best doubtful first year, every consideration is in favor of the cutting.

Great care, however, should be taken in the selection of cuttings, and the same must be said of "roots." This cut will assist the reader in guarding against imposition. It represents three different qualities of cuttings.

Fig. 6.

Fig. 5.



We may lay down the following general rules:

1st. The vine from which you select your cuttings should be healthy, and those not more than ten nor less than three years old.

2d. The wood of the cutting should be soundly ripe, of the early spring's growth of the previous year, and not of the second growth, which appears in or after the month of June. The part nearest to the old wood will rarely fail to grow. Cut C represents such a cutting.

3d. The more joints or buds within a given length the better. They should be closer together near the lower end than the upper.

4th. The more compact the stemwood, the finer the sap vessels, and the smaller the *pith*, the better. Coarse reedy cuttings, such as Cut A, are worth but little.

5th. Each cutting should be not less than twenty nor more than twenty-four inches long.

6th. Old wood of more than one year's growth is unsuitable for cuttings.

Cut with a sharp knife smoothly and nicely just below the bud at the foot, being careful

not to injure the joint; but above the upper bud, which is to form the "head," leave about two inches of wood, so as to form a protection to the cutting when in the ground, and that it may be held thereby when planting.

In taking off the first cutting from the old wood, the foot should be the very first bud near, or, if possible, upon the old wood, as in the best cutting, marked letter C.

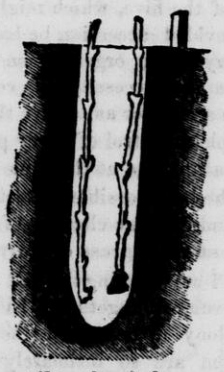
That proper caution should be used to put the cuttings right end up in the ground, will, I am sure, be understood by all. The upper part of the cutting may easily be ascertained by the upward pointing of the bud.

The planting is now performed; if by cuttings, two to each hill, sometimes by making holes with a hoe or spade as near as possible to the *marking stick*, which remains in its place.

The cuttings are then put in and covered carefully with earth.

But there is another, much speedier and equally good method. Have one or two *stilts* made, about four feet long and three inches thick, pointed with an iron socket of about twenty-two inches length. See Figs. 5 and 6, on opposite page.

Fig. 7.



With these stilts the holes are made close to the marking sticks two feet deep, and by moving the stilt from side to side the hole can be made sufficiently large.

There may be one hole to each cutting, or both cuttings may be inserted at once in the same hole, taking care to keep them separated by placing the fingers between them.

These holes are made as nearly perpendicular as may be, and the cuttings are inserted deep enough to have the upper bud one-half an inch below the surface of the ground. The cut, Fig. 7, will illustrate the position.

The cuttings are then held with one hand, while with the other loose earth or sand is poured in, around between them. Then pour water into the hole sufficient to "slime" in the sand compactly around the cuttings, at the same time avoid pressing with the feet near to the hole, as this renders the ground hard.

If the holes are dug with the hoe or spade, the cuttings may be put in slanting always *from* the hill, if the surface is not level, and slimed in as above.

If the planting is made with grape roots, the same care required by fruit trees should be given to have all the bruised roots cut with a sharp knife, and the foot roots carefully surrounded with fine earth, while they are spread in a natural position, and afterwards water is poured around them.

No grape root or cutting should be planted after the 15th of May. They should be in the ground as much earlier as possible, if the season be favorable and the ground is in proper order. Vineyards should never be set out and planted in wet, slushy weather.

Pruning Grapes.—If we have the good fortune to get some cuts ordered for the purpose, we will illustrate and explain the approved modes of pruning in the next number, which will be early enough for all who have their vines buried.

Correspondence of the Farmer.

The White Russian Turnip.

Messrs. Editors:—This variety is decidedly the best adapted for winter table use, of any yet known. It will keep until July, perfectly solid, and when cooked, is sweeter and more palateable than anything of the kind I ever tasted, and should be grown by farmers generally. I do not mean that it should displace our old flat turnip, or the ruta baga, but I certainly consider no collection perfect without it.

My practice is to sow them at two seasons, viz: some about the first of June, and again for my main winter's supply about the 10th of July. They are so hardy that they will bear quite a severe freeze and not destroy them.—They lived through last winter in the ground and grew vigorously in the spring. I have saved very carefully, a small quantity of the seed, which can be obtained on application at the *Farmer* office in season for sowing.

HENRY TURVILL.

Note.—We can testify to the excellent quality of the above turnip. We have never seen anything in the way of a turnip one-half as good for table use, and being anxious to get them into wider use, we have obtained several pounds of the seed of Mr. Turvill and another gentleman, which we intend to distribute among our agents and friends as opportunity offers. We will forward a small quantity to any subscriber who will send a stamp to prepay postage. They will be very highly prized by all who try them.—[Eds.

NATURAL HISTORY.

Correspondence of the Farmer.

Bees and Bee Hives.

MESSRS. EDITORS :—This is a subject which has recently attracted some attention. We now have frequent communications in our agricultural papers, from practical apiarians, and yet few persons are aware of the profits that can be derived from the honey bee, when properly managed.

Although our experience in bee culture has been rather extensive and varied in its character, yet we frankly confess we have much to learn of the natural economy of the bee, and hence the object of this and any subsequent articles we may write. As the winter evenings are now long, we will jot down, in old fashioned farmer style, some items of our experience and views of bees and bee-hives, and thereby manifest our desire to contribute to the general fund of knowledge on this important subject, trusting and believing that other apiarians will come forward and contribute of their experience for the benefit of the readers of this valuable paper.

Prof. Rutland and others have favored us with very interesting articles, which we hope will be followed by others. By a mutual interchange of the views and experience of practical apiarians, through the columns of an agricultural paper, much good may be done.

Before proceeding further, we want it distinctly understood, that anything we may say respecting any hive will be based entirely on its merits or demerits, as our experience causes us to view them, assingning the cause of objection and *vice versa*, disclaiming any interest in any patent hive, or promoting the sale of any publication whatever. With this preface we will proceed to consider the subject.

With us Americans, the first inquiry on all subjects is, will it pay? Will bee keeping pay? Our experience teaches us that it will pay handsomely, if understood and properly managed. Success depends upon three things, either of which is absolutely essential. The first is the selection of good, healthy, straight-combed colonies; the second, and perhaps the most important, is to procure the best hive; and the third is the general and special care and management after the colony is placed upon the stand.

The manner in which most hives are constructed admits of little chance of examining the interior. The best that can be done is to invert the hive, drive the bees away, and view a few inches of the extreme lower ends of the combs (the least important, by the by) and guess at the rest. If you should cut out a comb at the top of the hive to make a thorough examination, it is very difficult to replace it; in fact, it is not practicable to make an accurate examination of the condition of the colony, and in purchasing stocks of bees in such hives, you must generally trust to chance, which at best is very uncertain. In this particular, the movable comb hive of Langstroth is infinitely superior to any we have tested, as it affords every facility for a thorough examination of every department of the colony.

It is generally conceded that all bees are alike industrious in reproducing their kind, and collecting and storing up provisions for their maintenance, and yet it is a fact well attested, that all are not alike vigorous and productive. Why is this? The cause, to me at least, is plain. There is something wrong in the interior of the hive, which might easily be remedied, provided accession be had without material injury to the organization of the colony. Hence the necessity of constructing hives in such a manner as to give the apiarian full and complete control of every part of the colony at pleasure, and at the same time afford to the bees the best possible protection against the sudden and extreme changes of the weather, and prevent the ingress of intruders.

But I find I am blending the first and second parts of my subject together. In fact a well organized colony of bees and the hive that contains them are so intimately connected, that to speak of one necessarily implies both, hence I will treat it as one.

But I find this article is extended to a greater length already than I designed it should be, and consequently will close by promising to resume it at an early day.

HARBISERS.

CHENANGO, Lawrence Co., Pa.

BONES.—The value of bones depends on the phosphate of lime and gelatine which they contain. If we burn bones the gelatine is driven off, while the phosphate of lime remains as ashes. Dry bones contain, in 100 lbs., about 50 lbs. of phosphate of lime, and gelatine equal to about 5 lbs. of ammonia.—The commercial value of the former is about one cent per lb.; of the latter, twelve cents per lb.

Correspondence of the Farmer.

Bee Moth.

MESSRS. EDITORS :—The December number of the *Farmer* contains an inquiry after "the best safeguard against this little intruder."—Without claiming any long experience or great skill in Bee culture, I wish to state a few facts for the information and benefit of your correspondent and others.

Last spring, my father and myself commenced the use of Mr. Langstroth's patent moveable-comb hive. Being on a visit at Cherry Valley, Ill.—my father's residence—in October last, I found hives occupied by late and rather weak swarms, to contain some moths. Having a box in readiness to receive the frames, I opened a hive, lifted out, one at a time, five combs, examined them, removed the moths, and cleaned that side of the hive from which they were taken. The other four frames, and the rest of the hive were then examined, and the moths destroyed—the frames being placed in the room of those first removed. The frames were then returned to their former positions and the hive closed, leaving the bees freed from their troublesome intruders. The other hive was then served in the same way.

I might say much about the method of "keeping your stocks of bees strong,"—"the infallible secret of bee-keepers," which has been sold for ten dollars! but space will not permit. I think it is plain that the entire control of all the combs in the hive will enable the apiarian to effectually secure his bees from the ravages of the moth.

J. C. DANA.

SPRING PRAIRIE, Wis., Jan., 1858.

NEW FOOD FOR BEES.—Two agriculturists of the Department of the Var observed one day, in May last, that all their bees had left their hives, although the latter were well filled and exceedingly heavy. Towards evening the fugitives returned heavily laden, but on the following morning set out again in a directien which was this time carefully noted by the the farmers, who had been watching their doings. They followed them, and soon arrived where some cakes of tilseed, which had been subjected to the oil-press, were being beaten into a paste with water, to be used as manure for potatoes. There they saw their bees clustering round the tubs containing the paste, evidently enjoying a luxury hitheto unknown to them. The agriculturists procured their bees abundance of this food, and were rewarded by nearly ten times the usual quantity of produce, besides an immense increase in the reproduction of the insect.—*Mark Lane Express.*

EDUCATIONAL.

The Star of Agriculture Rising!

First in time, and first in importance, Agriculture is destined to be also first in honor.—The world is beginning to see that farming is not a degraded occupation, *per se*—that its highest success involves a necessity for a knowledge of the whole range of natural science,—that the *true* farmer is not a miserable, drudging clod-hopper, but must of necessity be an intelligent man, growing up into the practical philosopher.

All over the Union, and all over the world, there is a waking up to the importance of a more rational system of earth-culture,—the exciting cause in Europe being necessity; while, in America, the spirit of our institutions, and the genius of our people, together, combine to produce the result. But even in this new country, where the soil is rich in the mould of centuries—where civilization treads eagerly upon the heel of savage life—where active young men are older than the State they inhabit—even here, by a reckless system of culture, or rather by an almost total *neglect* of culture, the lands are so rapidly depreciating in real productive value, that the stimulus of *necessity* is beginning to be felt already, in the "glorious West."

This discovered importance of science as a basis of successful husbandry, has naturally led to the establishment of institutions of learning devoted to the special wants of Agriculture—to a general effort all over the civilized globe for the establishment of Agricultural Colleges.

Europe already has 500 of such institutions, and the almost three-fold crops of those countries where their influence has begun to be felt, as compared with ours, is demonstrative of their value. We sincerely hope our own State will not wait until our soils are all exhausted, before it provides for the inauguration of a better system of farming than has hitherto marked, and still characterizes our State. Let us have an institution where the science of farming may be taught to the young farmers of Wisconsin; where the practical utility of science may be demonstrated on an experimental farm, and from which our sons may go forth as well qualified to practice their profession wisely, as any of the learned profession are able to practice theirs.

We rejoice that such a move is being made, —that there is an appreciation of the importance of such educational institutions for the laboring classes of our people, among our intelligent legislators, and a good determination to do something this very winter, towards its establishment.

The following Report of the Standing Committee of the Senate, will be read with much interest, consisting as it does of startling facts and strong appeals:

REPORT.

The committee to whom was referred that portion of the Governor's Message which pertain to Agriculture, ask leave to make the following report:

Of the essentiality and real nobility of Agriculture, as a pursuit, there can be no question; neither can there be any doubt as to the important rank it holds, among the instrumentalities which determine the general condition and progress of the race; so that apart from the evident necessity for agriculture, the bare fact that nearly seven-eighths of the whole human family subsist not only upon, but *by* it, as an occupation, should have marked it long ago as a subject pre-eminently worthy of legislative consideration, and governmental patronage.

The history of the world establishes the fact beyond a question, that Agriculture is the only sure and permanent foundation of any society or National Government; and yet its present condition, furnish us most mortifying evidence of its almost total neglect as an art and science, not only in those portions of the world where the manual labor necessary to its practice is a disgrace, but even in our own country where it is claimed that all men are equal and labor honorable, a fact all the more remarkable because of the characteristics of our people and country.

A large majority of the States of the American Union, ever have been, and probably always will be, chiefly dependent for their wealth and power upon the natural products of the earth. Herein is our security—the fact that this is an *agricultural* country, with a well adapted people, is the true ground of our hope for prosperity and perpetuity as a nation.—Especially is this true of our own State.

With almost unequalled advantages of physical configuration; with unsurpassed fertility and a remarkable distribution of different classes of the best soils; with numerous streams of water, some of them navigable for imports and many of them for exports; with whole galaxies of sparkling lakes for still further watering, and the beautiful clustering homes of her rural population; easily penetrable by railroads and almost surrounded by navigable waters; and withal characterized by a climate just enough exacting to stimulate the intellectual and physical energies of her people, our noble Wisconsin would seem to have been marked by nature as by pre-eminence an Agricultural State.

Our statistics also show what is our chief reliance. The recent report of the Secretary of State furnishes data for the aggregate result of about fifty millions ($50,000,000) worth of legitimate agricultural products for the year ending Dec. 31, 1856, a sum which while it is absolutely large, swells in importance by comparison with the results of our commercial, manufacturing and mining operations.

By the same report, we find the whole number of acres of taxable land in Wisconsin, returned at 12,917,756, with an average valuation of $3.69 per acre, equal to $47,748,402 aggregate valuation, according to which the agricultural products of the State amount to a little more than 100 per cent. on the valuation, and 33 per cent. on the equalized valuation of the whole amount of property in the State.

Of the prominence of agriculture, therefore, as a paramount interest of this State, we have abundant proof.

But lest the glitter of this general aggregate result should deceive us, lest our pride and hope should rest upon a false basis, we have been led to examine into the details of Wisconsin Agriculture; and the result is a mortification of our pride, and a deep concern for the future. The aggregate yield per acre is really less than in many of the old and less favored States. Even New England with her niggardly soil and more rigorous climate, puts us to shame.

As by the report of the Secretary of State, the whole number of acres in wheat for the year 1857, was 52,393, with an aggregate product of 8,717,756 bushels, showing an average of 16 2-5 bushels per acre. Whole number of acres of oats, 176,609, with an aggregage product of 6,312,304 bushels, showing an average per acre of 32 1-5 bushels. Whole number of acres in rye, 15,050, with an aggregate product of 220,531 bushels, showing an average per acre of 14 2-3 bushels. Whole number of acres of corn, 285,339, with an aggregate product of 5,100,790 bushels, showing an average per acre of 17 6-7 bushels. Other products show like meagre results.

True, in the raising of wheat, which is considered our chief staple, we are in advance of some other States, since the average for the Union is 11 bushels per acre! but in the matter of corn we fall below the average, which is 25 bushels per acre; so also, in rye, potatoes and several other products, we are even below the old Atlantic States; while our whole country is so far behind Great Britain and some of the continental countries, that we have been characterized the most thriftless class of farmers in the civilized world! Indeed, in view of our advantages, absolute, and as compared with other States less munificently endowed by nature, our statistics are a reproach to our

system of agriculture, and call loudly for an explanation and a remedy. The explanation is two-fold, lying partly in the cheapness of our lands, but more largely in the lack of scientific knowledge on the part of our farmers. The former cause is in rapid process of removal by the influx of a growing immigration; the latter most imperatively demand institutions of learning, in which the present and prospective farmers of the State may acquire a knowledge of the known principles involved, and where through oft-repeated and carefully conducted experiments, the noble and complex science of agriculture, as specially related to our soils and climate, may be more fully developed.

In the midst of this eminently practical age, when, through the stimulus of science, commerce and the manufacturing arts, have made such rapid strides; when cities are built in a day; when the throb of the steam chamber, like the heart-throb of a mighty people, is heard on all our interior seas and rivers; when the workshops of the world are full of labor-saving machinery, and the genius of mechanics, is offering finished and economical implements to the husbandman, as fast as his wants are made known; when science is pressing the elements into the world's service, compelling fire and water to do its daily work, and the lightning to carry its messages,—in *such* an age, it is not fit that he whose business it is to conduct those mysterious, vital processes, by which the lifeless and otherwise useless forms of matter are transmuted into the life-sustaining plant, and the yet more wonderful organism of the animal,—whose work it is to feed and clothe the world of men—should grope his way in ignorance of even the leading facts and principles of his profession.

The pursuit of farming requires, in order to its highest success, a larger fund and more extensive range of scientific knowledge, and if properly conducted, is more prolific of reliable profit and substantial happiness, than any other material occupation of man. Nor is it because the sciences have been less generous toward the art of Husbandry, that its devotees are so deficient in the requisite scientific knowledge.

No! Science, wonder-working Science is guilty of no mean parsimony or partiality, but opens liberally to all, her hand of plenty.—And the husbandman is beginning to feel his blindness and now earnestly asks for that light which is to him the light of life; is beginning to feel and more fully realize the cause of his degradation and at last to demand that his occupation be lifted up to the dignity of a profession and science.

Various instrumentalities are already at work for the accomplishment of this grand result; all of which, however, have been but the fore-runners of that greater and crowning instrumentality—the Agricultural College.—The work is too vast for single individuals or small associations of individuals. It demands the combined efforts of the people of the whole State. Five-sixths of our populaiion are cultivators of the soil; and it is neither just nor consistent with an enlightened State policy that this large majority should be without the means of a knowledge of the principles of their profession, while the small minority are so amply provided for.

The farmers of our State have long and patiently borne four-fifths of the whole burden of taxation, while in a large majority of cases the benefits accruing have been directly to other classes. They now ask an appropriation of such funds or property as may be available, for their more direct and immediate advantage—for the establishment of an institution, where the several sciences which pertain to Agriculture may be thoroughly taught in the laboratory and cabinet, and on the farm.

Scientific institutions, devoted to agriculture, are being established in other countries, and the improved condition of their rural population, together with the extraordinary improvement in the fertility of their soils, fully attest their great value. In Prussia there are 70 such institutions, a number of them specially devoted to the improvement of some particular staple product; while in the several countries of Europe, taken together, there are 500 Agricultural Schools.

Great Britain is especially illustrative of the immense benefits of applied science. At the beginning of the present century, the land in cultivation was 40,881,800 acres, and the population 16,338,002; so that the proportion of cultivated land was 260 acres for every 100 inhabitants. Since then, up to 1850, the increase of uncultivated land has been 4,129,777 acres, and to the population 12,669,107 inhabitants; so that for 100 individuals added, only 32 acres have been brought into cultivation, and now the proportion is 1 2-3 of an acre instead of 2.6 to each person. With a population of 27,619,866, she supports them all, aided by a trifling importation, upon less than 123,000 square miles! being about 225 to a square mile; and the statistics exhibit the interesting fact that while 35 1-6 per cent. of her people were required, as late as 1841, to supply her population with food, only 26 per cent. is now required; showing that the quantity for the production of which seven families were then employed is now produced by five.

Now there is nothing peculiar to the climate or the soil of Great Britain that should enable her to raise 32 bushels of wheat per acre as the average instead of 11, and other crops in proportion. The sun shines upon no other better country than ours. With a generous climate, and a soil rich in the mould of centuries, and with the best race that peoples the globe, we ought to lead the world in the Agricultural Art.

True, we have not yet the pressing necessities for food, which England feels, and the

temptation is strong to exhaust one portion of country by a reckless system of cropping, and then abandon it for another; so that the beautifying of our homes with reference to their occupancy by our successors in the family, and the consequent strong attachment of children to the homes of their ancestors, and that patriotism which the love of home begets, are in danger of being so far disregarded that we shall eventually lose by a comparison in this respect, with the mother country. Surely the history of other States and countries, and the shameful deterioration of our own soils, ought to teach the State of Wisconsin the better policy of stopping this waste and exhaustion before stern necessity shall drive us to a restoration, involving ten times the expense of a rational prevention.

In order to such prevention it is the opinion of the Committee on Agriculture, that scientific knowledge on the part of the farmer is the great desideratum; and we, therefore, earnestly recommend, not only, that the suggestion of our worthy executive be adopted in the matter of petitioning Congress for a grant of lands to aid in the endowment of an Agricultural College, but would urge the importance of first doing something on our own behalf, as a State, before we ask the aid of Congress.

The legitimate scope of such an institution, demands, in order to a marked usefulness, a large endowment, and it is the hope and unanimous desire of the Committee, that such an appropriation be made as shall comport with the importance and magnitude of the enterprise, and the dignity of our State.

Accordingly, after mature deliberation, and with the full concurrence of the Assembly Committee, we beg leave to offer the accompanying bill for an act to establish an Agricultural College.

Signed,

L. W. JOINER,
D. W. MAXON,
D. WORTHINGTON, } Committee.

District Schools.—While thinking and talking about Agricultural Colleges, let us not forget these humbler but not less important institutions—the Common Schools. How many of us are taking the interest in them we ought? How many of us, *parents*, are visiting them at least monthly. (We are doing it and finding great pleasure in it also.) Let all parents remember that they owe no higher duty to their children, than to look well after their common school education. Sooner pay a dollar for a hand to help a day, than to keep a son or daughter out of shool, even at the loss of a single lesson; the mischief of such interruptions cannot be well estimated. Send your children early, neat and clean, and also go often to encourage them and their teachers in their labors.

MECHANICAL.

"WHICH IS THE BEST REAPER?"

Palmer's Challenge.

The above question can only be determined by actual trial in the harvest field. Premiums awarded at State or County Fairs do not decide the case. The experiment of a single farmer, on his own farm, through an entire harvest, are not positive evidence. A machine that has worked well one year may fail the next. The grain of one year may have been even, and stood erect; while that of the other has been, heavy, tangled or lodged. Another farmer who commences his second year's use of his reaper with great confidence, has soon been doomed to disappointment. To determine the above question fully, the machine must be tried in all kinds of grain—and this in any one case usually requires a term of years—it may be done in one harvest, by removing the reaper into different qualities of grain, and on different farms. The Illinois State Agricultural Society made a trial of Reaping Machines, near Bloomington, Ill., in 1854. This trial continued through the entire harvest, in different fields, and over a section of country five miles in extent. This was a thorough trial, and resulted in giving my machine the first premium; but its result, and the premiums awarded, have not been sufficiently published to the world.

I desire through the Wisconsin *Farmer*, to renew the following proposition to the Wisconsin State Agricultural Society: that is, let the Patentees or Manufacturers of the different Reaping Machines, present to the Wisconsin State Agricultural Society, one of their Reapers for competition in the harvest field; to be *owned* and *controlled* by the Society. Let the Society appoint a jury of twelve practical farmers, to take said Reapers at the commencement of the harvest, and operate them, either by themselves, or by hands appointed by them. Let each juryman and hand be sworn, to faithfully try the Machines. Let them be tried through the entire harvest; and then under oath report which excels in most of the annexed points, &c. Let a full report of the trial, of the names of inventors, patentees and manufacturers of each machine, be published in every agricultural paper in the Union. Let the Reapers all be sold at the conclusion of the trial, to pay the jury for their time, and all other expenses, and the balance go into the treasury of the Society.

The following are the points referred to in the above, in which a Reaper should excel:

1. Simplicity of construction and probable durability.
2. Ease with which it can be managed.
3. Saving of manual labor.
4. Ease of draft in proportion to width of cut.
5. Facility for passing over obstructions and through dead furrows.
6. Convenience for raising or lowering the cut.
7. Its general operation in light, heavy, dry, wet, lodged, and tangled grain or grass.
8. The price, compared with its advantages.

I will furnish for the said trial one of Palmer & Williams' Patent Self-Raking Reapers and Mower—worth at Madison two hundred dollars—if a respectable number of other Patentees will furnish one each of theirs.

Respectfully yours,

AARON PALMER.

Brockport, Monroe Co., N. Y., Jan. 30, '58.

Note.—This is the same proposition made by Mr. Palmer last year, and which none were found to accept. J. Heath & Co. did, however, substantially accept the proposition, under certain reasonable modifications. Perhaps they will do the same this year, as we know full well from having used it, that they have an excellent machine—a Hand Raker. If they and about two of the other leading machines will go into it, we feel assured that the Agricultural Society will make the requisite arrangements for a first class trial, that will prove something conclusive as to the comparatime ability of the different machines. But less than four would hardly warrant the outlay, and all the better if half a dozen would enter the lists.

A thorough trial of this kind, not only between Hand and Self-Rakers, but also the crack Self-Rakers, is due to the public, and we sincerely hope it may come off. We will do all we can to aid it. Send in your acceptances of the challenge gentlemen, early, so that we may be making the requisite arrangements.—[Eds.

To keep the Rabbits from Gnawing Trees.—A correspondent assures us that the rubbing of the flesh of a *dead rabbit* upon the bodies of fruit trees will prevent their being meddled with by the living rabbits.—[Eds.

MISCELLANY.

Correspondence of the Farmer.

Cure for the Bite of a Mad Dog.

Messrs. Editors:—Will you please insert the following recipe in your *Farmer*, as I wish to preserve it and make it known as far as possible, for the benefit of community at large.

For the Bite of a Mad Dog.—Burn oyster shells to lime, pulverize and sift through fine gauze or muslin; put two table spoonfuls (heaped) into a vessel; mix with eggs to the consistency of cream or batter for pancakes, and fry in a pan with a good sized piece of fresh butter or some sweet oil. Let the person as soon as may be after being bitten, eat this cake in the morning, and taste neither food nor drink for six hours, when they may eat and drink as usual. Three such cakes to be eaten as above, on three alternate mornings. This is for an adult; the quantity for a child can be administered according to age.

This recipe was got some years ago in Canada, and by inserting it in your columns you will confer a great favor on

Your humble servant,

MRS. M. A. BAILEY.

Dunkirk, Jan. 10, 1858.

Note.—We publish the foregoing at the request of our lady friend, and hope it is as infallible as she believes; for if so it is invaluable. But we confess that we should be somewhat afraid to rely upon it, especially if a dog was *very mad*.—[Eds.

Correspondence of the Farmer.

Good Logic.

Council Bluffs, Iowa, Feb. 1, '58.

Messrs. Powers & Hoyt:—I enclose eight dollars for ten copies of the *Farmer* for the year 1858. Heretofore none of my neighbors have taken any Agricultural papers. They know that I have obtained valuable information from the *Farmer* for two years past, and they have been benefitted somewhat also. Although the times are hard, I am happy to say that all my neighbors now subscribe for the *Farmer* believing this the true way of making hard times easy. To till the soil scientifically and thoroughly, should be the motto of the West.

Yours with respect,

D. B. CLARK.

Note.—The above is good practice and good logic, friend Clark, and will prove so beyond dispute.—[Eds.

Green County Agricultural Society.

This Society held its adjourned annual meeting at the Court House, in Monroe, on Monday the 1st inst., and was well attended. S. M. Humes, the President, presiding.

Amongst other business transacted, the Executive Committee were instructed by Resolution of the meeting to procure a deed to the Society of the Fair Grounds heretofore held in the name of A. Ludlow, and also to memorialize the present Legislature for the enactment of a law establishing requisite police regulations for the protection of such Societies during their Annual Fairs, and establishing penalties for infringments upon their rules and by-laws.

The meeting elected the following Board of Officers for the ensuing year :

President—S. M. Humes, of Sylvester.
Vice President—O. J. White, of Clarno.
Rec. Sec'y—J. V. Richardson, of Clarno.
Cor. Sec'y—J. A. Bingham, of Monroe.
Treasurer—T. Emerson, of Monroe.
Superintendent—Levi Starr, of Monroe.

The Chair appointed J. A. Bingham, Thos. Bintliff, W. C. Green, M. Kelly, and A. W. Sutherland, a Committee to report a Premium List to the Society for its consideration at its meeting in April next. Messrs. J. A. Bingham, M. Kelly and Wm. McDowell were each appointed to read an Essay before the Society at its meeting on the first Monday of April.

The Secretary was instructed to furnish a copy of proceedings of this meeting to the Wisconsin *Farmer*, Monroe *Sentinel*, and *Independent Press*.

J. V. RICHARDSON, Sec'y.

MONROE, Feb. 5, 1858.

Jefferson County Agricultural Society.

A meeting of the members of the Jefferson County Agricultural Society was held at Fort Atkinson, on the 22d January, 1858, to elect officers for the present year.

Meeting was called to order by N. P. Parsons, Vice President.

The following is the list of officers elected :

President—Milo Jones, Fort Atkinson.
Vice Presidents—D. M. Aspinwall, Farmington; A. B. Curtis, Jefferson.
Secretary and Treasurer—Giles Kinney, Cold Spring.

N. P. PARSONS, Vice Pres't.
M. SNELL, Sec'y.

Wisconsin Fruit Growers Association.

The Annual Meeting of the Wisconsin Fruit Growers Association, was held at Milwaukee, February 9th. The following is the list of officers elected for the ensuing year.

President—A. G. Hanford, Waukesha.
Vice Presidents—H. Crocker, Milwaukee; D. J. Powers, Madison; D. Matthews, Burlington.
Secretary—Charles Gifford, Milwaukee.
Treasurer—C. C. Olin, Waukesha.
Ex. Com.—H. J. Starin, Whitewater; J. C. Brayton, Aztalan; Thos. P. Turner, Waukesha.

Messrs Powers and Gifford were appointed a Committee to procure the passage of a law similar to that of Massachusetts for the protection of fruit trees, and trees planted for shade or ornament. Messrs. Olin, Starin and Crocker were appointed a committee to ask an an appropriation from the State to promote the objects of the Association.

Correspondence of the Farmer.

Poultry Raising.

BERLIN, Feb. 10, 1858.

MESSRS. EDITORS :—I wish to make a few inquiries in reference to poultry keeping. I intend going into that business, and I wish to inform myself on the subject as much as possible. I have read some articles on Poultry, &c., in the *Farmer*, but not enough to satisfy me. And now for the questions.

1st. What kind of hens are the most profitable, as layers, and where can they be procured?

2d. How large a house would be necessary for five or six hundred? (I have a plan of my own for a yard or park.)

3d. What kind of grain or feed is the best and how much is necessary per day or annum to each fowl?

By placing these questions before the readers of the *Farmer*, you will oblige,

Yours, Respectfully,
A SUBSCRIBER.

A LADY asked her gardener why the weeds always outgrew and covered up the flowers.

"Madame," answered he, "the soil is mother of the weeds, but only step-mother of the flowers."

PICTURES drawn in our minds are laid in fading colors, and, unless sometimes refreshed, vanish and disappear.—*Locke.*

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

UTTOXETER.*

BY MRS. HOYT.

Boswell touchingly narrates of Dr. Johnson, that when his father, who was a bookseller in the town of Uttoxeter, was one day unable, by reason of illness, to stand in the market-stall, and desired his son to take his place as salesman, the latter refused, and was ever after, for fifty years, a conscience-troubled sufferer; until, when he could no longer defer the expiation of his guilt, he went on the fiftieth anniversary of his disobedience a distance of thirty miles to the memorable spot, and with uncovered head, stood one hour exposed to a driving rain-storm, amid the jeers of the market people who thought him insane—his tears of penitence flowing the while down his time-furrowed cheeks.

An Angel went and told it unto heaven,
"Come see this great, new sight!"
And o'er his head who sought to be forgiven,
Straightway, swift wings alight.

Lo! in the market-place there stood and prayed—
White-locked and drenched with woe—
An aged man, whose tears another made,
As with the rain they flow.

Now piteously upturned, then lowly bowed
Was that uncovered head;
In speechless grief most eloquently loud
The cause was plead,

That dragged a secret to the light of day,
As heaven and earth were told
The guilt that on a life-time's conscience lay,
And death refused to hold.

How, when a youth, his father bade him go;
How fifty years had passed
Since to that father's word he answered "No,"
The first time and the last.

So to the spot, wherein accursed pride
His feet refused to stand;
Where memory and remorse allied,
With unconsuming brand,

Had pointed fair repentance to her shrine;
Through years of grief and shame—
'Twas there, forgiveness human and divine,
At last he'd come to claim.

Great heart, and brave! The heavens that saw amazed,
And bent a wondering ear;
The unthinking crowd that passed, or, loitering, gazed
With idle laugh and sneer—

No: they, nor we, saw deed of human kind
More simple, more sublime;
More fitly written on each filial mind,
And on the front of time:

As to the retrospect of buried years,
Come all who dare to think;
And at our own Uttoxeter of tears,
Fill up, and drink!

*Ute-ox-e-ter.

JOSEPH BONAPARTE wrote to his brother, the emperor, "All is vanity except a good conscience and self-respect."

The Children.

As our pen traced the simple words that stand above, and our eye rested, in loving revery, a moment thereon, our lips instinctively pronounced that of which the heart murmurs —the children.

The home passed once more before us, so home-like and so beautiful; again the parents, in their loving pride and wisely growing experience; but that which fixed the retrospective glance and filled the suddenly rejuvenated soul —O, that was the *childhood*. Who does not sometimes live again in sunny memories of that past? Later periods may—to the truly *living* man and woman they *must* come—with a capacity of affection and a power of accomplishment proportionate to the virtuous activities of the life; and therefrom the maturity, as the decay of years, will have a fruitage and a harvest all its own; but the gazing out from childhood's dreamy, beauty-haunted eye—O, *that* is a-never-to-be-equalled witchery that throngs a life-time of pictured days with things that are to be joys forever!

Thus it is, that the time so full of the credulities and simplicities we are prone to laugh at in the light of a larger experience, is yet the time to which we grown-up children do *so* love to return; for memory and imagination—the controlling faculties of that earlier mental development—having no precedents of disappointed promise or hope, had it all their own bright and happy way, unruled by the stern decisions of reason and judgment.

How fair it was, that play-ground world,

"So new, so grand, so vastly stored."

Dear old childhood! what a looking after thee goes floating down the ebb of every wave that bears us on, as the stream of life deepens and widens in advance!

As the drops of living water that everywhere thread the cavernous depths of earth, permeating with moisture and wooing into vitality each soil and seed hidden there, so do the pure and beautiful instincts of childhood underlie the coarser growths and incrusting selfishnesses of maturity, touching, now and then, the springs of the soul with a sense of humanity.

This is no time to discuss the long ago canonized theory of "total depravity;" but we venture to suggest, on behalf of the babyhood of the race, that the occasion of its promulgation to the world was prior to any evidence it could have given for or against such establishment. As an institution, *the doctrine* is said

to have existed before that of *the child*. What a multitude of such as are "of the kingdom of heaven" have lived and died in the light-unfolding ages that have since elapsed; still, on the blessed Sabbaths, and on Thanksgiving days, we walk gravely to, and sit in our places in the sanctuary, that learned divines may expound to us the mystery and the beneficence of the doctrine of "imputed sins;" and—and why, the truth is, the more we are like unto children in our love and faith, the more we don't understand it.

Children indeed, the dear, blessed children! Where do we find such a refutation of all that disinherits the human soul of virtuous aims and god-like powers as in their honest-hearted earnest little lives? The children of any community, as of any particular family, may be taken as the proper exponent of its moral and intellectual condition; for childhood is as the delicate tissue sheet whereon the artist finds impressed—and more perfectly than pencil could copy it—his rude or elaborate design.—Each line, every curve, the faint or bolder stroke of light and shadow—all is there; there to the honor or dishonor of those whose beauty or deformity of thought is thus given to another. And the best and the worst of it is this, that it may never be effaced. Other, and still other impressions may overlay it; years of growth and change may wrap it thickly in their ever-winding sheet of dim forgetfulness; but if it was, it is, and shall be evermore; for the immortality of things is in the perpetuity of their influence.

"Children never forget," has grown into an aphorism as true as the falsity of that opposite, "they do always forget." This contradiction comes from mistaking the sphere and possibilities of children. A child seldom forgets that which has been so apprehended as to give it a distinct thought or emotion. And what else can it be said to have had, either to remember, or forget?

This quickness of apprehension and impressibility of nature is at once, from the circumstances wherein it finds itself placed, the blessing or the curse of childhood; and being in the nature of those things the child could neither have chosen or refused, becomes the point whereon rests the fearful responsibilities of parentage. To have been a good and happy child is to have laid up an inheritance of innocent delights from which the whole after-life may be enriched. But all lives are not thus enriched; therefore all children are not good and happy. Where, O where shall the generations of fatherhood and motherhood hide from the world-witnessed reproach that their lives were not thus innocent and blest, and their children's are like unto them?

How wisely and how delightfully do the seasons of life come on, each in its turn filling the soul's vision and capacity. All that the child can bear is childhood with its little griefs and joys. How does its eye sparkle and its heart swell at the provocations of mirthfulness or sympathy. How rapidly, too, its moods change, every phase of which is so faithfully delineated in the fair young face.—No motive to, as no ability for concealment. One of the most winning attractions of childhood is this same frankness of character; a certain genuineness of life that most truthfully reflects the purity within. Then, their generally joyous spirits, and condiding repose upon the promise and love of those who care for them. How beautifully, because so unconsciously, these characteristics of the dependant little ones operate as a safeguard to their defenceless years, while they are at the same time the source of that so refining and gladdening infludnce they have upon all around them. We need not draw pictures. Every home will furnish its own artist. But let it be one where are gathered, or where are wanting all the comforts of life; yet, without controversy, "a babe in the honse is a well-spring of pleasure;" and, as the children grow up, they are—to hearts worthy such heaven-sent ministry—the "messengers of hope and love."

As flowers to the natural, so are children to the social world; an inspiration to the thoughts, an incense to the affections. And they are everywhere. No clime so drear, or far, but the foot of humanity has pressed the one, and its great heart the other. Children and flowers! What more could the dear Father have done for the families and the fields of his love, O ye of little gratitude?

The children of any generation, of any age; what a volume wherein to write the prophecy of its glory or its shame! The children of any hearth-stone, of any heart; what transcript leaves of that home-life, of that heart-love!—These are thy treasury of all imperishable gems, O thou swift-rolling Time; these are thy jewels, O thou ambitious Heart; crown, crown them on the brow of Wisdom, while yet the day is thine and "she standeth in the way."

Domestic Arts—No. 2.

MODES OF PREPARING MEATS.

Soups, &c.—Economically considered, there is no better way of preparing meat than in some of the various forms of soups, broths and teas; healthfully considered, the objections do not compare with the advantages.

As the natural food of the young mammalian animal is the milk of its mother, this milk may be regarded as a model for the food of the species to which any particular animal belongs. Woman's milk would then be the type for human food, and somewhat after its form and composition this food should be prepared, especially for those whose condition approaches that of the child. Now this milk contains nearly 90 per cent. of water, the remaining constituents being from 3 to 5 per cent.,—the most considerable of which are sugar of milk, oil, and curd. So much for its *composition;* the *form* we all know. Comparing the constituents of good beef with those of human milk, we find the proportion of water a little less, the fat a trifle more, while fibrin or gluten take the place of curd and sugar; so nearly do beef and milk resemble each other in their elemental values; but how different in form. The one fluid, so that it is ready alike for the babe and the adult; the other solid, so that it must be reduced from its natural firmness before it can be used even by the full-grown man. Science, as well as experience, has shown the utility, if not the necessity, of an admixture of animal and vegetable food in order to the best development and health of the physical man; and this, in a due proportion of their most important constituents, fat, sugar and fibrin. Nor, from what we have seen, is it unreasonable to infer that our food, if not naturally liquid, should be intimately mixed with a large proportion of some fluid before it is taken into the stomach. Indeed this lesson seems inevitable from the study of various natural forms of vegetable food. Added to its economy and healthfulness is the simplicity and ease of this mode of preparing meat for table use.

Soups.—Almost any kind of meat will do, but none, perhaps, of all that are in common use, will prove so good as beef. The principal object in soup-making, being directly opposite to that in boiling, roasting or baking, will of course require a process the reverse of that we recommended in our previous article upon this subject. *To get out the juice;* this is the main point; in which, with the best kind and quality of cooking and some little addition thereto, lies the secret of success. To do this most speedily and completely, let the meat be cut in small pieces, rinsed,—but never allowed to soak in the water in which it is washed—and put into the desired quantity of *cold* water, which may then be brought very gradually to the boiling point; or, if the meat is quite tough, and the object is to make a rich soup, let it simmer until the last few minutes, when it may be boiled. The reason for this will be evident by reference to our article No. 1. In this case, the meat, if the cooking has been sufficiently long and slow, will be found tough and nearly tasteless, but the soup very rich, containing all the really nutritious properties of the meat.

Where soups are much used, and in any case depended upon as the principal dish for a meal, the addition of vegetables is common, and of great value to the family board. But the way in which they are ordinarily prepared and *cooked in the soup* is alike opposed to its flavor, and its healthfulness. The explanation is too long for the present time and article, and must be deferred to a chapter on vegetables; only this, let the vegetables be cooked in separate vessels, and when nearly done, carefully drained of their liquor, let them be boiled a few minutes with the soup. Let those who think this troublesome, or "over-nice," try it a few times—they will not need prompting on the subject thereafter.

We have said nothing of seasonings, and for this reason—*the less of them the better.* Yet there are those so wedded to old practice, or the gratification of whimsical tastes, that not to have their food seasoned to their palate, is nearly as great a calamity as not to be fed at all; and we are sorry to believe this is more generally the case in the article of soups than almost any other. In many families it is eaten more as a sharpener to the appetite, than partaken of as the principal dish; therefore it is upon this point we would particularly speak.

Let the soup be made of whatever meat you have, with the addition of such, and so many vegetables as you choose to prepare; let it be carefully and very nicely prepared, seasoned a little, and, if you can bring your family to your better judgment, *only with salt;* lastly, let it be *the meal;* for who can afford to spend the time and labor to prepare it as it ought to be, and not have it largely, or wholly, lessen the burden of the hour?

FOR THE CHILDREN.

THE WORK-BASKET.

A FABLE FOR LITTLE GIRLS.

One day when little Mary went
To make her doll a dress,
What little Basket was about,
No one of you can guess;
For never was there seen before
A Basket that could talk;
While Needle, Thimble, Scissors, Thread,
Like one of you could walk.
But this time, every one of them
Were standing up and walking;
While quite aloud, and all at once,
The whole of them were talking.
The Basket told a piteous tale,
How Needle pricked her sore;
How Thimble crowded through the hole
That little Scissors tore;
How Thread was always in a knot,
Tangling here and there;
That such behavior in them all,
No Work-Basket could bear.
But Needle, Thimble, Scissors, Thread,
Said Basket was too small,
And did not give enough of room
Nicely to hold them all.
They said the fuss was all her fault,
As any one could see;
That with the chance they had, they were
As good as they could be.
Basket, declaring 'twas not true,
Shook them with all her might;
So thread broke off, Needle fell down,
And Thimble cried outright,
But Scissors said it was a shame
They should be treated so,
And made her little wicked points,
Right through the Basket go.
Then loud with pain the Basket cried,
Shook harder than before,
And threw them out with all her might
Wide scattering on the floor.
When little Mary saw this sight
She said, "what *does* it mean?"
For never, never in her life
Had she heard of such a scene.
There lay her pretty Basket
Of willows white and red;
The Needle and the Thimble,
The Scissors and the Thread;
Why they should quarrel all the time,
She could not think or see;
Or how to coax them back again,
And make them all agree.
So down upon her little stool
She sat and thought awhile;
'Till by-and-by she clapped her hands,
And jumped up with a smile:
"I've thought of it! I've thought of it!"
Said little Mary now,
"The way to make them all agree,
I think I know just how."
So picking little Basket up,
She placed it on the stand,
And wound the thread up neatly,
With slow and careful hand;
The Needle in a cushion put;
The Thimble in its place;
Sharp-pointed little Scissors,
Slipped in its proper case.
"And now," said little Mary,
"You're mine to own and use;
And I shall keep you after this,
Just where, and how I choose.
Each one of you shall have a place,
And in that place shall stay,
Whenever I put by my work
For study, or for play;
So when I come again to make
My dolly a new dress,
I'll find you where I put you,
All snug and still, I guess."

* * * *

Now little Mary, from that day,
With Basket kept her word—
And nothing more,
From Needle, Thimble, Scissors,
Or thread was ever heard.

THE VANILLA OF COMMERCE.—The vanilla, so much prized for its delicious flavor, is the product of a vine which grows to the top of the loftiest trees. Its leaves somewhat resemble those of the grape; the flowers are red and yellow, and when they fall off are succeeded by the pods, which grow in clusters like our ordinary beans; green at first, they change to yellow, and finally to a dark brown. To be preserved they are gathered when yellow, and put in heaps for a few days to ferment. They are afterward placed in the sun to dry, flattened by the hand, and carefully rubbed with cocoanut oil, and then packed in dry plantain leaves, so as to confine their powerful aromatic odor. The vanilla bean is the article used to scent snuff, flavor ice-creams, jellies, etc. The plant grows in Central America and other hot countries.

HIGHLAND NAMES.—The following table gives the meaning of the names of the principal Highland clans in Scotland:

M'Intosh, the son of the First.
M'Donald, the son of Brown Eyes.
M'Dugall, the son of Black Eyes.
M'Onnechy or Duncan, the son of Brown Head.
M'Gregor, the son of a Meek Man.
M'Cuithber, the son of the Arch Druid.
M'Kay, the son of the Prophet.
M'Taggart, the son of the Priest.
M'Leod, the son of the Wonder.
M'Lean, the son of the Lion.
M'Kenzie, the son of the Friendly One.
M'Intyre, the son of the Carpenter.
Campbell, Crooked Mouth.
Cameron, Crooked Nose.
Stewart, High Stay or Support.

NAMES that lie upon the ground are not easily set on fire by the torch of envy, but those quickly catch it which are raised up by fame, or wave to the breeze of prosperity.—*Landon.*

THERE is beauty enough on earth to make a home for angels.

EDITOR'S TABLE.

To Correspondents.

We would say a word in explanation, of what may seem strange to many of our friends who write articles for the *Farmer*.

1st. Why they do not always appear promptly, or at all perhaps. For this there are many reasons, the most common of which are, the being received too late for the number in which they are intended to appear. The inate disposition in human nature to procrastinate, leads us almost all to defer what we intend doing until the last moment, and often times a little longer, until what was intended should be in season, absolutely turns up at last *a little too late*. Thus we often receive communications of a general nature, which according to our plan can only appear in the fore part of the *Farmer*, after the said fore part (or first form) is printed, which is always as early as the tenth of the preceeding month, thereby absolutely precluding them, however much we may regret it. Often such articles are wholly out of season before the issue of the next number, and therefore lost. All such general, and even special articles, ought as much as possible to be sent in early, no matter if a month ahead.

2d. Those who write for publication, should avoid generalities as much as possible; almost any one can generalize and write over whole sheets, often without a single point that is new. Such articles may be pleasant but usually are not very instructive. Those who write for the instruction of others, should have some definite and specific point in view besides a mere desire to write, and should come at once to the subject, without too many apologies to the "Editor," or compliments for the paper. Directness and brevity are excellent features in composition.

This last caution is not needed by many of our correspondents, but there is now and then one that it will not hit amiss.

Then, the writing upon two or three distinct subjects, in the same article, is a bad practice, as well as the writing upon both sides of the sheet.

We not unfrequently receive articles, wholly or in part foreign to the subject and scope of the *Farmer;* these of course we lay aside.—We also not unfrequently receive long articles intended as advertisements for somebody's patent right or speculation; these too we of course omit. We are in receipt of a long series, of long article sat the present time, intended, as near as we can judge, to bring a certain patent bee hive into especial notice. We are the more led to think so, because we see substantially the same articles published in several of our exchanges. Now this may be a smart way of advertising, as well as economical, but will hardly work with us. In winter, we find by experience, that we usually get much more miscellaneous matter than we can publish, and in summer ordinarily less. Therefore for all of the aforesaid reasons, and many others that might be mentioned, we often have to lay over communications, many of which contain valuable information, and would well justify publication.

Still, as usual, we shall always deem it a pleasure to publish every thing from our correspondents that circumstances will warrant, and in what we have said would not be understood as wishing or intending to be over critical; but it occurred to us that a few suggestions upon the subject would not be wholly unprofitable.

As hitherto, we find it necessary to lay over numbers of communications the present month that we would gladly publish, and will yet, when circumstances will permit.

Binding the Farmer for 1856 and 1857.

We have got some beautiful covers for binding these two volumes (not in one, but separately) with a beautiful illustrative cut on fancy paper, to face the title page of each.—Price of binding, 40 cts. per copy, as usual. We are binding many hundreds, and wish to thousands. Send them in, friends, on every occasion; we will warrant you to be more than pleased with them when bound.

The Transactions—

Of the Wisconsin State Agricultural Society, are now completed and ready for distribution to those to whom they were awarded at State Fair as premiums; also to life members of the Society, and to Editors of the State; to all of whom they will be forwarded on request and as directed if practicable. No plan yet determined for distribution to County Societies, and others.

Congressional Documents.

We are indebted to our Hon. Members at Washington for numbers of valuable public documents, speeches, &c., *and hope to be* called upon for many similar acknowledgments, before the close of the Session.

State Agricultural Society.

The Executive Committee of this Society held their annual winter business session at Madison, on the first week in February. The meeting was pretty well attended, and the entire business for the year blocked out.

A Committee of Arrangements, consisting of Messrs. J. F. Willard, (President of the Society,) S. S. Daggett, Esq., of Milwaukee, and D. J. Powers, were appointed and empowered to fix upon the place, and make all needful arrangements for the next Annual Fair, which it was determined to hold for the four days from the 5th to the 8th of October.

We think we do not assume too much when we say that the present Executive Committee of the Society is composed of as staunch and judicious men as are often associated together in such an enterprise.

The interests of the State, aimed to be met and provided for by the Society, were well considered during the session, and a disposition evinced to fully meet and sustain them. In laying down the plans for the next fair, the purpose seemed more to have a good than a great one—to so adjust matters as to collect together the appreciative and the useful, instead of the merely curious and fun loving.—Still there will probably be a proper provision for the latter, much as usual near the close of the Fair.

The Premiums, in amount, will be about the same as last year, with some considerable variations in their proportional amounts. Among other new things, a premium of $50 will probably be offered for the best Sugar Manufacturing Apparatus, on the ground, in actual operation through all the processes of grinding, boiling, clarifying the syrup, and graining the sugar. It is believed that demonstrations of this kind can be got up that will be more instructive and valuable to the assembled observers of the State, by far, than the whole cost of the Fair.

The Society also offers premiums of $25 for the best premium essays,—1st, On the best modes of cultivation of an ordinary sized farm of mixed husbandry. 2d, On the best plans for, and arrangement of farm buildings, for a medium sized farm. The buildings altogether not to exceed $2,000 in cost.

Also on field crops in their varieties. The whole list will probably be published at no distant time, and we think will elicit some interest among the enterprising and progressive of our farmers, artizans and house-wives.

The vacancy in the Executive Committee caused by the resignation of Hon. Edward Pier, of Fond du Lac, (Vice President,) was filled by the election of the Hon. F. McCarty, of the same place. And the vacancy caused by the removal of N. P. Davis, Esq. from the State, was filled by the election of the Hon. Wm. R. Taylor of this County.

Seeds for Distribution.

Sugar Cane.—About the time this number is being received by our subscribers, we shall be in receipt of some ten bushels of the above seed directly from the South, and about the quality of which there will probably be no question. We shall obtain this and whatever more is necessary for distribution among our agents and subscribers, according to our terms advertised upon the last page of the cover, which please read carefully so as not to misunderstand it.

Bad Seed.—Some few have notified us that they received bad seed of us last year (which is not strange considering the many parties from whom we had to buy it, and always at high prices,) to make up the very large quantity that we distributed—probably 15,000 packages for the *Farmer* and State Agricultural Society.

To all such we would say that it will give us great pleasure to replace it, the present season, with that which is good, to all who will call or send to us for it, and *gratis* of course, as in all former instances. We shall in no instance sell seed, our purpose being purely to distribute for experiment. Thence if any happen to get a poor article of us, we cannot help it, as we warrant nothing, nor receive nor ask anything for what we distribute.

One very sagacious and economical friend to whom we *gave* a package of the Cane Seed last year that was bogus (although we believe we received it from the Patent Office) wrote us not long since claiming considerable damage for the failure and loss of time in cultivating it. We promptly replied, offering to pay up, if it took our farm. Consequently the matter will probably be adjusted without appeal to the Supreme Court. We hope so at least.

Hungarian Grass Seed.—We have also ordered ten bushels of this article for distribution as is the case of the Cane Seed. And from now on to planting time we shall be picking up whatever is rare or seemingly desirable for the same purpose. *Duly avoiding all ordinary Garden Seeds,* which we do not pro-

pose to furnish people *at all*, and want it so understood, to save all inquiries, trouble and disappointment. But everything that we can get that is new, choice and desirable, we shall as before said, circulate as widely among our friends as possible, and trust to time for appreciation and reward.

CULTIVATION OF SUGAR CANE.—We shall publish a complete and comprehensive article on this subject in the next number, giving all the information extant or desirable in all respects up to the present. So that none need to buy books of instruction on the subject, unless they wish to become extraordinarily scienced in its cultivation or manufacture.

The Distribution of Seeds by Agricultural Publishers.

We notice an article in that somewhat *seedy* rundown-village-newspaper-like-looking sheet, that has changed its editors, style, face and form, at least three times in as many years, to-wit: the *Prairie Farmer*, making great ado about those of its more enterprising brethren who think proper to distribute seeds to their subscribers. It talks very complacently if not very dignified, and deals in divers disparaging epithets.

We suppose the blow is mainly aimed at its enterprising and much dreaded next door neighbor—*Emery's Journal of Agriculture.*—But as it hits us also in what we consider an insolent and uncalled for way, we have thought proper to take thus much notice of the gentleman who conducts it, probably for the small sum of his bread and cheese, and dear to his employers at that. There, Mr. *Prairie Farmer*, will you mind your own business hereafter? That is our motto and practice.

County Agricultural Society Appropriations.

The Legislature have amended the law under which the $100 annual appropriations are made to Co. Ag. Societies, so that all the organized Societies of the State, (whether recognized under the law or not) that have made their reports to the Secretary of State previous to the passage of the amendment, and generally substantially complied with the law.

So that all Societies that have attended to their matters in anything like a proper manner, will be able to get their money.

Ohio Pomological Transaction for 1857—

Received but not yet carefully examined.—It is the offspring of the best pomologists in America, and we will copy such portions as will be useful for our latitude hereafter.

The Editor among the People—Third Tour.

Our third tour was altogether a satisfactory one, inasmuch as the weather, after the first two or three days, was favorable, and our greetings were quite uniformly warm and cordial. Gentlemen of all classes and professions—farmers, merchants, bankers, lawyers, doctors, clergymen, and even hotel-keepers(!) appeared glad to see and entertain us. It must not be understood, however, that the order observed in the enumeration was intended to illustrate the comparative degree of cordiality of the several classes; for had the order been premeditated we should have been compelled to quite a different arrangement: Of our brethren of the press we take especial occasion to say a few hearty words. Proverbially generous, they appear to have been *extra* generous toward our enterprise, advertising our meetings gratuitously, without an exception, and lavishing encomiums upon our efforts, without mercy. We shall ever remember them with grateful heart and anxiously hope for an opportunity to reciprocate their generous favors. *Vive la Editeurs!*

Our first point was Milton, known to the whole State as a flourishing village at the junction of the M. & M. and S. W. R. R.'s—the place where that queer, antique, Turko-Persian-looking block of grout buildings, with a black sun rising out of the gable-end of each, first salutes the eye, and makes one feel that during some Rip Van Winkle sleep, he has been translated to the realms of the Orient.—Here we *disembarked*, and soon satisfied our curiosity, by meeting, face to face, the author of this piece of architecture, who, with a hearty "God bless you! You are welcome here," took us cordially by the hand, and made us feel that we had known Uncle Joe Goodrich for at least two hundred and fifty years! The man and the block are each a commentary on the other;—no two passages of scripture in context were ever more mutually explanatory. Our lecture was delivered in Academy Hall, under the auspices of Uncle Joseph and the worthy Principal of the Academy, Mr. Spicer, and was well attended, all things considered. The Milton Academy is provided with two excellent four story brick buildings, and is based upon the christian principle of educating the sexes in common. A rival Institution is planned, and its buildings already commenced; the ground of difference being the day of the week upon which the Sabbath

should fall! We commend both parties to this divine declaration:—"The Sabbath was made for man, and not man for the Sabbath." There is certainly philosophy enough to harmonize all differences, and we hope these two vigorous forces will yet join hands and build up an Institution that will be the pride of Milton, and an honor to the State.—There is a splendid farming country lying about the village, and we can see no reason why Milton should not be a large and flourishing town.

Whitewater, twelve miles below M., is a much larger and handsomer place than we had imagined, and is well sustained by an enterprising community in town and country. Our feet were no sooner planted on her soil, than we were "picked up" by a certain wholesouled gentleman, who politely announced himself as our host, and transported us *vi et armis* to as beautiful a rural home "by the side of the brook," as we have seen in the West. And his wife, and daughter, and sons, and orchards, and well-stored cellar,—how cordial was the welcome of each and all! Here around the cheerful fireside, while the snow-flakes were falling without, with social converse, and *such* apples, and *such cider*, (who has not heard of H. J. Starin's extraordinary fruits?) we spent the short hours of our visit with only the absence of our dearer, better self, to detract from the perfectness of our enjoyment. The lecture was delivered in Metropolitan Hall, to a large and brilliant audience; and after doing ourselves the honor to call upon the gentlemanly and generous Editors of the *Register*, and making several agreeable calls, with our host, we took our leave of friend Starin and Whitewater, bearing with us, a basket of the finest apples we ever saw, and promising ourselves—Mrs. H. included—the pleasure of a second visit when summer shall have come, with soft verdure and sweet flowers.

Next came Palmyra, city of old renown in ancient story. We went prepared to gaze with poetic and historic eye upon the ruins of a once mighty metropolis,—taking with us of course, our sketch-book and pencil, with which to capture the outlines of ruined temples, basilica and towers,—but lo! a *village* of *almost* modern build,—with wooden dwellings and churches and *taverns*! Did our eyes deceive us?—No, this *was* Palmyra, but the Palmyra of Wisconsin,—a pleasant village, (hope we don't offend by not calling it a *city*—the seeming end of village ambition, in our State,) probably much better known to every body else in the State than it was to us. Our lecture, although the people had been *spiritualized* almost to death by A. J. Davis and fellow woman, and notwithstanding there was no bell in town—not even a cow-bell—wherewith to "*ring* the people in," was nevertheless well attended and well received by an intelligent auditory. Our stay over the Sabbath was made very pleasant indeed by Mr. Turner and family, who were our special entertainers, and Mr. Carpenter, President of the Jeff. Co. Ag. Soc. Among the objects of interest at P. is the new school-house, projected and planned by our friend A. J. Craig, Ed. Wis. Journal of Education; which, however, we were only able to see afar. Who will prove to us that Palmyra may not yet be as great and famous as her ancient namesake?

Seed Corn—Dent Corn Rotting in Cribs.

How many of our farmers know just where their seed corn is coming from in the spring, which is now so near at hand, All will bear in mind that very little corn ripened fully and went into the bin dry and sound last fall, especially the dent varieties. We doubt if there is much of the latter in the State, that is safe and sure to grow, while on the other hand very many thousands of bushels are moulding in the crib which will fully spoil as soon as warm weather comes on if not fed out before.

We enjoin upon all thus early to look up their seed corn, and not to fail to put it in a pan of moist earth and set it in a warm place for a few days to test it; if good it will sprout, but if it does not on a fair trial, then put not your trust in it, but bestir yourself in due time for some that will. We predict that good seed corn will be scarce and hard to be got. Ours is already secured.

Agricultural College.

A bill has been introduced into the Legislature for such an Institution in connection with an Experimental Farm, and seems to meet with especial favor. We see no reason why it may not pass.

Michigan has such an Institution, that is flourishing highly, and well filled with students. We are in receipt of the last report, to which we will refer more at length hereafter, as well as to the whole subject of Agricultural Colleges, and State Legislation in general, which by then will have been pretty much finished up for the year, probably.

New Advertisements.

See Nursery Advertisements in this number. The old Rock County, by Colby & Willey, on hand with everything both good and cheap.—A. G. Hanford, Esq., of Waukesha offers an attractive and undoubtedly a fine collection of all the choice articles.—And last though not least comes in our old friend Geo. P. Peffer of Pewaukee. See what variety of new things he offers. He is a great hand for fishing up the choice things a little ahead.—Then comes Lawton with his famous Lawton Blackberry, offering by the dozen and hundred. He claims that they are another thing altogether from the New Rochelle, and vastly superior.—Thorburn's Flower Seed List will not be unattractive, especially to the ladies, although some of the names may smash their *dentistry* in pronouncing.

Wind Mills.—See what is said of these wonderful labor saving engines, (destined to become as common in America as in Holland.) We saw Major May's do all the wonders of printing, pumping, straw cutting, &c., on the State Fair grounds, and it did the thing up brown. See the new Testimonials for Halladay's, especially Rev. J. G. Kanouse's, one of our Dane County farmers. Who will doubt their working hereafter?

Spring Garden Seeds.—See the advertisement of J. M. Thorburn & Co., 15 John St., N. Y. The oldest seed house in America, having been going more than sixty years. How they have lived so long if they are not reliable and good men to deal with, we cannot tell.—Read their list carefully all who wish to buy.

Wood & North's Patent Adjustable Subsoil Attachment.—See certificate of scores of men who have used it, and Richard E. Ela's name at the head, one of the most experienced plow makers in the State.

Agricultural Books.—See A. O. Moore's notice of valuable new works on Hedging, Evergreens, Fish Culture, Sorgho, &c., besides his general book list of 100 works on 3d page of cover.

Dodge Co. Mutual Insurance Co.—See their Annual Report; it certainly shows well, and is said by those that are acquainted with it to be an excellent company.

Emery's Journal of Agriculture.—See the advertisement of this new and enterprising Agricultural paper.

Fine Short Horns for sale.—See advertisement of Cha's H. Williams.

Farm, Stock, &c., for sale.—See advertise- of Richard H. Douglas, of Sauk Co.

LITERARY NOTICES.

Second Volume of Transactions of Illinois State Agricultural Society.—We are indebted to the Cor. Sec. of said Society for a copy, and have deferred a notice for some weeks, in hopes of space for one as extended as it deserves, but a multiplicity of subjects crowd each number of a monthly. Suffice it to say, that it is a volume highly creditable to its author, John A. Kenicott, Esq., to its various contributors (among whom is our I. A. Lapham, in a valuable scientific article on the grasses of Illinois, and others from Rob't Kenicott on the natural history of the State, both well illustrated,) and to the noble State whose agricultural and business interests it represents.

Essay on the Insects and Diseases injurious to the Wheat Crop.—By H. Y. Hind, Esq., Professor of Chemistry at Trinity College, Toronto. We are indebted to J. H. Crewley, Esq., of this county, and also to the author, for copies of this highly valuable work; a prize essay before the Canadian Board of Agriculture and Statistics. It goes thoroughly into the history, habits and scientific character of all the insect plagues upon the wheat crop, and makes the best exposition of the subject that we have yet seen. We shall publish such extracts from it in subsequent numbers as will be most useful to our readers. We hope that it will soon be published in cheap form for wide circulation among the wheat growers of the West.

Godey's Lady's Book for March is as usual received promptly ahead of time, and as in each succeeding issue seemingly eclipsing the last, in all that pertains to artistic taste and matter. For all who prize the fancy above the substantial, it is par excellence among the parlor magazines. But as the standard of female mind is absolutely rising and solidifying under the modern blaze of light and utilitarian progress, the fancy magazine makers will have to rely on something more than rehashes of stale love stories, painted dolls or expanded skirts, to retain the highest grade of intellectual favor and popularity. We predict that ten years will work quite a change in the appearance, tone and character of American Parlor Magazines.

Meteorological Synopsis for January, 1858.

Barometer stood highest on the 7th, 29.630.
" " lowest on the 16th, 28.354.
Average for the month, 29.018.
Thermometer stood highest on the 25th, 54 degrees.
" " lowest on the 7th, 9 "
Average for the month, 31 "
Amount of rain, 1.83 inches.
The prevailing winds were South and South-west.

University.

MARKET REPORT, COMPILED FROM THE LATEST PAPERS.

	N. York.	Buffalo.	Clevel'd.	Chicago.	Milw'kee	F. du Lac	Stev's Pt.	Madison.	Pr. d'Ch'n	St. Paul.
Flour per cwt	4,90@5,50	....	4,00@4,50	5,32@5,56	3,00@4,00	1,50@1,75	....	1,50@1,75	1,50@2,00	4,00@4,50
Wheat	1,15@1,25	....	80@1,00	54	58@62	56@60	....	42@47	40@45	 70
Corn	60	....	40@60	32	35@40	30	....	35@38	30@35	60@75
Oats	40@45	....	28@29	20	25@27	17	 45	18@20	20@25	 40
Barley	70@78	.. ....	50	25@40	35@45	35	....	35@40	....	 75
Hay	9,@12,00	....	8@10	....	....	....	 5,00	7@8	....	....
Timothy Seed	....	....	2,00@2,75	....	....	1,25	....	....	....	....
Potatoes	95@1,00	....	36@40	40	30@37	20	 30	25	35@45	 50
Beans	1,40@1,50	....	75@1,00	....	 75	....	....	....	3,00	 2,50
Green Apples	3,00@3,25	....	1,50@1,75	....	....	3,50@4,00	....	....	....	....
Dried " ℔ lb	7@8	....	1,00@1,25	....	12½	12½	....	....	15	....
Dried Peaches	15@18	....	....	....	....	....	....	....	....	....
Salt	....	....	1,75	2,00	1,94	....	6,00	3,00@3,25	2,00	 3,75
Pork ℔ bbl	15,@16,75	....	18,00	12,00	....	18@20	17,00	....	15,00	....
Fresh Pork ℔ lb	....	....	8½@5	4½@5	....	5@6	07	6@7	....	....
Lard	10@11	....	7@8½	9	....	....	10	9@10	....	....
Beef	6 on foot	....	....	....	5¾@5¾	3,00@4,00	....	3,00@4,00	....	....
Mutton	10	....	4½@6	....	....	....	....	5	....	....
Turkies ℔ lb	7½@8½	....	9@10	6@8	....	7@8	....	8@10	....	....
Chickens	9@11	....	6@7	12@15	....	6@7	....	....	....	....
Butter	15@21	....	15@16	16@18	15	17@18	 18	15@16	20	27@35
Cheese	6@8	....	7@9	11@12	....	....	 12	 16	12@15	... 16
Eggs ℔ doz	20	....	12½@14	13@15	....	15	 18	10@12	20	 35
Common Lumber	....	....	....	....	....	10,00	....	....	15,00	10,@16,00
Clear "	....	....	....	....	....	18,00	.. ....	....	27,50	....
2d "	....	....	....	....	....	14,00	....	....	22,50	....
Shingles	....	....	....	....	1,00@2,50	2,00@2,50	....	....	2,00@2,50	4,00@5,00

The markets of the country show very little change during the last month. No indications yet of any material improvment in the prices of the great Western staples of grain and meat. The foreign demand continues light and unpromising for the future. Consequently the prospect of a rise in prices at the opening of navigation is at least dubious and doubtful.

Still we cannot fully dismiss the idea from our minds, that the present stagnation will wear away, as the stock gradually diminishes—that monetary matters will gradually improve, and altogether work up the prices of the more strictly commercial staples, to somewhat better prices before the maturity of another harvest.

As hitherto, we would enjoin upon all to be careful of what they have, notwithstanding the dullness of prospects. Whatever is perishable, dispose of. What will keep, take care of, until you can dispose of it.

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NORTH-WESTERN CULTIVATOR.

Vol. X. MADISON, APRIL, 1858. No. 4.

D. J. POWERS AND PROF. J. W. HOYT, Editors.

VEGETABLE CHEMISTRY.



THE PLANT.—CONSTITUENTS—No. 8.—Finally, we come to treat of that class of constituents, known as coloring matters, naming a few of the most important.

Whatever may be the source of color, philosophically considered, it is certainly true that the Infinite Beauty of the universe finds therein one of the most common and recognizable means of demonstration.

What were the world without color—its numberless shades and myriad tintings, the verdant earth, the gorgeous hue of changing autumn leaves, the parti-colored flowers and plumes of the gay, warbling songsters—sweet musicians of the groves,—what the blue, arched canopy of heaven, the azure-tinted cloud with gold and silver lining,—what the *visible* beauty of this beautiful world were color destroyed and all things to appear in simple, modest gray? Why, the absence of color would require the re-constitution of the human mind—aye, and the mind of the great Author too; for color is the offspring of that sense of the beautiful which symbolizes the quality of God, and God clothed the world with the beauty of colorings not more because they are pleasing to us than because they are delighting to Him. Sparkling gems deep hid in the bosom of the earth; etherial flowers of matchless hue, and numberless beasts, birds, and insects on the islands of the unknown sea; "trailing clouds of beauty," tinted with a ray of golden sunlight, and with brilliant, ever-shifting hues, bursting at last, unrestrained, into a gold-and-crimson sunset of gorgeous magnificence and ravishing beauty, where the eye of man may not delight itself with the glorious vision,—all these are proof that color has its origin in the beauty-loving quality of the Infinite Soul.

That there is also in man a universal sense responding to the beauty of color, is apparent from his effort in all ages and at all stages of his development to imitate nature. The rude savage who daubs himself with the colored juices of fruits and of roots, on the one hand, and the immortal Michael Angelo and diviner Raphael, on the other, with almost infinite gradations between them, are undeniable evidences.

The Painter—twin brother of the Poet—what a mission divine tasks his heaven-born genius! To transcribe and preserve the actualities of life and nature—the *things* of nature, those dear faces and forms that could otherwise only exist in the picture gallery of memory; the heroic deeds of history thus embalmed or reproduced, and a *creation*, through god-like powers of combination and a true conception of the possibilities of material and spiritual things, of that perfect Ideal to which the individual soul and the world of souls must

ever aspire,—this is his mission. And his reward? O that is the etherial joy—the ravishment of soul—the divine "phrenzy," which only he may know who thus allies himself to God!

Of colors properly called *primary*, there are three—red, yellow, blue—colors which hardly occur pure in the vegetable world, and yet are quite faithfully represented by the Red Geranium Flower, the Yellow Jasemine, and the Blue Sage. The quantity, however, derivable from these sources is so trifling that commerce is obliged to look to a variety of coloring matters which only approximate purity. A brief account of some of these, observing the order of their occurrence in the solar spectrum, may be interesting.

RED COLORING MATTERS.

Of these we have almost a perfect type in the Red Geranium.

Physiologically and psychologically considered, red is a stimulating color. Stimulating to the eye, if continued for a long time it produces inflamation and disorganization. It also has a like effect upon the mind, producing excitation and kindling the fires of the soul. So marked and extreme is this effect upon some animals that large masses of red, as red clothes, are used to enrage them; turkeys and wild cattle are examples. Every roguish boy in christendom has amused himself by thus enraging the consequential gobbler, and the use of the red flag in the bull fights of Spain is familiar to all. Indeed we venture to suggest that *man* is no exception, and that the red coats of the British soldiery helped to achieve the American Independence!

The artistic effect is warming, and the skillful painter is able to use it with wonderful effect. Combined with yellow it produces orange —with blue, every shade of purple and violet.

Of the substances used in dyeing and calico printing, Logwood, Brazil wood, Redwood, Camwood, and Madder are the most common.

Logwood, or *campeach*, as it is sometimes called, is obtained from a tree growing on the bay of Compeachy and in Jamaica, known to botanists as the *Hæmatoxylon Campeachiacum*, which grows in proper soil to a great size, and is characterized by laurel-like leaves, and a smooth, thin bark protected by thorns. The wood of the chips is heavier than water and very hard, taking a fine polish.

The coloring principle of logwood is a deep *red*, called *haematoxylin*, which by various chemical processes is often separated from the wood—the log*wood* itself, however, is more commonly used, and not unfrequently, by housewives, with inferior effect, owing to the use of water containing lime, or other alkaline substances, which produce a dullness, particularly when the logwood liquor is mixed with various metallic salts for the production of a *black*.

These salts are called *mordants*, (from *mordeo*, I bite,) because they are said to bite the coloring matter into the cloth,—without their aid, the color will not be permanent.

Madder is obtained from the root of the *Rubia tinctoria*, a plant which grows in Italy, France and Switzerland, and even in the United States. We have cultivated it in our own garden with success. The color when first extracted is yellowish, but becomes red on exposure. When fresh in the root, and after being cut and ground to powder, (in which state it is used by the dyer,) has a slight earthy flavor, and yields a heavy sweet smell. Inferior specimens have a sour, musty odor. Chemists have detected several coloring matters in the root, which are all seperable, one from the others, and have been styled *madder red, madder purple, madder orange, madder yellow, and madder brown.*

YELLOW COLORING MATTERS.

Yellow is the type of the colorific rays, being more brilliant than any other, and is of all the most disorganizing to the eye. Combined with red, it produces *orange;* with blue it produces *green.* Its contrasting color is violet—hence its appropriateness to the sable complexion of the African. By the artist it is used to give a warm, animated tone to the picture.

The yellow coloring matters of vegetable origin are not so numerous as the red, and are chiefly obtained from the bark of the black oak, the wood of the West India mulberry, (fustic,) from the berries of the buckthorn, and the Anotta tree.

Anotta, or anetto, is obtained from the pulp of the seeds of the *Bixa orellaus*, a native of South America, but cultivated in Guana, St. Domingo and the East Indies.

The seeds are raisin-like in their appearance and enveloped within a pulp which is itself inclosed within an oblong bristled pod resembling the chestnut bur. As the fruit matures, this pod bursts and displays the rich crimson pulp.

To obtain the coloring matter, the pods are divested of their husks, bruised and thrown

into a vat with just enough water to moisten them, and allowed to remain until fermentation renders a separation of the pulp from the seed easy by the aid of agitation with paddles.—The liquor is then strained through seives, and boiled in copper vessels until the coloring matter floats to the surface as scum, which is then still further boiled until reduced to a paste, when it is made up into cakes and dried.

Used for dyeing cotton cloth, and coloring butter and cheese.

BLUE COLORING MATTERS.

Blue has a cooling instead of stimulating effect upon the mind and the eye; hence the azure of the sky, and its use in the preparation of spectacles for weak and irritable eyes. Its contrasting color is orange. With yellow it forms the secondary *green*, and with red the secondary *purple*. Next to black it forms the most perfect contrast to white.

Of the blue vegetable coloring matters, Indigo and Litmus are the most notable.

The early history of indigo is but little known. The Greeks and Romans used it as a paint, under the name of *Indicum;* but its value as a dyeing agent was not known in Europe until near the close of the 16th century, when it was imported from India by the Dutch.

It is obtained from a genus of plants known as the *Indigofera*, of which there are some sixty species described by botanists. The *I. anil, I. argentea*, and *I. tinctoria*, however, are the chief sources of it to commerce—plants which grow natively in India, Africa, and South America. The coloring matter resides in the cellular tissue of the leaves of the several shrubs, and in the natural state is not blue but white,—it is not until the vessels have been ruptured, and oxygen been absorbed that the *color* is developed.

There are several modes of preparing Indigo for commerce, but we will confine our description to that which is the most common. The plant, which grows from four to seven feet high, is shorn of its leaves and twigs, which, in bundles of a foot in diameter, are placed in a water-tight, brick vat, and covered with cold water, the bundles being kept from rising by a layer of bamboo canes covered with blocks and stones. After a little, fermentation commences and is completed in ten or twelve hours, when the liquor is drained off into another vat low enough down to receive it. This second vat is then entered by men who walk back and forth, and with sticks like canoe-paddles, agitate the liquid until the coloring matter aggregates into small semi-fluid lumps, which are allowed to subside. This pasty mass is then removed, after the supernatant liquor has been drawn off, and boiled in copper vessels until still further reduced in consistency, and again drawn off into a vat with a filter at one end. After draining, the paste is placed upon proper frames and subjected to pressure. It is then cut up into cakes and dried in ovens, when it is ready for commerce.

The physical properties of Indigo are familiar to every one. Insoluble in alcohol, ether, alkalies and dilute acids.

Chemically considered it consists of carbon 6 parts, hydrogen 5, oxygen 2, nitrogen 1.

By the action of nitric acid and chlorine, a large number of new compounds are produced, such as isatine, isatinic acid, carbazotic acid, chlorisatine, bichlorisatine, chloridoptine, &c., most of which have been turned to but little account.

Being almost the only vegetable coloring matter permanent without mordants, it has a very general use. In calico printing, the white figures are produced by either first stamping them in agents which resist the action of the dye, and are washed off after dyeing, or by first dying the fabric blue, stamping the figures in chromate of potash, and then removing the compound of the indigo and chromate by oxalic acid.

Litmus is extracted from certain lichens in Holland, as the *Lecanora tartaria*, by a secret process, and is remarkable as the best *test of acids*, being changed thereby to a red.

GREEN COLORING MATTERS.

Chlorophyl, or leaf-green, is that which gives color to the foliage of the great vegetable world, and in its admirable adaptation to the mind and eye of man, furnishes one of the most interesting proofs of the beneficence of the great Author. According to Berzelius, it exists in so small quantity in plants, that if all extracted, a large tree would not furnish more than 100 grains. Formed by the chemical agency of sunlight, how suddenly it changes the pale leaves of the forest and meadow to a deep fresh green.

As extracted from the leaf or bark, chlorophyl is a waxy substance, soluble in alcohol and acids, but insoluble in water. Unavailable for the arts, it appears to have been solely intended for the world's adornment. H.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER IV.

PLANTING TREES FOR ORNAMENT—FRUIT AND FOREST.

Having carried along our rural plan, from the selection of the land for the farm, to the dividing and subdividing, and to the making the requisite fences therefor, we are now brought in the order of our programme, to the next stage of putting on the *lace* work, or ornament, in the way of trees both for beauty and utility.

And in treating this portion of our subject, we shall only aim as hitherto to present the more prominent and practical features, such as will be likely to be useful to the great masses of our readers, instead of the few amateurs, whom we would not presume to instruct, and to whom we shall leave the task of filling up the picture with more specific instruction, in the details, for the reason if for no other, that it is impossible for us, in so general an article, to be as minute upon individual subjects, as a thorough understanding of them might require.

But in what we say, we shall aim to confine ourselves to what we believe to be practicable and attainable, here in our own northern country and latitude, instead of indulging in mere flights of fancy, and as is too common, talk about things desirable in themselves to have, but wholly impossible to be grown or produced successfully among us. First then in the order, though not so in importance, are

ORNAMENTAL TREES,

not merely for the amateur yards and gardens, of a few of our wealthy and tasty citizens of the large towns, but for the farms and homesteads of our tens of thousands of rural inhabitants throughout the land.

First then in the list of ornamental trees, of the *deciduous* order, we shall give the preference to one of our most common forest trees, as being in almost all respects superior to any other yet tried among us, foreign or native.—The SUGAR MAPLE, from its very *commonness* too often undervalued, is the peer among the ornamental, and not much less so among the useful, of our forest trees. No tree that will bear transplanting, is more common in our forests; and in those regions of the State and West, where it does not already abound, it can be grown even from the seed, much easier and faster than is generally supposed. The open land grown trees, come forward enough faster usually, than those transplanted from the forests, to make up in a dozen years for all lost time, on account of planting the seed. We purpose giving full instructions in our subsequent numbers, each in its season, for the planting of the various desirable forest trees.

The sugar maple is a long-lived, clean and beautiful tree, with dense and varying foliage, and when grown to some size, has a good degree of utility, both for sugar, the mechanic arts and fuel. And the only possible valid objection to it is its slow growth. This to be sure is somewhat of an objection, but not a conclusive one by any means, especially with those who have an ambition to leave some mark of usefulness behind them. Let those who would be stable benefactors of their kind, fringe around their farms and fields with sugar maple, putting them at fair distance, (say two rods apart,) when they are grown, and between them plant any quick growing tree that best pleases them, to answer the purpose until the maple is grown. And for this purpose, we doubt if there is anything better, if obtainable, than its *faster* brother, the *red*, or as it is more commonly called, the *soft or white maple*. This too, can be grown easily and very rapidly from the seed, not unfrequently making a handsome sized shade tree in ten years, even exceeding the sugar maple in many respects, in natural beauty, but being shorter lived and less dignified in its general final character.—We would particularly commend this species of maple to those who are so impatient that they cannot wait for the other to grow. It will be found to be a beautiful tree in all respects.

But those who *cannot wait*, or obtain either, can plant the still faster growing trees—the locust, the poplar, the cotton wood, the silver-leafed arbela, and divers other kinds too well known to require a mention. We dwelt unusually long on the maple, on account of its intrinsic merits, but shall pass over other kinds without special remark, and direct our efforts mainly to the general importance and principal features of the subject.

It is a well established fact, that no outlay of the same amount upon a farm or village residence, will add so much to its beauty, pleasantness or saleability, as a judicious and proper growth of ornamental trees and shrubbery. Even a single accidental natural tree,

near a house, often imparts more beauty and cheerfulness to the scene, than all the labored ornaments of architecture. Who that has taste has not seen and realized the fact?

As to the precise manner in which trees should be disposed and planted, that is a matter of circumstance and taste, and if they are planted at all, it can hardly be done amiss, (the great fault generally being in not planting them at all.) A few ideas on this subject, however, may not be amiss. First then, it is in better taste to plant ornamental trees and shrubs in the foreground, and about a dwelling, than those for bearing fruit. Then again, they are much more appropriate upon street and road lines, than fruit trees, in our opinion (notwithstanding the opinions of some more theoretical than practical philanthropists to the contrary.) With the Vandal population we have in this country, (though unpleasant to say it,) we do not believe that an apple would ripen, upon a tree in or near the public highway, unless guarded by a *jail yard* fence in ten years; and if the trees were so small that they could be broken off for *ox-goads* or sled stakes, we would not insure them for a small sum, by any manner of means. Plant the streets and roads then we say, with ornamental and shade trees, and so far inside of your fences, that vagabond horses and cattle, running at large in the highways, cannot reach over the fences and brows them down. Then again, in planting tall growing, or wide branching trees, reference should be had as to where they will cast their shade. Lines of such trees, set north and south, do not shut out the sun, so much as when ranging east and west, in which case the north side is almost wholly shaded. Then again, close thick ranges of trees are often very valuable as wind breakers. All of the foregoing, and many other considerations, should be taken into account, in planning where, and how, to plant ornamental trees.

Those who have got well started with other ornamental trees, will do well to sprinkle in the *evergreens* among them. Nothing makes a more beautiful contrast, in summer or winter, with the rest of surrounding nature. The sombre and dark-colored evergreens, standing erect and pyramidal, amid the driving storms of winter, presents one of the most rich and pleasing pictures in nature's landscape. Now who that has evergreens growing thriftily about their dwellings, would sell or dispose of them much sooner than with their children. They become special pets, with which we are pleased and justly proud. Who cannot tell the culture of a household, and the character of its inmates, by the external evidences about their dwelling. It is a book that we often study when traveling, and calculate that we are not often deceived or mistaken in our conclusions. "The wood bined cottage," indicates tidiness and good taste within—a lady that is a good wife, and daughters that will make the same, as surely as the lack of these externals indicate the opposite characters.—We would rather select a wife in the flower garden, trowel in hand, than in the ball room with a fancy fan, and in nine cases out of ten, would make a better bargain.

Nor are the characters of men less indicated by these externals. We fancy that we can also read them truly in nine cases out of ten, while passing their homesteads, even in a railway car. Trees and shrubbery nicely taken care of, are never seen upon the premises of a sluggard, a careless man or a speculator, but only around the thrifty and attentive, the intelligent and prosperous.

As yet, time and divers circumstances have prevented very extensive planting of ornamental trees, in the newer portions of the West, but the time seems now to have fully come, when a new era should be inaugurated in this highly important matter, and we ardently hope to see it. Is it hoping too much, that the average of our readers will bestow at least as much time and attention upon the subject, as we have in writing thus much upon it.—Every body who owns a bit of earth, from a section farm down to a village lot, is almost equally interested in the subject, and under the same obligation to plant trees to the extent of their ability around them.

But alas, how many will resolve to do it, and when the time comes, with all the hurry and flurry of "spring's work" will finally do nothing about it. At least three-fourths of all, we fear. Still we say to all who have got force and action in them, to plant ornamental trees, of some kind, and in some quantity, each and every spring,—they will grow up and call them blessed The farm, or homestead, that is well fringed with ornamental trees, even of cheap and common kinds, will be noticed and admired by all, and if offered for sale will always find a buyer, at a much larger price, than the naked one.

PLANTING FRUIT TREES.

We shall not devote a very large space to this portion of our subject, at this time, for the reason that we have so often referred to it before, and for the further reason, that it is so often referred to by others. Still, in a general way, we would advise all to give it early, prompt and careful attention. And as heretofore, we would recommend the main attention to the more substantial articles of cultivation, and the bestowal of not too much time or money upon the more difficult and doubtful kinds of fruit. An apple orchard, selected from the most hardy varieties (whether in all cases the best fruit or not,) and planted in the orchard square of our model farm in the Feb. No., is the first grand essential. (We expect to publish a list of what are esteemed the most hardy fruits for our climate, in the Horticultural department of this number.) If any of the trees die out, keep planting them in from year to year, and when planted, bestow good care upon them. They need as frequent looking over and handling, as cattle or colts, to ensure their doing well, not only in this but in all other countries. The apple on account of its agency in the Original Sin, or from some other reason, seems to have as many destructives to prey upon and destroy it, as almost any other tree that could be mentioned. Hence the greater watchfulness is necessary, to guard and protect them from body and limb *borers*, *bark lice* and *aphides;* catterpillers, rabbits and sap blight. Still vigilance and care will shun them all, we verily believe, even in this country and climate, and enable the persevering to grow good apple orchards, at least in the great majority of cases. None, certainly, should abandon or neglect the effort, until fairly convinced to the contrary, by absolute demonstration.

Small sized, thrifty, low branching trees, will undoubtedly prove the most desirable for transplanting and cultivation, and if not pushed forward too fast in growth, will be much less likely to winter kill. A little patience in growing orchards, will be found to work well, as in every thing else. And those who are the slowest, will often win the race.

Cherries, pears and plums, will hardly pay for planting in this latitude, except by those who have an extra share of patience, and care to look to their after cultivation. Some of the hardier, of all these different fruits, will undoubtedly succeed when thus favored. Possibly some of the very hardiest standard pears and plums may succeed even under neglect, but it will not be often. More specific instructions, for selecting varieties, planting and management, will be found in the previous numbers and volumes of the *Farmer*, during the last two years, and in subsequent numbers of the work.

THE CULTIVATION OF FOREST TREES OR TIMBER.

This highly important subject, is one to which we have often adverted hitherto, and one to which we always refer with a great deal of interest. It of course has no attractions for the timbered portions of the State, and West; but for those vast regions of smooth, woodless prairie, and thinly scattered shrubless openings, possessed often of the finest and richest soils imaginable, and yet wholly or nearly destitute of that all-essential of use and beauty—timber. There can hardly be a more important subject of consideration or action.

Many seem to allow themselves to glide into the notion, that the prairies and openings are natural in their present condition, and that timber will hardly grow upon them. In fact, we have often heard this theory urged, and with the assurance that timber would not grow upon them. No idea could be more absurd, as the slightest observation shows that whenever, and wherever, the fires are shut out and any opportunity given, almost every kind of timbor grows with great luxuriance, and often springs up spontaneously. That the prairies and rich soils of the West will grow the finest timber and withal most rapidly, there can be no doubt; and that this whole Western world would have been one dense and mighty forest, not yet penetrated and settled for hundreds of years, if the annual fires had not cleared the way, seems equally certain.

What can be stranger then, than the dullness and delay of the thousands of prairie farmers, remote from timber of any kind, who defer from year to year, the simple, cheap and perfectly easy operation of planting timber of some kind, upon their farms. From our own observation, we are led to doubt if there is as many as one in a thousand of those who have lived on these farms, from ten to fifteen years, who yet have raised a finger to grow a tree upon their premises, for the purpose of timber. How easy it would have been, with many of them, years agone, to have broken up some outside corner (if rough and gravelly, all the

better,) and sowed it to locust, soft maple, cotton wood, poplar, oak, hickory, elm, butternut, cherry, ash, or almost anything else in the way of timber. The new land thus broken in June, and well dragged or cultivated in the fall, at the proper time of sowing fall seeds, or in the spring for such as are best adapted, and secured by a fence from ordinary intrusion, and the work is done until they are large enough to thin out for final growth. If sowed upon old ground, they will need weeding thoroughly for the first year. Most likely, running a cultivator through the rows, two or three times, for the first two years, would materially promote their growth.

The obtainment of the seed, readily and easily, is undoubtedly oftener an impediment in the estimation of those who would plant, than almost anything else; but with a little forethought and pains, they can easily be obtained, either by gathering in the neighborhoods where the butternuts, hickory nuts, acorns, cherry, maple or locust grow, at the proper times in the autumn, or they may usually be bought from dealers in them, although we think the former the best plan, when practicable, as one then knows that they have new and good seeds. Nearly all of them, are the better for being planted in the autumn. The cuttings of the cotton wood and poplar can be best planted in the spring, as also the locust seed—scalding being better for it than freezing.

Now this whole matter of planting and growing the common kinds of timber, is perfectly simple and easy, and *the main thing is to get about it.* Once started, it soon comes on to useful sizes, and is ever after a mine of wealth and pride to the owner.

We recommend the planting of divers varieties together, instead of separate (being careful not to plant too close,) for the reason that if one kind fails for any cause, other kinds are already on the ground to take its place; especially is it good policy to mix up the fast and slow, growing together, as the one will be ready finally, to succeed the other. We would plant in rows at least six feet apart, each way, putting several seeds in the hill, so as to be sure and have at least one good plant to each square. The surplus, after the first year, can be thinned out, and the blanks if any supplied, and the surplus plants can be set on new ground.

How many prairie farms in the country, need such forests as these started upon them, and as the rapid years roll on, what would add more to their value? We will venture to say, that such an outlay judiciously made, would pay at least twelve per cent. per annum through all time, besides being the greatest convenience imaginable, to the occupants of the farms, and a greater beauty still to the country.

A HUNDRED PER CENT. SPECULATION THAT IS LEGAL.

Those who never figured up the profits, *on paper*, of timber growing, may perhaps be a little surprised at the figures. Suppose a section of cheap prairie land is taken and planted entirely to locust timber in squares, once in eight feet, at which distance they would grow perfectly well and thrifty. A plat of this size, and at these distances, would contain the nice little number of about 500,000 trees, which in fifteen or twenty years, would grow large enough for railroad ties—two cuts to the tree, making altogether, 1,000,000 of them, more or less, which at 25 cents apiece, would amount to $250,000. And the land after being thus cut, and the tops of the trees, would be worth well nigh enough to pay for the labor of cutting and flattening the ties, which could be done wholly with machine saws, and with great expedition. The lot should of course be located at the crossing of as many railway tracks as possible, so as to afford a market for the ties. And what would be more acceptable to railroad companies than such a set of locust ties; they would last almost like iron. On land thus cut over, the stumps would again sprout up with double vigor from the ample roots, and grow again to proper and useful sizes, in two-thirds the time as at first; thus yielding a perpetual crop for all time, if not troubled by the borers.

Now if this is not as handsome a speculation *on paper*, as can well be shown, then we are no judge. Even after abating one-half for accidents, it is still perfectly bewildering in its results. The land if bought at government price, would not cost altogether, broken, fenced and planted, more than $3,000, nor more than $10,000, for principal, interest, cultivation, taxes and care, for the whole period, thus leaving a margin for more than one hundred per cent. profit per annum. What a chance for capitalists, who wish to make high rates of interest, without breaking the laws. The prairie would stand such a speculation as this, and never complain.

What we have thus demonstrated on a large scale, will be equally profitable in proportion, on a smaller one; ten acres will pay just as well in proportion as one thousand. Why then will not many of our farmers, who have more land in tillage than they wish to put into crops the present spring, plant a few acres of it in this way. Remember it must be new and clear of weeds, or woe to you in keeping it so, as the locust, at first, starts and grows so slow. We have 20,000 young locust trees, of one year's growth, fine and promising; and mean to plant twice as many more this spring, besides hosts of other trees. Who will bear us company? To such as wish, we will render every assistance in our power, *free gratis*, in the way of obtaining the seed, or otherwise.

P.

Correspondence of the Farmer.

Too Poor to take the Farmer—Raising and Feeding ing Carrots—How to Make a Seed Drill.

MESSRS. EDITORS:—I have been making an effort to get up a club for your paper, but the general cry is, we are too poor—the times are too hard. True the times are exceedingly tight, and that is one of my strongest reasons for taking the *Farmer*. I wonder if people will think the times are so hard that they cannot afford seed corn and potatoes to plant their fields after they have them plowed, or will they plant them without plowing to save the cost of a plow. I presume they will do neither. For myself, I would sooner sow one acre less to wheat and sell the seed to raise the money than to do without the *Farmer*, for I am too poor to do without it in these hard times. If a farmer does not need to exercise all his skill and obtain all the agricultural knowledge possible, to make farming pay in such times as these, then surely he must be a lucky man.—It is an easy matter for almost any man to dispense with some little luxury or pleasure and thereby save a dollar with which to pay for so useful and interesting a paper as the Wisconsin *Farmer*.

—A few words about Carrots. From this until the time grass comes in the spring, is the time that we feel the want or realize the benefit of having raised a good crop of carrots the past season. Probably many that have never used them are not aware of the advantage of raising and feeding carrots. In the first place it takes but a small piece of ground and a little labor to raise 500 or 1000 bushels, and for cows, young cattle, colts and sheep, I prefer them to any kind of grain; and for working teams, I would rather have part carrots than to feed all grain. I am wintering horses, cattle and sheep on wheat straw and carrots, without hay or grain, and they are in better condition than the most of cattle that have plenty of hay and a little grain.

Those who have raised and fed them know their value, but to those that have not I would say, try the experiment of raising an acre of carrots next summer, and if you are not satisfied with the result, please communicate the reasons of your dissatisfaction through the *Farmer*.

Now is a good time to procure your seed and lay your plans for the coming season. For a field crop, I prefer the large white variety, as they yield heavier and are harvested with half the labor, as they stand partly out of the ground. My method of raising carrots is as follows:—Take a good rich piece of sandy loam, (a good coat of well-rotted manure incorporated with the soil does not injure it,) plow deep, the deeper the better; as soon as the ground is in good condition, harrow nicely, and if there are any roots or sods in the way, rake off lightly with a hand rake, then with a seed drill sow in rows sixteen inches apart.—If the ground is not foul, two hoeings will be sufficient. About the 20th of May go through the piece and stick a water melon seed once in about ten feet, and you will have all the mellons that you can eat and lots to give to your neighbors who are too negligent to raise them, without any cost except the trouble of sticking the seed. I have raised them so for five years past, and cannot see as the two crops interfere with each other in the least, and have never had my vines disturbed by the striped bugs in my carrot patch.

Now for the cost and profit on one acre of Carrots:

Use of land,	$4·00
Tilling land, ..	3·00
1½ lbs. seed,	1·50
Sowing one day, (can be done in half a day.)	1·00
Three days hoeing first time,	3·00
Two days hoeing second time,	2·00
Eight days harvesting and putting in cellar,	8·00
Total cost,	$22·50
A fair crop on good land is not less than 500 bushels, which at 15 cents per bushel amounts to	$75·00
Leaving a net profit of	52·50

Actual cost 4½ cents per bushel.

—I have a seed drill, of my own getting up, that works to a charm. I will give you a description of it as well as I can, as I am willing any one should be benefitted by it who feels so

disposed. It is in the form of a wheelbarrow; the wheel is three inches broad on the face of the rim on the centre of which is a one inch raised bead for making the furrow for the seed. Across the top of the frame is a small shaft, geared to the shaft of the main wheel by small pulleys and a cord for a band, on which is built the seed barrel, which is composed of two wooden heads six inches in diameter, cut out of an inch board, and twelve pieces of hoop iron 3-4 of an inch wide and five inches long, and the same number of tin slides. The heads to be put on the shaft three inches apart, the strips of iron to be fastened to the heads with screws, so as to leave twelve spaces of equal size; then cut your tin slides a little wider than the spaces and slip them under the edges of the strips of iron and your barrel is inclosed. Now punch a neat smooth hole in as many of these as you wish to have it drop times in making a revolution. You will see that by having several sets of slides you can arrange the same seed barrel in a few minutes time so that it will drop any sized seed from a turnip seed to a garden pea, and also by using a part of the slides without holes it will drop once, twice, three times, four times, six times, or twelve times in making one revolution, just according as you arrange the slides. Under the barrel is a conductor for conveying the seed into the furrow just back of the wheel.—The coverer is a little scraper standing at an angle of forty-five degrees with the furrow, hung on to the frame so as to run directly behind the conductor. It should be of sufficient weight to scrape the furrow full but not heavy enough to disturb the seeds.

Any one wishing to see one of these machines, can have the opportunity by calling on me at my residence. A man will sow two acres in a day with this drill with perfect ease.

MILO BALDWIN.

Jackson, Adams Co., Jan. 25, 1858.

The culture of tea in South Carolina has proved a failure. It grows well enough, but wages are too high in this country. It is profitable in China, but a fellow is hired there for a dollar a month, and boards himself.

Hard water may be softened by dissolving half an ounce of quick-lime in nine quarts of water, and the clear solution put into a barrel of hard water, and it will become soft when clear.

Business Hints for April.

While April suns and April showers are preparing the earth and skies for the labor of the year, see that *your* labor of preparation is not neglected. Review the "Hints for March" and if anything omitted last month may be done this, delay not a moment, but do it now, with a promptness and thoroughness that will partially, at least, atone for the neglect. Nature will forgive you if you atone by "*works* meet for repentance"—not otherwise.

Allow us to insist again upon the righting up and thorough repairing of all fences upon the farm. Cattle and swine are very much like men—if you allow them to acquire the habit of wandering about from field to field without restraint, they will be pretty apt to be impatient under restraint, however wholesome, when such liberty may endanger your crops. Prevent the acquiring bad habits by immediate attention to our caution and you will be less likely to get into jangles with your neigbors, and out of patience with yourselves.

Clear off your meadows and plow-fields.—It will require much less time to pick up a stone or stick than to grind a scythe, and now is the time—as soon as the frost is out of the ground—to set the boys at this work. Old logs, chips, and brush should be gathered up and burned,—especially that old log that you have been "plowing around" the last five years. It has been a harbor for all kind of vermin, and cost you several bushels of grain, to say nothing of the vexation of the team and driver. Make clean work of all such rubbish this year, and the appearance alone will reward you ten-fold for the cost.

Don't let the cattle range over the fields intended for cultivation.—As soon as the frost is out of the ground, take your cattle off the grain-fields; hard, lumpy ground will be the result, if they are allowed to travel over them this season.

Do gour plowing at the right time.—Land should not be plowed until the furrow will pretty well fall into pieces in the operation.—Farmers often injure their ground by plowing it while wet. And remember this—20 acres well and deeply plowed will yield better results, with a little more than half the labor, than 40 acres merely scratched. After soils have been run down, like many of ours in Wisconsin, Nature requires pretty hard tickling to maka her "laugh with a—bountiful harvest."

Seed for Planting.—We are very sure there will be unprecedented failures of seed *corn* this year, and other seeds may be looked to with advantage. There is but little corn in Wisconsin that will sprout, however well planted. It is certainly very stupid policy to lose two weeks of precious time and the labor of planting in order to save the ten minutes necessary to a proper test of germinating power. Try your seed-corn, farmers, try it, or expect but little sympathy from us, when late in the season you are compelled to "plant over" again and again. Put a little of your corn into a basin of moist earth and keep it in a warm place until it sprouts or *doesn't* sprout. "Going it blind," though a pleasant game in some things, is too expensive in farming. Late in February we fell in with a friend in Grant Co., who was on his way to a place twenty-two miles distant, where he *knew* he could obtain a *genuine article*, and we marked him down in our book as one of the "wise men" of our time.

We also urge the importance of the *best variety* of seeds that can be found in the country. If somebody has a better variety of turnip, or cabbage, or potatoes, or anything else, get some of the seed and try it. Put away that stupid notion that there is "nothing new under the sun." Any man with a thimble full of brains may learn something new every season, at least.

One word again about Farming Implements.—In our travels through the State the past winter, we have found scores of reapers, and hundreds of plows lying out in the fields, just where the last work was done! Why in the name of common sense and economy are these tools not gathered up and put under shelter? Shrinking and swelling, rotting and rusting, while the owner is often too poor to take an agricultural paper! Come friends, such lack of thrift is *disgraceful*,—at least gather them to a place of shelter before the coming of frequent rains and hot suns.

Rotation of crops.—That field that you have required to grow wheat year after year, has grown weary. Give it rest. Clover it down and devote a little more attention to the raising of stock.

Manures again.—If you have neglected to sled out your barn-yard manures, improve these frosty mornings for the purpose. If you starve your crops, they will starve you in turn.

Again we say read the suggestions of last month, as well as those in the Horticultural department of this No., elaborate them into plans of operation and execute without delay. H.

The Chinese Sugar Cane. (Sorghum Saccharatum.)

Its Success for Syrup, Sugar and Alcohol—Genuine and spurious Seed—Difficulty of Discrimination—Cultivation—Soils most Suitable—Planting and after Cultivation.

The extraordinary interest awakened on all hands in favor of the Chinese Sugar Cane, and the high faith that is almost universally entertained of its value, as a syrup and sugar producing plant, for the Northern States, seems at length to call for the most thorough understanding of the subject practicable, on the part of every farmer of the country, not only that they may avail themselves of whatever benefits it offers, by fully understanding its character, cultivation and manufacture, but that they may shun all imposition arising out of the ignorance and excitement on the subject. With this view, we propose to treat the subject in all its important bearings, sufficiently thorough for all ordinary practical purposes, in this and succeeding numbers, each in ample season for use, in the present year's operations.

The agricultural, and also the newspaper press of the country, North, Central and South, is teeming with reports of infinities of experiments, large and small, that have been tried during the past year, and with very few exceptions, the results seem to have been highly satisfactory to all parties. Now and then a croaker, as in the case of *Fulton's* steamboat, seems even yet to doubt its value, claiming that an equal excitement was created a few years since, in favor of the sugar beet, and which has wholly subsided, without any useful results whatever.

But from being one of the doubters, all through up to the close of the last year's experiments, we are at length pretty much converted to the belief, that it is going to prove a good thing, beyond all peradventure, and one that all who will carefully study the subject, may safely embark in, at least to the extent of producing their own syrup, and most likely their sugar of common qualities, at no distant time, at more economic prices, than by purchasing from the South. The great majority of experiments go to show that an acre of cane, cultivated as well as Indian corn should be, will produce an average of 200 gallons of superior syrup, and at a cost ranging from fifteen to twenty-five cents per gallon, de-

pendant upon various circumstances ; being a saving of at least one hundred per cent. upon the entire consumption of this article throughout the Northern and Western States ; for it must be remembered that this process of home manufacture leaves the product in the consumer's hands, and the saving is, the difference between the cost of producing the one, and the interior retail price of the other, which when we include the better qualities of syrup, averages at least as high as 60 cts. per gallon.

The aggregate saving to the North and West, in dollars and cents, on this article of such universal and extensive consumption, is surprising in amount, and if sugar should also prove to be included, not less perhaps than a million of dollars on an average to each State; besides the other great additional advantage of keeping all our money at home, that is now paid out for these articles, and what is better still, in the hands of the farmers themselves—thereby saving at least one-fourth of their store bills, that *canker-worm* of destruction upon the whole farming community. We do not think we set it too high, when we say that Wisconsin may save practically, $1,000,000 per annum, out of this new resource, when it is once fairly understood and introduced among the people. Still, notwithstanding all these flattering prospects, we would not advise any to go too largely or rapidly into the business. Take it cool and careful, and grow into it by degrees. That is the way to avoid mishaps and disappointments, and to attain the highest ultimate success.

Mr. Joseph S. Lovering, an extenslve sugar refiner of Philadelphia, has reported the most complete and successful experiments, in the manufacture of syrup, sugar and alcohol, from the Chinese Cane, as yet on record. We intend publishing the entire report, in this or some subsequent number. We quote a few remarks in relation to it, from an exchange:

"Joseph S. Lovering, of Philadelphia, an experienced sugar refiner, made sugar from the syrup of the Sorghum, of every variety, from the common brown to the finest loaf. Mr. L. states that there is no difficulty in making sugar, that it can be done by one and all. Indeed he says, 'it is about as easy to make good sugar from the Chinese Cane as to make a good pot of mush, and much easier than to make a kettle of good apple-butter.'

"Although a sugar refiner, and possessing, of course, every facility for making sugar, Mr. L. preferred to conduct his experiments at his house with the simplest machinery, and such as could be procured easily by farmers. The canes were raised on half an acre of good upland, planted in rows four feet apart, and six inches apart in the rows. On the 28th of September, the experiments in making sugar, (seven in number,) were commenced and continued at intervals until the 20th of December. The yield per acre, Mr. L. estimates at 1,221 pounds, and seventy-five gallons of molasses, but he made no attempt to produce large results, either in the amount of cane or the quantity of sugar. More than double this quantity he thinks might be produced."

PURE SEED.

The difficulty of discriminating between the pure seed and some of its imitations, and of obtaining that which can be relied on, will undoubtedly appear large to many, especially after the not unfrequent mishaps of last year.—But we think this seeming difficulty will prove comparatively small the present spring, first for the reason, that dealers and all parties, as a general thing, have become much better acquainted with the genuine article, and its peculiar characteristics, than they were last season. Secondly, the motive for deception will be much smaller, for the reason that there is a great plenty of it that is genuine, and obtainable at such low prices comparatively, as to largely abate the motive for cheating.

No permanent seed dealer, who has had any experience in his business, need be imposed upon in obtaining his stock ; nor is it in any way for his interest, to obtain and sell a poor or spurious article, as it would damage him in the end, ten times as much as it would benefit him. Therefore we do not expect that much or hardly any bad seed will be circulated, by known and responsible parties the present season. *And we would certainly advise all parties to buy none whatever of strangers, however fine a story they may tell, or cheap they may offer it.* We are obtaining ours from an old and well known establishment in St. Louis, and presume that we shall not be cheated.—We shall have plenty for any of our subscribers that may wish, at prices ranging from 40 to 50 cts. per lb., depending on what it costs us. But we do not wish to supply any only our subscribers, at any price. We are also advertising it for numbers of dealers, all of whom, we think the public can safely rely on. So none who wish to plant, need hold back through fear of seed, or the cost of it, as it will not cost more than one-fourth as much per acre for seed as for potatoes.

SUITABLE SOIL AND CULTIVATION.

The united testimony of all cultivators seems to be in favor of a warm, dry and medium rich, loamy and gravelly soil; in short, as exactly the same soil required to grow and ripen a good crop of corn, as possible. The lower and richer soils producing a larger but less saccharine growth of cane. A certain amount of sand or silica, seems necessary in the soil, to quicken and ripen the growth, as well as to contribute the material for the cane, or outside of the stalk—indispensable to stiffen and support so tall a growth. Mucky, sandless soils, will be fonnd to grow a rank, limber stalk, liable to lodge.

The tall growth of the cane, indicates tho fact of a deep root, and consequently the necessity of deep tillage—the deeper the better, no doubt, both for nutriment and moisture.—Rowing north and south, full four feet apart, and the hills of a single stalk, before suckering about twenty inches apart in the row; or of two stalks to the hill and four feet apart, when one prefers to be able to cultivate both ways, seems to be about the proper mode and distance. Experience has demonstrated, that too close planting stints the growth, and therefore does not increase the crop. The disposition of the cane to stool, or sucker, renders it necessary to leave but few stalks in the hill, in any case not over two, and then not to be allowed to sucker to more than three stalks each, finally.

The cane is so slender in its germination and early growth, that it requires a soil in good tilth, and the seed not covered more than an inch deep. If the land is foul, it will be found exceedingly difficult to weed out the tender stalk. Therefore a warm early soil, clear of weeds, and in good deep tilth, are the prerequisites to a good crop of sugar cane.—Subsequent cultivation should be much the same as corn. The soil should be kept clean and light, and the stalks thinned out to a proper number. The early growth will be slow and unpromising, but when at length it gets good root, it will then spring forward like magic, sometimes growing from three to six inches per day. Such is the *Sorghum* in some of its more ordinary aspects, aptitudes and wants. And long before it will be needed we will illustrate the best machinery and apparatus, requisite for its manufacture, both upon a small and a large scale.

P.

Correspondence of the Farmer.

Why is it So?

MESSRS. EDITORS:—Having ascertained by count that there is in a pint of our club wheat 19,297 kernels, which makes 1,234,908 kernels in a bushel. Leaving off the fraction we have 1,216,000 kernels in a bushel. Having ascertained the above fact, I am led to ask the question, Why, from wheat sown two bushels to the acre, do we not get but 17 or 18 bushels to the acre on an average? It is a well known fact, or so considered, that from every kernel there is from 3 to 8 heads, each head containing from 15 to 20 kernels. Taking these lowest extremes, 3 and 15, and we get 109,440,000 kernels from the two bushels of sowing, which would yield 90 bushels, and as we commonly sow two bushels to the acre, we should have 90 bushels of wheat per acre.—Again I ask, why is it so? Will the Editors of the *Farmer* please throw sunlight on the question. I am willing to expose my ignorance for information.

WASHING WHEAT FOR SEED.

As I always wash all my Seed Wheat in brine, I thought it would do no harm to send you the *modus operandi*. The utensils consist of two barrels that will hold brine, a corn basket, a cullender, a tin dipper, a washtub, and a half bushel. Four pails full of brine is first made in one of the barrels, and when strong enough to float a potato, it is poured into the tub, or as much as is necessary, being careful to leave all the salt in the barrel.—Throw a few dippers full of salt into the empty barrel. Then the barrels and tub being placed in a row, the tub in the centre, commence washing by pouring a half bushel of wheat slowly into the tub—slowly to prevent the wheat from carrying the light substances to the bottom. The cullender being placed upon two sticks on the right hand barrel, and the basket set in the other, stir and skim with the dipper, empty into the cullender. When the wheat is clean enough, pour the contents of the tub into the basket, and let it remain there until another half bushel is ready to drain, when it may be thrown in a pile on the barn floor. Be careful to add salt and water to the brine every half hour, and see that salt stands in the bottom of the barrels constantly, as the brine will grow weak very fast.

I can in this way wash 20 bushels per day, and by spending time enough, I can get out every oat, and then be careful and not feed

whole oats to the team when plowing and harrowing the wheat ground, and by thus managing I always have clean wheat. I always avoid sowing wheat on oat ground or ground that raised oats the year before.

Wheat washed in this way will swell somewhat, so that care should be taken to get seed enough on the ground.

I keep count of the half bushels washed, and then measure the pile, so as to know how much it has swelled; in this way I know how much I get on an acre.

Wheat washed in this way is as good a preventive of smut, as vitriol. The salt will always pay for itself as a fertilizer.

E. REYNOLDS.

METOMEN, Feb. 26, 1858.

ANSWER.—In answer to the foregoing enquiry, "Why do we not get more wheat per acre, considering the amount of wheat sown?" we would say, that to account for the discrepancy in full, would require a going over of the whole subject of wheat culture, in all its bearings,—a showing up of the half way careless manner in which the soil is too often prepared previous to sowing. Perhaps a hard turf of the previous year's breaking, simply scratched by a drag and not plowed at all, so that the wheat, after being sowed and *dragged in*, would perhaps not be more than two-thirds covered, and much that was covered only slightly so, and thus exposed to the depredations of every thing that creeps or flies (and such *things* are usually pretty numerous about sowing time.) Thus in this way a large amount of the seed is lost in the premises.

Then upon land that is plowed before sowing, the matter is often not much better, on account of the roughness of the field before sowing, by which much of the seed is covered so deep that it does not grow in season, if at all, or so superficially as to be destroyed, or to dry up and not vegetate in season, if the weather happens to be over dry. That the aforesaid errors, in both cases of sowing, account for much of the seed, is further demonstrated by sowing a well tilled soil with the wheat drill, it being an admitted fact that only about half the seed is necessary that is required for broadcast sowing.

Then again, more or less of all sown seed, is poor, and does not germinate at all, all of which reasons, with many others that might be mentioned, and mainly the fault of the farmer, would in our judgment fully account for the aforesaid discrepancy. In fact we wonder that so much grows as usually does under all the circumstances.

The washing and brining mentioned is beyond question a good thing, and should never be omitted. P.

Correspondence of the Farmer.

A Farmer's Barn, and Experience.

MESSRS. EDITORS:—On the 13th day of May, 1836, at a small lake port called Milwaukee, solitary and alone, poorly and ordinarily if not miserably clad, landed from the old steamboat Globe, your most humble servant. Well? Why, to speak negatively, I have not made my mark on the age like "Horace," but have, as I humbly believe, caused "two blades of grass to grow where *none* grew before," and have made my mark in the Milwaukee woods. But it is not my design to write my own biography. It will require a sharper pointed pen than mine to perform that task.

There is one act of mine, however, which may not be wholly void of interest to your readers. One reason why I feel somewhat anxious to lay the matter before them is because my conduct in the premises has not been very fully endorsed by neighbors. A prophet is not without honor, save in his own country, and I have hoped that a wider range of opinion as to the wisdom or folly of the act, would be more satisfactory to me, and as the evils men do, lives after them, whilst the good is oft interred with their bones, the one, if evil, may serve as a warning to future adventurers in this direction, whilst the other, falling like ripened fruit, may be devoured by some lucky wight

"Who loitering here at noon may read my name."

Without further skirmishing then, permit me to say that I have builded a barn—not such an one as my father, my grand-father, and every body else have built, but such an one as nobody else ever built, to my knowledge, being my own architect, and being well satisfied thus far with this, my first attempt. A rough ground plan and end view, as drawn by the builder, John Guthrie, accompanies this communication.

A few observations explaining the plan may be necessary to a full understanding of the building. The main building is 40 by 50 feet with 19 feet posts, floor running lengthwise. This, as you will see by the plan, is entirely enclosed with what is sometimes called a *leanto* 16 feet wide, 11 feet posts, and rafters resting

upon girts of the upright building; the whole clapboarded and painted red, trimmed with white: doors matched, and cellar under the threshing floor.

I have in this building, a barn (a large one too,) a horse barn, a carriage, tool house and work shop combined, a cow shed commencing at the tool house, running 41 feet south to a large door for the ingress of cornstalks, &c., stored in the loft for cows, and for the egress of manure, when it is wanted, from the horse and cow stables. Then there is a small place 16 by 13, as you turn east, for anything. A gate is hung upon the corner post of the main building, which fastens to the south side of the shed, or to the west side to suit your convenience, making the cow stable smaller and the other larger, or *vice versa*. So on the opposite side of the floor, which is designed for sheep, you can divide your lambs or old ewes, or young lambs or bucks, into such numbers as you choose, and give them room according to their strength, merely by swinging a gate, and this I deem a great convenience.

The loft is filled with straw for litter and coarse fodder, to be used as wanted, for the different kinds of sheep, the ewes always claiming the back seat and the rocking-chair. The swine pen, bee house, and henery, all separate rooms and furnished up to the handle, brings you to the floor again and front entrance, where the granary completes the round.

The stock, it may be needless to add, is all fed from the mows of the main barn into the racks below, without any waste and but little labor, and no tramping in the mud in wet weather or snow in cold. Here are all your buildings except the house and a smoke and ash house for a farm. You come home at night, perhaps late, with your team. You enter the carriage room and close the door—then you are all right. You can unharness, take care of your team (or call the boys,) feed everything, bid them a hearty good night and know that they will have it, for they are comfortably fed and properly housed.

Now, Messrs. Editors, if I have done wrong the fault is yours. I have done as you have advised me to do ever since you commenced to publish and I to read your journal. I have provided suitable, and an abundance of food for stock. You have advised me to raise roots; I have built a cellar to put them in, and do not intend to offer it to rent. You have informed me that *heat* was equivalent to food; this I have provided in the protection I afford them from the fierce, raging, merciless winds of this northern climate. And you have "prayed till all knees were weary" that we would save our manure, and thereby increase the fertility of our soils and consequently augment instead of diminish our products. This result I have secured in an eminent degree. Sheds being built upon a mortar wall with a solid clay bottom, save the liquid as well as the solid manure, and the enclosure prevents the passing off until wanted upon the land.

My neighbors say I have a large barn and small farm. Not so with them; they have large farms and small barns. They shelter the forage and turn the stock and tools out—the one to moulder and rot in "the winds of heaven" like Pollock's ship, and the other to die of disease and starvation.

But I have "sung beyond my first request," and will close by requesting that you do with this as seemeth meet, and believe me your friend and well wisher,

FRANCIS D. WELD.

GREENFIELD, Feb., 1858.

NOTE.—We are glad to occasionally meet with a farmer, who is satisfied to do things up in the aforesaid reasonable way; who does not spread out his means over so much ground that (to use a homely illustration) he resembles a coon's skin stretched and nailed out upon a barn; but goes patiently to work to accomplish what he ought, and is willing to be a reasonable time about it.

We purpose to have Mr. W.'s plans engraved for a subsequent number.—[EDS.

Correspondence of the Farmer.

Sorghum Sugar.

MESSRS. EDITORS:—In the published proceedings of the Boston Society of Natural History, there is occasionally to be found information of great value to farmers, which should be made accessible to them in some way. For an example—on the 4th of November last, Dr. C. T. Jackson, the Vice President, exhibited crystals of sugar produced by the Sorghum or Chinese Sugar Cane. They had the form and angles of cane sugar. He stated that the young plant contains gum or dextrine, and glucose. As the time of flowering is approached, large quantities of starch globules may be seen, with the aid of a microscope, in the cells of the plant. If, at this period,

the stalk is pressed, the fluid which exudes is found slightly milky, owing to the presence of starch globules, which subside after some time. When the seed ripens, the starch diminishes in quantity in the cane, and the expressed juice gives, upon evaporation, almost wholly *cane sugar*. This is a point of interest in the manufacture of sugar. The presence of starch in the syrup prevents the ready formation of crystals of cane sugar, and it should therefore be removed by decantation or filtration. Fermentation of the syrup and the conversion of the sugar into lactic acid and mannite takes place in warm weather. It should therefore be boiled before viscous fermentation takes place. Dr. Jackson expressed the opinion that the Sorghum would ripen in the Northern States in warm seasons, if planted early.

At a subsequent meeting, Dr. Hayes stated that after careful inquiries he had grave doubts of the production of *cane* sugar by this plant. Masses of crystaline matter have been obtained by evaporating the syrup; but when it is remembered that a gallon of the expressed juice of the fully ripened plant contains more than an ounce of salts of potash, lime, &c., the production of a compound of glucose and salts is not surprising.

At the meeting held Dec. 2d, Dr. Jackson remarked that, after having both last year and this, demonstrated that the Chinese Sugar Cane produces, when ripe, true cane sugar, with its perfect crystals, having all the replacements and secondary forms belonging to cane sugar, and wholly incompatible with the forms of grape sugar, or glucose, and having publicly made this demonstration before the Society, by aid of excellent microscopes, he could not consider the nature of the sugar an open or undecided question. It was an absolute, demonstrated fact, beyond question. He had shown that the unripe plant produces grape sugar, which is readily crystalizable by suitable operations, and the form of those crystals is that of grape or fruit sugar, wholly incompatible with that of cane sugar so abundantly found in the ripe plant. He stated that the ripe Sorghum juice gives from 12 to 18 per cent. of saccharine matter, and by the usual process of sugar making in a practical way, nine per cent. of good crystalized cane sugar.

So the matter rests at present, and we do not see but the matter must be decided in favor of Dr. Jackson's view of the subject.

I. A. L.

STOCK REGISTER.

Wonderful Power over Horses.

PERFORMANCE BEFORE HER MAJESTY.—On Wednesday morning, Mr. John S. Raney, from the United States, America, had the honor of exhibiting before her Majesty, the Prince Consort, and the Royal family and suite, in the riding-house, his miraculous power over the horse, on various subjects selected for the occasion. He commenced with a wild colt, 18 months old, belonging to the Prince Consort, which was brought from Shaw Farm, and which had never been handled except by halter, and selected by Colonel, the Hon. A. N. Hood for the occasion. After being alone with the animal about an hour and a half, the Royal party entered, and found Mr. Raney sitting on his back, without holding the rein, the horse standing perfectly quiet. Mr. Raney then made a few remarks in regard to his great experience in the treatment of this noble animal. A drum was afterwards handed to Mr. Raney, which he beat with fury whilst sitting on the horse's back, without the colt exhibiting any signs of fear. The royal party afterwards withdrew for a few minutes, and on their return found the animal lying down, and Mr. Ranney knocking his hind legs together, one of which he put against his face. Afterwards a restive horse, from Mr. Anderson's stables in London, which Mr. Raney had before handled, was then brought in; this horse was placed at one end of the riding-house alone. Mr. Raney went to the other end, and at his command the horse walked quietly up to him. He then made the horse lie down in the presence of the Queen, when Mr. Raney crawled between his hind legs, and over him in various ways. Mr. Raney then rolled the horse on its back; the horse afterwards was placed in various positions, in which it stood without holding and without a bridle. A third horse, selected by Mr. Meyers, the riding-master, as a very nervous animal, was then brought in, and in a few minutes afterwards it was made by Mr. Raney to do all which had been done by the other horses. At the conclusion of this exhibition of Mr. Raney's wonderful power over the horse, his Royal Highness the Prince Consort expressed to Mr. Raney his gratification and thanks. The secret has been intrusted to Major-General Sir Richard Airey in confidence, who has pronounced that there is nothing in the treatment but what any horseman would approve of.—*English Paper.*

NOTE.—We have noticed several other accounts, equally wonderful, of the power of this new *Yankee* star, over the wild, half human spirit of the horse, enough to remove all probability of humbug. It is another feather in the cap of Young America, sure.



HENRY CLAY.

The above cut represents that fine Black Hawk stallion, Henry Clay, the property of E. A. Smith, of Whitewater, Walworth Co., Wis., who imported him from Vermont, last season.

He won the first premium at the State Fair last fall, in the class of Black Hawks three years old and under four, and also at the exhibition of the Wisconsin Farmers and Mechanic's Club at Whitewater. Is claimed to have trotted his half mile in 1 1-2 minutes. Is claimed to be a grand-son of old Black Hawk, as will be seen by the following pedigree. He is a very fine horse in the estimation of good judges, and will doubtless make his mark in the State.

We see no reason why Wisconsin may not, ere long, become as famous for its fine Black Hawk and Morgan horses as Vermont.

PEDIGREE.

Henry Clay was foaled June 15th, 1854, the property of T. D. Wicker, Orwell, Addison County, Vermont. Sired by Shark, he by Black Hawk, (original.) Black Hawk by Sherman Morgan, he by Justin Morgan, Dam was by Flying Cloud, he by Black Hawk (original.) His Dam's Dam, was got by cross of Mr. T. Rogers' Messenger horse and a first class Cock of the Rock mare, Cock of the Rock was sired by Duroc, he by imported Diomede, his Dam was full sister to Miller's Damsel the Dam of the American Eclipse. His color is black, 15 1-2 hands high, weighs 1,000 pounds, and will be four years old the 15th day of June next. Blood like in appearance, docile in temper, and is claimed to be the fastest trotting Stallion of his age this side of Vermont.

See card in advertising pages.

Dogs.—We hear constant complaint among farmers, that the Legislature does nothing to rid the country of these nuisances. Several in this vicinity have been heavy loosers in valuable flocks of sheep, and say they must abandon wool growing altogether, unless something can be done to protect them. Our State is well adapted to sheep, but they are destroyed so by dogs, that the business is too uncertain. Will our wise men at Madison think of it?—*Exchange.*

One hundred alapacca sheep arrived at Panama a short time since, destined for the U. S.

Correspondence of the Farmer.

The Black Hawks challenge the Blood Horses.

MESSRS. EDITORS :—In your February number, under the head of "Breeding of Horses," I find an article which bears the impress, from beginning to end, of the pen of the jockey or part owner of some sixteen and a half hands horse, that he evidently believes, or would have others believe, to be thorough bred.

After indulging in a very ungracious fling at Vermont and New Hampshire men, and a side slur on fine-wooled sheep, he pitches into Black Hawk and Morgan stock, and in his opinion gives them fits generally; says they are "rarely fast," that they are "without sufficient strength for the plow, or for an ordinary load of fifty bushels of wheat." In relation to their being fast, there are more of them today that do their mile inside of three, than of any other breed of horses in the States, and as for a span of Morgans or Black Hawks not having weight or strength for the plow or an ordinary load of fifty bushels of wheat—pshaw! Messrs. Editors, do you think he ever saw one? Again, looking down the long vista of years to come, visions of Mormon troubles and Indian wars arise before his distempered fancy, and like the ghost of Banquo, will not down at his bidding. What a pity—the State in trouble—a white as well as red Indian war on hand (for our scientific writer seems to have discovered a new "genus homo" somewhere toward the Rocky Mountains,) and we have no way to meet our threatened doom. Our rangers and volunteers, and Uncle Sam's fighting men, heretofore supposed to be some in a skirmage, are nowhere, and old Buck must be thankful for the timely advice that would have him hold on while we in Wis., raise him blooded horses for a regiment of cavalry wherewith to catch them. In relation to thorough bred or blooded stock, I have this remark to make, that the breed best deserves the name that gives us animals best adapted to fulfill the requirements of man. The Morgan and Black Hawk horses are uniformly kind and docile, quick, spirited, and of cheerful temper—hardy, compact and easily kept—swift and strong of limb, and at a dead weight will out-draw nine-tenths of the horses one-quarter larger than their size. Experience and the record shows that progeny from large mares and medium sized stallions are perfect and symetrical, while large stallions crossed upon small mares, bring ungainly starvlings. Youatt, p 27, says—"When it became the fashion in London to drive large bay horses, the farmers in Yorkshire put their mares to much larger stallions than usual, and this did infinite mischief to their breed, by producing a race of small chested, long legged, large boned, worthless animals." Let us be careful that we do not run into like error. If the Morgans and Black Hawks are not large enough (and the most fastidious can take no other exception to the breed) cross them upon large mares, and while you increase the size, you will maintain that symetrical beauty so common to the race, and grow up a stock of horses in the country that shall rival, if not excel, those horses (produced by a cross of the Andalusian barb and Arabian courser, upon the heavy Flanders mare) whose reputation is world wide. A few years will test all this, and then we shall see what we shall see.

I am not here, Messrs. Editors, talking for buncomb, and as an earnest of what I mean, I challenge the owner of the Menasha horse, or Medoc, or any other horse of that strain of blood in the State, to deposit, with me, $100 in the Waukesha Bank, and exhibit at the next Fair in this Co., 6 three years old, 3 two years old, and 3 yearling colts, against the same number to be exhibited by John Gale, said colts to be sired by his Black Hawk stallion. The best colts for all purposes and uses to draw the pile—the result to be determined by three judges, each party selecting one and they choosing a third. If you are horsemen come up to the scratch. "Blood will tell."

OCONOMOWOC, March 1. L. M. J.

P. S.—Any person accepting the above challenge, may obtain any required information in relation to the parties making it, by applying at this office.—EDS.

Correspondence of the Farmer.

Black-Leg.

MESSRS. EDITORS :—By reading the last few numbers of the *Farmer*, I find a number of communications headed "Black-Leg," and I will give you my experience. In 1852 and 53 the black-leg prevailed in this vicinity, severely attacking colts, calves and yearlings. I have never known it to attack an animal over two years old. The great difficulty is in not knowing of the disease in time to effect a cure. The only remedy I know of is sulphur and spirits of turpentine, mostly sulphur, given plentifully. When it prevails in a vicinity, by giving your stock sulphur, I think it the best preventive known, which farmers may rely upon, so far as my experience goes. I saved a colt, and one of my neighbors saved a calf, after an attack, by giving sulphur and turpentine. I lost one heifer a year old. Fed my stock sulphur and lost no more. Others the same in this place. A. A. BENNETT.

CHARLOTTE, Grant Co., Wis., Feb. 8, 1858

HORTICULTURAL.

Correspondence of the Farmer.

When and How to Plant Evergreens.

MESSRS. EDITORS:—Perhaps with such a heading as this, I need scarcely anticipate many readers, for in this fast age, we hardly expect that any thing new can be said; indeed, so old is everything under the sun, that I sometimes have my doubts whether there has been anything really new or original produced for a long time. All our readings are but thoughts in a new dress, and what one scholar will claim as his own idea, may have been presented in some other light by a worthy predecessor. Particularly may this be said of tree planting. When, and how, have long been vexed questions, until it would seem that all had been said that could be, and still how few there are who know anything of the theory of vegetation; hence the almost total failure of trees planted either for ornament or fruit.

The one under consideration is of such vast importance, that those who are well read, and better informed through the agricultural press, of the many advances made in this branch, will pardon me for trespassing, and remember that there are a vast number who have never read a word or given the subject a thought.—Let us then exchange ideas, stimulate one another to better deeds, to more thorough culture, and try to make our suggestions beneficial to those who wish to learn.

The long controverted question, When shall we plant? takes precedence, and this might be answered in the three words, at any time, but for the fact that there are many things which rightfully preceed the planting, of more importance than the time. I have moved evergreens in the middle of summer, and vice versa. I once moved an apple tree, four years from the graft, in July, and succeeded in getting as good a growth upon it, as upon those left in the nursery rows. Still I would not adopt this as the best season for moving either of these varieties of trees.

In transplanting evergreens, there is much that depends upon the condition of the soil.—It is the all-important requisite, in securing a good and healthy tree. But few evergreens will live and thrive in wet localities, though the American Arbor Vitæ, American Balsam Fir, and Hemlock, are exceptions to some extent; but even these are very grateful for dry footing.

A thrifty, healthy tree, is at all times an object of attraction, while a stunted and dwarfed one, bespeaks mismanagement by the cultivator. The first great requisite is thorough drainage, and if this is not in all cases necessary, it is well to see to it, that no water accumulates in the pits, or about the trees, as the principle item in gaining a quick and rapid growth, is the planting. A rich and well pulverized loam is best, fine enough to fill into every crevice. With this at hand, and pits previously dug, an evergreen need not be exposed to the sun but a short time. Pits ought to be at least 9 feet across, and 1½ feet deep; this to be filled with compost, or rich surface soil often answers well. Premising that this much is done, viz: a good loam at hand, pits dug, and draining done if necessary, (and by the by, why does not some one take up that subject and show the benefit of it even on our dryest prairies?) we may answer the question when to plant evergreens?

Most evergreens are unlike deciduous trees, their growth usually extending little beyond the first of July, and they *may* be removed at any time, by due attention in preserving most of the roots, but not so the latter. Many consider it the best time to plant while they are making their greatest growth, but, unless we have cloudy and wet weather for several days, there is much risk in moving them at this time. Any who may wish to try it, should bear in mind to take up all the dirt which will adhere to the roots, but as this makes it cumbersome and bulky for transportation, except when near at hand, and the risk of being overtaken by the hot sun just in the wrong time, together with the difficulty of shading sizable trees, makes this season of the year objectionable for transplanting evergreens, especially if they are to be removed from any distance.

There are some varieties of evergreens that will withstand the midsummer treatment of transplanting better than others. The pines, and especially the white pine, (*Pinus strobus,*) is said to do much better taken up as soon as its growth ceases, which is usually about the first of August; though it varies, always being some weeks later than the spruces and firs. But if the weather proves dry, evergreens planted at this season will fail to establish their roots in the soil, and if this is not done to some extent, the cold, severe winds, alternating with hot rays of the sun, is almost sure to brown them beyond recovery.

The same objection will apply to what is termed "fall setting," except the chances would be against "the undertaker" in almost every instance. The large evaporating surface of an evergreen makes every precaution necessary in the West. In New York it is quite the reverse, but there they are protected from the wind and cold by forests and snow. (When will we learn wisdom, and protect ourselves and modify our climate by planting forests?) In this climate I would much prefer the frozen ball system to the fall, but neither is as good as spring. That is the time to improve. No matter though we have to peck through the frost a little under the tree, the sooner it is done the better, after spring has once come.—Evergreens taken from the nursery at this time, having had their natural growth, and rested through the winter "from their labors," will commence growing immediately, and keep nearly equal pace with those left behind.—Spruces and Balsams may be planted through the month of April and first half of May, if not previously done, but the wiery roots of the Hemlock, and generally the Pines, Austrian and Scotch, are much more sure if removed as early as can be done in the spring.

This much in regard to the time, but if the *how* is not done skillfully, or at least understandingly, we must expect some failures.—When, however, a little knowledge is had of the nature of the "subject," whether it be in watering, hoeing, or pulverizing the soil, for they each have a science, evergreens are easily managed, even by the mere novice in tree planting.

First see that they are well taken up. Nurserymen are apt to be in a hurry about these times, and if you watch "the men" a little yourselves, it may save you some hard feelings as well as the lives of your trees. When digging, be sure and get all the roots. Cut smoothly any portion of broken or bruised ones, for it will heal much quicker, and root pruning answers the same purpose that top pruning does, the one forms fibers, the other new wood, both adding to the health and vigor of the tree. Then "keep shady" till boxed or replanted.

I have never found it necessary to water when planting early in the season, and would not recommend it; the natural moisture of the earth is sufficient for nature. If evergreens have been shipped from a distance, and come to hand in a dry time, or are moved late in the spring, it may be, as it frequently is, found necessary to water freely, but not to overflowing. There is a right and wrong way. I have practiced with evergreens that had been boxed six weeks, and were received the first week in June, to water, giving each tree ten or twelve quarts, pouring the same into the hole after it was partly filled with the compost, and every interstice being filled by placing the dirt with the hand, not shaking the tree about to accomplish it, as though it was a post.

The object of using the water before the planting is completed, is various, and here is the science of it. We water them for permanent effect, and pour the water in and about the roots, then complete the filling process with the finest of the compost. See the result. The damp, moist earth is in a condition to retain its moisture, being shaded from the sun by the open and porous earth which covets it, whereas, had we entirely filled the pit, then watered, we would have our trees in a short time standing in a "hardpan," as thoroughly baked as water and dirt could be, and every ray of the sun descending with no interruption. But the loose particles, and they should be kept so for some time after planting by frequent stirring with the hoe, act as a preventive, and is an excellent mulching.—Though each article appears dry, its perfect freedom from neighboring particles, prevents, to a great degree, the understratum from feeling the drying exposure of the surface, and the ground is always ready to receive the water that may fall, either as dew or rain.

The planting is never completed, be "the time" when it may, until each tree is thoroughly mulched with some coarse litter. That from the stable is good, but half rotted chips are better.

Plant no deeper than the tree originally grew. The reasons for this, the whys and wherefores, I have not room to write, nor you Messrs. Editors to print, or patience to read. I acknowledge the fault of not applying the maxim of "sufficient unto the day," &c., much sooner, but I have found much in this subject worthy our attention, and though the half is not yet done or said that ought to be, I fear "my say" has been too long, but like the minister, I have not had time to make it shorter.

W.

JANESVILLE, Wis.

Correspondence of the Farmer.

The Farmer's Garden—Seasonable Suggestions.

MESSRS. EDITORS:—We shall presume that things of large importance belonging to the farm home have received their share of attention—your fruit trees of apples, pears, plums, &c., have been planted with care. We would now, lest you might through carelessness or forgetfulness omit them, remind you of some items smaller in comparison with the greater labors of your new farm culture, but which will produce for you an amount of luxuries and delicacies, more than repaying the labor they cost.

Asparagus is a table luxury not generally found in the country, yet after a bed of it is properly prepared, it will form a delicious addition to your daily food through early spring, for many years, needing after the first year, little care save an annual dressing of manure. To prepare a bed, dig the soil at least two spades deep—two or two and a half feet would be better—make very rich with well rotted manure; bones, hair, woolen rags and old leather are also good. Set the plants twelve inches apart, in rows 15 inches; spread the roots carefully, and cover with three inches of fine soil. Plants may be obtained at the Nurseries for about $1 per hundred.

A bed of Rhubarb will afford the earliest material for pies and tarts. For this, as well as for asparagus, the ground can hardly be made too deep or rich. Victoria is a good sort, so also are Linnaeus, Collossal, Giant and Scotch. Cahoon's Mammoth will always be popular on account of its size; it seems however more tenacious of soil and location than other sorts. We give the Scotch the preference for productiveness and fine flavor. Plants may be had for about $3 per dozen crowns.

A dozen or more gooseberry bushes will give a family supply, affording next after the Rhubarb, the earliest material for pies and tarts. The large English sorts are liable to mildew, though this may be measurably avoided by high culture, severe pruning and frequently renewing the plants from cuttings or layers.—We prefer Houghton's Seedling, an American sort. Though not large it is exceedingly productive, and we believe always exempt from mildew. Strong plants may be had for about $1·50 to $2·50 per doz.

A good supply of Currants should be considered indispensable. The Red and White Dutch and Black English are good sorts.—There are many newer and fine varieties which may be added by and by, but these named should be in every garden. Well established plants may be had for $1 per doz., and less by the hundred.

Raspberries of different sorts will afford a succession and pleasing variety, in the circle of small fruits. The Orange, Franconia, Red and White Antwerp are among the best. The Black is the best for drying and cooking.—Plants may be had for about $1 per doz., and less by the hundred.

The Blackberry is deserving of attention.—The New Rochelle is a fine sort, so too are the Dorchester or Highbush and Newman's thornless. Established plants may be had of either sort for about $3 per dozen.

A Grape Vine or two will well reward the outlay and care bestowed. The Isabella and Catawba are well proven sorts, but throughout much of the Northwest require winter protection, and do not, especially the latter, always ripen perfectly. The Clinton is hardy and very productive, thriving everywhere. It is also early, and though not of BEST quality, is desirable. Well rooted plants of these may be had for 25 to 50 cts. each.

The Concord ripens two or three weeks earlier than the Isabella, and is more hardy; the fruit is very handsome as well as excellent.—All things considered we believe this the best native grape for the North yet introduced. Mr. Ball, the originator of this variety, in a recent letter to the writer says, "it has taken the first premium wherever exhibited—among them the first premium at the Mass. State Ag. Fair of $20, for the best new, hardy, Seedling Grape, equal to or superior to the Isabella.—The wine also received the first premium." Vines were long held at $5 each, but may now be had for $2.

The Rebecca is a fine native White Grape, also ripening before the Isabella, and said to be more hardy. The Delaware is another fine new Grape, small but high flavored, and delicious. Plants of this and the Rebecca are sold at $3 each.

There are many seedlings of native New England Grapes, which are hardy, mature early, and though more or less foxy, are desirable and will be valued by many for this very peculiarity, reminding them of the days of "auld lang syne." Early Amber, Black Cluster, and Harvard Seedling are among the best of these which have come under our notice.

A Strawberry bed must not be forgotten.—It may be made at any time from early spring until fall. It had better be done early, lest in the press of other duties it may be neglected. There are many fine sorts in cultivation which may be had for about $1 per hundred.

A. G. HANFORD.

WOODSIDE NURSERIES, Waukesha, Wis.

Correspondence of the Farmer.

Hardy Varieties of Apples for Wisconsin.

MESSRS. EDITORS:—I send the following list, under three divisions, in order to make the matter more distinct.

First, Brief descriptive lists of varieties which have proved extremely hardy, and most of them rank No. 1 in other qualities.

1. Red Astrachan—vigorous, upright grower, moderate bearer; fine tart cooking apple. August.

2. Fall stripe—vigorous, beautiful grower—great and early bearer. Fruit medium size, uniformly fair; tender, aromatic sub-acid flavor, which takes everywhere; in use from August to October, for family and market.

3. Adams Sweet—upright, medium growth, medium size, with a concentrated sweet richness beyond comparison; in season from first Oct. to Dec. for baking and stock.

4. Fall Winesap—vigorous spreading, early and great bearer; medium, fair, juicy, sub-acid. Nov. to Jan.

5. Fameuse or Snow—vigorous, spreading; early and constant bearer; medium, tender, delicious, aromatic, sub-acid. Nov. to Feb.

6. Winter Sweet (Campfield)—vigorous, upright, productive; medium—best winter baking and stock apple. Nov. to March.

7. Westfield Seeknofurther—vigorous, productive, medium, tender, aromatic. Nov. to March.

8. Yellow Bellflower—irregular, spreading; medium to large, fine brisk tart, juicy; cooking and desert. Dec. to April.

9. English Golden Russett—productive, medium, mild, sub-acid, fine flavor. Dec. to May.

10. Perry Russett—vigorous, productive, large, excellent. Dec. to May.

11. Red Romanite—spreading, very productive, small, fair, mild. Jan. to June.

Second, For general cultivation.

SUMMER.—Early Red, Red Attrachan, Sweet June.

FALL.—Fall Stripe, Cranberry, Adams Sweet, Fall Winesap, Jersey Sweet, Sweet Pear, St. Lawrence, Fameuse.

WINTER.—Fameuse, Westfield Seeknofurther, Spy, Vandevere, Yellow Belflower, White Gilliflower, Black Vandevere, Willow Twig, Eng. Golden Russett, Perry Russett, R. Jannett, Red Romanite, Talman and Campfield—8 sorts for baking ann stock.

Third, Of those varieties which have proved tender, and should be set only in cool, airy locations, and then moderately.

Early Harvest, Summer Queen, Sweet Bough, Summer Golden Sweet, Fall Pippin, Hawley, Maiden's Blush, Belmont, Baldwin, English Russett, Rambo, Rox. Russett, Rhode Island Greening.

These lists are not supposed to be complete, for there are many new varieties which are proving hardy and fine.

We would present the following suggestions on pruning, for the consideration of every beginner.

1st. Cut away only such as seems necessary to give form or equalize the flow of sap, having in mind that the true form of a fruit-bearing tree, is low-branched, stocky, self-supporting.

2d. In taking away a whole limb, cut at the out edge of the shoulder at the base, and never close to the main branch or body.

3d, Ten days before the flow of sap in spring, is the best time for heavy pruning; midsummer pruning is preferable to that of May. All wounds made while the sap is flowing freely, should be covered with composition applied hot.

4th. These rules do not strictly apply to trees newly transplanted, which require the loss of top in proportion to that of root, and being dormant for some time, will not often bleed from fresh cuts.

Composition for Grafting—Four parts resin, to one of beeswax, softened with the addition of linseed oil to the consistency of very soft gum—not readily chewed. The compound will be less than one-sixth oil. We also recommend covering the waxed graft with a slip of white paper, to prevent the action of the sun upon the wax, also as a sign.

J. C. PLUMB.

LAKE MILLS, March 9, 1858.

THE Richmond South says that the growing wheat in Virginia never presented a more encouraging aspect at this season of the year, than at present.

THE deepest well in the world is at Louisville, Ky. Its depth is 1,900 feet.

Brief Directions for Planting and Cultivating the Sweet Potato.

Select land for this crop that is loose and dry, that is either sandy or a light clay loam, and not too rich, or the crop will run too much to vine; wet prairies, rich bottom, and black walnut lands are the most unfavorable. Rolling land, either in the prairies, or timber, is preferable, and in the North, should be selected, if possible, sloping to the south or southeast, and if elevated would be less subject to white frosts in the spring and fall.

To avoid cutworms and weeds, the Sweet Potato ground should have been cleanly cultivated the season previous, and plowed late in the fall, that it may be pulverized by the frost. Early in the spring, or as soon as the soil is in good working order, it should be plowed, harrowed and rolled, if dry and cloddy, in which condition it should lay until the plants are ready to set out, then it should be thrown into ridges, and crossed with a small plow into hills about three feet each way, in the centre of each of which, set one good plant, by making a hole with the hand or a transplanting trowel, large enough to hold one pint of water, in which place the root of the plant, and pour the water directly on the roots, and draw the loose earth quickly about the plant without pressure. By this mode the roots are floated out in their natural position, and the soil settles around every little fibre more than by any other mode of planting; the water is just where it is needed, and the soil left dry on the surface will not bake, as is the case when the plats are watered on the surface, or are puddled into the mud after a rain. We never plant when the ground is so wet as not to need water, and if the plants are good, and the work well done, we do not expect to loose one per cent. in the dryest and hottest days of May and June, and never water after the plants are set. Plants should be set so deep that one or two leaf-buds are covered, that they may sprout if cut down by frost or worms. After the plants are set out they should be carefully plowed each way, so long as the vines will permit, and earthed up a little, at each plowing, with the hoe. Perhaps the most certain plan for farmers to get their potatoes planted in time and well cultivated, would be to select ground in their corn-fields, and make hills to correspond with the corn rows, and cultivate the same as the corn, putting two plants in each hill when planted four feet apart.

The hills should be about as large as can be thrown up with a small plow, and where few are made the corners may be dressed up with the hoe, but it is not necessary if the ground has been well prepared, except for turning rows and near stumps.

The season for planting in this latitude is from the 10th of May to the 20th of June, or as early in the spring as we feel secure from the frost. Those that want a few early potatoes may plant the 1st of May and cover with earth in cold or frosty weather, which will not injure the plants for a few days, if the ground is not too wet.

Plants can be carried a great distance in good condition, if the roots are packed in damp moss or earth, but care must be taken not to wet the leaves when closely packed, or they will rot in a day or two.

Sweet Potatoes should be dug before frost, or the vines cut off immediately after, or the quality of the potato will be injured for the table or for keeping, and should be placed in a warm airy room, or cellar, for use, as they will not bear a low temperature without injury.

J. W. TENBROOK & CO.

ROCKVILLE, Parke Co., Ind.

Correspondence of the Farmer.

Fruit Cultivation in Wisconsin—the best Varieties.

MESSRS. EDITORS:—The business of fruit growing in Wisconsin is surrounded with many difficulties, and will require the combined experience and intellect of the State for years, to clear up those difficulties and render the fruit business comparatively safe. Yet I believe that apples, at least, can and will be successfully grown here. It may take fifty years to find out the varieties and the modes of culture adapted to this climate.

All will notice that we have a very peculiar climate. For three months in the summer, the winds sweep up the Valley of the Mississippi River, from the Gulf of Mexico, and give us almost a tropical climate, which together with our rich soil produce a rapid and succulent growth of new wood, which is very poorly calculated to withstand the three months of arctic winter winds, which for the same reason, that there are no mountains to obstruct them, sweep up the valley of McKenzie's River and across the low lands about the Lake of the Woods, and give us almost an arctic climate. So the productions, as it were, of the genial South, are obliged to winter in the cold embrace of the frigid zone.

The first thing then is to find a plant or a tree that will bear the extremes of heat and cold. Such varieties are not very plenty, and I believe our best fruits are yet to originate among us.

I have tested about two hundred varieties of Eastern and Southern fruits, and find the following kinds worthy of further trial.

APPLES—Yellow Harvest, Sweet June, Early Pennock, St. Lawrence, Famuse, Fall Winesap, Golden Russett, Tallman Sweet, Rawles Jannett and Red Romanite. I presume there

are other good kinds which I have never tested.

PEARS—The Flemish Beauty is the only kind that has stood the climate for the last three years, and I have sanguine hopes of its success.

CHERRIES—I have no hopes of them except the low spreading Morello.

PLUMS—Set them out; if we have a run of five such winters as the present, you will get paid for your trouble. No great difference in varieties about standing the winter.

You can raise any amount of small fruits.—Get good varieties, and give them as good cultivation as you do your corn.

Some prefer setting seedling apples, but this is unnecessary further than to originate new varieties adapted to our climate for we already have some grafted fruit as hardy as an average lot of seedlings. Low headed trees are preferable for reasons oft stated.

One word about root and stock grafting. I think there is more objection to the kind of roots commonly used in root grafting than in the position of the scion. If a variety is constitutionally tender, you cannot make it hardy by grafting it high up, even if you should place the scion one hundred feet from the ground.

There is not room here to discuss the question of soils, exposure and cultivation. You will see I have barely given a hint in relation to the topics I have mentioned.

Eastern fruit books are of very little practical use to us. Some one has got to write a fruit book for Southern Wisconsin, and revise it from time to time as our knowledge of fruit culture in this region increases.

JOHN TINKER.

CLINTON, Rock Co., Wis., March 10, 1858.

Apples.

John P. Kramer, a successful fruit-grower of Fond du Lac, wishes it announced, that there is no valid reason why the apple-tree may not succeed in Wisconsin. He very sensibly insists, however, that the purchases be made, not of "tree-pedlars," who care not whether the trees they sell live or not, but of good responsible nurserymen,—that the buyer himself make the selection, of low, healthy, hardy, *living* trees, and *give time* to their careful transportation, setting out and cultivation in good soil, not too rich, but well-drained and properly protected. Sensible advice certainly. Let every body follow it.

MECHANICAL.

Home Made Wind Mill.

Our friend L. Wright, of Whitewater (township,) has made a Wind Mill for himself, and erected it upon his barn, so that he gears it (with a belt) to his threshing machine standing in the barn, and does a snug business. He states that he threshed 400 sheaves per hour on an average. It is so constructed that he can hitch it with equal readiness to a grinding mill, straw cutter, pump or turning lathe. It is a nice piece of mechanical work throughout, and we cannot see why it will not prove a cheap and useful power. It may be seen from the cars, three miles East of Whitewater, just off the track, on the North side.

Wind Mills are bound to do a deal of the above mentioned kinds of work in this windy country yet. Read the certificates about Halladay's and May's Mills, in connection with their advertisements. That they are a great labor saver for deep wells, is fully and conclusively demonstrated. P.

AMERICAN IMPLEMENTS FOR RUSSIA.—Col. Wellington Lee, now engaged in raising the sunken ships at Sebastopol, who, at the earnest and repeated solicitation of gentlemen high in position in the Russian Government, has consented to interest himself in the importation to that country of American farming implements, such as Reapers, Mowers, Drills, Plows, &c. The selection and shipment of these, has been intrusted to Mr. Holmes—and no man is more competent—who intends to collect a full ship load, and with a corps of suitable mechanics, sail for Russia in season to set up and dispose of the implements before the next harvest. This bids fair to be a profitable as well as praiseworthy speculation.—The time is exceedingly auspicious, coming as it does just as the Russian system of serfdom is being abolished by order of the government. With a good system and the use of improved machinery, Southern Russia is capable of being made one of the finest agricultural sections of the world.

FOR THE SULTAN OF TURKEY.—Mr. F. G Gouch, of Worcester, has completed the manufacture of a carpenter's tool chest, with tools, intended by certain parties as a present to the Sultan of Turkey. The chest is described as a beautiful piece of workmanship, being made of butternut wood, highly polished, heavily bound with brass, and thickly studded with round-headed brass screws. The interior of the chest is no less finished. It is filled with every kind of carpenter's tools, the workmanship of which has never been excelled.

TWO IMPORTANT IMPLEMENTS FOR PLANTING AND CULTIVATION.

Howe's Eagle Seed Sower.

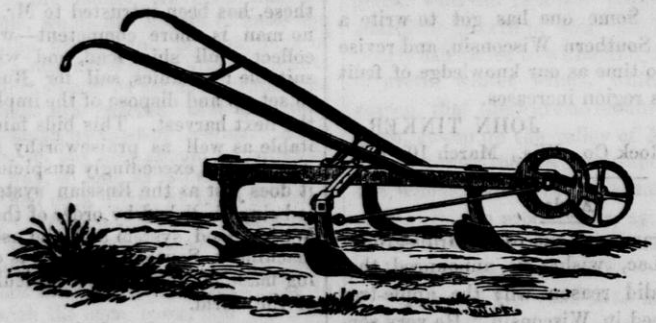


This is a new Seed Sower, which will readily commend itself to the judgment of the farmer and gardener, from its great simplicity, and ease of management. There is little friction for the strength to be wasted on, and so few pieces and little gearing, that a single glance would detect anything out of order, even if it *could* be deranged short of a violent blow.

One great advantage in this sower, is the ease with which the hoprer which contains the seed may be taken off and the seed changed. To do this, nothing is required but to move a hasp, when the hopper may be taken off and the brush removed.

In this machine we have the advantage of on adjustable plow, by its being hinged to the arbor of the driving wheel forward, and holding the roller in the rear of the plow by the same arms, thus giving a uniform depth to the seed, independent of the operator. There is also attached to the plow an iron rod, which passes through the cross bar of the handles, by which the operator is enabled, by dropping the handles, to raise the plow, and at the same time the seed is cut off, and the whole thing is thrown upon the forward wheel; then the machine may be run from one row to another, or from field to field, in the easiest manner possible. The plow is self-covering. The whole machine is light, the spokes of the wheel being wood, and the rim iron, but broad and thin. When in motion, the plow, hopper and roller are independent of the handles, so that the machine is as properly adapted to one person as another, whether he be short or tall.

We have great confidence that this machine will prove the best Seed Sower yet introduced, and that by the aid of this and the Horse Hoe, the root crops will be largely increased in our country.



Howe's Improved Expanding Horse Hoe.

This is designed for the hoeing or cultivation of corn, the various root crops, cotton, hops, nurseries, and all crops that require a frequent stirring of the soil. It is light, easily managed, turns, pulverizes and mixes the surface, and is consequently highly destructive to weeds and grass. The forward tooth is a miniature double mould-board plow, throwing up two ridges of earth, which are not disturbed by the side teeth; the broad rear tooth penetrates but two or three inches, cutting off the roots of weeds, and sifting the soil through its elevated prongs above. In light lands that have been well plowed the preceding year, it does excellent work without being preceded by the plow. It lifts, changes and pulverizes the soil in a manner that is not effected by any other implement, except Knox's Patent Horse Hoe.

The foregoing implements are sold by Vose, Mitchell & Co., Milwaukee, together with many articles of a kindred nature.

EDUCATIONAL.

Agricultural Colleges—Their Importance, &c.

The fact that the establishment of Agricultural Colleges is being not only agitated but really effected, all over the civilized world, is good evidence that their importance is beginning to be recognized; therefore we propose no elaborate argumentation in support of their value. To every reflecting mind it must be apparent, that agriculture cannot be fully successful without a knowledge, on the part of the cultivator, of all the sciences involved—that the character of the soil and the means of improving it; the relative adaptation to it of various plants; the laws of vegetable growth and development; the multiform relations of climate; the anatomy and physiology of the animals he would rear, together with the prevention and cure of their diseases; and the principles involved in the mechanic arts, are all absolutely essential to his highest success,—that in the breadth of range of scientific knowledge, the farmer ought to be the most learned man in community.

OF THE SUCCESS OF AGRICULTURAL COLLEGES,

It is sufficient to say, there are nearly 500 such Institutions in the several countries of Europe, almost without exception in a flourishing condition, and productive of the most beneficial results. In America we also have *one*(!), the success of which is a decided encouragement to all friends of Agricultural Education.

AS TO THE PROPRIETY OF GOVERNMENTAL PATRONAGE,

There can hardly be a question, so long as despotic governments, establish and support them. The theory of a republic is, that the People are sovereign, and, therefore must be educated. But the ordinary Colleges and Universities of the present day, are chiefly adapted to the demands of the "learned professions," and cannot supply the aid needed by the industrial masses. We must have institutions whose chief aim is the economical education of the great body of the people in the practical affairs of life. They have neither time nor inclination to study the classics, but may be enticed through the discovered beauties and utilities of science, into the fields of a more liberal culture. If institutions which aim at the intelligence of the people and the economical development of the resources of the State are not legitimate objects of governmental patronage, we know of nothing which is.

GENERAL FEATURES OF THE PROPOSED AGRICULTURAL COLLEGE OF WISCONSIN.

1. It is to be a Scientific School, aiming at the largest practical results,—an institution where established principles will be demonstrated before the student, and where important principles now unknown may be discovered—where the youth of our State may be qualified for their work of life.

2. Assuming that labor is honorable, as well as needful, it will require that the student himself spend a portion of each day in applying the principles taught in the lecture room.

3. Eschewing everything like an aristocracy of wealth, it will open its halls to all the youth of the State, *"without money and without price."*

4. It will aim, through carefully conducted experiments upon the different field and garden crops, fruit-raising, the breeding and rearing of domestic animals, upon destructive insects, and in the proving of agricultural implements and machinery, to work out on a liberal scale, and at an immense saving of time and expense to the people, most important results for the industry of the State.

5. By means of annual exhibitions, involving a display of everything connected with the Institution and farm, together with an annual report of the character of the instruction and the nature and results of all experiments for the year, it will endeavor to awaken the interest and stimulate the enegies of the multitudes of the people of the State who would make its occurrence not only a grand gala-day, but an opportunity for gathering large stores of valuable knowledge pertaining to their business.

WHAT SUCH AN INSTITUTION REQUIRES.

As a foundation, there should be a sufficiently large quantity of land to embrace as many varieties as possible of soils and exposures for all its needful annual experiments in the great interests of farming and gardening, and the raising of stock.

In the next place, buildings would be necessary—not extravagant structures involving great expense and little utility, but plain, substantial buildings of appropriate size and construction for all needful uses, and furnished with complete philosophical, chemical, anatomical, and industrial apparatus, and illustrative museums.

There should also be barns, stables, apiaries, &c., and workshops where the machinery belonging to the farm could be repaired, and perhaps manufactured.

The instruction should be full, thorough and practical, and would therefore require such number of professorships as would enable each teacher to devote himself as much as possible to his specialty.

That such an institution would awaken a deep interest in agricultural pursuits, and by properly educating labor, really dignify and ennoble it, while at the same time it would through the increased productiveness of our soils, and the superior quality of crops and fruits produced, an hundred fold re-imburse the State for the cost of its establishment, is so demonstrable as hardly to be questioned.—Whether our Legislators will so regard it remains to be seen. H.

Educational Facilities—To Whom Furnished.—No. 2.

BY MRS. HOYT.

It is a part of our philosophy to be patient, but patience, long tried, like hope deferred, worketh unhealthfulness. It is needful to have, and when we have, well to rejoice in the indications of the fruition of long cherished hopes. One of life's brightest, yet one that has for the most part but hovered above its horizon, is *the hope for a better education for women.* With this and an unfaltering faith in its sometime and somewhere realization, we have thus far, with a tolerable cheerfulness, groped our starved and thirsty way.

Recently we have two items whereon to base a brighter-hued endurance.

But a few weeks since, in attendance upon the Sabbath day Chapel service of the University of our State—there being an unusual number of ladies present—we were publicly thanked for the encouragement of our presence there; and as an incentive to such continuance, it was gravely *intimated* that the doors of that venerable institution *"might yet be opened to ladies!"* We could scarcely believe our senses, which nevertheless with wonderingly attentive eye and ear bore witness to the fact. Just think of it. An institution whose charter dated back only *four and twenty years!* whose location has been a central point for the munificence of such a State as Ohio; whose educational facilities had been hoarded up and refused to every second child of her bosom for well nigh half a century, to stand thus suddenly and boldly up, and in the person of her honored President, breathe such a possibility as this—"might yet be opened!"

How the narrow walls and light-out-shutting windows of that stingy little chapel stretched away into the glorious architecture of a time when even that crazy old institution, whose every palsied stone was tottering to the fall, might be re-builded strong and wise in the great *Christian* future. Does any one wonder that we fell back for explanation of this anomalous incident, upon the eternally progressive nature of things, and, as we walked hopefully homeward, thanked God and took courage?

Yet a few days, and there was in our hand the last Annual Report of the Board of Regents of the University of our adopted State. We had lived just long enough in the West to be satisfied that its "Star of Empire" was genuine; and the spirit of generous activity among its people the out-growth of necessities that would not be scantily supplied. But from our knowledge of its establishment and precedents we were not prepared to expect anything very liberal—to *our* side of educational prospects—from the University of Wisconsin. Therefore we acknowledge to a certain feeling of indifference as we turned the pages of this well-filled Report. What wonder? We had done the same, year after year, not of this only, but of other such institutions from the munificence of whose endowments we had never yet received a dollar's worth of help for our struggling hope. No, not the shadow of a prophecy thereof. It was in such a mood, then, as befitted the memory of such facts, that we turned and read; when like a star that suddenly emerges from a cloud that grows darker as we gaze—the following paragraph met our eye:

"The completion of the central edifice, will open the way to the admission of female pupils to the Normal and the other departments of the University. It is a question, now much agitated, whether the liberal culture of the female mind is an end most appropriately attained under the existing agency of separate educational establishments, doubling the array, and quadrupling the expense of the instruction. The entire success which has attended the common education of the sexes in the Normal schools and the higher academies of the Eastern States, goes far towards settling the question for the University."

The world moves! There is not wanting from its history the record of a time, when woman was denied the possession of any intellectual faculties whatever—the belief in the immortality of the soul not including her within the range of possibilities. Then came the grudg-

ingly acknowledged idea of her claim to a share in that great human inheritance; but what a share! And what a share has she since had in the educational facilities of a progressive civilization! No wonder that the soul of the philanthropist is stirred within him as he reads the inglorious record of what a system of abjection and prejudice the female mind has had to encounter, in reaching even its present unenviable condition. No wonder that the warm blood of a justly indignant womanhood has risen up in a never-to-be-silenced appeal against the continuation of this great wrong—this so unequal appropriation of means to the intellectual needs of the sexes.

But the twilight of such ignorance and selfishness is brightening to a day of better things. We can scarcely look into a respectable periodical, or newspaper, without finding evidence that the world is tolerating a more christian theory upon this long heathenly-legislated subject. Legislated,—ah, that is the "point in fact" whereon the unfurnished facilities have had to hang their poor pitifulness. Local taxation and individual liberality have together been found inadequate to a supply of means, sufficient to insure the most liberal culture for the youthful mind; and this not more in the poverty of man than in the wealth of our now well-established republic. But, as charter after charter has been granted under munificent appropriations from State or National Treasury, of land and money, has there been found one, in all this boasted array of institutions, that has had the generosity—no, the justice to so shape its policy and liberalize its upbuilding, that its doors might be open to all? Not one. We love not to write it, but the truth is, they have rather stood in, than been the way to the largest advantage to the largest number.

But this cannot always last; and we rejoice to know that there are so hopeful indications that the University of Wisconsin will not be behind, if it does not indeed take the lead in inaugurating a new era for female education throughout the entire States and the world. This has been the hope, and to this end the labor of many earnest-hearted workers in her educational fields.

We repeat it, the world moves; so it is no longer the great question, agitating our present system, Shall woman be educated, or shall she not? but how is this important end to be "most appropriately attained?"

After all, heroism is the great thing in our life-battling for the high and good,—the heroism that can labor and can also wait.

ATHENS, O., Feb. 8, 1858.

MISCELLANY.

Marquette Co. Agricultural Society.

The Marquette Co. Agric'l Society held its adjoured annual meeting at Princeton on the 18th Feb., at the office of S. M. Fish, Esq., and was well attended; F. Chickering, Esq., President, in the chair. The meeting elected the following board of officers for the ensuing year.

President—Thomas Countryman, Princeton.
Vice President—David Lee, Jr., Dayton.
Sec'y and Treas'r—S. Shuman, Princeton.
Ex. Committee—F. Chickering, Dayton; Sam'l Newton, Princeton; L. W. Merrit, Princeton; Sam'l La Mont, Princeton.

Resolved, That the proceedings of this meeting be published in the Wisconsin *Farmer* and Marquette *Express*.

F. CHICKERING, Pres't.
S. M. FISH, Sec'y.

Offer of Sweet Potatoes for Premiums to Members of the State Agricltural Society.

D. J. POWERS, *Cor. Sec. of Wis. State Ag. Society.*

DEAR SIR:—I have been induced to make your State Agricultural Society the offer of a premium of Seed Sweet Potatoes, believing that the subject has *not* received the attention and encouragement in your State, that it deserves. I offer for the disposal of your Ex. Com., to ship to the order of said Committee, three barrels of my *Nansemond Sweet Potatoes*, (worth $10 each,) one barrel to be shipped April 1st, 1858, and intended for distribution among the members of your Society; the other two barrels to be a premium for the best crop or sample—as the Com. may prefer—at your next Annual Fair, and to be shipped April, 1859. If accepted, please inform me, and notice should be given soon, that all may have an opportunity of procuring seed in order to contend for the premiums. Yours,

J. W. TENBROOK.

ROCKVILLE, Parke Co., Ind., Feb. 10, 1858.

The Agricultural Society have accepted the above offer, and will distribute the seed when received, among such members of the Society as desire to try their hands at their cultivation.

A list of premiums will be found in the premium list for the State Fair, for those who make the best show of them. We suppose there is no reason why Sweet Potatoes cannot be grown among us, if a little pains is taken

in their cultivation, and they are certainly a very desirable addition to our table luxuries.

D. J. POWERS, Secretary.

STATE AGRICULTURAL ROOMS, MADISON, March 10, 1858.

We shall also have a barrel of the aforesaid Sweet Potato sets, for distribution among such of our Wisconsin farmer friends, as wish to experiment with them.

We shall not probably receive them until the middle of April.

POWERS & HOYT.

Premium Crop of Carrots for 1857—Raised by Eli Stilson, of Oshkosh.

Statement of one-fourth of an acre of Carrots raised by Eli Stilson, in the town of Oshkosh, county of Winnebago, and State of Wisconsin.

The soil on which the carrots grew was a black, sandy loam, very deep, bearing strong marks of being alluvial, being about one mile from Fox River and the same distance from Lake Winnebago, on the point of land formed by the junction of Fox River with Lake Winnebago. The land has been eleven years under the plow, and four years out of the last five, in carrots, and manured each year at the rate of ten loads of rotten manure to the acre (too much manure makes them grow *unsmooth* or rooty.)

Mode of Culture.—The land was plowed the fore part of May, very deep, into beds one rod wide; then harrowed and sown by hand, in drills 15 inches apart. It was sown after the 20th of May. (I prefer to sow from the 15th to the 20th of May.)

EXPENSE OF CULTIVATION.

Drawing Manure,	$1 25
Plowing and harrowing,	1 00
Seed,	75
Planting, two days,	2 00
Hoeing twice, four days,	4 00
Harvesting,	4 00
Expense,	$13 00

Product 321 bushels, costing about 4 cents per buseel.

ELI STILSON.

OSHKOSH, Nov. 23, 1857.

NOTE.—The foregoing statement having been duly certified according to the rules, as to its correctness, the Ex. Com. of the State Agricultural Society, at their winter session, awarded the first premium for field crops, on said crop of Carrots.

It certainly seems favorable for carrot culture; an article, by the way, that ought to be much more extensively cultivated in the State. —[EDS.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

SPRING'S FORAY.

BY READ THORTON.

By the flowery-banked Floridian river
The young Spring lay,
Glinting sun'eams filled his quiver
That February day;
Beside him peeped the violet's eye,
And scented the breeze the orange-blow;
The Virginia red-bird whistled night,
Beat south by the northern snow!

On his shield of golden sunshine
The young Spring lay,
The flaming spear he held was made
Of lightning flashed in May;
"Thou, tyrant winter! hast come down
And overpassed thy line!
I'll have a foray in thy field,
Since thou hast camped in mine!
Since o'er my southern floral clime
Thy snows have dared to brood,
I'll try which is the stronger,
The gentle or the rude;

"Gather! south-winds, gather!
Breeze up for the North!
Birds of sunny feather,
For the rear come forth!"
Northward trooped the gallant Spring,
While Winter, cowed, retreated,
And left the plain for mountain-tops,
Without a fight defeated;
Where Hudson's rocks like dragons gape,
Spring breaks their icy teeth,
And from the valley's turfy lap
He melts the snowy wreath—
Through mildest days he keeps the field,
While Winter northward rallies,
And made an ambush for the Spring
And with his danger dallies—
But the still woods hear the battle-cry,
And warn the gentle Spring to fly!

Down from the Adirondack
This second morn of Spring
Come the vast aerial surges
Their foam-like snows to fling—
Like hungry wolves of Labrador
The gusty winds will howl and roar,
Yet bonny Spring, God bless thee
For thy brief and bright foray—
We'll mingle with the winds of March
Thy foretaste of the May!
And when the early April
Shall fleck with flowers the wood—
'Twill prove for thee the gentle
Is stronger than the rude!

CHILDHOOD is like a mirror, catching and reflecting images around it. Remember that an impious or profane thought uttered by a parent may operate on the young heart like a careless spray of water thrown upon polished steel, staining it with rust that no after scouring can efface.

The Family.

As an institution, the Family is the oldest and most honorable of which we have any knowledge—its establishment being coeval with time, and the human race. Its rule was the first, and for many succeeding ages, the only form of government among men; and through the conflicting periods of up-growth and disaster that have distracted the nations of the earth, the Family has been abiding still, and as a fortress of strength and hope, not more to the individual than to the State. The history of the world has indeed been darkened with the bloodshed and violence of its attempted overthrow; but how have the people, who have "lifted up their heel" against its hallowed restraints, and treated its sanctities with contempt, been led in the sackcloth and chains of a God-avenging retribution? On the other hand, how have those who have fostered and respected it, been preserved in their simplicity and independence?

Who can read those legends, so wonderful, yet so truthful in their historic simplicity, of "Araby, land of the blest!" and not feel how beautifully family ties, and their divinely recognized authority, permeate the whole web of that costly-threaded Arabian Literature, through whose golden sands flows down the very soul of eloquence and song. What were the barren plains, burning, and wide-spread, the inhospitable rocks and shriveled streams to a people who found their highest good, and deepest joy, in those perennial fountains whose source is God, and centre human loves.

In the literature of no people do we find such deep religious fervor, and absolute worship of the All-Wise, linked in such perfect devotion to, and faith in earthly affection—this affinity so seldom found, yet only sure basis of the one, or safe trust of the other.

Under the genial influence and invigorating fervor of her domestic life, Arabia spread out her coasts and strengthened her borders, till in the world's great conquests, she, almost alone, and more than any other, retains the purity of her idioms, the simplicity of her manners, and best of all, the sanctity of her social and religious institutions.

And through all time will silver-toned Arabian poetry flow over the ages, in every swell and sparkle, breathing out the loving tenderness of Him who "setteth the solitary in families," making the windernesses of this world "to blossom as the rose," to those, who loving, emblemize His own.

Passing by many an instructive period, and the peoples of a thousand tongues, hear what old Rome says, as, from the archives of her yet half-unsealed history, she proclaims the fact, that, "For the first five hundred years of her overshadowing, and then unshaken reign, not a single divorce was asked, or granted, in all her realm." And this was the formation period of her after-time almost absolute power; the consolidating basis upon which, in her degenerate days she reared the gorgeous superstructure of her unsubstantial greatness. Had Rome been true to her own theory of virtuous liberty, carrying out and up into her public life and governmental policy, the strength and beauty of her earlier domestic economy, she might now have been "mistress of the world," sending out from her seven-hilled diadem, benedictions to all the earth. As, looking back, we see her contrasting, strongly enough, in her stern discipline, rigorous virtue, and hard-hearted justice with the poetry-impassioned people we have before noticed, Rome yet adds another, and most iron link to the chain of evidence adduced by history, in favor of the position we give the Family, in the strengthening or disruption of nations.

What the Arab realized through his domestic loves and overflowing affections, the Roman found in unswerving morality and severe virtue—first a Home, then a Country—in both, happiness and security.

Which of these proved strongest, let "where are they now?" answer. Rome shudders in her world-wide grave, and, from the relics of her costly tomb, flicks back the glory used to be. Arabia, in the desert for beauty, and on the hill-top for strength, calls aloud, "Lo, here am I!"

Now let us glance at another page, near at hand, and oftenest read. It is said that France enthroned herself, and laid her liberty and her glory in the dust, by denouncing the Christian Religion, or rather, the God of Revelation.—And by what steps? First of all, by unlegalizing and setting at naught all Family ties.—This paved the way, naturally enough, to an abrogation of the Sabbath, and with it all that social worship which is the life and soul of public ceremony.

Then came, inevitably, and as a consequence of the first fatal step, a public decree—formal and impious—by which God was ruled in general terms out of his material universe, and particularly from any further knowledge of, or interference with, the affairs of the French people and nation.

We all know what followed—how women crazed, and men, gray-haired in a day, trampled under their unhallowed feet the remnant of virtue and justice they had left; how all goodness, and all beauty lay down together in a most accursed grave, and while the streets ran blood, and children begged for bread, how tyrants rose up fiercer than before, to fetter them anew with the galling chains and drench them in the wormwood of despotism.

In all the revolutions that have befallen that refined and unfortunate people, we may trace distinctly the influence, or, more properly, the want of influence, from that internal rule whose soul and sinew is the joy and confidence arising from well-ordered Families.

Of all civilized nations, France has paid smallest regard to the duty of cherishing and legalizing the marriage relation; and, of all called Christian, her history is worst scarred, most frequently and disastrously afloat upon the tide of revolution.

[CONCLUDED NEXT MONTH.]

Flowers.

Everybody loves flowers;—from the household baby to the most venerable of grand papas, they are to all a beauty and a joy. With what wondering eyes the little one just entering the first spring-time of its life, follows the flower it fain would catch in dimpled hand. How lovingly the children gather round the bush where the half-opened bud unpeeps its roseate face. Not a leaf is touched, or twig broken, as cautiously they look to see how many are coming, and which will be out first. Then, what a burst of joy, when, some morning, after a gentle shower, is heard the shout, "Roses! Roses! The whole rose-bush in bloom!"

Yes, this sense of the Beautiful is a part of the soul. Long before a child can be made to understand anything beyond a hobby-horse, or doll-baby, it feels the force, and yields to the influence of whatever speaks to the heart or directs the thoughts through the beauty-loving eye.

Of all the mistakes we make in the dull prosy way we undertake to educate and govern our children, there is none greater than this; the separation of the symbol from the truth we would teach.

With children, they are especially needful—nay, they are next thing to necessary, and helpful to all. How can a mother so effectually teach her children to be joyous as the birds, gentle as the lambs, and like the flowers for fragrance and beauty, as when living specimens of these come often before them, and share in the love of their young life?

Unfortunately, all cannot bring these precious aids to their assistance, but nowhere are people excusable for neglecting the culture of flowers. They may be few and simple, but their lessons will be constant and powerful, and in the happy, cheerful, and moral influence they will have upon a household, a thousand-fold repay the time and labor they cost.

Let no one to whom God has given a place worthy the blessed name of Home, fail to entertain some portion of His bright Ministry of Flowers.

A New Year's Gift just come to Light!

We exceedingly regret that an interesting and complimentary communication from John P. Kramer, Esq., of Fond du Lac, making offer of a large number and splendid assortment of rare fruit-trees and plants, as a New Year's gift, should have been mislaid until it is now almost too late to even make appropriate acknowledgements. Our absence in Ohio, during the entire winter must be our apology. We return our grateful thanks for the offering, and will have them transplanted to our future fairy home on the Mendota.

The Kitchen Garden—Small Salads.

CRESS—*Curled or Pepper Cress.*—A very early and delicate salad. May be grown fit for use in a hot-bed in forty-eight hours. Sow thickly and broad-cast on very rich light ground, *covering very lightly*, and press in smooth with spade. If very dry, give occasional but light watering. Ready for use when one inch high and best when once cut, but may be grown to several inches, and cut repeatedly.

WATER CRESS.—A very early and healthful salid; found growing in springs or streams of pure water. May be propagated by throwing a few plants upon any such spring or stream. Also cultivated in low, wet soils, where they will be sure of plenty of water. Dig deep, set them six inches apart, and at first, till fully established, water them well.

CHIVE.—A hardy perennial bulb, which once planted, grows in any soil and for a number of years, being quite frost proof. Plant a few inches apart and two deep. The fine, young leaves come out very early and constitute one of the best of salids.

MUSTARD.—Cultivation and use, as a salid, the same as Cress.

To these may be added Sorrels, the early leaves of many Cabbages, Peppers and Radishes, and the first fruits of the whole family of Lettuce.

Lettuce to be brought to perfection should be thinned out, when pretty well grown, leaving the plants five or eight inches apart.—These, pressing the leaves somewhat together, should be earthed up with light warm soil, or sand, scattering straw or any such litter scantily over the tops. They will then head and blanch beautifully white and crisp.

Everybody knows how to cultivate Radishes. Light, moist soil, and frequent sowings is all that is required.

Recipes from Mrs. Horace Mann's Cook Book.

MUFFINS.—Warm a quart of new milk, and stir in two cups of rich cream; add four eggs well beaten, a table-spoonful of salt, a cup of yeast or a table-spoonful of well soaked dry yeast, and flour enough to make a stiff batter; beat it well with a spoon, and let it rise for six hours. Fill the muffin rings half full of the mixture, and bake them about twenty minutes.

BUCKWHEAT CAKES.—To one quart of buckwheat flour add half a cup of yeast, a cup of cream, a table-spoonful of salt, and make a thin batter with warm water. After beating these well together, set the mixture to rise for about eight hours; heat the griddle and rub it with a dry cloth well saturated with salt. Bake in small cakes.

TAPIOCA PUDDING.—Swell a cup of tapioca, either in water or milk, till it has become jelly; add a pint of cold milk or cream, five eggs, two cups of sugar, half a tea-spoanful of salt, and the grated rind of half a lemon. A cup of raisins or currants will improve it. Bake it an hour and a half.

BOILED INDIAN PUDDING.—Four teacups of Indian meal scalded with a quart of boiling water, two tea-spoonfuls of salt, two gills of molasses. Tie in a cloth so as to let it swell one-third, and boil three hours. Two cups of stewed apple will improve it. This pudding is very good eaten with roast beef as a vegetable.

HOT PUDDING SAUCE.—Boil half a pint of cream, and turn it upon half a pound of powdered sugar. Boil it once more, and flavor with lemon or peach.

FRUIT SAUCE.—Stew a dozen plums or cherries. Boil a pint of cream, and pour it over a pound of powdered sugar; add the fruit, flavored with lemon or rose water.

NEW YORK SPONGE CAKE.—One pound of flour, one and a half of sugar, fifteen eggs, the rind of two lemons grated, and the juice of one, and a little salt.

EDITOR'S TABLE.

The Editor among the People—Third tour, concluded.

[NOTE.—In view of several gross errors in our editorials of last month, particularly that singular (number) butchery of the French language, to which, since sunny school days we have always been partial, we beg our readers to remember that we were absent during the entire month, and are in no way responsible, except for the miserable chirography of our notes, which it appears the "devil" could not read!"]

If we remember, the printer chopped us off rather abruptly at Palmyra, whence, via. Milwaukee, we passed to Oconomowoc, situated *a la* Madison, between two crystal lakes, and surrounded by a fine farming country, embracing both timber land and prairie. Our lecture was well received and we were hospitably entertained by Hon. Dr. Lewis, and J. Ferrey, Esq. The following day was spent in visits among the farmers of Summit. Found Senator worthington's farm delightfully situated upon Lake ———, a very paradise, and our friend Danforth's as handsomely upon the "Twins" in the immediate vicinity of Neshota Seminary. There is no more beautiful section in the State than this, dotted with groves and be-mirrored with fairy lakes.

Our next appointment was at Watertown, 13 miles distant, which place, by reason of a running off of the cars, we were obliged to reach on foot, and in two-and-a-half hours!—But we did it, and came out two minutes ahead. W. is certainly quite a city, but not entitled to much credit for agricultural interest.

Columbus, the present terminus of the M. & W. Div. of the La Crosse R. R., is located in the midst of a rich farming country and expects to be a place of considerable importance. We arrived on Christmas eve and therefore came into competition with a Donation party, two dances, three Lodge meetings and the revelations of the "Great Seer." Of course our audience was somewhat less than otherwise. We were well pleased with the quality, however, and were agreeably entertained during our stay by friend Warner and lady.

Christmas day was stormy but enlivened by a *wedding* scene at the Birdsley House, upon which we luckily stumbled on our way to

Fall River—a pretty little village four miles west of C., and peopled by some of the most

cordial, whole-souled friends of agriculture that we have met. The greeting at the crowded church in the evening was warm and cheering, the meeting enthusiastic. At the close of the lecture, a Club Association was heartily entered into. We left Fall River the following morning with the names of Smith, Brayton, Adams and a dozen more, well graven upon our memory.

Beaver Dam, which, for want of a better conveyance, we reached on foot, we found to be a respectable looking village, with several mills, churches, and colleges, a good weekly paper, and an excellent hotel. After diligent search we were unable to discover more than two friends of agriculture, whom we strove to encourage, and then took the cars for

Horicon; with the business enterprise of which place we were well pleased, as also with the interest manifested in the object of our labors. At the outlet of the Lake Horicon, is well provided with water power, and is doing a fine business in the lumber trade. Among the friends, too numerous to mention, who greeted us, F. H. Roper, Esq., Treas. Dodge Co. Ag. Society, Pomeroy of the *Argus*, and Pickett, Superintendent of the excellent schools of H., are especially entitled to a place on our *private book*. With friend Roper we visited his farm, some three miles distant, and delighted ourselves with an inspection of his barns, stables, pig-pens, root-cellars, and stock!

Our next stopping place was Burnett, where we found a beautiful country church well filled with intelligent and enthusiastic people whom we addressed with considerable "unction" for nearly two hours. At the close, a company of four ladies and gentlemen relieved the audience with a beautiful agricultural song, and the meeting was concluded by forming an Agricultural Club. Welcomed to the home of Hiram Sawyer, Esq., we were made decidedly comfortable, and after a few visits to the neighboring farmers, and convincing ourselves that Dodge Co. is one of *the* counties of Wisconsin, made our way to

Waupun! where we took good care to keep out of prison, rnd thence hastened to Fond du Lac—a city of some 8,000 inhabitants, and strongly resembling the Chicago of a few years ago. Through the polite attention of E. W. Drury, we were favorod with a running survey of the town and its principal objects of interests. The artesian fountains, the handsomest church in Wisconsin (First Presbyterian,) one of the finest halls (Amory,) the Lake, and the steamboat landing, which is one of the best arranged for convenience to R. R. &c., we ever saw. The lecture was on New Year's eve, and notwithstanding the heavy snow-fall was well attended by an audience of as good quality as ever assembled at Fanneul Hall. To the hospitality of Hon. E. Pier and family, not omitting friend Kramer who accompanied us thither, we are indebted for many kind offices, and are also under large obligations toour brethren of the Press, whom we found as cordial men as ever drove a quill or lifted a type.

Fox Lake was reached from Beaver Dam by the generous aid of Messrs. Dunn & Allen—in whose neighborhood we spent a pleasant night and forenoon—and proved to be a pleasanter place even than we had anticipated, although from our partial acquaintance with Messrs. Baron, Smith, and Ferguson, we expected a good deal. The Baptist Church was filled with intelligent auditors, and an Agricultural Club was organized at the close of the lecture. The Sabbath was pleasantly passed in church-going and at the quiet, pleasant home of Hon. Q. H. Baron. If the La Crosse R. R. had not, with characteristic stupidity, run through a swamp, in order to keep quite out of reach of the town, Fox Lake would have a large and rapid growth. Along the line of the R. R. to Portage, the country is handsome, and will one day present a series of splendid farms.

Portage City is so well known to the whole State that we need give it but a passing notice. Rather sandy in the immediate vicinity for the most successful culture, it is nevertheless so situated in relation to the Wisconsin, Fox, and Baraboo Rivers, all streams of importance, and always freighted with immense quantities of lumber, as to be inevitably a place of considerable importance. To A. C. Ketchum, Esq., we are especially indebted for a most genuine hospitality. In the evening of the second day we again took the cars, and after a ride of an hour and a half, were set off in the "woods," and after much earnest inquiry learned that we were in

Kilbourn City! The editor of that genial, kigh-toned *Mirror* told us so, and we trusted him till morning; when lo! a city indeed, vast and beautiful, did, dimly and shadowily rise before our astonished vision. Before us swept the deep, silent current of the majestic Wisconsin, plowing its way through the deep

er gorge on the West; while eastward, northward, and southward, beautiful streets, real and imaginary, lined with handsome cottages and palatial mansions, stretched away in the undefined distance. But seriously, Kilbourn City has a charming location, and with its hundred houses, several stores, school houses, steam mills, depot buildings, and magnificent bridge, already makes an imposing appearance. We were very cordially received and entertained by A. Holly, Esq., Editor *Mirror*, who but two years ago set up his press in the midst of the forest, and to whose enterprise the rapid growth of the city is largely due.

Reedsburgh was reached the following day, after a walk of sixteen miles over lonely sand prairies and hills. The country in the vicinity of Reedsburg, however, is good and presents many respectable farms. Our lecture was delivered to a large and highly intelligent audience at the High School building, and we were cleverly quartered at the beautiful home of Rev. Mr. Dwinnell. The next day brought us to the famous city of

Baraboo—where we met so many cordial, whole-souled people, that a bare enumeration would fill a whole form of the *Farmer*. The village is beautifully situated on the Baraboo river—which furnishes admirable water-power—and is among the handsomest in Wisconsin. The soil of the valley and adjacent prairies is unsurpassed, and the scenery, made up of cultivated fields, woodlands, bluffs, rivers, and lakes is highly picturesque. Of course we visited "Devil's Lake"—not *alone*, however, for we had no relish for meeting the "Old Fellow" of *hoofs and horns* in the solitary places! Accordingly we levied upon the distinguished Editor of the *Republic*, who being a brave man, (Editors are always brave!) cheerfully became our guide and guard. Equipped and stored with provender, we reached the lake, crossed it, scaled the rocky bluff on the west, without seeing either *devils*, *snakes* or *wild cats*, and triumphantly swung our hats, 400 feet above the lake; from which "proud eminence" we satisfied our astonished vision with the surrounding world, devoured our apples and johnny-cake and returned to the city. In the evening we were greeted by an overflowing multitude at the Court House, and after spending the Sabbath with Messrs. Crawford and Kellogg, bade adieu to the good people, saying in our heart, "Great is Baraboo!"

Lodi is a stirring little village, lying at the foot of "Prospect Hill" and surrounded by as fine a farming country as we have yet seen. Conducted by friend Eaton to the summit of the hill, we were again delighted with the varied and almost limitless landscape which it commands. Believe it is intended to erect a seminary on the slope and an observatory on the peak. Grand idea. Why, the stars would look like old familiar faces, from that lofty eminence! Indeed, but for the clattering mills below, we should have fancied ourself the inhabitant of some new sphere. When the R. R. in construction is completed we shall visit Lodi again.

Lottery Humbugs.

We not unfrequently receive packages of lottery tickets by mail, accompanied by flaming handbills and circulars, setting forth "stupendous chances of making fortunes, and no earthly chance for loss." We wonder if they find any fools at this late day to buy their tickets of them. We would as soon throw our money into the middle of Lake Michigan, as to send it to these rascals and would expect return from it as soon.

Our present practice is to throw these tickets in the stove as fast as received, which leads to theiir immediately being drawn (up chimney) and ending in smoke without any loss of money to us, and we would advise all others to do the same. They mostly come from New Hampshire, which seems to be fertile in such humbugs. The getters up of them had better emigrate to the West and become honest men, before they are sent to the proper home of rogues, the State prison. The last batch received purports to come from E. R. Spalding, Moulton & Co., Haverhill, N. H.—Wonder if anybody living there knows the *Peter Funks*. If so, why don't they set them to cutting granite in the stone house at Concord?

Whortleberries.

We are in receipt of a nice sack of dried whortleberries from our friends Mr. and Mrs. W. D. Curtiss, of Jackson County, transmitted in the care of the Hon. Judge Pricket, member of Assembly from that district.

When in their county in the summer of 1856, we saw immense quantities of them growing upon the hill side slopes, and were also much indebted to the aforesaid friends, for their kind hospitalities to a *stranger* in a very new country. P.

THE LEGISLATIVE SESSION—

Is wading slowly along in its various labors of Investigation, Statutory Revision, and ordinary enactments; probably somewhat nearer its close, than at its beginning, although no time is yet fixed for an adjournment.

All in all, it is bound to be a singular session, and one that will long be remembered.—It seems to be turned into a great settlement day, or ballancing up of accounts, on all sides. Rogues and swindlers, of every grade and party, are being brought one by one to the block, and guilotined without remorse or pity. Another French revolution to all intents and purposes. Where the work will end, or who on being weighed in its balance will not be found wanting, none yet can tell. And the only feeling we have to express on the subject is, that we hope it will not leave its labors, until the bulk of a certain reckless and miserable class of men, that have been spawning iniquity in the State for the last few years, are thoroughly hunted out and exposed at least, if not punished.

When the report of the investigating committee is published, we will venture to prophesy that it will be a highly interesting work, and eagerly sought after.

IN ORDINARY LEGISLATION

But little is being done, compared with the past. The spawn of local and sixpenny legislation, that has hitherto disgraced the State, without anybodies having sense or honesty enough to check it; has been bravely met by Gov. Randall, and sent to the scrap box where it belongs. All honor to him for this, and for many other manly acts that have thus far characterized his administration. Honest and firm men in high places, have become so rare, as to actually make them heroes, when they do turn up, for merely doing their duty.

The Legislature is composed of nearly two-thirds farmers, still very little legislation has been asked by them, for the especial benefit of agriculture.

THE AGRICULTURAL COLLEGE BILL,

Is the principle feature of the session in that behalf. It provides for the purchase of a tract of land, in some central location upon a Railroad, of not less than than three hundred, nor more than one thousand acres, for founding an Agricultural College, and Experimental Farm;—to be endowed temporarily, by a portion of the income of the swamp lands. Such College to be devoted to the teaching and demonstration of the substantial sciences, and their application to agriculture and the useful arts. It provides that the students shall all be required to labor so many hours each day in the field, orchard, garden, workshop or laboratory; in those vocations that will most advance them in a knowledge of their pursuits. It is intended to be free to all, so far as tuition is concerned; and when fully developed, to be ample to accommodate from 500 to 1000 students. It is the wisest scheme for the advancement of the substantial interests of the State, that has ever before been presented to the Legislature. But what its fate will be, or whether it will pass in any shape at the present session, seems doubtful. Some are disposed to view it as a novel and doubtful matter, whilst others are wholly at a loss to see how any money can be spent for the advancement of agriculture, without a downright waste. This is all very natural, because it is wholly the custom and practice, to spend the public money for other and often foolish and worthless things; $20,000 or $30,000, frittered away on mere documentary and worthless printing, that few or none ever read or care for, is thought little of, because it is the fashion. But we prophesy that fashions will change in these respects, when people come more fully to appreciate their true interests, and Legislatures their duty.

There is a bill introduced for

THE PROTECTION OF SHEEP,

by a tax on dogs, and no law could be more needed; as it is a well established fact, that very many of our farmers are wholly abandoning sheep keeping, on account of the dog and wolf nuisance, both of which evils the bill is calculated to remedy. We sincerely hope it will pass and be well sustained by the people. Otherwise sheep will become strangers in the State, and dogs will take their places; about as wise a policy for Wisconsin, as slavery is for Kansas.

By the next number of the *Farmer*, we will undoubtedly be able to tell what the Legislature have done for the cause of agriculture, from whom they derive seven-eighths of their pay and support. Such laws as are particularly interesting to the farmers we shall publish.

P.

A WORD TO OUR CANVASSING FRIENDS FOR ELECTION-DAY, AND OTHER DAYS.

Gentlemen, we are sorry to have to appeal to you further the present year, in behalf of our subscription list. But through the tightness of the times, we find some 1,000 copies of the *Farmer*, from January, still on our hands, for which we want, and must have subscribers.

Now what we particularly propose, is to have our friends take the matter specially in hand, on Election day, and see if they cannot each and all of them, raise us a few additional names, making up in the aggregate all we will need to clean out our edition. It can be very easily and surely done, if our agents will only take copies along with them to town meeting, and commend them to those who ought to subscribe.

We have plenty of the SEEDS we advertise, for all who may deem them an inducement, and will forward them with pleasure to those that are entitled to them, with the *Farmer*.—We really hope that it will prove a telling day for us, in the way of bringing up our back lists to where they ought to be. Shall we hope in vain? We believe that we are doing our share without stint, and trust we shall not be obliged to hold *on our hands*, any considerable share of our edition for 1858.

About Reapers.

D. J. POWERS, ESQ.—*Dear Sir*:—As you used one of Palmer & Williams' Self-Raking Reapers during the harvest of 1857, together with one or two others, left with you for trial, will you do the farmers of Wisconsin, the favor to state through the columns of the *Farmer* the points of excellence of each, and also your opinion of the different harvesters now before the public, and thus oblige many who wish to purchase machines.

Yours, Truly,
E. W. SKINNER.

MADISON, March 1, 1858.

REMARKS.—The machines left with me for trial during the past harvest, were placed in the hands of Mr. J. A. Douglass, who was working my farm at that time, and his opinion of the different machines is hereto annexed. Mr. D. has had considerable experience in running reapers for several years past, and his opinion as to the merits of different machines may be considered reliable.

I would say, however, that I was in and about the harvest field considerable during the harvest, and was highly pleased with both the machines referred to by Mr. D. The Heath & Co. Hand Raker is a remarkably light and pretty machine, and of easy draft—a very good thing for a hand raker.

But the ingenious and never tiring iron arm of Palmer & Williams' Self-Raker did things up to admiration, in the most horribly lodged grain that ever was seen, and fully establishing our faith in Self-Rakers.

D. J. POWERS, ESQ.—*Dear Sir*:—Agreable to the promise I made last harvest, to report the working of the reapers which I was using, I avail myself of the present opportunity to comply with that promise. I had between 50 and 60 acres of wheat and oats, and the community in general pronounced it one of the worst tangled and lodged fields of grain they had ever seen. From the wheat field I had not over one-fourth of an acre that could be cut round, the balance had to be cut all one way. I used in cutting the most of my wheat one of Heath & Co.'s Hand Raking machines, (which in justice to them I would say, for a machine of that kind is not surpassed for good work and easy draft;) the balance of my harvest I completed with Palmer & Williams' Self-Raker. The field of oats, of which 10 acres could not have lain worse for a machine, if a farm roller had run over it previous to cutting. I finished in as good order as the standing grain. I am satisfied this Reaper could not have had a severer test than I gave it. Without intending to discredit Heath & Co.'s Hand Raking Reaper, I am satisfied if I had used the Palmer Reaper in cutting my wheat, I should have saved at least a week's time and the labor of three extra men, from the fact that the Self-Raker laid the grain as well as if it had been standing good, whereas it was impossible from the tangled nature of the grain, with the Hand Raker to lay it with any regularity. The great economy of Self-Raking Reapers, must of necessity recommend them to the good sense of our farming community. Yours, Respectfully,

J. A. DOUGLASS.

BURKE, Dane Co., Feb. 20, 1858.

Shanghais and their Eggs.

Gen. Corss of this city, left in our office a few days since, a couple of *Shanghai Eggs*, nearly as large as goose eggs. He informs us that his Shanghais, some forty in number, have laid well all through the winter,—that they have averaged from two to three dozen eggs per day. That is certainly establishing a good character for laying.

Notes and References to Correspondents.

Jas. L. Stickney, Esq., of Wauwatosa, states in a communication on the Wild Plum (for which we cannot find room in this No. and after which it will be too late,) that he deems it the best article on which to propagate the choicer kind of plums, by grafting close to the surface of the ground. We fully concur with him and have so stated in the *Farmer* frequently. He also doubts their utility for hedging, as compared with the native thorns. In this we also agree with him, but still continue to believe that they will answer very well around one's premises, where fruit would also be an object. We hope that Mr. S. will favor us with further articles when we are less crowded with those of a prior date.

R. M.'s article on the preservation of fence and gate posts will appear in May No.

A friend sends plan of a Farm Gate, which we would like to have engraved for publication, and may at some future time. He thinks our model gate not well braced, because the front brace runs counter to the back one. He must understand that this brace does good in holding the top of the middle standard in place, and that the gate cannot sag unless that moves. We place the braces as we do because we consider them just as good in fact, if the gate is well made, and a good deal better looking.

J. W.'s article on *Sorghum Sugar* is well written, but before received we had prepared a long article on the same subject, and a little more practical.

We have a dozen other good articles for which we have no room this month. Sorry that our patrons do not feel able to pay us for publishing a larger paper, so that we should always have plenty of room.

The First Premium on Plowing—

At the State Fair of 1857, was not published in the awards after the Fair, on account of an error in the entry of the party, to which the premium was awarded by the judges.

The team was entered as John Child's, Lima Center, Rock Co., while the judges awarded the premium to the gentleman that plowed, Mr. James Osborn. The revising committee, not finding Mr. Osborn's name on the entry books, and not knowing that it was Mr. Child's team, withheld the premium till the matter was explained, after which it was awarded to Mr. Child's. We say this much in explanation, because it excited some little attention.

The plowing was reported as very excellent, and reflecting high credit upon Mr. Osborn, the plowman, as well as upon the plow makers, Messrs. Winchester & DeWolf of Whitewater, it being one of their Whitewater Clipper Plows, which by the way, usually draw the premiums at the Fairs in plowing matches.

S. R. Fox is agent for selling the Plows of Messrs. W. & D., in this county and region.

Prices of Produce.

There has been so little change in market prices since last month, that we omit our market table for this month. As hitherto, nearly everything the farmer has to sell seems still to continue dull, all over the country; in fact almost a drug. The foreign demand for our staple products, seems next to nothing, and small prospect of improvement.

Still wheat has rather looked up in some of our Wisconsin markets, in one or two instances during the last month. How far it may justify a hope of better prices at the opening of navigation, one can judge about as well as another. We still hope (faintly) for some small improvement, though we can hardly give a reason for the hope.

State Fair of Wisconsin.

The place at which it is to be held next season, is not yet determined. The time is from the 5th to the 9th of October.

Illinois holds hers, at Centralia, (the junction of the Central and Chicago branch of their great road,) about 260 miles south of Chicago, in Central Egypt, commencing September 15.

County Societies, will oblige, by sending us any items of general interest, pertaining to their affairs, as they transpire.

Imphee Seed (Nee-a-za-na.)

A small parcel received from A. O. Moore, Agricultural Book Publisher, 140 Fulton St., N. Y. Will try it and report success next fall.

Cuttings of Lombardy Poplar.

John Chapin, Esq., of Palmyra, informs us that he has lots of these to sell, cheap, and will forward to order by Railroad.

Meteorological Synopsis for February, 1858.

Barometer stood highest on the 1st, 29.920.
" " lowest on the 10th, 28.814.
Average for the month, 29 088.
Thermometer stood highest on the 26th, 44 degrees.
" " lowest on the 10th, 13 "
Average for the month, 16.41 "
Amount of rain, .89 inches.
Amount of snow, 5.50 "
The prevailing winds were North-west and South-west.

University.

WISCONSIN FARMER,

AND

NORTH-WESTERN CULTIVATOR.

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D. J. POWERS AND PROF. J. W. HOYT, Editors.

VEGETABLE ANATOMY AND PHYSIOLOGY.



THE PLANT.—ORGANISMS.—NO. ONE.—Having at length completed the list of the most important compounds which make up the substance of the Plant, and are the support of all animal life, we come now to examine the *forms* into which they are grouped and the interesting processes of vegetable growth,—a branch of the general subject, not only fascinating because of the wonderful display of the vital forces involved, but additionally interesting to the mind of strictly *practical* tendencies, since it unfolds the *laws* of development, or the conditions of successful cultivation.

First, of Forms.—There is a class of plants almost without form, such as the mould which gathers upon decaying organic substances, the scum which collects on the surface of stagnant water, and the irridescence of neglected window panes. But of all the multitudes of different species, above this first order there are countless shapes and sizes. Some are so simple and minute as to require a magnifying glass for their discovery, and the aggregation of large numbers to render them visible to the naked eye; others are wonderfully complex in their organization, and attain to a giant size, like the oak, the banyan and baobab of thousands of years.

Leaving the simplest form of the plant, which is that of a single cell, in which there is visible nothing of what we should call organs, and in which the process of growth is simply an imbibition through its permeable sac walls of the necessary food for its own enlargement and the after production of like cells as its progeny—leaving the multitude of these species, we ascend by almost imperceptible gradations to those simplest forms in which, under the operation of organic forces the cell development takes a determinate direction and constitutes well-defined, distinct and typical organisms, familiarly known to every one as the *root*, the *stem* and the *leaf*,—parts essential to the perfect plant, and appropriately considered, in the order named, although strictly speaking, the development is from the stem downward into the root, and upward into the leaf.

A minute description of all the known forms of these organs would involve a thorough discussion of the botanical classification of plants, which of course lies outside of our plan; we simply remark, therefore, that whatever the differences of form in these several parts, the office which they severally perform in the economy of life and development is one and the same for all the different species.

Being alone essential to, and primarily concerned in the life and growth of the plant, they have been properly styled the *fundamental organs*, and either pre-exist rudimentarily

in the embryo, or are the first results of germination.

Embryonic development.—By carefully examining any of the ordinary seeds, as the bean or pea, apple or peach, you will find a little point at one extremity, of definite and almost invariable form for a given species; this is called the radicle, and is really a rudimentary axis, which by prolongation downwards is to become the *root* and by extension upward, the *stem*,—they are frequently called the *descending and ascending axis*. That portion of the seed which lies above the radicle, and constitutes its greater part, is termed the cotyledon, and is destined to become the leaf. As soon therefore, as the necessary conditions of heat and moisture, (as described in the April No. of '57,) are observed, the growth commences through a series of wonderful transmutations and transportations, until the envelope bursts, and the axis simultaneously ascends and descends, and the latent embryo becomes a living plant.

Thus developed, the proper organs are sufficiently discernable and distinct to render them separately examinable and distinctive names appropriate.

The root commences its growth by the production of a quantity of new cells which form at the lower extremity of the radical, and is continued by the enlargement of these cells next the stem and within the superficial cells, for the easier penetration of the resisting earth.

Since the offices of the root are various, it would, therefore, be reasonable to expect a variety of forms and characters to correspond with the end to be subserved by the plant of which it is a part.

In the largest number of plants of the highest order there is a *main* root which descends quite perpendicularly, and after a little sends out a large number of branches, which also, in turn, divide, and so on until the extremities consist of a multitude of thread-like rootlets.

Classified according to shape, roots are *fibrous* like that of the grasses; *tuberous*, as of the potatoe; *napiform* like the turnip; *fusiform* or spindle-shaped, as the carrot; *fasciculated* or in knobby clusters; or *palmate*, when the knobs are branched. According to duration of the plant, they are divisible into *annual*, *bi-ennial* and *perennial*.

Annual Roots are those whose plants spring from a seed, bear their fruit and die the same season, from exhaustion. Such roots are fibrous, with sometimes a main or tap-root, and sometimes without, and are simple *feeders*.

Biennial Roots belong to those plants which do not blossom until the second year, but, a mere tuft of leaves near the surface of the ground, spend all their forces in the accumulation, within the root itself, of the whole year's supply of nourishment; turnips, beets, carrots, &c., are examples. But the second year this store of nutriment if not consumed by men and animals, is exhausted for the production of stalks, flowers and seeds for the perpetuation of the species; after which this plant also dies. Roots of this class are thick and *fleshy*, and, while furnished with rootlet feeders, are themselves *reservoirs of food*.

Perennial Roots, as their name indicates, (derived from *per* and *annum*, through the years,) live for a series of years, and chiefly belong to a class of plants which wholly (root, stem, branches, and in some instances leaves,) survive the seasons, and produce new growths of wood and a succession of flowers and fruits. All trees and shrubs belong to this class, together with many herbs and flowering plants, whose stems die down annually and are succeeded by a new growth springing from the surviving root. Such roots are of varied form and use, being *both feeders and food*.

Roots are also divisible according to the *source of their nourishment*, and the medium *in* which they live. Most roots live in and upon the soil, but not all.

Aerial roots are of two kinds—those which have no connection whatever with the soil, and are often unconnected with any other plant. The plants to which they belong are called *air-plants*, or *epiphytes*, (from *epi* upon, and *phuton* a plant,) and appear to derive their nourishment almost solely from the atmosphere. The long moss belongs to this class, which by its grey festoons pendant from the boughs of the oak or pine, gives a grotesque and sombre appearance to the forests of Georgia and Alabama. There is also a class of roots called aerial, because though fastened at length in the soil, they commence their growth in the open air and remain thus exposed so long as they live. Indian corn affords an illustration on a small scale, in the roots which often branch out from a joint quite above the surface and descend to the earth in such manner as to remind one of the shrouds of a ship.—

The Screw Pine is a still better example, while the Banyan is the type of the class.

Parisitical roots are such as penetrate the bark of other plants or trees and draw from their ascending sap the nourishment required. The mistletoe is a familiar example of this species,—at no period of its life is it connected with the earth.

Some plants, as the common Dodder (*Cusuta gronivi*) of the Northern States, have both aerial and earth roots, and are, therefore, semi-parasitic; while still others are so thoroughly parasitical as to feed directly upon the elaborated sap of the plant upon which it preys; so that no separate digestive organs are necessary. Even stem and leaves are wanting, and the flower is developed directly upon the root which attaches it to the bark more closely than if it belonged of right thereto. The *Raflesia Arnoldi*, of sumatra is an example, and record is made of one of its flowers, found growing upon a grape vine, which "measured nine feet in circumference, and weighed fifteen pounds!"

The office of the root involves physiological and chemical questions of much interest—questions, however, which cannot within the limits of our plan, be discussed at much length.

1. *Roots are absorbers of water;* the promptness with which the drooping stalk and leaves of plants, withered under a summer heat, revive when the soil is suddenly saturated therewith, is proof.

2. They are also, through water, absorbers of gases. Oxygen and carbonic acid gas are both derived to the plant in some quantity through their absorptive power.

3. They are the sole medium of access to inorganic agents, which are first dissolved in the water of the soil, and therein conveyed to the several parts of the plant where they are required. Soda, potash, lime, iron, &c., &c., find their way into all plants through their roots; and what is certainly remarkable, they exercise a sort of selecting power, rejecting such as are noxious and appropriating those which are required. So marked is this ability in some instances as to almost convince the experimenter of the existence in plants of a perceptive power quite equal to the instinct of animals or the reason of man. It is really wonderful what plans and stratagems the roots of plants will sometimes adopt in order to supply themselves with needed food and drink. We have often traced with wondering eye the roots of certain shrubs, which, unfortunately grown upon rocks where neither the solid food nor water could be obtained, had traveled a distance of twenty feet, over the ledge and down to the soil and stream below. Among other instances of evident instinct, or something allied, we remember one remarkable case in which a plant half starved for phosphorus, had penetrated the hard clay soil near the church where it grew, to the depth of several feet, passed under the stone foundation, and again ascended to the vault, beneath the floor, penetrated the seam in one of the coffins, and was there found luxuriating upon the bones of the dead!

This selecting power is also proved by the fact that different plants in the same soil, supply themselves with different elements in invariably different proportions, and by the fact that they always make a strong effort to reject all poisonous compounds, however abundant, where they grow.

4. They are supposed to perform an *excretory* office—to carry out of the plant system such substances as are noxious and were produced there either by combinations of simple agents or by decomposition of compounds, a part of which were essential and therefore appropriated. In connection with these excretions there is a most notable fact, viz: the excretion of elements for the express purpose as it would seem, of getting them to combine with and return into the plant other elements which could not enter in the simple state, and which do not find the other element essential to a soluble salt, within their reach. For example, silica in its simple state is insoluble, and although essential in large proportions, to some plants, cannot enter them until combined with potash, which potash is often not present in the soil in sufficient quantity and sufficiently accessible to render the requisite absorption possible. Now when such is the case, the roots have been observed to return a portion of potash to the soil, to combine it with the silica, absorb the soluble compound, and after a decomposition of the salt thus introduced, return the potash to the soil for a repetition of this work of carrier, until the necessary supply was obtained. What a wonderful proof of the wisdom and beneficence of that Being, who, with equal care and equal skill operates the minutest and the vastest mechanism of the universe!

H.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER V.

THE ERECTION OF FARM BUILDINGS GENERALLY CONSIDERED.

The planning and erection of farm buildings, adapted to each particular case and circumstance, to most completely answer the purposes in question; and for the least expense and outlay, is a subject of so much intrinsic importance, and involving so many considerations, that it cannot be studied too much, nor understood too well, by those who undertake the task. That most build, without any well settled plan or much knowledge of the subject, is amply evidenced on every hand; in the rural districts, not merely in the new West, but East, North and South. In fact we see few things that surprise us more, than the *jack-knife* architecture to be met with wherever we travel, not merely among those who lack for means, but quite as often among those who build expensive establishments. Much depends on taste and good judgment in building well, as well as on the amount expended.

In planning for farm buildings, the first thing properly to have reference to, is the size of one's family and the farm to be built on, and the branches of farming likely to be predominant. But one thing is well established and certain; and that is, that every farm whatever its main purpose, needs a good comfortable house, at as early a period as the pioneer can make it reasonably convenient to build it. And it should be located in a sufficiently elevated and airy place, to avoid the miasma and damps that hover about the valleys and low places, thus securing good drainage as well as good air. Not unfrequently do we see a house crowded down under a hill, or into a deep ravine, in order to be a near neighbor to some mud spring. Or if the party is more fanciful than practical, towering upon the top of some high bluff to secure a fine prospect, at the expense of every real convenience.—Both extremes are equally objectionable. A central position and medium elevation, when admissible, is the true one, and all the better if it overlooks the more important portions of the fields and farm.

In relation to the styles of houses most preferable to build, it may seem presumptous to speak at all, as every one knows best (or imagines so at least) what will suit and please them. Still we feel disposed to hint at a few of the more common faults of style. And foremost in this line, is the modern furor for cottage houses of but one story. Cottage architects have latterly racked their brains in devising this kind of houses, and thrown an amount of drapery and embellishment about them, that makes them appear really very charming upon paper, but when once built and put to use, the charm immediately dissolves. They are found to afford but little room or convenience for the money they cost, for unless a house is quite large on the ground, it cannot contain the requisite parlor and working departments, together with any considerable amount of sleeping room. Hence the great necessity in an economical point of view, for some sort of a second story, if only half a one. No room in the house costs so little, or is more convenient or valuable.

Houses of much size, look much better proportioned when two story, than when only one, or one and a half. Still we would not usually prefer two story houses in the country, except on large farms, and where everything else is in keeping. For all ordinary outlays, a well-proportioned story and a half house—tasty and white amid the sunlight and green, looks decidedly appropriate and comfortable, especially for the first generation of a new country.

Another too common modern folly in house building, is to adopt the form of a cross, by which each room is surrounded by outside walls, making them warm in summer and cold in winter, besides making a great deal of wall for the amount of inside room. Few people seem to realize that it takes just as great a length of wall inside and out, to enclose a cross or irregular formed house of any kind, as it does to inclose a square one of the full size of the largest portions of the irregular one. Hence any irregularity of form is expensive, and should not be indulged in further than is necessary to secure a proper convenience within, and appearance without.

Octagons are another of the whims of the times, in which we have never yet been able to see any real utility; a deal is said about the economy of their form, and the number of feet and inches they enclose more than a square wall of the same length. But it has always appeared to us, as if more was lost in the additional amount of partitions required to cut off the extra angles, saying nothing about the

amount of room thus lost, full enough at least to ballance what is gained by the octagon form. Then as to external beauty, that is a mere matter of taste. But to us they present a mongrel, unsocial appearance, smacking more of the fort or barbaric castle, than of the quiet country home. We have a very pretty plan of the kind, drawn by our friend D. S. C., which we propose to have engraved and published ere long, for the gratification of the lovers of this style of architecture.

Irregular roofs, are as objectionable as irregular walls, especially when there are many sunk angles in them, or fancy chimneys to secure, as the chances are more than even that they will leak more or less, and damage everything below them. A leaky roof is the greatest evil that ever beset a house, (except perhaps a mortgage,) and in all ordinary cases, we doubt if any other roof is to be preferred to good shingle, except it be slate, which of course is usually out of the question.

A common old-fashioned fault with country houses, has been to make the rooms too low. A revolution in this particular is noticeable and commendable. No living or sleeping room should be less than 9 to 10 feet in the clear, and never without a ventillation of some ample sort at that. The modern style of making rooms as near air tight as possible, and heating them with "air tight stoves," is undoubtedly one of the most potent agents of destruction to female health, that has yet been devised or introduced. This is the prime cause, which coupled with easy rocking chairs, want of blood-stirring exercise out of doors, and over eating and drinking of rich and stimulating food, accounts in full to our senses, for nearly or quite all the difference between the present and the past, in female health. What will become of the human race, if these undermining influences are continued for one or two generations more, is not hard to divine. Look well then to ventillation; it is easily attained. In every room near the top of the ceiling, put in a ventillating flue, opening into the open space in the wall. Cheap contrivances for the purpose are to be found in all the principle hardware stores. And when not thus attainable, they may be made in any tin shop, as a thimble is made for a stove pipe, with a cover punched full of holes. But simple as it is to do, it should never be neglected by any who wish to live and enjoy health. Still we doubt if one house in a thousand, all through the country, is thus provided. Fire places and open houses used measurably to supply the defect, but in their absence, let us not forget or neglect the other provision.

As to the materials, of which houses can best be built, much must depend upon circumstances of course. But when one's circumstances or situation permit them to make the choice, stone or brick are obviously vastly preferable to wood, on almost every account of durability, comfort and beauty. Good brick are nearly or quite as good as stone, and more appropriate for small houses. Probably less damp and frosty than stone, but this latter difficulty may be wholly obviated by *firring* and lathing the walls amply and carefully inside; a thing, by the way, that should always be done through every story of a house, even to the cellar, it being the best safeguard possible, against frost and damp, where all other arrangements are appropriate. But great care should be taken in arranging this lath work and partitioning, to shut off the runways of the rats and mice. With a little care and contrivance it can be effectually done in stone and brick houses. Rats usually get in through the cellar, either through unguarded drains or windows, or by digging down outside and under the wall. Now all who are building houses, should guard against these intolerable nuisances; and the best way we have seen, of preventing their digging under the wall, is to put a gravel mortar, or grout floor all over the cellar bottom, close and snug to the wall on all sides; it is easily and cheaply done from the refuse mortar and gravel screened from the sand. Once done, and the windows and other openings secured by wire or some other screenery, and rats and all similar vermin will find it difficult to get in, or to hide themselves when they are in. Filling up solid between the mop boards and wall on each story with mortar, will prevent the scamps running up and down the walls. The same between the mopboards on partitions. A little such timely care, will save a deal of subsequent vexation and annoyance.

Chimneys, flues and stove pipe drafts, are not unfrequently miserably contrived, and made, even by those who esteem themselves good builders. Every chimney flue should be carefully plastered inside, and kept clear of all loose dropping lime and mortar; they should also be sunk at least two feet lower than the lowest *thimble* for the reception of

pipe. And have an opening withall at the bottom, to admit of being readily cleaned of soot and cinders. All pipes should enter chimneys horizontally and fit well, to avoid the danger of fire, as well as to promote the draft. Pipes passing through floors and partitions, should be well secured with good double tin cillinders, or other safe contrivance, admitting of no possible chance of fire. All wood and combustible materials, should also be cut well back from every place of exposure, about chimney flues and elsewhere, where by any possibility fire can originate. Nine-tenths of all fires are the results of downright carelessness, either in building or after management. Therefore let all who build, watch carpenters and masons closely, and see that they in their carelessness do not lay the train for burning up their work, on some cold and bleak midnight, when no one suspects it.

In the division and arrangement of the rooms, do not consecrate the best and most pleasant part of the house for a fancy parlor, to be expensively furnished and shut up at least nine-tenths of the year, of no possible use to any one, except perhaps to gratify the good lady's vanity, when an occasional *genteel* visitor calls. Have no room too good for use, and especially have those rooms that are daily and hourly used, to wit: the kitchen, eating and sleeping rooms, well planned and provided. How many of those fine houses, that have such fine large parlors to show to company, taper down in their subordinate arrangements, to seven by nine sleeping rooms, for the hard working members of the household. Bad economy and bad taste, to say the least, if not absolutely wicked.

Put no useless and expensive ornaments out or inside of your house, until you have *rigged* every department and appendage about the kitchen and working portions, in the most convenient and perfect manner possible—the wood, the water, hard and soft; the cellar, the ash house, &c., &c., all as handy as possible. These matters make almost one-half difference in the hard drudgery of a household. Attend to them, those of you who would save your weakly wives, daughters or maid servants.—Prevention of this kind is better than *doctors or drugs;* no mistake, and worthy of the attention of all who would be wise, healthy or happy.

But if I dwell so long upon the house (which by the way, is a subject on which books are, and still might be written) I shall have no space for barns and out buildings—all equally necessary to a complete and convenient establishment. Basements under barns as well as houses, when circumstances warrant it, are highly economical and cheap room for many purposes, and when well built of stone, are an all-important feature of a good barn, affording unfreezing shelter in winter, and cool quarters in summer. Barns sufficiently capacious for storing grain before threshing, in the productive West, seem rather too expensive for common use, and much the same with hay; still this latter article is much the better for being well stored, especially if of the cultivated sorts. Instead of very large barns, those of smaller size and more of them, although more expensive, are often most convenient, and least risky from fire, for if well situated around the corners of a square, one may burn and another escape. Barn and shed buildings, somewhat in the form of a square, make a pretty appearance, afford fine shelter, and offer the largest possible range of convenience.

Such buildings should not be situated too far from the house, (nor yet too near,) as thousands of trips to and fro are annually to be made; and a dry, comfortable walk between them, of plank or stone, will vastly more than pay cost, especially in the West, where mud is often particularly deep. Western mud we esteem one of the *nuisances* of Western country life and farming. It is not of course so much noticed after getting thoroughly used to it. But the long black mucky roads and lanes at certain seasons of the year, look forbidding to those who are used to walking on pavements and sidewalks.

Water about barns and yards, is an item of such convenience and value that it cannot well be over estimated, especially if raised, (in the absence of natural surface water,) by a wind mill, and always ready for use. The wind pump must soon become a common and indispensible appendage to every well arranged farm-yard; ever affording better facilities for water accommodations than can well be supplied by a running stream; because it will put the water just where it is wanted, and if properly rigged, never freezes over, dries up, or mires the weakly stock.

In conclusion of this subject, we would say that there is a great field for ingenuity and good taste in arranging barn and farm-yard buildings, convenient and tasty. Those who

would assume to do it, should first consider the main circumstances in their own particular case, and after fully apprehending them, should study long and well, how and by what arrangement they can best avail themselves of them, and if possible adopt a full plan before they strike a blow. When finally completed to a perfect whole, it will fully pay for the extra thought on the subject.

We have not presumed to present any definite plans at this time, for the reason that whatever we might present would fit so few cases. But as hitherto, our course will be to offer such plans of all sorts of farm buildings, as best befit the masses of our readers, and leave each party to place them upon their respective premises, as a good player does chess upon the board for a game.

In our next number we will discourse on the subject of gravel or grout walls, for houses, barns, and out buildings, showing (or attempting to show) what advantages they offer in the way of economy over other building materials, and also some specific instructions as to our way of proceeding in their construction.

We believe as we have before said, that we can demonstrate anew to the doubting their great utility in the prairie regions, and put many valuable new ideas into the heads of many who have never built them, and some who have. P.

Spring Emigration—The Wave of Emigration Changed for a Time.—However unpleasant the thought, that emigration to the north-west is to suspend in a great measure, and that the emigration movement will be towards Missouri, Kansas and southern Iowa, for many months at least, such is nevertheless true. Previous engagements and arrangements to move to the north-west only can acount for the small proportion of arrivals that we shall see during the spring of 1858 and for some months thereafter. We of the north-west must await our turn. Hurrahing and letter writing and newspaper contributions in aid of emigration, when the star of empire lies in another direction, can amount to nothing. Let there be a calm, after which another storm may arise and the popular waves swell and march as before. The people of the north-west are the most contented with their homes of any in the Union. We have known a few to fancy a better country away to the south or west or north; sacrificing property and time, they pulled up stakes and moved. The sequel is short; with scarcely an exception, they returned to their old homes in less than a year. We expect to see the like again, for there are those who can never see pleasures except in the distance.—*Grant Co. Herald.*

Survey of the Public Lands—Their Prospective Value.

The Report of the Commissioner of the General Land Office for 1857, sets forth some very interesting facts, for the consideration of speculators in public lands, on a large as well as those on a small scale.

Said Report shows the number of acres of the public lands in the States and Territories, survey'd and ready to be offered for sale to be.....57,449,876
And the probable additional amount that will be got ready during the present year to be.....15,889,461
Add to these one-thirty-sixth for school lands not included by him..... 2,087,009

And making an aggregate altogether that will be got ready for sale by the 30th of June, 1858, of..75,369,346

To this enormous amount must be added nearly or quite as much more that has been offered for sale, and now subject to private entry; making on amount on the market of from 100 to 150,000,000 of acres.

Some calculation may be made as to how soon it will be sold, by the fact that only $4,142,744·48 were sold for cash, and $6,283,920 on land warrants, (a currency now nearly out of the market) during the fiscal year from 1856 to June 1857, at which rate it will be seen that it will take from ten to fifteen years to dispose of it all, even if no more were surveyed, and sales should keep up at as high a figure as during the last mentioned year of feverish speculation, and with plenty of cheap land warrants to stimulate sale. Why the U. S. government should plunge so far ahead in their surveys, of all possible public or private need, is certainly a miracle to us. For when we consider how much unimproved land is already held by speculators and *make believe* farmers, in all the States and Territories, we do not believe the aforesaid 150,000,000 of survey and unsold land will find a market in twenty years, and perhaps not in twice that time; by which time the corner stakes will have vanished into dust, and the marked trees be grown over or gone. Why the government should thus rush its surveys ahead as before said, is a miracle to us. Certainly economy and the wants of the country do not demand it.

But our main purpose in referring to this subject was not to instruct the government, (although we think they need it,) but to show those who are buying and holding onto large tracts of ordinary farm lands in every remote corner of the world, that their chances are about as large for realizing a great rise in value as they would be if holding continental money. If there is not as great a pitfall ahead for the land speculators of the present day, as

engulphed them in 1836–7, we are much mistaken; perhaps it is no matter how soon it opens and swallows them up. P.

Culture of Indian Corn.

It is a well known fact that there is a material difference in the yield and quality of different varieties of wheat, and the same is equally true of different varieties of corn. The larger varieties, under good culture and in favorable seasons, generally give the largest yield per acre. The smaller varieties ripen earliest. As a general rule, farmers should plant those varieties, (having reference as far as practicable to productiveness,) which soonest come to maturity.

The utmost care should be exercised in the selection of seed corn, not only from the best varieties for the different localities, but also the seed of the particular kind desired. "Some of the choicest have been brought to their present perfection by selecting the earliest and best ears from the most prolific stalks. This ought always to be done before the corn is gathered in the field, where there is an opportunity for comparison."

Mr. Brown of New Hampshire, who has long grown the variety so widely known as the "Brown or King Philip corn," says he always selects his seed in the field, "choosing ears of uniform size, with small cobs, and avoiding large butts; selecting in this manner will prevent its ripening later and later." He has planted this variety for forty years, and has during that time improved its quality by increasing the size of the kernels to nearly double their original size, and rendered it much more productive and equally early. He states that for the past fifteen years his corn crop has been from seventy five to one hundred and thirty-six bushels of shelled corn per acre—averaging eighty-five. Pretty fair crops for the granitic soil of New Hampshire.*

The selection of the seed corn in the field for the next planting cannot be made, but a most rigid selection should be made of the seed for the coming season. In consequence of the last unfavorable autumn, a large portion of the corn over wide districts of the country, did not fully mature, and neither the corn or cob was sufficiently dry to prevent freezing during the unusual cold of November. All such corn has lost its vegetative principle.—Corn also that has heat or slightly moulded, is not suitable for seed. The only sure way, in selecting seed corn under the present circumstances, is to test the sprouting quality of the corn before planting. This can be ascertained by taking two turfs, ten or twelve inches square, and strewing some forty kernels of corn upon the grass side of one of the turfs, and placing the other turf (grass side down) over the corn. Keep the sods about the kitchen fire or stove, for a week or two, and then it can be pretty accurately ascertained whether all, any or none of the seed will grow when planted in the field. Or the corn may be planted in boxes or pots of loam, and kept in a warm room; if the seed is good, it will germinate as well in the box as in the field.

It is no trifling matter to replant even one acre of land with corn; but last year thousands of acres were planted the second, and in some cases the third time, in consequence of using bad seed. Much of the late planted failed to ripen well; being harvested and cribbed in too green a state, great loss has resulted in the moulding and rotting of the corn in the crib, and in some instances that left in the fields has shared a similar fate, resulting in heavy losses to thousands of corn-growers.

Some advocate and practice very early planting. Others wait till the ground becomes warm and dry, and are content if they can get they corn planted by the first of June. Our spring seasons vary so widely that it will not always do to be governed in the time of planting, by any particular date or day as put down in the almanac. Usually, the leafing-out and blossoming of certain kinds of trees, pretty accurately points out the suitable time of planting corn.

The soil for corn should be dry, rich, and well pulverized. Much is gained in planting and hoeing, by bringing the land into fine tilth before putting in the seed. On smooth sward land, the double or Michigan sod plow is an admirable implement for preparing green sward for a corn crop.

Under favorable conditions, corn is one of the most profitable crops grown in New England. Of thirty-five crops of Indian corn offered for premium in Massachusetts, the average profit over all expenses exceeding $51 per acre.

At the annual meeting of the New Hampshire State Ag. Society, holden at Concord, Jan. 5th, Mr. Simeon Abbot, of that town, exhibited a statement of his manner of growing corn. He raised 180 bushels of sound corn on three acres of land, at a cost of thirteen cents per bushel. The corn at that time (and probably is now) worth $1 per bushel; leaving a nett profit of 87 cents per bushel, or a profit of $52·20 per acre. This is paying better dividends than railroad stocks.

*Query.—Who upon the rich soil's of the West, raises such crops? The sweat of New Hampshire industry, as compared with Western laziness, perchance makes the odds.

Agricultural Wealth of England.—If the mines of California were to produce one million of dollars per week for two hundred years, the amount would be something short of the estimated value of the cultivated lands, with their appurtenances, of old England,—which is said to be $10,860,000,000.

Culture of Hungarian Grass or Millet.

It is the design of this article to gratify the spirit of inquiry as far as possible, and aid in the introduction of an article which must become one of our staple productions. We have now had the experience of another season on a large scale, and we can now speak with confidence; there can no longer be a doubt about its superiority as a hay crop over everything ever tried upon the Western prairies.

In the spring of 1853, as nearly as can be ascertained, a Mr. Gleason brought a small quantity of this grass seed with him from Illinois. He had procured a handful of it the spring before from a Hungarian exile who was passing through the country. What became of the exile or the balance of his seed, is not known; nor yet the name of one who has conferred such a favor upon the people of the great West. His name should be written in gold; for that little handful of seed is destined to change the agricultural character of a dozen States, and give us a product which will stand second only to the corn crop upon the rich prairies of the advancing west. This poor exile, and Mr. Gleason with his handful of seed, have done more to promote the agricultural interests of these prairie States than the Government has, with all its seeds, in the last ten years. They have done so, because they have given us an article completely adapted to our soil and climate, and one which we needed above all others. This may sound like enthusiasm; but it is a sober reality. We have now, in this region, the best hay country we have ever seen—till this season and the last it was the worst. The common grasses are a total failure; yet we have hay of the best quility in such overflowing abundance, that we can feed seven months, and still have hay to sell; and this hay was grown upon the high, dry prairies, at the rate of three and four tons to the acre.

Mr. Gleason sowed his handful of seed in Illinois, and the next season brought the product to Monroe county, Iowa, where he sowed again. It may be well to observe that he had difficulty in procuring a piece of ground, as farmers were afraid it might somehow ruin their land. The next season, which was 1854, he distributed among such of his neighbors as had overcome their fears. This year it began to attract some attention in the vicinity, and its popularity has increased as fast as the little handful of seed has multiplied itself. Those who have seen it every year since the first was sown, are now much better pleased than ever—this year's crop exceeding all that went before it. Within the little circle of its present production its popularity is unbounded.

In an article last spring it was stated that a Mr. Bates was the first to introduce it; but a closer investigation traces it beyond him to Mr. Gleason.

These facts have been secured while they were within reach, because a great effect is destined to flow from this small beginning, and when the little stream becomes a great river, the world will wish to know in what secluded fastness the head-spring is situated.

This grass is a crop which has never failed. Wet or dry—cold or hot—it has been a good heavy crop; even last season, when that sturdy giant of the West—the corn—dropped his strong arms. and rolled up his green banners in the dry hot blasts, his more humble neighbor—the Hungarian grass—spread its rich green mantle over the parched soil, and shot up its luxuriant blades, aud waved its golden heads triumphantly, in spite of dry winds and rainless skies. In point of certainty we have no crop which compares with it; it seems to be exactly adapted to our loose, deep, prairie soils, and is, perhaps, a better crop in Iowa than in its native soil in the country of the Magyars. The secret of its success lies in its strong vitality, stout roots and adaptation to a dry soil. The roots of our common domestic grasses are too short and slender to reach below the influence of our dry, hot summers, while this production, from its greater vigor and larger roots can pierce below the reach of drought, and draw up the treasures of fertility which lie beneath.

The only objection which can be urged against it as a hay crop, is that it must be put in every year; but the immense yield, certainty and nutritive qualities more than compensate for this disadvantage; it is not at all likely that we will soon find a perennial grass which will at all compare with it in these particulars.

In appearance, the Hungarian grass resembles millet; and it no doubt belongs to the same family; but it is much more productive; it affords a better provender, and the seed is more oily and nutritious.

As hay it is superior to timothy, that old and substantial favorite of every farmer.—Horses changed from timothy and corn to Hungarian, begin to thrive on half the usual allowance of corn, and put on that fine glossy coat so much admired by stock-growers.

It is not the hay alone which gives value to this crop; it produces seed at the rate of twenty to thirty bushels to the acre, which in nutritive properties is much superior to oats; it is heavier, and contains a larger amount of oil. In truth the crop is better than a crop of oats and timothy put together.

The production of this crop is as yet mainly limited to the east half of Monroe county and the vicinity, in which it is supplanting both oats and timothy, and is reducing the quantity of corn. Farmers are beginning to turn their attention more to cattle than hogs. Up to this time the country has taken up all the seed, "and cried for more;" but this season there will be enough to supply the home market and leave a surplus to send abroad—at what price is not yet settled. Farmers here would not

be tempted to part with their own supply for ten dollars a bushel.

As an evidence of the popularity of this crop, it may be mentioned that the price of seed has steadily advanced for the last three years, notwithstanding a bushel will sow three acres, and produce twenty-five bushels to the acre.

In the spring of 1855 it could not be sold at any price, except by the quart or gallon; next season the price was $2·50; and last season it started at the same, but soon reached three dollars, then four, next five, with the supply exhausted, although there was no demand for it outside the circle of its growth.

Last spring a gentleman took a small load of it some seventy-five miles north for speculation, but he could not sell it for what it cost him at home; he then made an effort to put it out on shares, taking one-half the seed for his share, in which he succeeded. He has been offered two thousand dollars for his interest in the crop, but he refused to take it. All his seed will be taken near where it grew at almost any price.

Another farmer, last season, who had five acres, threshed out one hundred and fifty bushels of seed, which he sold at four dollars a bushel, making $600.

CULTIVATION.

Thls crop should be sown from the middle to the last of May, on clean ground, plowed, then harrowed before and after sowing, and then rolled if practicable.

The usual quantity of seed is a bushel to three acres; but where the seed is the main object, it may be thinner, and for hay only—thicker.

Any ground fit for oats or corn will answer for this crop, but the cleaner the ground the better.

The rule is to cut it when most of the stalks and blades turn yellow, and the mass of seed is nearly perfect. This secures both hay and seed.

Cut, cure, and put up like timothy, or it may be cradled and put into sheaves, if desired. It comes in just after oat harvest.

When cut, the stubble does not die as a general thing, especially if cut as early as it will bear; but it sends up new shoots which will make half a crop, or it may be used as fall pasture.

It produces from three to four tons to the acre as a general rule; but some crops will much exceed this. An acre grown on the farm of Mr. J. Hedrick, near Dalahnega, was weighed a few days since, by three of his neighbors, as it was put into the stack, for the purpose of trying to secure a premium at the county fair. The reported weight is seven tons, and two hundred and ten pounds. This almost staggers belief, but there is little doubt of its correctness.—*Wm. M. Allison, in Eddyville (Iowa) Commercial.*

Messrs. Editors:—I see in your January Cultivator, an inquiry of A. B. Reynolds, for the best "Substitute for Hay"—whether green oats, green corn, millet, &c., or carrots, or other root crops, are the best substitute. It is my opinion that the Hungarian Grass Seed is far preferable to either of the above. That any kind of land that will raise good corn or oats, will raise good Hungrrian grass, and on land that will raise from 60 to 75 bushels per acre, will raise from 3 to 5 tons per acre. It has been grown here in the West at the rate of 7 tons per acre. When it grows from 3 to 5 tons per acre, it will turn out from thirty to forty bushels seed per acre. One bushel seed will be sufficient to sow three acres. At this place it is now selling for $3 per bushel from our seed stores. I however bought five bushels from a country wagon last week for twelve dollars, weighing full 50 pounds to the bushel. The ground should be prepared the same as for sowing oats, and be sown from the first to the last of May, and it will then be ready to cut right after oat harvest.

If cut for hay it must be cut when in bloom, and about the time the lower blades or leaves begin to turn yellow. If cut for seed, it should be cut when the seed is in a thick doughy state, and then bound in sheaves the same as wheat, which makes it much more convenient for threshing in a machine. The seed is of an oily nature, and horses and cattle will eat the seed before corn or oats, and the hay before timothy and clover. Horses having been fed on grain and good timothy hay being changed to one-half the grain and this hay, began to improve immediately in flesh, and their coats more sleek and shiny. Cattle will do very well on this hay after the seed is threshed out. The grass has good roots, grows deep in the ground, and will stand dry seasons much better than any other kind of grass. The dryest seasons in the West will not make the grass wilt in the middle of the day. After the grass is mown, it will sprout or sucker up very thick, and will probably make much more pasture than timothy and clover, after being mown, during the summer and fall. It will not stand the winter, and of course must be sown annually. I shall sow about fifteen acres the coming season, and shall then be better able to test the quality of the grass. In some parts of Iowa, where timothy hay sells for $10 per ton, the hay of the Hungarian grass brings from $12 to $15 per ton.

S. P. KIRKBRIDGE.

Quincy, Ill.

Although our correspondent pronouces the Hungarian grass superior to Millet, we suspect he has never seen the latter plant cultivated under its proper name, for we can assure him that the Hungarian grass is identical with the German Millet. It is a valuable forage plant, and especially adapted to the light rich soils of the prairies, where enormous crops of it were grown the past year.—*Country Gent.*

Note.—We copy the foregoing from our various exchanges, and would add that all of the

Iowa papers speak in the highest terms of it as a forage crop, especially for the uplands. An Iowa gentleman assured us, that his horses kept as well on this unthreshed grass, as on good timothy hay and oats—that they prefered ths new hay to good timothy. Judging from these commendations, we see no reason why it may not prove a valuable article for Western culture.

We are circulating the seed very widely among the friends of the *Farmer* and State Agricultural Society, so that every neighborhood will have an opportunity of seeing its character during the season. Any time up to the middle of May is said to be early enough to sow it. We still have plenty of the seed which we forward as stated on the outside of the cover.

Correspondence of the Farmer.

Law and Farming.

MESSRS. EDITORS:—Every farmer should be a delligent law student. This may seem a strange statement, but it is nevertheless true, and it will be the object of this article to point out the relation law sustains to farming.

There is no avocation which calls us into more intimate connection with law, or depends more upon a knowledge of law, than that of tilling the soil. "But," objects our practical farmer, "I have no taste for the study, neither do I see how a knowledge of Blackstone will help me in my business." To your first objection I have only to say, if you have no taste for the study of law, you may despair of ever beeoming a noble farmer, which I hope all the readers of the *Farmer* aspire to be; and in regard to the study of Blackstone, it is not the study of law as expounded by that great law-*scholar*, that is recommended, but as illustrated and taught by the great law-*master*. In short, I would recommend natural, and not civil law.

It is upon obedience to the laws which God has instituted to govern the vegetable and animal world, that all our success in farming depends, and to a non-conformity to nature's plan or order of proceedure, that we must attribute all our failures.

There is no class of persons so favorably situated for the prosecution of natural science as our practical agriculturists. We may gain a knowledge of inorganic chemistry in the laboratory, and of the elements of botany, physiology and geology in the lecture-room and the study, but we must go to the fields, amid the growing crops, to learn the laws which govern the productiveness of our soils, and the growth of vegetation. It is not to men of books and abstract thoughts, whose communings with Nature are only occasional, that we must look for the most accurate statement of the principles of the *sciences*, or the most feasible methods of reducing these principles to practice, which constitute the *art* of farming; neither do we expect this from those whose ignorance of science or prejudice against "book learning," induces to go on in the old stereotyped style, rejecting the facts so carefully arranged by the great lights of the scientific world, but to those practical farmers who, while they carefully observe, experiment, and above all *think* for themselves, do not despise the observations, experiments, and thoughts of others. The science and the art of cultivating the soil have been divorced long enough; we want to reconcile them to each other. To do this, farmers must study the science while they practice the art. If the time now spent in idleness, or worse, and the money which now goes to administer to depraved appetites, thereby enfeebling both body and mind, were spent in the prosecution of the natural sciences so intimately related to farming, it would not only be more profitable, but infinitely more pleasant and soul-elevating than it is at present.

Let every farmer, especially every young farmer—and I may add, farmer's wife and daughter—prosecute the study of elementary works on chemistry, botany, geology, and physiology, in connection with careful observations and patient thought, to which should be added the presence of at least one good agricultural periodical, and such other agricultural works as can be obtained, and my word for it, they will find the study of the laws of farming so attractive, that the labor will be no longer the drudgery it now is to many. Let us have more *lawful* farming. Our labor to make the wilderness of this young and beautiful West, bud and blossom, will be crowned with success in proportion as we keep the "law on our side." "Nature will not be conquered but by obeying her."

H. N. HERRICK.

ROSE HILL, Minnesota.

A LARGE number of American oaks have been planted on the Quai de Tuileries, Paris, and are flourishing.

Business Hints for May.

"When now the winds are soft and warm,
And heaven puts on the blue of May,"

No moment must be lost. In our climate, May is almost the busiest of the busy months.—Sweet April with her alternate smiles and frowns, rough winds and bud-swelling showers, has passed, and the time of rapid growths is here, seeming to say, to the farmer, "All winter long have I been recruiting my energies and preparing for this work of mine—the work of adorning the earth and preparing food and raiment for its countless multitudes. If you too have been making ready, give me your hand quickly and we will be co-workers; otherwise, I must do the best I can without you. I will *wait* for no man."

We presume of course the land intended for corn is pretty generally in readiness, and that the work in the garden has progressed to a considerable extent. We suspect, however, that all has not been done that ought or might have been to ensure a plentiful autumn,—that the soil in many cases has not been properly fitted,—that too little care has been observed in securing the best quality and best varieties of seed,—and that already the conclusion is more than half formed in the mind of not a few, that this thing and that thing pleading to be attended to now, will have to wait another year.

Oh, this waiting *another year!* If we had a speaking trumpet whose shrill voice could pierce the ears of every moping, laggard farmer in America, we would reiterate that good old adage, "Put not off until to-morrow what should be done to-day!" until he was either roused from his lethargy or stunned to perpetual deafness. If you think you would *like* to have the best crops of grain and the best looking farm in your town or county, *be determined* to have it and go to work accordingly. If you would *like* to try the Sorgho Sucre, or the Hungarian Grass, or White Russian Turnips, or anything else, get the seed, learn all you can about their cultivation, and know for yourself, and not be enquiring of your neighbors for two or three seasons, "how they will probably succeed." If you feel ashamed that your garden has always heretofore looked more like a drunkard's than a *white man's*, prove your lingering self-respect by works meet for repentance. Construct a neat looking and safe enclosure, carefully prepare the ground, supply yourself with a good assortment of the best varieties of seed—lettuce, beets, onions, carrots, parsnips, cabbage, broccoli, cauliflower, asparagus, melons, cucumbers, squashes, &c., &c.,—provide yourself with a good work on Gardening, (Buist's or somebody's else,) and go about it in earnest. Make it just as much a matter of *business to be done*, as the sowing of wheat, and it will soon come to be a source of both pleasure and profit. And the fruits, the delicious, health-giving fruits! how stupid to neglect their cultivation when they are so easily and so cheaply produced. Be determined this year to put an end to that murmuring of nature against exclusive winter diet all summer, by rejoicing your tables with luscious fruits, such as a king might envy.

THE FARM.

Portions of Wisconsin are well adapted to corn-growing, and yet the crop of last year was almost nothing—nothing in its yield per acre, and but trifling in the aggregate amount. But last season was a very unfavorable one. Be not discouraged—this season will be better, and you can amend upon the last year's trial by planting better and surer seed, and earlier than last. The "King Phillip" and "Porter," are sure to get ripe, and in good soil, with good cultivation, may be made to yield 50 to 75 bushels per acre. The "Dent" will be likely to succeed pretty well this season, if the future prove what the present seems to warrant. Try the Hungarian Grass seed, as the experiment will cost but a trifle and it may prove an excellent variety. See article in this No. The Chinese Sugar Cane no longer admits of guess work. If any are anxious to make their own molasses a good deal cheaper than the *toe-nail* samples that are now imported from the South, tell them to send in their dollar for the *Farmer* and get seed enough to plant half an acre. See article on "Cane" and advertisement of Powers & Hoyt on back of cover.

In putting in your crops, as in their cultivation, pursue the economical policy of employing the best labor-saving machinery. Good plows, planters and cultivators will pay for themselves over and over again—if not left in the field to rot. Remember, nothing is lost by taking extra pains to nicely prepare the ground for the seed. If plowed early in the season and allowed to lie until weeds have started and the surface has become crusted over, it will pay to run through it, in advance, with cultivator or harrow; the germination of the

seeds will be facilitated by contact with the fresh, moist earth, and the grain will then have an equal chance with, instead of being throttled by weeds the moment they come into existence.

Be not anxious to turn the cattle upon the pasture before the ground is properly dried and settled, and the grass has a growth sufficient to pay the grazer for his travel. The after-growth will not be so good and the cattle will not do so well as if kept a little later on hay and fodder.

As you cannot be sure of a good hay-crop this year, cover up your stacks and provide for autumn soiling by sowing patches of corn early and late; the former will serve an excellent purpose during the summer drought, and the latter will carry the stock into the foddering season in good condition.

If the meadows are not properly cleared, omit it no longer. Set the boys at work with baskets, rakes and clubs, for the gathering of stones, sticks, and stalks, and the beating to pieces of all little heaps of manure, so that the grindstone and vexed mowers may mingle fewer curses this year than last.

FOREST TREES.

Plant them at once. They will beautify your premises for your own enjoyment and furnish the next generation with fuel and timber. Not only so, but if properly placed will become valuable as screens for your field crops and orchards.

THE ORCHARD.

If you have tried to raise an orchard and failed, try again. The most important fruits can be raised in Wisconsin. But we must first learn *how;* and every enterprising farmer should aid in the experiment. For particulars concerning the Apple, see Horticultural Department. Grafting must be done this month, and trimming and cleaning may be neglected no longer. If worms are suspected about the roots pour on hot water until they are sufficiently *cooked* to prevent further depredations, —one to three gallons about each tree will probably suffice. Fill vacancies with hardier varieties, and so keep trying.

WORKING ANIMALS AND STOCK GENERALLY.

Good feeding always *pays*, and then who wouldn't rather drive a fine-looking stout team, than one whose thin sides, projecting bones, and protruding tongues, must turn his conscience in purgatory every time he takes the lines or goad! Provide for forthcoming calves, lambs and colts, by proper care of their dams before, and simple unstimulating diet after the birth of the young. In arranging for the next season, omit no effort to secure the use of the *best* males. It is certainly poor economy to keep inferior animals, whose real value is one-fourth that of better breeds, while the expense for food and care is just as much or more.

THE GARDEN.

Ah yes, the Garden,—how many of our readers have what may be properly termed *a garden?* Patches there are we know, attached to most house-lots, which the owners dignify with that name; but how many of them are miserable slovenly enclosures, with a few rows of potatoes and corn, beets, onions and cabbage included, and a thousand rank weeds growing, to every useful plant? For economy and decency's sake—to say nothing of the gratification it would afford your wives, and the refining influence it would have upon the children—do make this year a new era in this respect. In addition to the ordinary, old-fashioned vegetables, try what virtue there is in some of the later "inventions," such as celery, cauliflower, asparagus, broccoli, kohl, rabi, &c.,—they are well worth the cultivation, and ought to have a place in every garden.—See Horticultural department and Home Circle.

THE LAWN.

It is just as easy to have beautiful grounds about the house, and everything looking neat and tasteful, as to slouch along through life, with nothing to delight the higher senses of the soul. Attend to planting evergreens.—This is the best month for doing that work. Consult back numbers of *Farmer*, and if you can, buy and read Warder's new work on Evergreens and Hedges.

THE BARN AND OTHER OUT-HOUSES.

Clear up the yards, replace broken boards, and thoroughly cleanse the stable, pig-pens, and henery. Filth is quite as detrimental to the health of the lower animals as to that of man. Make liberal use of whitewash.

THE DWELLING.

"The house? That belongs to the *women-folks!*" And to *you* also; for two thirds of the dirt and disorder are the result of your own careless habits, and it is certainly now your duty to assist, so far as may be necessary, in the renovation. Carrying water and shaking carpets are duties admirably adapted to your broad shoulders and brawny arms. H.

Treatment of Manures.

A practical farmer and gardener in the American Farmer's Magazine has enunciated several bold truths which has but recently attracted the attention of agricultural chemists. He advocates the theory that until manure has undergone such fermentation as to produce sensible heat, there can be no loss of the essential elements of vegetation by gaseous escape. That the escaping gases from fresh or saturated manures, form no part of the gaseous elements which are the food of plants. Hence the offensive smell that issues from them is no sort of consequence, unless the putrefactive fermentation is going on by the process of sensible heat. That if manure heaps are put upon the soils they are intended to supply so as not to generate heat, there is no sensible loss except by leakage from saturation and this goes into the soil and is not lost.

We announced several years ago the same principle, practically, in an essay written for the Southern Central Agricultural Society, by advocating the hauling out of fresh manures to the fields mixing them with carbonaceous manures, such as decaying leaves, &c., &c., putting them up in small conical heaps to prevent *fire fanging* by admitting a free access of air, as the best method for saving the most of the ammonia as well as the fixed salts. It is a little singular now that Professor Voelcker of the Agricultural College of Circenster, England, and John Johnson, an extensive farmer of Western New York, have recently simultaneously announced the same principle, one by explaining the chemical action of the theory, the other by asserting its practical truths from a series of facts accumulated in the lapse of years.

We have no hesitancy in embracing the theory of Prof. Voelcker, as it accords with our practice in the matter for years, although we had not arrived at the conclusions that he has announced. The result will be very advantageous to farmers and produce quite a change in the whole system of manure making, we mean that class of farmers or planters professedly guided by science, and believing in the truth of the axiom that knowledge is power and money too. Instead of throwing out their manure into the pound or to be washed away by the rains of winter, they will learn the economy of hauling them to the poor spots in the fields intended for their application, and mix them with mould or soil if nothing else is at hand to keep it cool and prevent its waste, as the leakage will permanently benefit the soil around and the loss by evaporation will be nothing if the manure is kept cool as it may be.

This is an interesting subject and we expect to refer to it more in detail for the benefit of those who are engaged in renovating worn out lands, and are at a loss how to husband all of the means in their power to the best advantage.—*Sparta Georgian.*

Chinese Sugar Cane.

A Committee of the United States Agricultural Society which recently met at Washington, made a report upon the subject of the Chinese Sugar Cane, of which the following is a synopsis:

1. The soil and geographical range of the Chinese Sugar Cane correspond nearly with those of Indian Corn. It produces the best crop on dry uplands, but the most luxuriantly on rich bottoms of moist loams.

2. It endures cold much better than corn, and experiences no injury from the autumnal frosts. It will also withstand excessive drouth. Ripens its seed in September, in dry and warm soils, in many parts of the New England States; in the extreme South it may be planted as late as the 20th of June.

3. Its cost and culture is about the same as Indian Corn.

4. Highth of plant, when fully grown, varies from 6 to 18 feet, and stalks vary from half an inch to two inches in diameter. The weight of the entire crop, when fully grown, taken before drying, is from 10 to 40 tons.—Of seed, the amount is reported from 15 to 60 bushels.

5. During the early stages of its growth, it makes but little progress; so slow, indeed, as to have discouraged many cultivators; but the approach of warm weather imparts to it a wonderful rapidity. The period of growth varies from 90 to 120 days.

6. The yield of juice was about 50 per cent. The number of gallons required to make a gallon of syrup varies from 5 to 10; in New Brunswick, 10 to 1; in Indiana and Illinois, 7 to 1; and in Maryland and Virginia, 5 to 1.—The yield of syrup varies from 140 to 400 gallons. The amount of pure alcohol ranged from 5 to 9 per cent. Ripe cane, grown on a light, warm soil, gives 11 per cent. of well defined crystalized sugar.

7. A palatable bread was made from the flour ground from the seed.

8. By accounts from all parts of the country, this plant is universally admitted to be wholesome, nutritious and economical food for animals; all parts of it being greedily devoured, in a green or dry state, by horses, cattle, sheep and swine, without injurious effects; the latter, especially, fattening upon it as well as upon corn.

9. Paper of various qualities has been manufactured from the fibrous parts of the stalk, some of which appears to be peculiarly fitted for a special use.

Pay in the English and American Navies.—An English captain receives from £450 to £500, with us from $3,500 to $4,500.—Their commanders $1,500, ours $2,500. Their lieutenants $800 and $1,000, ours one-half as much more. Their lieutenants commanding $1,000, ours $1,800.

Correspondence of the Farmer.

Inverted Posts.

MESSRS. EDITORS:—There are a few subjects, which as regular as the lake tides, (that don't exist) go the rounds of the agricultural press. Twice within the last eighteen years has the subject of inverted posts gone the rounds, signed an "Ashfield Farmer." This subject was brought to my attention about thirty years ago, whilst living in the town of Ashfield. It was contended that posts in buildings, fence posts, and even stakes, would last much longer by being inverted. The principle was asserted with so much confidence, that I was induced to try it. I soon had occasion to inquire why the top end of stakes should rot so much quicker than the butt. I had a fair trial of the principle, with fence posts. A tall black cherry tree was cut into suitable lengths, and sawed tapering for posts. One-half of course were inverted. I built a door-yard fence with these posts, and in six years they were rotted off. There was no difference in favor or against the inverted posts, for the simple reason, that there was no particular difference in the solidity of the timber. The most sound and solid end of timber should always be put into the ground. The inverted post theory is fully contradicted by experience, and has no existence but in the imagination. So thinks another

ASHFIELD FARMER.

REMARKABLE WORKS OF HUMAN LABOR.—Nineveh was 14 miles long, 8 wide, and 40 miles round, with a wall 100 feet high and thick enough for three chariots abreast. Babylon was 56 miles within the walls, which were 75 feet thick, and 100 high, with 100 brazen gates. The temple of Diana, at Ephesus, was 420 feet to the support of the roof. It was a hundred years in building. The largest of the pyramids is 481 feet high, and 653 on the sides; its base covers 11 acres. The stones are about 60 feet in length, and the layers are 208. It employed 330,000 men in building.—The labyrinth in Egypt contains 300 chambers and 12 halls. Thebes, in Egypt, presents ruins 27 miles around, and 100 gates. Carthage was 29 miles round. Athens was 25 miles round, and contained 359,000 citizens and 400 slaves. The temple of Delphos was so rich in donations that it was plundered of $50,000,000, and Nero carried away from it 200 statues. The walls of Rome were 13 miles round.

IT is estimated that over 20,000 sewing machines were sold in the United States during the past year.

STOCK REGISTER.

On Hip-Joint Lameness.

BY F. J. SEWELL, M. R. C., V. S., LONDON.

Mr. Gibbon, V. S., writing in the last number of your periodical, details a case of incurable hip-joint lameness, and inquires how we can correctly diaganose these cases or affections of the acetabulum joint. This kind of lameness is of greater frequency, at least in London, than is generally imagined. In working on the stones in town, there is more slipping and sliding about than is the case on roads; and consequently, with harness-horses in particular, more stress is thrown on the hind extremities, as they have more to do. All these cases may in general be traced to a fall, to being cast in the stable, or some sudden wrench of the hinder limb, which from its violence causes an excessive strain on the ligament (*ligamentum teres*) of the acetabulum.—The synovial membrane, and the other structures entering into the formation of the hip-joint, are thus most likely also injured; the consequence of which is, inflammation and more or less pain and lameness. As the inflammation progresses, ulceration and even caries of the joint gradually supervene; and these parts, which in a state of health do not exhibit any particular sensibility, when once they become the seat of inflammation, give rise to the most acute pain.

The symptoms which I have observed of hip-joint lameness are very striking, and cannot fail to indicate the seat of the affection.—In the first place, there is the posture of the horse when standing; the affected limb is quite pendulous, as it were, from the quarter, resting only slightly on the toe, the weight of the body being supported entirely by the sound limb, till the lameness is relieved; then the stifle joint is always pointed or twisted outwards, the limb presenting very much the appearance of the cut in the October number of the *Veterinarian*, p. 562. In the second place the action is very peculiar. In the walk or trot the quarter of the affected limb sinks or drops at every step; the horse goes lightly on the toe, and is incapable of getting the leg forward, and when forced to trot, he frequently carries the limb, and goes on three legs from excessive pain. So, that the most prominent symptoms are great pain, the pendulous appearance of the limb, the turning outwards of the stifle joint when standing, and the depression of the quarter in action, all of which continue more or less during the progress of the lameness. There is in general, little or no swelling, and nothing particular to be perceived in the appearance of the affected limb. In process of time the muscles waste, and the whole quarter becomes much attenuated.—With respect to treatment, bleeding, physic, and counter-irritation are indicated. In chron-

ic cases, a seton introduced along the course of the femur, five or six inches in length, and kept in from three to six weeks, produces the best effects. A rowel inserted immediately opposite the hip-joint, just under the trochanter-major, proves very successful in more recent cases; and when the lameness is acute, a patten-shoe applied on the foot of the lame leg, is a great auxiliary to the restoration of soundness. In illustration of the above, the following cases are adduced:—

1. A bay gelding, aged, sixteen hands high, and worked in harness, had been lame for upwards of six months, showing symptoms of hip-joint lameness in the near hind leg. The lameness was most acute, and he could not trot. He was treated with the seton and patten-shoe, and became sound in two months, and has performed his regular work ever since.

2. A grey gelding, aged, and used in harness. He had been lame a long time, was treated with the seton, and recovered in six weeks, and has since stood regular work.

3. A bay mare, accustomed to harness; was treated by inserting a rowel opposite the hip-joint. She soon became sound, but the lameness returned in consequence of putting her to work too soon. This was a recent case.—These and many other cases that might be recorded by me, are proofs of the efficacy of the seton in the treatment of deep-seated lameness.—*Veterinarian.*

The Horse not Originally Imported into America from the East.

It is well known to our readers that Professor Holmes, of the College of Charleston, has been for many years engaged in exploring the fossil beds of Ashley river. A large number of interesting relics have been collected, and the savans of Europe and America have expressed their great satisfaction at the results of these explorations. Professor Agassiz, in a lecture some time since, just after a visit to the Ashley with Professor H., said, "it was the greatest depository of fossil remains he had ever seen. Professor Tuomey called it "the great shark sepulchre of America;" and now Professor Leidy, the distinguished American anatomist, has prepared a valuable paper on the remains of the horse and other animals, found fossil on the Ashley, which has been placed in his hands for examination by Prof. Holmes; and it will appear, from the short extract we make, that the investigations now being made in this department of natural science, are developing some curious things.—Professor Leidy writes: "In regard to the remains of the horse, from the facts stated in the accounts given of them in the succeeding pages, I think it will be conceded that this animal inhabited the United States during the post-pleiocene period cotemporarily with the mastodon, megalonyx, and the great broad-fronted bison."—*Char. Mercury.*

The Improvement of Stock.

This must receive more attention from our farmers ere Wisconsin can take rank among the best Agricultural States. In some counties, particularly the more eastern, new interest has been awakened, and we have had the pleasure of looking at some as fine cattle, sheep and hogs as we ever saw in Northern Ohio, or Kentucky. But throughout the middle and western portions of the State, with here and there an exception, the stock—of which there is really but little, of any sort—consists altogether of inferior and unimproved breeds.

Now we would not be understood as advising our farmers to go into all sorts of wild and senseless speculations in the breeding of animals,—buying fancy sheep, cattle, pigs and poultry at fabulous prices—by no means. But we do insist, that more stock ought to be raised in Wisconsin and of better quality,—that by judicious selections of well adapted breeds—proper attention being paid to the laws of climate and the physiology of breeding—the stock-raising of this State might be made five times more profitable and infinitely more creditable.

May and June is the time to initiate a more rational and economical system, and we really hope, our farmers will spare no pains in seeking out the best stock and getting them introduced into their respective neighborhoods. It is certainly better to raise five horses worth $200 each, than twenty, worth only one-fourth as much; the aggregate would be the same in both cases, but in the former the cost of keeping would only be one-fourth as much. Come farmers, a few extra dollars expended for the best *seed-stock* will pay you more than compound interest twice compounded. Try it. H.

HUMANITY TO HORSES.—A person who has had some experience with horses says: "When a horse has fallen, from the slippery state of the ground, the readiest method of enabling him to rise is to place a piece of old rug or carpet under his fore feet, and he will be able to get up at once. Many horses are seriously strained by their efforts to rise on slippery ground, and this is most particularly the case with those of high spirit; and frequently those of greatest value are so frightened by the fall that greater injuries to themselves, as well as danger to those in the carriage, ensue from vain efforts to get up than by the fall. Let the driver leap down at once and assist the horse to get in position to get up, at the same time placing the rug, carpet or even an old coat under his feet."



SHORT HORN BULL FREMONT.

The property of Richard Richards, Esq., Racine, Wis., who, by the way, we understand has many other good cattle, and is one of the good stock-breeders of the State. Our desire that successful stock raisers may be increased in our midst, leads us to give as much notoriety as we well can, to those who are thus successfully engaged. It is becoming quite clear that our farmers must turn their attention to something else besides raising wheat, (and dogs instead of sheep,) if they ever mean to rise to independence and wealth.

The Pedigree of Fremont may be found in the American Short Horn Herd Book, Vol. 2d, page 149, and is as follows ;—Bred by John O. Reed, Ohio. Got by Butus (31,) out of Beauty by imp. Perfection—Lady Washington [imp. in 1857] by Diamond (976,)—Purity by Brompton (54)—Dairy Maid by Sultan (631)—Ruth by son of Punch (531.)

Correspondence of the Farmer.

Salt and Ashes for Stock.

MESSRS. EDITORS :—Salt and ashes have been recommended in so many papers and so many times for the health of cattle, that the principle appears to be about as well established as the old man's lies; he had told them so many times, and with so much zeal, that he really believed every word to be true. The early settlers of this country were supplied with cattle from the South, and some of them were diseased. First settlers, owing to change of climate and other circumstances, have much to learn. Therefore, when salt and ashes, mixed half and half, were recommended as essential to the health of cattle, and it was asserted besides, that they were more fond of the mixture than salt alone, it was very natural that people should be induced to try it. It soon appeared however, on trial, that the cattle's instincts had been belied. But still, from the high recommendation, it would appear it must be good for them, if they didn't like it, so I continued to give it. But some how the preventive would not work; in spite of the ashes and salt, my cattle sickened and died.—At length I began to study into the cause of it. I had never seen anything like it before, and began to suspect the ashes. I thought they might produce a similar disease. I discontinued feeding ashes and have had no such complaint among my stock since. To give medicine in order to prevent disease is rather doubtful practice. The man who can recommend giving ashes to cattle in order to prevent disease, I think might recommend healthy people to drink that villainous compound, falsely called whiskey, to prevent their becoming sick.

O. MARTIN.

The High Pressure System of Raising Animals Destructive to their Health.

We copy a portion of an article from a late English paper, detailing the results of a series of examinations by an eminent English surgeon, (Frederick J. Grant, Esq.,) of the effects of high and over feeding of animals for exhibitions at Fairs. It is a subject fraught with the highest interest to all parties, not only breeders and exhibitors, but those that may purchase such animals for after use as stock-breeders. We have long believed that the practice of forcing animals up to unnatural sizes and fatness, for show as stock animals at Fairs, was as pernicious in its effects upon the health and value of such animals, as it is foolish and deceptive to the judgment of *green* observers, and purchasers. We believe the true course in all such cases is for the Superintendent to either rule out such animals from exhibition, or to place them among the fat stock to be passed upon by the committee of butchers. And we will hereafter do what we can to induce that line of policy, on the part of the Wisconsin State Agricultural Society. Let those who bring hog-fat calves (that have sucked four cows) to be cheated on to those who are no judges, for breeders, be served right for the cheat, by having them turned over to the butcher committee for veal. Killing them in season may prevent their dying of the asthma, or overplus of blubber. But read what the learned surgeon says on the subject, and judge for yourselves, if cattle and other creatures should be forced up hog-fat for show.

I passed on, continues the writer, to the pigs. A pen of three pigs, belonging to H. R. H. the Prince Consort, happened to be placed in a favorable light for observation, and I particularly noticed their condition. They lay helplessly on their sides, with their noses propped up against each other's backs, as if endeavoring to breathe more easily, but their respiration was loud, suffocating, and at long intervals. Then you heard a short catching snore, which shook the whole body of the animal, and passed with the motion of a wave over its fat surface, which, moreover, felt cold. I thought how much the heart under such circumstances must be laboring to propel the blood through the lungs and throughout the body. The gold medal pigs of Mr. Morland were in a similar condition, if anything worse, for they snored and gasped for breath, their mouths being opened as well as their nostrils dilated, at each inspiration. From a pig we can expect a grunt, but not a snore. These animals, only 12 months and 10 days old, were marked "*improved* Chilton breed." They, with their fellows just mentioned, of 11 months and 23 days, had early come to grief. Three pigs of the block breed were in a similar state, at 7 months 3 weeks and 5 days, yet such animals "the judges highly commend."

Throughout the exhibition one circumstance particularly arrested my attention. It was the size of the animals compared with their respective ages. The bullocks averaged from two to three years; the pigs and sheep were about one year old. When I contrasted the enormous bulk of each animal with the short period in which so much fat or flesh had been produced, I certainly indulged in a physiological reflection on the high-pressure work against time which certain internal organs, as the stomach, liver, heart, and lungs, must have undergone at such a very early age. I, therefore, resolved to follow up these animals to their several destinations, and to inspect their condition after death. And Messrs. Jeffery, King, Gorton, Sack, Sinkler, and Smith, of Hampstead, courteously admitted me into their slaughter-houses. This was necessary, in order that I might identify those animals which I had selected for examination. These were the gold and silver prize bullocks, heifers, pigs, and sheep, which remained in London. I witnessed the death of many of these animals, and at once removed the heart, lungs, liver, &c., of each, for further examination. I then made dissections of the organs mentioned, and procured faithful drawings of both their visible and microscopic appearances. I spared neither time, trouble, nor expense, in my pursuit of the facts, and subjoined are the results:—

Sheep.—1. Fat wether sheep, short-wooled South Downs, one year old; the Duke of Richmond exhibitor and breeder. No. 1. The heart weighed 10¼ oz., its external surface is very soft, greasy, and of a dirty brownish yellow color, here and there mottled with yellow spots of fat imbedded in the substance of the heart. On its anterior surface (left ventricle) is a large opaque patch of a stone-grey color. These external appearances contrast remarkably with the clear, bright reddish color, and firm, crimp consistence of healthy hearts of sheep, four years old. On opening the two ventricular cavities, their internal surface and substance were equally soft, greasy, and yellow throughout—an appearance due to the infusion of fat between and into the muscular fibres of which the heart should chiefly consist. This substitution of fat for muscle is proved to have ensued by the microscope. For, when thus examined, the muscular fibres no longer presented the characteristic cross markings (*striæ* of anatomists,) but the *fibrillæ within the fibres* were entirely broken up, and replaced by bright globules of oily fat. The healthy structures of this heart had, therefore, thoroughly degenerated by its conversion into fat.

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No. 2 was another fat wether sheep, of very long-wooled breed, one year old; Lord Berners. The heart weighed 10½ oz., and was partly converted into fat, but less so than that of No. 1, the sheep of the Duke of Richmond. Under the microscope, the muscular fibres were found in the first stage of degeneration into fat. The liver weighed 2lb. 2oz., is of a dark purple color, and showed marked congestion of the hepatic veins. The lungs were flabby, and did not crepitate with air on pressure between the fingers. Many nodules were seen, each of the size and shape of a kidney bean, imbedded in the substance of either lung.—These lumps contained numerous worms (*filaria*) in various stages of development. Numerous small hard tubercles were also scattered on the surface of the lungs, some grey and transparent, other consisting of a chalky matter, one of the latter having actually ruptured the pleura (enveloping membrane of the lungs.) I selected this animal for slaughter, and he appeared the fattest in the pen; but his breathing was distressed.

No. 3 was a fat wether sheep, long and short-wooled, cross-bred, one year old: Mr. John Overman. The heart, lungs, and liver were in a similar condition.

Pigs.—Pigs of any breed above 12 and under 18 months old, *improved* Chilton breed; Mr. G. B. Morland. The heart weighed 15oz. 2drachms. The substance of the left ventricle is much thicker than usual in hypertrophy. The cavity of this ventricle was very small, and of insufficient size to accommodate the free return of blood from the lungs. Thence the supply of blood throughout the body must have been defective, and the health of this animal must, therefore, have been seriously impaired. The liver gave proof of an obstructed circulation, being of a dark livid color, while the hepatic veins of the left lobe more especially were congested. Their bloated extremities were easily seen on the surface of the liver, and they presented the appearance of numerous oblong livid spots, each of which was surrounded by a white circle, which marked the situation of the empty portal veins.—Here and there the blood had actually escaped from the overloaded hepatic vessels.

Horned Cattle.—Devon heifer, not exceeding four years old; His Royal Highness the Prince Consort exhibitor. The heart weighed 6lb. 13oz. The substance of both ventricles had undergone complete degeneration into fat. This, under the microscope, consisted of bright shining globules within the muscular fibres, the *fibrillæ* of which had entirely disappeared. In the base of one papillary muscle (in the left ventricle,) I observed that the muscular fibres were actually broken up, and that many large fat cells had replaced them. Yet it is on the strength of these papillary muscles that the tension of the *mitral* valve depends during the contraction of the ventricle, and therefore the rupture of one such muscle would produce sudden death.

Devon ox, above three years old; the Earl of Leicester exhibitor and breeder. The heart weighed 6lb. 6oz. The muscular fibres of the left ventricle were converted into fat, which in other respects had the appearance last described.

Short-horned ox, above three years old, "the best in any of the classes;" Mr. Edward Wortley exhibitor and breeder. The heart weighed 7lb. 13oz. The left ventricle had in this animal also undergone conversion into fat but more so in certain portions of its substance. One spot near the apex of the ventricle was particularly yellow, soft, and greasy. Here the muscular fibres had given way, and a blunt probe could be readily introduced through the substance of the ventricle, almost into its cavity. Fortunately, the thin lining membrane (*endocardium*) had not been ruptured, or the animal would have died instantly. This would have happened at any moment, on the slightest exertion. Nevertheless, so highly did Mr. Smith, of Hampstead, value his prize, that he charged half a guinea for this monstrous pathological specimen!

Extra Stock.—The best beast, a Devon ox; His Royal Highness the Prince Consort exhibitor. In this specimen the heart weighed 7lb. 15oz.; portions of its substance were healthy. The muscular fibres of the left ventricle were here and there partially converted into fat.—The intestines: within about a foot of the termination of the large bowel was a putty-like mass, one inch and a half thick, and about one foot long, and which partially surrounded the intestine. Such, then, are the chief results of my examinations, limited as they unavoidably have been to certain viscera only. Under the present system of rearing and feeding, one disease is of most frequent occurrence, namely, conversion of the heart into fat. I am supported in this opinion by the invaluable testimony of Professor Quekett, of the Royal College of Surgeons, who re-examined the hearts in question, and confirmed my observations. I need scarcely advocate the special importance of this result, for no one can dispute the fatal tendency of a disease by which the structure of an organ most essential to life has been degenerated into fat. The stomach may, indeed, prepare food for the production of blood, and the lungs and kidneys may purify it of excrementitious matter, but these departments of the blood-factory are only subsidiary to the heart, whose special duty it is to propel the vital fluid to the most distant recesses of the body, that every part may be nourished and renovated. Yet I found the great central organ, more than any other, damaged. In the sheep, particularly, the heart had lost its contractile and propelling power, and was converted into a flabby, inert lump of fat.

HORTICULTURAL.

Are we Likely to Succeed in Raising Apples in Wisconsin?

Were our question confined to the possibilities of a few careful amateur pomologists in certain favorable localities, there need be no hesitation in making affirmative answer; for we have eaten some as nice Wisconsin apples as ever delighted our palate: Pippins, Bellflowers, Vandeveres, Romanites and others—ah, we remember them!

Peaches, pears, plums and cherries are certainly very nice, but the APPLE is after all the *fruit of fruits*. Can we so far succeed that its use will become universal? or is it to be a luxury for the few, but the "forbidden fruit" to the many?

In various parts of the State we have found fine looking orchards—some of them, particularly in the southwest, large, and well-grown like those we used to rejoice in, in the glorious days of childhood and *sweet cider;* but a nearer approach and closer inspection brought a "sigh from the heart and a tear to the eye,"—they had gone the way of all the living,—the frost, the borer, and bark-louse had done their fatal work. In several large orchards of five to ten years' growth and two or three years fruitful bearing, there was not a single grafted tree alive. Some appeared to have been frozen to death outright, while others seemed to have lingered one or two seasons and then fallen victims as much to the sun as to the cold.—Almost without exception, the decay of the trunk commenced on the southwest side, and was doubtless occasioned by too early flow of sap,—on that side because the greatest intensity of the suns' rays is at about two o'clock P. M., when the side most exposed would of course be west of south.

The results of our observation and enquiries will be briefly stated under several heads.

I. EXPOSURES.

Protection from cold west and north-west winds is important, but this precaution should not be observed to the neglect of others equally important. Early trees, i. e., trees which circulate the sap early in the season, succeed best on a slope facing the north, or in some other way protected from the intensity of the sun's rays, while those which are later will be benefitted by a southern exposure.

II. SOILS.

The apple-tree does not require a very rich soil, and is often hastened to premature decay by transplanting from a clayey loam to a rich prairie mould. Again, the circumstance of moisture is important: abundance of water is ruinous. The land should be well drained, and no artificial draining is so good as the natural. Let the orchard be planted upon the hill rather than in the valley—unless the valley itself be well drained by a stream whose bed is deep. But if there be no soil on the farm sufficiently well drained, then we recommend deep trenching and the use of tiles.

III. SUPERIOR HARDINESS OF SEEDLINGS.

Nothing is surer than that seedlings are much more hardy than either root or stalk-grafted trees. Often in an orchard of half grafted and half seedlings, the latter have been found all living, while the former were all dead or dying.

Let our fruit-growers try grafting into the limbs of the poorest, and *from* the best.—Much of the natural fruit is as good as the best grafted, and a tree native to the soil certainly stands a better chance than one imported from some remote and totally unlike portion of the country.

IV. VARIETIES.

We should not be so anxious for the *greatest number* as for the *best*—the most hardy—varieties. Many of our farmers have been planting without the slightest reference to this.—Much of the discouragement among the fruit-lovers of our State has grown out of a lack of proper selection. So far as we have been able to determine, the Yellow Belleflower, Fameuse, Fall Winesap, Red Romanite, English Golden Russett, Spy, and Red Astrachan, have endured our climate the best. We may be slightly in error, but if so it is the fault of those fruit-culturists upon whom we have relied for information.

V. TRANSPLANTING.

There is, perhaps, as little common sense displayed in the transplanting of trees as in any other branch of the horticultural business. In the first place, the meanest trees are selected; secondly, they are often *chopped* out of the ground with mattock or shovel, by severing all the larger roots and most of the smaller ones, so that they stand about as much chance to live as a man would if his arms, and legs, and head were cut off close to his body!—thirdly, they are *stuck* into the hard ground like a fence-post, without comfortable room or proper tilth for such roots as are left; and

fourthly, they are as badly murdered afterwards as merciless winds, reckless cattle, and stupid pruning-knives know how to do it.

Having selected the most thrifty-looking, *low-branched*, young trees, see that they be removed without injury to the roots, and immediately packed in straw and leaves, and kept *moist* until they arrive at their destination,—then make a wide excavation—five or six feet across for trees four years old—with depth enough to receive the roots upon a bed of moist earth. The filling should be done carefully, and the surface about the tree covered with a mulching of half-decayed straw, or chip-manure, to ensure requisite moisture. It should then be supported, between two or three stakes, by a rope of straw, to prevent too much swaying by strong winds.

VI. CULTIVATION.

This includes every sort of care, and cannot, therefore, be discussed in detail. Two points require special notice:—First, the earth about the trunk must be kept free from weeds and grass, by hoeing; and, secondly, the pruning should be such as to make a *low-head* and give the whole true symmetry of form. The absurd custom of trimming off all branches up to the very top—so that the plow-team can pass conveniently under, and cattle cannot easily browse the twigs(!)—argues not only very bad taste but also a total inattention to all convenience of the fruit-gathering, and the requisite protection of the trunk against the heat of the sun. Cattle have no more right in an orchard than swine in a lady's parlor; and God never intended apple-trees to be manufactured into *dying liberty-poles*.

Come farmers, give us less of whining over the climatic dispensations of Providence, and better evidence of horticultural common sense.

H.

THE HUBBARD SQUASH.—This new variety of the Squash family is strongly recommended in the report of the transactions of the Massachusetts Horticultural Society. In shape the Hubbard resembles the Marrow or Boston.—It ranges in weight from four to twenty-four pounds. In color it is a dark green. It keeps well, being ripe from November to May. Compared with the Marrow, says the reporter, "it is thicker meated, better flavored, finer grained, drier, sweeter, and a better keeper, and from its thick hard shell less liable to be injured.—*Mich. Farmer.*

DR. PIPER, of Woburn, makes an excellent suggestion to railroad companies, that is, to plant trees along all their lines.

Gardening.

Gardening is as eminently the branch of horticulture for May as is tree-planting for April, and should more or less engross the attention of all who have any ground to cultivate. Few appreciate the value of good gardens, except those who have them; and that number is few indeed, wherever one goes; yet nothing better pays the cost, especially among farmers who are remote from vegetable markets, and have to rely wholly upon what they raise themselves for family use, and usually go without what they do not thus obtain. The luxury of vegetables in ample variety and season, is also further enhanced to farmers and country people for the reason that they are often less well supplied with fresh meats, fish, fruits and other varieties and delicacies common in cities. Hence we repeat that every farmer and farmer's wife should be a good gardener if possible, and at all events a tolerable one in the common branches.

Yet how many do we address, who have been on their farms for years, that have not yet an enclosed and well-started fruit, or even vegetable garden. It is a sad, and to be lamented omission, both in point of comfort, economy, and health; and one that it is to be hoped those who aim at progress in the right direction will strive to correct. Let none strive to find an excuse in the climate for such neglect, for it presents no bar to the successful cultivation of an ample variety of articles to afford a pleasant change, for every day in the year.

OF SMALL FRUITS,

Strawberries, currants, gooseberries, raspberries, blackberries, plums (of the native varieties at least,) and grapes of the hardier kinds may certainly be grown, in ample abundance, by all who will try, with a little study and perseverance.

OF VEGETABLES,

There is no end, all good, and easily cultivated in their season and way. Asparagus, lettuce, rhubarb (pie plant,) peas, tomatoes, and all else too numerous to mention. Of the cultivation and protection of some of the more prominent articles, we propose to copy a few valuable suggestions from FESSENDEN'S COMPLETE FARMER AND GARDENER; by the way an invaluable cheap manual for the daily use of the people at large, as every subject pertaining to

farm or garden is alphabetically arranged and treated on briefly and to the point.* Worth ten times its cost to all who will read and heed it.

ASPARAGUS—*Asparagus officinalis.*—*Soil.*—Asparagus ground should be light, yet rich; a sandy loam, well mixed with rotten dung, or sea-weed, is recommended.

Preparation.—A good quantity of dung trenched twelve or fifteen inches below the surface.

Propagation.—It is best to raise this plant from seeds, although the sprouts from seeds will not be fit to cut so soon by a year as from the roots. The seeds should be dead ripe, when gathered, and taken from the strongest and most compact shoots.

Asparagus beds may be from four to four and a half feet wide, with alleys of two feet in width between them. In these beds "the soil should not be less than two feet and a half deep, and, before planting a bed, it is considered good practice to trench it over to that depth, burying plenty of dung in the bottom, as no more can be applied there for eight or ten years. It can scarcely, therefore, be too well dunged; besides, though the plant naturally grows in poor, sandy soil, it is found that the sweetness and tenderness of the shoots depend very much on the rapidity of its growth; and this is promoted by the richness of the soil. Damp ground, or a wet subsoil, is not fit for asparagus. Indeed the French consider wetness as so prejudicial to this plant, that they raise their asparagus beds about a foot above the alleys, in order to throw off the rain."

RHUBARB—*Rheum.*—*Propagation and culture.*—All the sorts may be raised either from seed or by dividing the roots. If from seed, which is the best mode, sow in light, deep earth, in spring; and the plants, if kept eight or nine inches asunder, will be fit for transplanting in autumn, and for the next spring. When the roots are divided, care must be taken to retain a bud on the crown of each section: they may be planted where they are finally to remain. When a plantation is to be made, the ground, which should be light and rather sandy, but well manured, should be trenched three spits, or as deep as the subsoil will admit, adding a manuring of well rotted hot-bed dung. Then plant in rows, three feet wide by two feet, in the rows for the *R. rhaponticum* and *palmatum*, and five feet by three feet in the rows for the *R. hybridum*. No other culture is required than keeping the ground free of weeds, occasionally stirring it, during summer, with a three-pronged fork, and adding a dressing of well rotted manure every autumn or spring, stirring the ground as deep as possible. Some never allow the flower-stalks to produce flowers; and others cut them over as soon as they have done flowering, to prevent the plants from being exhausted by the production of seeds. The former seems the preferable method, as the flower-stalks of plants cannot, like the leaves, be considered as preparing a reserve of nourishment for the roots.

Taking the stalks.—Remove a little earth, and, bending down the leaf you would remove, slip it off from the crown without breaking, or using the knife. The stalks are fit to use, when the leaf is half expanded; but a larger produce is obtained by letting them remain till in full expansion, as is practiced by the market-gardeners. The stalks are tied in bundles of a dozen and upwards, and thus exposed for sale.

SALSIFY OR OYSTER PLANT—*Tragopogon porrifolius.*—The salsify is a hardy biennial, a native of England. The root is long and tapering, of a fleshy white substance; the herb smooth, glaucous, and rising three or four feet high. The leaves resemble those of the leek; the flowers are of a dull purple color, closing soon after mid-day; the seed, as in other species of goat's beard, is remarkable for having attached to it a broad feathery crown.

Culture.—It resembles a small parsnip in appearance. It is raised annually from seeds, and as easily, requiring no more care than the carrot. It bears a tolerable crop.

Use.—In this country it is parboiled, and then fried either in batter or without. It forms an admirable garnish for boiled fowls or turkeys. In its taste it so strongly resembles the oyster, that, when sliced and fried in batter, it can scarcely be distinguished from it.—If our gardeners would introduce it into the market, and our citizens once try it, there would be no danger of its ever failing hereafter to be raised. It is in eating from November to May, precisely the period in which our vegetable market is most deficient in variety.

INSECTS—*How to Avoid.*—The fly, which is often very destructive to cucumbers, melons and pumpkins, may be killed by sprinkling a mixture of tobacco water and red pepper over the vines.—*Dom. Encyc.* Sprinkle the plants with a strong infusion of elder leaves, that of hops and of walnut leaves is likewise recommended; or, suspend a diamond-formed piece of white paper, shingle, or other piece of wood, by a thread, tied to the end of stick stuck in the ground at a small distance from the hill, so that the paper shall hang directly over the hill and near the plants. The air, by constantly vibrating the paper or shingle, will have a tendency to prevent insects from alighting on the plants. The surest way, however, is to enclose the hills with frames covered with gauze, or other cloth of a light texture.

It is but a trifling job to make these, and they will last for years if taken care of. By having the lower edge sharpened and pressing

*Published by A. O. Moore, 140 Fulton street, N. Y., and forwarded to any part of the U. S., by mail, at $1·25. See Nr 16, in list on third page of cover.

it into the earth a couple of inches, it will keep them from blowing out of place, and also often prevent the cut worms from reaching the tender plants. A bit of matched flooring is the best thing to make them of, groove up, as the cloth covering can be confined with a tongue strip in the groove much easier than with tacks.

Powdered soot sprinkled on and about young plants, is said to be an excellent preventive of bugs and worms. P.

Correspondence of the Farmer.

The Blackberry.

MESSRS. EDITORS:—This fruit is becoming a general favorite throughout our country. It is one of the most healthful of small fruits and when obtained with small seeds and plenty of pulp is one of the most delicious.

All efforts made to introduce the common wild blackberry into garden culture have been attended with but partial success and generally with entire failure. But the discovery of the "Lawton" or "New Rochelle," is a new era in Blackberry history and culture.

The "Lawton," while it thrives well with even ordinary garden culture, will with care give strong canes of ten feet in height, loaded with clusters of magnificent fruit. The fame of the "Lawton" is already wide spread and is attracting increased and deserved attention. As yet it may be said to be only partially tested in Wisconsin, though friends of the writer in different parts of the State who have had it under cultivation for two or three years speak well of it and think it will fully sustain its eastern reputation. On my own grounds I have not been allowed to test its perfection, for the demand for plants has been such that I have disposed of the whole crop of canes every year. The canes are hardy, not being injured by the severe weather of past winters more than should be cut off in ordinary pruning.

A rival of the "Lawton" has more recently been introduced to public notice, and which bids fair to contest the right of supremacy for excellence. I refer to the "Newman" or "Thornless," fruit nearly as large as the "Lawton," and if possible, more delicious.—The almost freedom from thorns (the comparatively few found being short) is considered quite an advantage or improvement.

The "Newman," like the "Lawton," seems to be a product of nature's own improving.—It was found in the woods, by Mr. Newman, whose attention was attracted by the circumstance of great fruitfulness and freedom from thorns. He removed it to his garden and extended the culture of it with a view to the raising of fruit for New York market. The fame of the fruit being noised abroad, he set a price upon the canes and readily disposes of all he can spare at $6 per dozen. During a recent visit to N. Y., I spent a few days in the vicinity of Mr. Newman. His neighbors confirmed the statements made of the productiveness and excellence of this variety. Canes planted on our own grounds last spring endured the severe winter without protection though the growth was but a feeble one.

The improved "High-bush" blackberry is a variety of the wild blackberry of New England, improved by garden culture; it is of fair size and fine flavor, but must give way to the preceeding.

The "White Blackberry" does not prove worth cultivating.

The "Low" or "Running" blackberry, as found in the fields of N. Y., produces a large juicy berry, and is one of the sweetest and most delicious varieties of this fine fruit. I am not aware that its culture in the garden has been attempted (except by myself.) Last year I procured some plants and hope to tell you of good success therein in another year or two.

All the varieties may be propagated by suckers which spring up from the roots, to be removed and planted in the fall or spring. They will generally bear fruit the first year if allowed, but it is better to cut the canes near the ground and thus ensure greater strength and a full crop the second year.

Plant in deep, rich soil, in rows six feet apart and the same distance in the rows, or train against a fence or building. Mulch the ground around with coarse manure, cornstalks or litter. In the fall, dress liberally with well rotted manure, forking it in. Cut out the old canes which have borne fruit and thin the new ones, and of those left cut back one-third or one-half.

A. G. HANFORD.

WAUKESHA, WIS.

NOTE.—See the Lawton blackberry advertisement, by Lawton himself, and by numbers of others in our advertising department.—EDS.

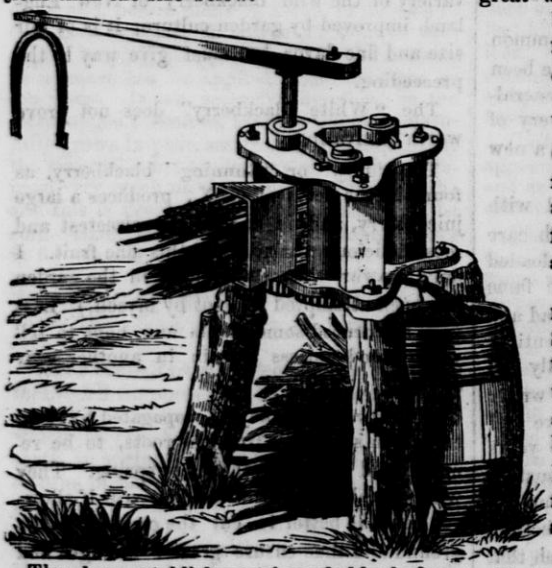
MECHANICAL.

SUGAR CANE MILL.

Herewith we give an illustration of one of Messrs. Hedges, Free & Co.'s most improved low priced Sugar Mills. It represents the $56 mill in their advertisement, and is undoubtedly a very compact and efficient mill for a small business, and withal, costing so little as to put it within the reach of any man, (or two or three neighbors,) to own one, for the next fall's use.

Messrs. H., F. & Co. offer them in lots of five machines at 10 per cent. discount from advertised rates, provided they are ordered by the first of June.

We shall publish a cut of their $90 machine, with horizontal rollers, in our next issue, which will be better adapted for large operations than the size below.



The above establishment is probably the largest manufacturer of these mills, that is to be met with in the country. They made and sold a considerable number last year, and hence they have had the benefit of experience (which is worth a great deal in new things.) We think those who wish to secure good mills, can safely order of them, and further that they will do well to order early, as the demand will undoubtedly largely increase as the season comes round for using them.

THE EVAPORATING PANS,

Are also undoubtedly an excellent article, compared with any common kettle, especially when the amount of fuel and time they will save, is taken into consideration. They present so much surface comparatively, that the juice evaporates with great rapidity.

We saw an entire set of their apparatus in operation, at the U. S. Fair, at Louisville, last fall, and were well pleased with its workings in all respects.

We purpose having a set of their machinery for our own use next fall, fully believing that good machinery, as compared with poor, will more than pay cost in a short use. See Messrs. H., F. & Co.'s card for different sizes and prices of mills, and further notice that they will forward circulars containing the fullest information to all who order them. P.

The Progress of Mechanical Invention.

Every week, yea every day, heralds something new, in this ever progressive field of great and glorious enterprise. Every mail brings us circulars of some wonderful, new, or immensely improved old machine or invention.

Among others we find the circular of Wagner's Grain Harvester, Thresher, Cleaner and Bagger, being got ready for the next harvest, a machine that assumes to deliver the grain in bags, fresh from the field, at the rate of 25 acres per day.

And stranger still, another gentleman, (a good mechanic,) of our own State, writes us that he has perfected the plan of a steam machine, that with the aid of four men, a boy, and a horse and wagon, will cut, thresh, clean and bag the grain, and stack the straw, of 100 acres per day. Will not that do for even "Young America?" We say so.

We are almost as incredulous on the subject, as the flat boatmen were about Fulton's steamboat, when told that it would travel up the Mississippi to the tune of fifteen miles per hour. But when the thing is done and works complete, and ordinary sized farmers can have their harvesting done up to order in from one hour to half a day, will we not then look wise, and claim that we always knew it would work first rate? Of course we will. P.

MR. M'MICKEN, of Cincinnati, has bequeathed eight hundred thousand dollars or more, for the purpose of founding a first class University in that city; also ten thousand dollars for the benefit of Farmers' College. His estate is estimated at a million.

EDUCATIONAL.

Agricultural Colleges growing in Popularity.

The extraordinary interest manifested in scientific agriculture during the past legislative season is by no means, as some have suggested, a popular mania,—destined to prevail for a time and then to disappear, leaving the great interests for which it had striven to slump back again into their former deplorable condition,—but is rather the legitimate result of a genuine appreciation on the part of the more intelligent friends and devotees of the industrial pursuits, of the aids offered by science. Although among the very last to feel this need, because of nature's abounding generosity towards even the careless and ignorant tiller of the soil, yet has the availability of science for the advancement of all other industrial arts been so long demonstrated before his very eyes, that the farmer is beginning to feel that *his* occupation cannot be an exception to all others, but is also susceptible of elevation and progress. We said *beginning* to feel; but the beginning was years ago,—the time has now come when he begins to demand boldly what is his right—the *means* requisite to such advancemont.

Accordingly, in a large number of the more enterprising States of the Union, the establishment of agricultural colleges has been undertaken, and in quite a number they have actually been incorporated and endowed. The liberal and progressive papers of the whole country are teeming with the recorded triumphs of an enlightened industrial policy; from which, for the information and satisfaction of our readers, we quote a few passages:

MICHIGAN AGRICULTURAL COLLAGE.—It seems that the example of Michigan in establishing the first agricultural college on our side of the Atlantic, is deemed worthy of emulation. Our institution has succeeded, educationally, beyond the expectation of its most sanguine friends, in spite of the severest tests, and those inevitable obstacles incident to all new and important enterprises. The next term commences on the first Wednesday of April, and we understand that applications are on file already for four times as many vacancies as will exist, many of them from other states.—The public confidence seems firmly established in its triumphant success.—*Jackson (Mich.) Citizen.*

OHIO AGRICULTURAL COLLEGE.—The bill which Mr. Raymond has introduced, pursuant to the views of Governor Chase, as contained in his annual message, provides for the purchase of a thousand acres of land in one body, at no more than $25 an acre, and appropriates $50,000 for that purpose, and for the erection of buildings, purchase of furniture, apparatus and library. The College to be under the supervison of the State School Commissioner and State Board of Agriculture. The course of instruction to include a thorough English course, mathematics, natural philosophy, chemistry, botany, animal and vegetable anatomy and physiology, geology, mineralogy, meteorology, entomology, veterinary art, horticulture, political economy, civil engineering, book keeping, and the mechanic arts directly connected with agriculture. The sum paid to professors the first year shall not be more than $5,000, the rent $6,000, and any year thereafter, such sum as the board of supervision shall deem necessary. Tuition in the college shall be forever free to pupils residing in Ohio, and in case more pupils apply than can be accommodated, they shall be apportioned to each county, according to the ratio of its population. —*Toledo (Ohio) Blade.*

IOWA AGRICULTURAL COLLEGE.—Iowa has likewise passed a Bill for an Agricultural College, in speaking of which the Tipton *Advertiser* says:—

"The 'rural members' of the House had a 'pitched battle' with the 'legal members' on Wednesday, over the bill for an Agricultural College. The committee on Agriculture, of which Mr. Lundy is chairman, after long and careful labor perfected a bill which gave general satisfaction to the friends of the College, and upon reporting it to the House it was referred to the committee of Ways and Means, as it called for an appropriation of $25,000. The Committee reported it back recommending 'indefinite postponement,' and that the pitiful sum of $1,000 be appropriated for the establishment of a bureau, for the distribution of seeds.

Wilson, Edwards, Seevers, Jackson, and Mahony, all lawyers, and the leading members of the House, favored the report of the committee, and tried to convince the former that they were altogether ahead of the times in their project, and did not comprehend what they were asking for. They were replied to by Wright, Lundy, Gue and Richardson, who proceeded to show the lawyers that they were entirely ignorant on the subject, and did not know anything about the bill under discussion. They answered successfully all the objections raised and convinced the House that the lawyers had not even read the bill, and were trying to discuss a subject they knew nothing about. Their triumph over the lawyers was complete; the House refused to concur with the report and the Bill was afterwards passed by an almost unanimous vote in both Houses."

But space will not allow of further quotations. It is sufficient to remark that N. York, Maryland, South Carolina, Tennessee and Minnesota have also established like institutions, while a half-dozen other States are fast following in their footsteps.

Our own State, although among the first to move in the matter, is likely to be among the last to really *do* anything. The Bill, notwithstanding it is satisfactory to the friends of Agriculture, and is very moderate and consistent in its demands, still hangs in the Senate, and will probably not get into the Assembly until the enemies of progress, and the contemners of the farming pursuits will have done everything in their power to defeat it. The character of the Assembly is such, however, as to fill us with hope; quite a majority we believe are farmers, and men of intelligence and liberal views.

From our conversation in public and private

with the most intelligent men of a majority of the towns and cities of the State, we are fully convinced that the people who understand the plan of the proposed Institution, heartily endorse the enterprise; and that the exceptions found here and there are solely due to the distorted notions of the Institution, obtained through the one or two crotchety local papers of the State, whose strange, unreasonable positions on this question can only be charitably explained upon the hypothesis, that they have no conception whatever of the important ends sought to be secured.

We sincerely hope, however, that the *farmers* of the State will not be so thoroughly blind to their own best interests as to become in any way responsible for the defeat of an enlightened policy which looks to the elevation in true dignity and value of the occupation to which they have devoted their lives. H.

How shall the Farmer be Educated?

NUMBER III.

Not alone through books and papers. These are important, as we have already urged, and no sane man of intelligence will reject the aid they offer. No, let the farmer welcome these "ships of thought" and human experience, as they come freighted with their precious treasures. But there are other instrumentalities which may not be omitted,—among which the *Club* is especially worthy of attention.

In the cities, almost the world over, the Club has become an institution,—the Club literary, scientific, social and political. In Europe, these last concoct revolutions and hold the fate of empires; while in America they manufacture governors and presidents, and control the "dear people," who meantime are delighted and perfectly satisfied with the sham title of *sovereign*. Of their potency there can be no question,—the great thing to be determined is, how to turn them to the best account. Now that the world has learned their availability we cannot expect either the literati, the scientists, the socialists, or the politicians to forego their use, lest they incidentally or even directly operate to the injury of those great classes who ignore their value and rely solely upon individuality of effort.—No, the industrial classes—the ninety-eight hundredths of the human family—must also learn their utility and become practically as wise as the ruling minority.

Association, association is the motto of the age, and the farmer must adopt it as his. It is only by association that the State is established and maintained, or that the Church is built up, and carries forward the work of christianizing the world. Not only so, but all classes, professions and occupations of men, *except the farmers*, have long acted upon the maxim, "in union there is strength." He alone, until recently, has ignored the value of combination, and ever since the days of grandfather Adam, been at work "on his own hook!"

But, of late years, he too has begun to learn the lesson, and is now making good proficiency. The object of this article is to impress upon him more strongly their importance.

The term "Club" is technically restricted to an association of a small number of individuals for some specific purpose; but we do not propose to confine it to any limit as to number, and shall, therefore, under this head, also treat of the Society.

First however of the Agricultural Club proper. This should be organized in every township at least, and every farmer therein should be an active member. Their benefits would soon transcend calculation. A few words of the plan of organization and the mode of conducting them.

The organization should be as simple as possible, the Constitution specifying the object of the Club and providing for a President, two Vice Presidents, a Secretary and Treasurer, and the terms of membership,—the By-laws consisting of such rules and regulations for the management of its affairs and the conduct of its business as may appear advisable to a majority of its members.

The frequency of the meetings will of course be determined by circumstances,—in the winter one evening every week could be advantageously occupied in this way; in the summer, during the busiest season, when the evenings are short, once in two weeks would probably be often enough.

The exercises would properly consist of essays, discussions, or debates, and scientific lectures. The subjects for either are multitudinous and self-suggestive. The best varieties of grain, the best mode of sowing or planting, the most profitable cultivation and the best kind of manures; the most hardy varieties of fruit, the most desirable exposures and essential care; the best breeds of cattle, horses, sheep and swine, with the most economical mode of feeding,—these and a thousand other subjects would come up for investigation.

THE BENEFITS DERIVABLE FROM FARMER'S CLUBS are two fold; viz: social improvement and superior practical skill.

First, of Social Improvement. Farmers incline to isolation. Necessarily separated somewhat from their neighbors, there is a tendency to a sort of selfish independence,—to rely each one upon his own experience and the experience of his ancestry in direct lineage, and thus shut out not only the innovation of other men's ideas, but also the liberalizing influence of neighborly association. Man is by nature a social being, and a violation of this law of his spiritual nature will just as surely have its penalty in the dwarfing and narrowing of the mind and soul as a protracted confinement of the feet in prison stocks will diminish the ability for locomotion, Narrowness and bigotry are terrible curses, and the best way to avoid them is a broad and generous acquaintance with other men.

Farmers are charged by the refined and cultivated residents of cities as "rough, boorish and uncouth," the appropriateness of which terms, when softened down a little, we are sometimes obliged, however reluctantly, to admit. Men, like minerals, are in a state of nature, rough-surfaced and angular, and occasional attrition is necessary in order to the rubbing off of sharp corners, and that polish so requisite in properly refined society.

Even in the cities, a bigotry of religious creeds cramps and distorts the social character, so that there is often but little fellowship between members of the different churches,—just as though Heaven were made solely for Episcopalians, Presbyterians, Unitarians, or Methodists,—and this too when their worldly business brings them into frequent contact.—Then how much more must it be true of the farmer, who scarcely associates with his neighbors, except occasionally at the village store, the mill, or the church?

Now the Club would supply this important desideratum by bringing farmers of various degrees of intelligence, culture and ability, as well as of all shades of religious belief, into contact and sympathy. There, in the friendly discussion or simple statement of individual experience and observation, in the interchange of opinion and sentiment, and in the kindly grasp of neighborly hands that ought to be co-helpers, brother Brown will learn that neighbor Jones, though a member of another church, or of no church at all, is really, after all, a genuine man, with a good brain under his hat, and a warm, generous heart in his bosom; after which discovery he will take his advice more graciously, and more easily believe that he too may enter the "kingdom," though to him his religion be ever so heterodox. So shall the soul of each expand, and each be more a man.

Under the head of social improvement we may also include acquired facility for communicating thought, and consequent increase of confidence. If farmers were trained to public speaking, they would a thousand times speak out manfully when now they remain silent; in which case it would be perfectly safe to predict that the important affairs of government would not be left in the hands of a few brangling, wire-pulling demagogues.

Secondly, the club will be a source of increased professional knowledge and skill.

The wisdom of the whole world does not concentrate in any one man. "Many men of many minds" was a stereotyped phrase of the copy-book when we were a schoolboy, and is just as true now as then. We have never yet met a man so stupid but that we could pump some new idea or old experience out of him, for our profit. Most men know a good deal more than they get credit for; and of the farmers of a particular neighborhood, it may be presumed that each one has learned some better mode of doing some one thing than is known to his neighbors. How much, then, would the common stock of knowledge be improved by a free exchange of these experiences.

In order to a respectable preparation of the essay, the essayist would naturally draw upon every source of information within his reach, pertaining to the particular subject of which he should propose to treat,—books, papers, and the knowledge of his neighbors would be levied upon for cantributions; and when he went before the club with important information it would be with a mind both newly stored and newly disciplined.

So also for the discussion there would be a general "posting up," and while the acquired knowledge of the subject would be worth a great deal, the quickening of the mind and the rousing of its dormant energies would be worth ten times more.

Occasional courses of scientific lectures by competent men would relieve any monotony of the exercises and prove highly profitable. And, although the number of available lec-

tures would at first be small, the law of supply and demand would soon furnish others.

In conclusion, therefore, we urge upon all the farmers who may have been induced to read this article to begin, at once, the work of organizing a Farmers' Club. In the course of our several tours through this State during the winter we have aided in the formation of several, and subsequent reports bring gratifying evidence of their success. Were they formed, as we recommend, in every town in Wisconsin, our agricultural statistics would show less mortifying results, even at the close of 1858.

Of *Societies*, County, State, and National, we shall treat at another time. H.

The Education of Labor.

Some parents are strict to require daily physical exercise of their children before and after school, in the way of labor. To this course some are prompted by necessity, and others by principle. Their children are required each day to perform a given amount of work. This is, in particular, true of farmers and of others in rural districts.—And if the labor be appropriate in kind and amount, the value of this practice cannot be over estimated. Every child should be carefully practiced in some useful industrial employment. No other education is more important. Work is the great law to which God and Nature bind us. As a preventer of evil, and a producer of good, there is nothing in all the world like industry; like hard work.—Our children better be reared in ignorance of books than of all kinds of productive industry. This truth applies to the children of the wealthy as well as to all others; for all men and women, not invalids, who do not by their own efforts earn their own living, are worth less than they cost.

Some one has said that "an idle man's brain is the devil's workshop." If this idea be correct, he has little reason to be proud of his quarters; and perhaps justice would require that some allowance on this account be made in passing judgment on the work he turns out.

But seriously, do not the highest and dearest interests of society demand that in the school as well as in the family the idea should be made prominent, that labor is alike needful and honorable for all? What greater calamity could befall the world than to have our youth educated to look upon work, daily work, hard work, as unbecoming ladies and gentlemen? The ancient custom that every boy should "learn a trade," and qualify himself to gain by manual labor an honest and honorable livelihood, it might be well to re-establish.—*Ohio State School Commissioner's Report.*

MISCELLANY.

Premium on Field Crops for 1858.

The State Agricultural Society offers the following list of premiums on Field Crops for 1858.

We publish them in advance of the premium list, in order to give competitors time and notice to make their entries in due season, which it will be seen is necessary to be done by the fifteenth of June, to come within the rule.

We would in this connection, repeat what we have formerly said on this subject—that it is due to our State and Western soil, to demonstrate what it can do, in the way of large yields of the staple crops.

Every year do we see paraded on the premium awards, of the old and worn out soils of the East, statements of crops, to which in quantity our farmers make no approach; until at length it has almost become a foregone conclusion, that the Western soils, though apparently rich, are yet not so in reality. This *quasi* judgment ought to be reversed, and will be when Western farmers *try*. And that is just what we wish to have them do. We hope that at least the names of a hundred competitors will come promptly forward for the current year, a list of all of which names we propose to publish at the expiration of the time, together with a statement of the crops they enter for.

The Premiums offered are not large to be sure, but the credit of having raised the best crop, is always worth striving for.

STATE AGRICULTURAL ROOMS,
MADISON, April 20, 1858.

FIELD CROPS, BY THE ACRE.

The Executive Committee will award the premiums under this head at their meeting in December.

Best one acre winter wheat,		$10
2d	do	5
Best one acre spring wheat,		10
2d	do	5
Best one acre oats,		10
2d	do	5
Best one acre corn,		10
2d	do	5
Best one acre barley,		10
2d	do	5
Best acre potatoes,		10
2d	do	5
Best fourth-acre carrots,		10
2d	do	5
Best one acre hops,		10
2d	do	5
Best one acre timothy seed,		10
2d	do	5
Best one acre clover seed,		10
2d	do	5

Accompanying the above a detailed description of the soil, manure, mode of culture and expense must be presented in writing. The land must be accurately measured; also the grain and roots. The accuracy of the state-

ment must be verified by the affidavit of the exhibitor, and one other competent witness.

Competitors for any of the above premiums must file with the Secretary, by the 15th of June, notice that they will enter for competition, and specify the crop or crops.

D. J. POWERS, Secretary.

The Manufacture of Sugar and Syrup from the Chinese Cane—Its Yield compared with Louisiana.

We extract the following from Olcott's new work, "Sorgho and Imphee," being the remarks and views of Dr. Lovering, of Philadelphia, at the close of his series of experiments, (the length of which we regret precludes their publication entire, at present,) and conclusively showing what can be done with the *Sorghum;* also its value compared with the Louisiana-grown Cane. His experiments and remarks are entitled to especial value, because of his evident general knowledge and ability in conducting them. The successful results of his experiments have attracted universal attention and confirmed everybody in the belief that the Sorghum is valuable as a sugar plant for the Northern States.

"Assuming these propositions to be true, I make the following estimate of the probable yield of an acre of canes of ordinary growth, such as I have experimented upon, viz.:

Actual yield as per experiment No. 4,	1221.85 lbs. sugar,	74.39 gal. molasses
Add for inefficiency of mill, 10 per cent.		
For heating and reheating, &c., 5 per cent.		
For footing say but 5 per cent.		
Total 20 per cent.	244.37	
Probable yield per acre,	1466 22 "	" 74.39 " "

Further, it will be observed that my acre produced but 1847 gallons of juice. I have, however, seen published accounts of far greater yield than this; one, for instance, in this county, apparently well authenticated, reaching 6,800 gallons per acre, which, according to my *actual* results, would produce 4499 lbs. of sugar, and 274 gallons molasses—and according to the foregoing *probable* results, would yield 5389 lbs. sugar, and 274 gallons to the acre.—I do not pronounce such yield of juice impossible, but it will certainly be of rare occurrence—a mean between this and my yield will be a large return.

Another subject worthy of notice is the nature of the season. My impression is, that owing to the lateness and coldness of the spring, and the continued wet weather, the last has been quite an unfavorable season for the ripening and development of the sugar in the juice, to which cause I think a deficiency in the yield of at least ten per cent. may be attributed, which would further increase the quantity to 1612 lbs. of sugar, and 81 8-10 gallons molasses, a yield very nearly corresponding with that of the best conducted plantations of Louisiana, as will be seen by the following figures, which I have collated from a minute statement furnished to me by the enterprising proprietor of one of the most complete and costly establishments in that region, (it being furnished with vacuum pans, and all the most approved machinery of later times, and conducted under his own personal supervision,) of the actual product of one of his plantations of 266 acres, for eight consecutive years.—These figures will also furnish useful data for the estimation of the cost of production here, viz.:

LOUISIANA PLANTATION.

Aggregate yield of juice from 266 acres for eight consecutive years,	4,757,700 gallons
Aggregate yield of sugar,	3,626,425 lbs.
" " molasses,	217,585 gallons

COMPARISON.

LOUISIANA.

Yield of juice per acre	2,286 gals
Density of juice, (Beaume,)	8.44°
Yield of sugar per gallon of juice,	0 76 lbs
Yield of sugar per acre,	1,704 "
Yield of molasses per acre	102 gals
Wood consumed per acre, 8.57 cords, at $2 20 per cord.	
Coal for engine, 0 41 tons at $2 50 per ton.	
Labor, per acre, 8.70 days.	

PENNSYLVANIA.

Yield of juice per acre,	1,847 gals
Density of juice,	10°
Yield of sugar per gallon of juice,	0.66 lbs
Actual yield of sugar per acre,	1 221 85 "
Probable " " "	1,612.00 "
Actual yield of molasses per acre,	74.39 gals
Probable " " "	81.83 "

ESSEX AGRICULTURAL SOCIETY, MASS.—FARM DONATED FOR AGRICULTURAL AND EXPERIMENTAL PURPOSES.—J. W. Proctor, Esq., of Danvers, writes us that "a short time since Dr. John G. Treadwell, of Salem—a man of intelligence, wealth and discrimination, bequeathed to the Essex Agricultural Society the ancestral farm of the family, finely situate, near the centre of the county, in the rural town of Topsfield. It borders on the Ipswich river, which passes through it—contains 150 acres of tillage, pasture or meadow, in about equal quantities."

This is a noble tribute to the Essex Society, and we doubt not it will faithfully discharge the trust reposed in them by the liberal donor. Can not some of the wealthy men of N. York make an investment in aid of our Agricultural College, where it will be not only safe, but abundantly beneficial.—*Jour. of N. Y. State Ag. Society.*

NOTE.—Aye, cannot some wealthy men of Wisconsin, instead of endowing more literary Universities and Colleges, of which we already have at least as many again as there are students to sustain, do something toward endowing an Agricultural College for Wisconsin?—The man who leads off, and gets such an institution named after him, will hand his name down to posterity in a most enduring and praiseworthy manner.—[EDS.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

The Family.

[Continued from page 150.]

In its social and private relations, the Family is indispensable to a christian civilization; the foundation-rock, upon which, alone, a pure and healthful morality can be reared. Within its sacred precincts, as could be no where else possible, the young life is trained to the practice, and the soul from infancy imbued with the love of virtue. Here, too, the aged prove the repose and reward of conquered selfishness and passion; while, between these extremes the great masses of society find a refuge from the temptations and an asylum for the disappointments of life. Outside of its endearing relations, there is little security for the inviolability of the one, or the happiness of the other; therefore the law honors, and the people love it.

If to the State, to society, so much, what is it not to the individual?—for the Family embraces within itself *the world* wherein each one of us received our first and most enduring impressions. The number and character of its separate members, with all their pursuits, habits and tastes; their intelligence or their want of it; their beauty or their barrenness of soul as reflected in looks, words and manners; the strength or weakness of the general family affection,—how completely have all these circumstances influenced our being, giving to one this, and to another that, of capacity and coloring; for how different are Families?—Not always, as in their public and governmental relations, are they the promoters of peace and bonds of strength to the individual. Alas, that it must be written! But the Family picture that stands farthest back, and most ineffaceably of all in the gallery of memory, is not the one at sight of which smiles light the face, and joy the heart o'erflows—not always; let us hope, often.

The routine of a well-ordered Family is a model of ingeniously laid out, and skillfully executed effort. No time unfilled; no duty unperformed; and this, without the unthriftiness of delay, or the overtasking of haste.—Too much leisure will be enervating to both the physical and mental energies of any household; too much labor distracting. That one whose affairs are properly arranged and controlled, will move on, with at least tolerable uniformity, between these equally unwise extremes. The general family spirit, as regards the observance or non-observance of good order and regularity, has an incalculable influence upon the youthful mind. There is no doubt but many, very impressible persons have gone through life with an impetuosity of effort, and impatience of result, born of the hurrying and uncertain meal-times, retirings and risings; the hours of play-time and study, of going and coming; the putting-off of the old, and on of the new, both in habit and apparel,—never, perhaps, twice alike or in any fitness of succession—and all with a sort of rush-and-dash unbecomingness that characterized the family of their childhood and youth. Such persons must fail of anything great in accomplishment, merely through the reaction of misapplied and inopportunely-put-forth energies, just as surely as do they, whose vitality has been deadened by an extreme of punctilio and methodicalism in the detail of earlier life.

How varied are the appliances, and how rich the stores of knowledge in an intelligent Family? Of old and new, what a treasury is its memory; its imagination, how many-winged; its judgment, how diverse; its will, how variously fixed; its working capital of brain, what a revenue does it evolve of capacity and acquirement!—for in such a Family all are pupils—all workers. That which is acquired by one is shared by all, so far as there is ability for its appropriation; while the light of every advance is reflected back upon inferior positions, making the way safer and speedier to those who struggle on, and up. This community of thoughts and facts not only lightens the labor, but enhances the value of intellectual effort. The mind reposes amid the very toils that would otherwise dishearten the young aspirant, in that it is brought thus nearly and constantly into the atmosphere of every future success. That which we see done, and done by the brother or sister just older—scarcely bigger—than ourselves, can surely be again accomplished. It is this earnest hopefulness of character that acts as a stimulant to, while it keeps in a healthfully balanced state, the mind that is unfolding amid the happier train of incidents, simplicities of thought and cheerfulness of feeling, that are inevitably connected with the intimate association of those of different ages, capacities and tastes.

And where can this be so enjoyed as in the Family, where all are open to receive and free

to impart? where the timidity of the little ones is not thought stupidity, or the assurance of knowledge in those older accounted arrogance?

Again, it is well for all—to some, *a necessity*—that appreciation, if not, indeed, *praise*, attend the successful effort to do, or to be, the great and good; and who does not know how much sweeter are the words of commendation, when they come from beloved lips? But in the world, how often is this altogether denied—sometimes through ignorance, oftener through selfishness. So stingy is society of this beautiful garment of praise, that it will seldom allow it to rest, untouched by any withholding, even upon the standard bearers of genius; much less to such as have won their way to this distinction through heavier labors and self-sacrifice. One may not, without scandal, let the world know how high are the aims, and how successful the efforts of one's better life. But in the Family—that world whose condemnation or approval we so dread, or love—how different it is! Stimulated by a noble family pride, and kept alive by the vitalizing warmth of its just appreciation, how have the germs of thought thrown off the incrustations of bigotry and prejudice; the trembling hopes of many a young heart, how have they budded in this sun of praise, "shook their green leaves, and shot towards heaven"—the heaven of a higher sphere, and more ennobling activities, for humaity, as for the man.

But this is not all. The Family may be virtuous, well-ordered and intelligent, yet wanting the element, that of all others, is essential to the realization of its highest utility and beauty; the affection that is the outward manifestation of its internal and perfect harmonies. In the happily-constituted Family—one that embraces all that can be affirmed of those otherwise named—there are no discordant elements—no uncompleted joys;—for love hath added itself thereto—love, highest and best of human possibilities!

To be full and perennial, this family love must be the outgrowth of an affection between parents, founded upon an appreciation, in each other, of pure and noble characters; of sympathy and companionship with great and beautiful souls. Without this, as a fountain of dews for refreshment and a sun of rays for life-giving, it is vain to plant the marriage vine, hoping to find the Family indissoluble in attachment thereon. With this, and the intertwining loves of all who may claim kindred under its charmed shade, how rich, how blest, how safe is the Family!

There is a place, the blessedness whereof is mingled of the joys they know, when the tender and holy relationships of husband and wife, of father and mother, of parent and child, of son and daughter, of brother and sister, have completed the Family circle in a house that has been established in wisdom, and beautified with love; and precious in the sight of heaven, must be this heaven on earth!

The Flower Garden.

Once more the sweet Spring-time has come, and though wrestling still in now-and-then encounter with stern-visaged Winter, has won the trophies from his chill domain that foretell how soon her conquest

> "Will prove, for aye, the gentle,
> Is stronger than the rude."

Let no one fail entirely in helping forward the universal bloom of that kingdom of beauty whose coming is with every opening flower.

For our climate and a season so forward as this, all hardy annuals and biennials may be sown as early as the 10th, and from that to the 20th, after which, and on till the middle of June may be sown such as are less hardy. Of the first class, the African and French Marigold, China-Aster, Chrysanthemum, Sweet Sultna, Indian Pink, Candytuft, Larkspur, Lavater, Lupins, Amaranthus and Mignionette, (sweet scented,) all annuals, make up a good variety. Of the hardier biennials are Canterbury Bells, Carnation, Globe Thistle, French Honeysuckle, Tree Primrose, Sweet William, Wall-flower and Petunia. Of the well nigh endless variety and beauty of the perennials, including bulbous and tuberous-rooted flowers, shrubs, &c., we can only refer our readers to such works as treat in detail of their management and propagation; the space we have being quite too limited for anything satisfactory upon so large a subject.

But a word more and that of the Rose, queen and eclipse of every other bloom. Surely no hand will fail to stir the soil and trim the bough for some one of this beauteous family—so shall no eye go unlighted, no heart unrejoiced through the summer of its glory and perfume.

Of the cuts we are able to furnish, No. 1 represents a variety of the generally named Austrian Briar, which under good management becomes profuse in the number and rich in the quality of its flowers. Of the color to

which it belongs, none more beautiful than this, if so fed that it does really meet our idea of a double bloom.



WILLIAMS DOUBLE YELLOW SWEET BRIAR.

The Queen—color, a delicate blush, is a fine specimen of its kind, though, among the large and beautiful variety in which it is classed, scarcely deserves the pre-eminence of its name.



QUEEN (ROSA BOURBONIANA.)

In the cultivation of the above, or indeed any Roses, the principal thing is to give them a sufficiently rich soil. Without this it is vain to expend the labor of setting, pruning and propagating. A light, rich loam, well mixed with its own quantity of good stable manure, is not less needful than the sunshine and showers, all of which are indispensable to its highest perfection of growth and bloom. If you are just planting out, see that the bruised parts of roots are removed, the soil shaken in firmly about those that are left, the tops of which when covered, should be very near the ground; the whole nicely trimmed of any superfluous or ungraceful shoots and the main stock firmly staked in its natural position.

Recipes from Mrs. Horace Mann's Cook Book.

CORN MEAL GRIDDLE CAKES.—Boil a quart of milk, and scald with it as much corn meal as will make a thick mush. (Yellow meal needs more boiling than white.) When it is partially cooled, stir in a table-spoonful of dry yeast or half a cup of wet yeast, three well beaten eggs, a teaspoonful of salt, and two table-spoonfuls of wheat flour. Let it stand three or four hours, and bake on a hot soapstone griddle rubbed with salt. (It will be necessary to rub the griddle with the salted rag between every griddle-full of cakes, to prevent burning.) Yellow meal is the best.

WAFFLES.—Add to a quart of milk a cup of rich cream, a little salt, four well beaten eggs, and flour enough to make a thin batter; heat and rub the irons well with salt, fill them and bake them very quickly. Grate sugar over them, and eat them with cream, or with butter when they are not too hot to melt it.

RICE WAFFLES.—Add a cup of rice, boiled soft and mashed fine, to the above, with half the quantity of flour.

CUSTARD PUDDING.—One quart of milk, eight eggs, half a pound of sugar; season with lemon or peach, pour it into a pudding dish wet with cream, set the pudding into a pan half full of water, and put them into the oven to bake for three-quarters of an hour. If preferred, line the baking dish with delicate cream paste. Less egg will make a good custard.

BOILED BATTER PUDDING.—Eight eggs, eight spoonfuls of flour, one quart of milk; beat these together very thoroughly; put the mixture into a well floured cloth or a water rinsed mould, and boil one hour. Serve it with cold sauce. If more flour and less egg is used, boil it longer.

The same pudding may be baked in an oven three-quarters of an hour.

LEMON PUDDING.—Half a pint of rich cream, four eggs, a glass of wine, the grated rind of two lemons with the juice and pulp; salt and sugar to the taste. The sugar, eggs, lemon, and wine, should be stirred into the boiled cream when it has been cooled off, to prevent curdling. Four oranges and less sugar, for an orange pudding.

EDITOR'S TABLE.

THE AGRICULTURAL COLLEGE BILL.

The sequel has shown that our article in the Educational Department, though not very sanguine, was more hopeful than would have been warranted by facts since developed; for, after a protracted contest in the Senate, the Agricultural Bill was finally defeated on the 15th of April, by a vote of 13 to 10—Senators Boyd, Clark, Greulich, Joiner, McClellan, Maxon, Proudfit, Smith, Walsh and Worthington voting in the affirmative, and Senators Bean, Bennet, Chappel, Chase, Davis, Giles, Kimball, Kingston, Martin, Pier, Simpson, Sutherland, Tucker and Wheeler in the negative.

As reported by the Standing Committee on Agriculture, the Bill commended itself to our judgment, and provided for a sufficient fund to establish the Institution on a sure and permanent basis. The conflicting interests, however, of several parties interested in the Swamp Land Fund, resulted in amendments, which, notwithstanding they were somewhat objectionable to us, (chiefly because they proposed even a temporary draft upon what, properly or improperly, has been heretofore considered a part of the Common School Fund,) nevertheless commended the Bill to the Senate, and at one time would have carried it without serious opposition. Its defeat was owing to the change of position of certain Senators whose constituents had been led to oppose it by the strange misrepresentations of certain newspapers, whose Editors, without any knowledge of what was the proposed plan of the Institution, libelized it into odium with those very persons whose best interests it was intended to subserve. The Janesville *Gazette* was especially bitter, and although honest, as we presume, in its opposition, nevertheless, by the aid of a fertile imagination, added to idiosyncratic prejudices against agricultural enterprises generally, succeeded in transforming it into such

"Hydras, gorgons, and chimeras dire,"

that even some of the farmers of old Rock were actually bamboozled into a strangely insane opposition. With three exceptions, however, so far as we know, the Press of the State favored the measure, and many of the papers supported it with able editorials; to all of whom we return our own and the the thanks of all the friends of industrial education.

The special champions of the Bill in all its stages were Senators Joiner, Worthington, Boyd and Clark, all of whom supported it with forcible arguments and eloquent appeals. Let their names be cherished by the farmers of the State in grateful remembrance.

Of the oposition in the Senate we will say no harsh words. We believe a majority were influenced by honorable motives, and only regret their narrow policy and short-sightedness. Ere long they will appreciate and correct it; while those who have dared to trifle with the claims of the great majority of the people, will learn, that this Agriculture is a sleeping giant, who is already rousing himself, and will soon compel the respect and obedience of the poor, blind pigmies who would now laugh him to scorn. The farmers of Wisconsin will not always submit to be led blindfold to exclusive menial service for the aristocratic minority, while their own grand work is neglected and ignored. We have no selfish ends to subserve and will earnestly labor and patiently wait.

CORRESPONDENCE OF THE BELOIT JOURNAL.

In reply to the author of a late windy communication in the Beloit *Journal*, charging us with *all sorts*, on account of our course in relation to the late Agricultural College Bill, we would simply say that we regard his charges and insinuations as too absurd to entitle them to any especial attention, even admitting their author to be no less a personage than a veritable grave Senator, who had already made several speeches on the subject.

CONVENTION OF AGRICULTURAL EDITORS.

Our enterprising friend Judd, of the American *Agriculturist*, has a nice scheme blocked out, for an Agricultural Editorial Convention, to assemble in New York, (or some other place if preferred,) about the middle of June next, for the purpose of discussing and considering matters and things in general, pertaining to agriculture and to their special vocation as teachers of its divers interests.

The suggestion strikes us as a good one for many reasons, and if it can be well carried out in letter and spirit, it cannot fail of being both useful and agreeable.

But instead of New York we would propose Cleveland as a much more natural point for the Agricultural Press and world. We will venture that one half of the agricultural papers of the Union circulate west of a line drawn north and south through Cleveland. We feel sure that Bro. Brown would do all for us in C. that is proposed in N. Y.

ANOTHER REAPER FOR THE TRIAL.

MR. D. J. POWERS, *Sec'y of Wis. State Agricultural Society.*

DEAR SIR:—We accept the proposition of Mr. Palmer for a trial of Reapers and Mowers, with the privilege of instructing the jury in working our machine, for we do think we have the best Hand Raker that's made, and also think it is the best for the majority of farmers to use under all circumstances.

Yours, Truly,
JOHN HEATH & CO.

PALMYRA, March 26, 1858.

That's right gentlemen. Now who else among the Reaper manufacturers and dealers, will follow suit? If two more will enter, making four in all, we are authorized to say that the Agricultural Society will consider the number sufficient for a good and thorough trial, and will make their arrangements accordingly.

One such trial as is proposed—testing machines for a week in all kinds of grain and grass—will go further to prove their sterling qualities and comparative merits, than a hundred fancy trials of an afternoon, as is the common practice. Let us have a Reaper trial, that will tell our farmers, not only which is the best Reaper in its general workings, but also which is most economical, a Hand or Self Raker, all things taken into account and allowed for, in the summing up. P.

THE SWEET POTATOES—

Spoken of in the April No. have been duly received and partly distributed, to such as signified a wish for them, and as we found an opportunity of sending to. We still have some on hand for such as desire them.

All may not realize the fact that in order to ripen in our climate, they must be sprouted in a hot bed, so as to be well started by the time it becomes warm enough to plant them out.—To those who have not hot beds we would say, that their best way may be to avail themselves of the use of a corner in a neighbor's when practicable. But if there are none at hand, one sufficient for such a purpose can be made in an hour, as follows:

CHEAP HOT BED.

Level up a bed of common horse manure ten inches deep. Spread on the top of it about the same thickness of well pulverized loamy soil. Stake a curb of boards around it about seven inches high in front, twelve to fifteen at the back, with slanting ends to match, (no matter how rough,) stretch a cloth (common sheeting) upon some kind of a frame sufficiently large to cover it over, and the thing is *did*. Just as good for any common purpose as if it cost $50.

Plant the potatoes from three to four inches deep in the soil, after which watch them carefully from day to day, and if too warm, uncover and let it cool off to the proper temperature, when if about right, they will sprout and come forward ready to set, being a couple of inches above ground, in about three weeks; at which time carefully break them off from the potato, which replant for new sprouts if more are desired. They will continue to produce them to any extent required. It may seem a slightly intricate and difficult operation, and so it will prove to the careless, but no way difficult to the nice and observant. We hope that a sufficient number will not only try, but succeed in their cultivation, to be able to make a good show of specimens at the State Fair, worthy of the prizes that will be offered.

ST. LOUIS AGRICULTURAL AND MECHANICAL FAIR FOR 1858.

We learn from the *Valley Farmer* (St Louis,) that their forthcoming Fair is intended to be even more magnificent than that of last year. They are raising some $25,000 for general and special premiums, fittings, &c. Many private citizens and farmers are offering from $100 to $500 each as single premiums in their special callings and favorite pursuits.

We doubt if there is another city in the United States of equal or even approximate liberality in these things. It speaks to us of a glorious future for Missouri, and not far off either. Let her early become a free State, and then Ohio, Illinois and Wisconsin may look out for their laurels. Her metropolis is really, as well as prospectively, the great city of the West—our future and natural national Capital, and that within the lives of middle aged men, more than likely. Who endorses the prophecy?

WINE! WISCONSIN WINE!

We are indebted, through Senator Clark, to Messrs. Woodruff & Wright, of Ripon, Wis., for two bottles of "Western Champagne" from their vintage, and although we make no claim to epicurian delicacy of taste, yet have we sometimes *sipped* a poorer article marked "Longworth's Excelsior," and "Bogen's Best." We are fully confident that vineyards, regular vineyards, will ere many years hang out their tempting clusters on a thousand hills in Wisconsin. If wine-lovers will only learn *not to take too much!*

STATE FAIR.

The next State Fair, the Janesville *Gazette* learns, will be held either at Milwaukee, Madison or Janesville. The only interest we have in the matter, is that the Fair may be held where the greatest number of our people may get to it, and on that score, we should prefer to see it located at Milwaukee. We hope in the course of time, the managers of that institution will learn that there is a North, and distribute their show accordingly. This having it away one side of the State every year, don't exactly suit us up this wav. If it should happen to be convenient, we should like it up this way sometime during the present century. —*Dodge Co. Citizen.*

All right gentlemen. Nothing will suit us better than to see a State Fair held at Beaver Dam, as soon as anything in the way of sufficient Hotel and Railroad accommodations can be had. Its position would be central and excellent.

We can fully assure you and all others, that the Officers of the Society have no other purposes or wishes, than the best interests of all concerned. But in locating Fairs, to have them turn out well, a great many things have to be taken into account. Unless the La Crosse R. R. Co. were more obliging than last year, the locating upon the line of their road would be little short of suicide; and even Milwaukee would be less central practically than Janesville or Madison. Wait patiently, gentlemen, and your turn will come as soon as you are *good* ready for it.

The said Fair is not yet located, but probably will be soon. We purpose publishing the Premium List in our next No. P.

DIE KAISERLICHEN FRIEN OKONOMISCHEN GESELLSCHAFT ZU ST. PETERSBURGH—

Will receive the thanks of the Wisconsin State Agricultural Society for valuable scientific works, just received through the generous and polite intervention of M. Stouht, Sec. of the Imperial Legation of Russia to the U. S., and will please accept in exchange, copies of our State Agricultural Transactions and Historical Reports.

WHITE RUSSIAN TURNIPS.

A. G. T.'s article on the cultivation and quality of this most desirable root, will appear in June No.

Mr. J. L. Webster of this county has left some 40 lbs. of the seed for sale at our office, of the genuineness of which we have no doubt. In bags of 4, 8 and 16 ounces, at 4, 6 and 10 shillings each. We are yet distributing small packages gratis to all who call or send for them, per mail, with 3 cent stamp to prepay.

CONVENTION OF THE EDITORS AND PUBLISHERS OF WISCONSIN.

The second Annual Meeting of the "Wisconsin Editors' and Publishers' Association," will be held at Madison, on Wednesday, the 16th of June. The fraternity here will do all in their power to make the occasion one of much interest, and it is hoped there will be a universal attendance.

J. W. HOYT, Cor. Sec.

PITTSBURG, FT. WAYNE & CHICAGO R. R.

Attention is called to the advertisement of this new, short, direct and popular route to the Eastern cities. It is considerably the shortest route to Philadelphia and New York; it passes through some of the finest portions of the States, and makes reliable connections at Pittsburgh with the great Pennsylvania Central Road.

REMEDY FOR CHOKED CATTLE.

D. L. Webster, of Burke, Dane Co., after resorting to various other measures without success, has finally decided that the best method of relieving choked cattle is to pour melted lard down the throat, while the hand of the operator is at the same time employed in forcing the obtruction downward into the stomach.

THE EDITOR OF THE HOME CIRCLE—

Gratefully acknowledges the receipt of the fine assortment of apple, plum, pear, and peach trees, currant and gooseberry bushes, &c., &c., lately proffered by John P. Kramer, Esq., of Fond du Lac. All arrived in nice condition and will soon begin to live in their new home.

MORGANS AND BLACK HAWKS.

We have a couple of hard *pokes* at the above breeds of horses, which were received too late for this No. They will probably appear in our next. We are glad to see the horse men getting waked up a little. "Flint and steel strike out the sparks of truth" usually.

PATENT CHURN.

We have in our office one of Burham & Hibbards Patent Churns, which is warranted to make from 5 to 15 per cent. more butter from the same amount of cream, than any other churn in use. For further information apply to or address J. Mason Haight, at this office.

CORRECTION.

In the recently published list of officers of the Wis. State Ag. Society, the name of F. *D.* McCarty should have appeared as one of the Vice Presidents, instead of F. McCarty.

MARKET PRICES.

No material change since last month, nor much of a brightening prospect for the future.

THE NOTES OF OUR FOURTH LECTURING TOUR, Which necessarily include references to the principal towns of Iowa, La Fayette, Grant and Crawford Counties, are deferred, for want of space, to the June No.

IF ORRIN E. PRIEST— Will have the kindness to give us his address, the *Farmer* will be mailed to him forthwith.

NEW ADVERTISEMENTS.

Talcott, Emerson & Co., advertise their Manny Prize Reaper. Notice its offer as a premium for the best wheat field in Wisconsin. (The notice of the offer was received so late that the State Ag. Society will not be able to make proper arrangements for awarding it this season.) The reading of the advertisement of the Manny Machine, discloses plenty of high endorsements in the way of premiums and prizes awarded, insomuch as to render anything additional that we can add, both superfluous and needless. It is annually on trial in all the grain growing districts of any note, in the United States.

Sherman & Mason's Hand Seed Planter, is another of the new machines that is highly spoken of by those who have used it. Read their advertisement.

Haines' Sale of Thorough Bred Animals. See notice of; who among our people wish to thus invest?

J. & C. N. Rice advertise their fine Black Hawk Horse.

Mutual Insurance Companies.—See cards of Madison, Milwaukee, and Dodge Co. Mutuals. They appear to be doing a good business.

In reply to several inquiries we have lately received in relation to the liability and responsibility of Mutual Companies, we would say that we have the best legal authority for saying that those insured in such companies are in no way liable beyond their premium notes. It has been so decided by the N. Y. Court of appeals, and never since questioned.

In relation to the responsibility of these Companies, we can only speak of our own knowledge, of the Madison Mutual, and in relation to that would say, that we *know it to be perfectly good,* and we do not hesitate to assure all such as personally know us (Powers,) that they need not be afraid of it so long as they see our name in its list of officers, as it will be both promptly and surely withdrawn if the affairs of the company become in any way precarious. Of this rest assured. P.

LITERARY NOTICES.

A New Work on Horticulture.—The Garden; A New Pocket Manual of Practical Horticulture; or, How to cultivate Kitchen Vegetables, Fruits, Flowers, and Ornamental Trees and Shrubs. With an Exposition of the Nature and Action of Soils and Manures, the Structure of Plants, and the Laws of Vegetable Life and Growth, etc. By the author of "How to Write," "How to Behave," etc. Fowler & Wells, 308 Broadway, New York. Price, in paper, 30 cents; cloth, 50 cents.

No one who owns or rents a square rod of ground can affore to be without a good garden manual. This is an eminently popular and practical work—so clear and simple in style that everybody can understand it; so convenient in form and size that it can be carried in the pocket, and so low in price that all can buy it. See advertisement.

Sorgho and Imphee—The Chinese and African Sugar Canes.—A Treatise upon their Origin, Varieties and Culture; their value as a forage crop; and the manufacture of Sugar, Syrup, Alcohol, Wines, Beer, Cider, Vinegar, Starch and Dye-Stuffs; with Wray's process for crystalizing the juice of the Imphee. By Henry S. Olcott. Fully Illustrated. A. O. Moore, Publisher, 140 Fulton-st., New York. Price $1.

This Book supplies an important desideratum, and ought to be in the hands of every extensive cultivator of the Sugar Cane. The process of manufacture of Syrup and Sugar requires nice, or at least careful, manipulations, and to those unacquainted with the business, the work is worth ten times its cost.

Warder on Hedges and Evergreens.—A Manual on Live Fences, with particular directions for their planting, culture and trimming, especially with regard to the Maclura (Osage Orange) hedge, and how to make it. Also an Essay on Evergreens, their varieties, propagation, transplanting and culture in the United States. By John A. Warder, M. D., President of Cincinnati Horticultural Society. A. O. Moore, publisher, New York. Price $1.

The reputation of the author of this work is a good guarantee of its value, and an examination of its pages affords gratifying evidence that the Dr. has hereby added a fresh sprig to his wreath of laurel. The subjects embraced are important and ably discussed in a pleasing and popular style.

First Annual Report of Prof. S. W. Johnson, Chemist to the Connecticut State Ag. Society; embracing the chemical results of analyses of the several guanos, superphosphates, poudrettes, peats, cotton-seed cake, &c.

Valuable to farmers of the Atlantic States, and interesting to all.

Meteorological Synopsis for March, 1858.

Barometer stood highest on the 5th, 29.454.
" lowest on the 22d, 28.114.
Average for the month, 28.965.
Thermometer stood highest on the 15th, 66 degrees.
" " lowest on the 1st, 13 "
Average for the month, 36.59 "
Amount of rain, 1.94 inches.
The prevailing winds were North-west.

University.

WISCONSIN FARMER,

AND

NORTH-WESTERN CULTIVATOR.

Vol. X. MADISON, JUNE, 1858. No. 6.

D. J. POWERS AND PROF. J. W. HOYT, Editors.

VEGETABLE ANATOMY AND PHYSIOLOGY.



THE PLANT.—Organisms.—No. Two.—However interesting that portion of the plant which performs its office so faithfully, so beautifully, and yet so modestly in the secret places of the earth, casting deep and wide its firm anchors for the support of the ponderous trunk above, and searching out with myriad hands, guided as by instinct, the hidden reservoirs of food, and bearing forth their rich stores for the countless races of animate beings,—however attractive the study of the roots of plants, they certainly bear no comparison, in point of interest, with those portions which people the earth above, and clothe its surface with soft verdure and beautiful flowers for the support and enjoyment of man.

THE STEM

is that part, which, in the germinating embryo, is known as the plumule, and which, proceeding from a fixed point upwards, towards the surface, is usually styled the ascending axis. Let us briefly examine into its varied forms and functions. Minutely considered, there is no practical limit to the number of individual forms; since, of all the millions between the tiny plantlet in the flower-pot, to the majestic pine of California, no two are formed exactly alike. Accordingly, botanists have grouped them together into certain styles or classes.

First, according to size and style of growth, they are divided into the *plant*, distinctively so called, the *shrub* and the *tree*. Of the first class, the stem is soft and tender; of the second it is hard and woody and many branched, from the root upward; of the third it is also woody, but simple, large and high, and is usually known by the name of *trunk*.

In favorable localities and soils, the trunks of some trees attain an enormous size—as the pines of the Pacific coast, whose ordinary height is said to be 200 to 300 feet, and the chestnuts of some countries on the Mediterranean, whose circumference is recorded as nearly 60 feet! Of the northern States of this Union, we believe Ohio has the credit of producing the largest growth; the oaks and elms of her forests are majestic, and her sycamores sometimes attain a diameter of 10 feet.

As it relates to *special* form, the majority are cylindrical, while some are compressed and others are nearly square; some are simple and others branched; some are smooth and uniform, others rough and knotty; some are upright, others nodding, decumbent, or creeping; some are strong and self-supporting, others slender, climbing and supported.

Considered with reference to *internal structure* and the *method of development*, stems are classifiable into those which increase by the addition of concentric layers on the outside, pressing inwards, and consist of *pith*, *wood*,

and *bark*,—called exogens, or *outside growers*; and those which grow by an accumulation at the centre, pressing outwards, and are without well-defined pith, bark, or *layers* of wood,—known as endogens, or *inside-growers*.

Of the *outside* growers, almost any of our temperate-zone trees or shrubs are illustrations. Every boy who has severed the stem of a shrub with a jack-knife, has noticed this arrangement of concentric layers referred to, and has learned that each of those layers is the result of one year's growth; so that in order to determine the age of any given tree, all we have to do is to count the rings from bark to pith. In this way we have often read the history of oaks and sycamores whose period of life was over a thousand years. The distinctness of these layers is confined to trees grown within and beyond the *temperate* zones, because in the tropics the growth is uninterrupted throughout the year, so that the rings or layers are all blended together, and thereby lose their individuality. The cessation of growth during winter is essential to distinctness. How beautiful this arrangement of annual markings, by which each tree incidentally makes faithful record of the work it has done since it first burst the shell and pierced the crust of earth, a tender, little sprout,—of a time so remote in the by-gone ages, that human history does not reach it!

ANATOMY AND PHYSIOLOGY OF EXOGENOUS STEMS.

The *pith* consists of a loose, cellular tissue, in the centre of the stem, which seems not to add to its substance as the wood increases in weight, although it does increase in bulk by expansion and the separation of its particles one from the other, even to the extent of at last becoming a hollow when the stem approaches maturity. As to its office, physiologists are not exactly agreed, though there is little doubt that its cells, in the earlier stages of growth, like the leaves, are laboratories for the manufacture of sundry proximate bodies, such as have been described under the head of "constituents." At first full of juices, it gradually becomes dryer and dryer, until at last it is a collection of mere skeleton cells, which line the hollow cylinder of wood.

The *wood* itself, consists of bundles of transverse and longitudinal fibres, crossing each other at right angles, after the manner of the warp and woof of woven fabrics; the transverse fibers or tubules being known as medullary rays, and communicating directly between the pith and bark; while the longitudinal tubules extend throughout the whole length of the stem and convey the sap, until so far compressed by the pressure of outside growth, that the channel is obstructed, as is the case with the *heart-wood*. Every body has observed the difference between the *heart* and the *sap*-wood, as to color, hardness, and quantity of juice contained in each: the compression accounts for the two last-mentioned properties; and the color is due to the presence of iron and other oxydes left within the little tubes no longer permeable, as at first, by water.

To prove that the circulation of sap is chiefly confined to the outside, we have but to cut off the stem of a shrub near the root, and while the leaves are still fresh, introduce the severed end into a vessel containing a solution of some coloring matter: the outside wood will be dyed, while the heart will be but little changed.

Herein, also we have an explanation of the earlier decay of the sap, as compared with the heart-wood, and of the advantage of steaming, seasoning and kyanizing: It decays first because its vessels are full of readily decomposable compounds, such as albumen; and the process of steaming is simply a means of expelling such compounds and supplying their places with simple water. But this, also, is prejudicial, and requires to be removed by the process of kiln or sun-drying. Kyanizing, (derived from *Kyan*, the author of the process), is also based upon this decomposibility of the compounds contained in the sap, and consists in saturating the wood with a solution of some substance which has the power of coagulating or permanently fixing them beyond the power of disorganizing forces. Corrosive sublimate is of that class, and is often used for such purposes.

The *Bark*, or outside sheath, enclosing the whole stem, is made up of three distinct layers or coatings, viz.:

1. The thin, strong, cellulo-fibrous membrane next the wood, known as *liber*, or inner bark, (the latin word for book), because the ancients were accustomed to use it for paper. Indeed, so much like paper is it when properly prepared, that in some parts of Asia and South America, it is used in its stead even at this day.

2. The *outer* bark, which is cellular, consists of two portions, viz.: the *green envelope*, and

the loose, spongy tissue known as the *corky* envelope.

3. The *epidermis*, or outer skin, which is usually thin and transparent, consisting of flattened cells.

The growth of the bark proceeds together with the increase of woody-fibre; but the thickness, after the first few years, does not materially increase, owing to the rupture of the outside layer by the swelling stem within, and the consequent annual falling off. The sycamore and the shag-bark hickory are notable examples of this annual shedding.

The functions of the bark are three-fold. First, its vessels transmit the downward flow of sap; secondly, its cells are laboratories for the elaboration of sap and the formation of certain compounds peculiar to the bark; and thirdly, through its organs of ingestion and exhalation, it receives food for digestion and excretes substances no longer essential to the growth and health of the plant. That it is essential to the circulation may be readily determined by the simple process of "girdling:" the tree, in such event, inevitably dies within the year; since there is no longer any supply of water or nutriment to the foliage and branches. That the bark is the medium of the downward and not the upward current, is equally capable of demonstration by merely tying a cord or wire about the trunk or any of its branches: the bark will enlarge above the cord until it touches the body below, and uniting therewith, encloses the ligature and leaves a prominent ring about the trunk; just as the human arm will swell below and not above, if a ligature be applied to it with sufficient tightness to prevent the easy passage of the venous blood, which flows near the surface and always *from* the extremeities towards the vital organs.

BRANCHES.

Of the branches it is only necessary to say, they have the same structure and observe the same laws of development as the stem, differing therefrom only in origin: they spring from *buds* instead of seeds, and themselves in turn give origin to branches in like manner. And so it is that each tree, beginning with the germ, which is a perfect tree in miniature, reproduces itself over and over again, until, at last, so far as organs are concerned, each shrub or tree becomes composite, and may represent a thousand—being a plurality in unity.

Different names are applicable to branches according to the part of the plant whence they spring, and the end they subserve. Next to branches proper—which always spring from the axils of leaves, or that point between the leaves and the stem, and require full exposure to the air and sun-light,—there are *stolons, suckers, offsets, runners, tendrils, and spines* or *thorns*.

A *stolon* is a branch which, rising from an elevated portion of the stem, then descends to the earth, takes root, sends out new shoots, and becomes a new plant, capable of existing, like the full grown child, without further assistance from the parent stem. The Banyan tree is a great stolonizer.

A *sucker* only differs from the stolon, in that it originates at about the junction of the stem and root, and after burrowing a while under the surface, rises from the earth a new plant; its course, therefore, is strikingly like, but exactly opposite that of the stolon. The raspberry, blackberry and alder are examples.

An *offset* is a short lateral branch, terminated by a cluster of leaves, and capable of taking root when separated. The houseleek is an illustration.

A *runner* is a thread-like branch, which originates at the base of the stem, and after running along the surface of the ground for some distance, takes root and produces a new plant like the original, and so on until the number is indefinitely increased. The strawberry is a good example.

Tendrils are those leafless branches of vines which serve the purpose of hands, laying hold of and closely twining themselves about the sturdier plant or other object which supports them. A remarkable characteristic of these is, that the tendrils of given species of plants always determinedly twine or curl in the same direction, and usually with the sun.

A *spine* or *thorn* is a hard, horny, rudimentary or abortive branch, terminating in a point and itself often branched, so as to present an array of bristling points, as if in defense of the parent stem. Some trees, as the buck-thorn and others, terminate all their branches with a sharp, needly point, instead of a tuft of leaves, as is ordinary. To the use of these points reference will be made under another head; for the present let it be only suggested that they may serve as lightning rods, drawing off silently, but perpetually, from the atmosphere the electric fluid known to be essential in some quantity to every plant. H.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER VI.

ROAD-MAKING AS PRACTICED IN THE WEST, AND AS IT OUGHT TO BE.

Very few subjects of an ordinary nature, are more important to a new country than good roads; and very, very few are longer or more shamefully neglected.

True, there is some excuse for this in very new settlements, when the new beginner has every thing to do, and too often very little to do it with. But even then, who has not seen *mud holes* neglected until many a pioneer and waryfarer got *slewed;* and ten times as much damage, of one sort and another, was done, as it would have cost to *fix* the place.

But if such is true of the green tree, what shall we say of the dry? of the older districts where a ripe maturity has been attained, and no lack of means can be plead? And that Wisconsin, and even the entire northwest, abounds in such instances, who can doubt that travels? The rich, loamy soil of our prairies and openings—of our marshes and meadows, is not very good material for road-making, to be sure; but, bad as they are for the purpose, a proper mode of action and management will in all cases greatly improve the results.

During a twenty years' residence in this country, we have been observing these matters, and have finally been compelled to the conclusion that the importance of road-making among the country people, is not generally appreciated, nor in fact, in many instances, any too well understood. But the former is, probably, the most common difficulty. Too many seem to have such contracted views on these subjects, as to consider whatever they do upon the roads a downright waste and *throwaway*. The taxes that are usually assessed for labor upon the roads, are, to say the least, much less than they ought to be; and yet how many, in every town and neighborhood, will even shirk out of them, as far as possible. More frequently than otherwise, so far as our observation has gone, *mullets* or shirks are selected for *overseers* instead of faithful and thorough men; and where this is the case, "the thing is up" for the season, for nothing will be done worth the naming. But the appointments are made for this year, and such as they are, each district has got to rely on them for better or worse; and by the time this number is in the hands of our readers, it will be time for them to be attending to their duties.

And now, let us, in all modesty, suggest to such as have *condescended* to take the office, that it has important duties coupled with it, and duties that require as careful and thorough performance at your hands as would devolve upon you if elected a member of the county Board of Supervisors, or even to the Legislature; and those duties, friend overseer, are first, to study and understand the law on the subject, if you do not already understand it; and lest you may not have it at hand, we take the liberty of publishing some of the most essential portions of it, together with the *liabilities* for not performing such duties.

On pages 168, 169 and 170, of the Revised Statutes, the following sections will be found.

SEC. 5. It shall be the duty of the overseers of highways:

1. To repair and keep in order the highways within the several districts for which they shall have been elected or appointed respectively:

2. To notify all persons assessed to pay highway taxes, of the time when, and place where labor will be received in payment for such taxes:

3. To collect all highway taxes as required by law, and to execute all lawful orders of the supervisors.

SEC. 8. It shall be the duty of overseers of highways in each town, to maintain and keep in repair, at the expense of the town, such guide posts as may have been erected by order of the supervisors, within the limits of the district for which they shall have been respectively elected or appointed.

SEC. 9. Any overseer of highways may, if he shall deem it necessary, procure a good and sufficient scraper and plow, or either of them, for the use of his road district, and pay for the same out of the highway taxes by him collected.

SEC. 13. Whenever any highway shall become impassible, by reason of any casual interruption from the falling of timber, the destruction of any bridge, or the washing away or injury of any part of such highway, it shall be the duty of the overseer of said highway to cause such highway to be put in passible repair as soon as practicable.

SEC. 17. Every overseer of highways who shall refuse or neglect to perform any of the duties required of him by law, or which may be lawfully enjoined upon him by the supervisors of his town, and for the omission of which a penalty is not hereinafter provided, shall for any such neglect or refusal, forfeit the sum of ten dollars.

SEC. 18. It shall be the duty of the supervisors of each town, whenever any overseer of highways in such town has refused or neglected to perform any of the duties required of him by law, forthwith to prosecute such overseer for the recovery of such penalty.

Now such is the law, and if you are *an honest and faithful man*, (fit to be put ruler over many things), you have, or will carefully study and weigh the whole matter, and then will proceed to put it in practice. Not after you have waited until you have accomplished every thing upon your own farm first, large and small, but when the right time comes for making good roads, which is usually early in June. You will have your plans all laid beforehand: 1st, as to what amount of work you will have to expend: 2d, where it should be put to be of the most benefit, (not to your own dear self, nor your brother, nor brother-in-law, but) to the whole public concerned; 3d, your business is, to know before hand what your mode of work will be, and what tools, teams and force you will need with which to perform it, and in warning out your help, to have due reference to this. How often have we seen a motley, unassorted crowd come on to the road to work of a morning, (if it was not too late), with or without tools and implements of a proper kind. When fairly on the ground, at nine o'clock or after, it would be discovered that a plow or a scraper, a wagon, or, perhaps, merely a chain, was lacking, and must be had before anything could be done. Bad, indeed! and a whole company of lazy fellows would, perhaps, have to sit under the shade of a tree, (may be much against their will), till all things were made right, and by which by time, perchance, the forenoon was nearly or quite gone, and lost to the roads and world, merely because a careless, thoughtless overseer, no way fit for his place, had neglected to be thoroughly ready, and to notify each and every man prescisely as to what he wanted, and in such a pointed manner that he would not forget it. Keep your time in hours, and allow no man for any more time than he works. No matter who he may be, fear him not, but if he comes late or is lazy, or disposed to tell stories and hinder others, dock him promptly, so as to make all right. No matter if he blusters and finds fault, all sensible men will think the better of you for it, not even excepting the parties rubuked, after they have time to reflect a little. Do not have too many idle teams or plows standing around, (not even your own), on which you have to allow compensation. Yes, Mr. Overseer, bear all these suggestions in mind, and as many more as you can think of that will aid you in your duty; and recollect, withal, that if you would have men promptly on the spot, and have them accomplish good results, that you must personally set them a good example by being promptly on hand yourself, and in all things setting a good pattern.

By adhering to the foregoing suggestions, few and common-place as they are, rest assured you can accomplish at least twice as much as is usually done in the slip-shod, hap-hazard, lazy way of the West, in which highway work is too frequently expended. Working on the road should cease being a "holliday or a resting spell," and every good citizen should strive to do his best day's work for the year when on the highways, and ordinarily, none will pay him better in the end.

Our western soils need piking up in nearly all cases, to make even a tolerable road; and in doing this, it is by far too common a practice to throw the ditches too far apart, and to make them so wide as not to get them high enough in the middle to prevent their holding water at every rain, thereby both making mud and spoiling the road. Work narrow, then, to begin with, and round up well in the middle. From the bottom of a deep ditch, gravel will not unfrequently be obtained, even in the West, with which to top-dress and make a good road. Roads made early in June, settle infinitely better than those made in October or November. One day at the former time, is frequently worth two at the latter. This is a thing that every good overseer will bear in mind, and not allow those who are to work to shirk it off until the last of the season, or perhaps entirely at last. Look to this, we say, early in the season, you who would be faithful.

Do your duty, gentlemen, both overseers and workers, for this single season, being careful to work considerably more than your tax, if need be, and many a stone, stump and slough will be no more among the things that hit our wheels and break our vehicles,—that stall us by the way, and compel us to draw light instead of heavy loads to market. When we see stumps, stones, or perchance big mudholes, before an old settler's door, we never stop to ask any questions, but know perfectly well "what manner of man" lives there, "Actions speak louder than words." Let not the roads of Wisconsin speak for the character of

its people, until they have had at least one more year in which to redeem themselves. In many neighborhoods, we fear, they will need even two. P.

Correspondence of the Farmer.

Chinese Sugar Cane.

MESSRS. EDITORS:—In the February number of the Farmer, page 48, you published a communication of mine relative to the culture of Sorghum Sucre. In the March number, page 91, there is another, written by J. G. Knapp, Esq., upon the same subject, taking issue with me, contradicting the position I had assumed, and representing that I had been fooled with coffee corn, and expressing a desire to correct the errors in my February communication, &c.

He says: "Cane cannot be ripened as easily as eight-rowed Yankee corn, but it can be ripened in Dane county; neither is it true that cane which produces ripe seed loses its sweetness, and becomes dry and pithy like corn-stalks." Now he contradicts a well-kown law of nature, when he represents that a ripe sugar cane stalk does not lose its sweetness and juice, or become "dry and pithy." This is the natural result with all plants of this class in this latitude. Permit me to say I have not been deceived with coffee corn—I have raised the genuine *Sorghum Sucre.*

Now for the proofs in support of my February communication referred to.

I planted my cane in a rich alluvial soil, on which cattle had been yarded some time, and about the 10th of May; the same day I planted several rows of eight-rowed, yellow, Yankee corn by the side of it—the cane and the corn were planted in hills four feet distant, each way. It all came up about the same time, and was cultivated alike, and when the first heads of my cane began to turn dark, I examined my corn and found the ears had begun to glaze. The whole ripened well, and before the frost hurt either.

In proof that "Cane which produces ripe seed loses it sweetness and juice, and becomes dry and pithy," I would simply say that I made it my particular business, while my cane was growing, to determine its peculiarities, so far as I could, that I might know how to cultivate it profitably. I cut stalks every few days, after it tasseled out, until dead ripe, and found that before the seed was full in the milk, the juice had a greenish, unpleasant taste, although very sweet; when it was full size, it had no unpleasant taste, and the inner portion of the stalk was about as sweet as sugar candy, and the stalk perfect. When the seed began to turn dark on the tip of the heads, I found a small hollow forming in the center of the stalk next to the head, and as the seed ripened, this extended down the stalk from one-half to two-thirds its entire length, and the stalk had a pithy appearance. The juice about this hollow became flat and insipid, with but little sweetness, and tasted very much like the last run of maple sap, after the buds have started. The lower joints of this same stalk would usually remain sound and very sweet, while the upper portion, as the seed ripened, became nearly dry, and very much resembled the inside of a ripe corn-stalk. From these observations I came to the conclusion that when the seed is fully formed and about to turn dark, then the stalk is at the highest state of perfection for use, and will make either sugar or syrup, as you desire,—that after the seed ripens it becomes unfit for syrup or sugar.

I am, Sirs, very respectfully yours,

S. E. CHAPMAN.

Waterford, March 8th, 1858.

Correspondence of the Farmer.

White Russia Turnips Against the World.

MESSRS. EDITORS:—In the last number of your paper is an article on the culture of the Russian Turnip. As I have had some experience in the cultivation of this crop for the last five years, I wish to give you, in few words, what I have found to be the proper time for sowing, and the best mode of cultivation. Your correspondent recommends sowing as early as the first of June such as are designed for feeding stock. This may do upon a heavy clay soil, but upon a rich loam, or sandy soil it is too early, as they will make most of their growth in too warm weather, thereby causing them to rot. From the 20th to the 25th of June is early enough to sow for stock feeding on such soils. Those designed for eating I have generally sown about the 25th of June, but in an ordinary season, I think they may be put in as late as the 1st of July. The largest crop I have ever raised, were sown on the 20th of June, in drills, three feet space between, and eighteen inches apart. From three-quarters of an acre I gathered six hundred bushels. This will probably ensure a larger crop than if planted closer. If sown later for

table use, they should be planted 12 instead of 18 inches apart in the drills. I fully endorse the opinion of Mr. Turvill as to their superior quality for cooking, having never seen a turnip which retains its sweetness and solidity so late in the season.

Yours, &c., A. G. TUTTE.

Baraboo, March 8th, 1858.

NOTE.—We have distributed *lots* of said seed. And still have plenty to remit to any of our subscribers who will forward us a postage stamp to prepay. Also, several pound and half-pound packages left by a friend for sale.

Correspondence of the Farmer.

Roads Again.

I have often thought that if the present race inhabiting the United States were to become extinct, and to leave behind it no other remains of its genius than the common roads of the country, these would be as much of a puzzle to the future race, as to what they were intended for, as the Indian mounds are to us.

It has been observed that, generally, the roads of a country are good indications of the state of its agriculture. The roads of England and Flanders are better than those of France and Spain; their farming is also better. If Western farming were to be judged of in the same way, it would be pronounced to be in a very low condition. If roads were defined as smooth and hard tracts of ground for traveling, it is certain ours cannot be called such, except during those portions of the year, when, as one wittily said, they are taken care of by those best two path-masters, the frost in winter, and the sun in summer.

Why do we have such bad roads? Simply because farmers are allowed to work out their road tax themselves, and that in their own way; and our roads will always be what they are as long as this system continues, for farmers have too much native independence, and too blunt perception of public utility, to enter upon any substantial improvements in this matter, forgetting that public interests and true self-interests are always identical. It is probable that one-third don't work their tax at all, while the other two-thirds work it out in the most convenient manner possible, the object being to do the least amount of work in the greatest space of time; besides that, the work done is, in most cases, entirely useless.

The great remedy for all this, would be to make the road-tax payable in money alone, and to appoint an able overseer in each "beat" to see that it was well spent. If every "beat" were about two miles long, about one-quarter of a mile might be thoroughly stoned and graveled each year, besides keeping the other parts in passable condition. In this way, in 8 or 10 years, what are now beds of mud, would be converted into solid turnpikes; after which the tax might be lessened, for the first cost of improvement is always greater than that necessary for afterwards keeping it in repair. Great advantage would also arise from the saving of time and animal power, and having the market always accessible.

J. E.

Rosendale, April 19th, 1858.

The Ohio Farmer as Premiums.

Wherever our County Agricultural Societies have adopted and fairly tested the plan of awarding *The Ohio Farmer* as premiums at Fairs, it has been found to work well. This is the case in Seneca, Crawford, Summit and many others. We have the authority of John McClymonds, Esq., for saying that the Columbiana County Agricultural Society, after fairly, and for years, testing the plan of distributing agricultural papers, books, silver plate, cups, diplomas, &c., &c., finds the *only* satisfactory plan is the distribution of cash and agricultural papers. For several years past, this Society has distributed a large number of the Ohio Farmer, which has not only proved entirely satisfactory to the members of the Society, but the Board believe has greatly contributed to the *present prosperous condition of the Society;* and that the Society is in a prosperous condition is shown by the fact that it is *entirely out of debt*, has money in the treasury to loan, and nearly $3000 invested in Fair Grounds and permanent improvements thereon. In view of these facts the Board have arranged for the gratuitous distribution of more than *two hundred* Ohio Farmers, and a liberal number of Ohio Cultivators, among those entitled to premiums for 1858. The plan is to present each one entitled to a premium over $1, and under $3, with a copy of the Ohio Farmer for six months, or the Cultivator for twelve months, as may be desired by those entitled to the premiums; and to each one entitled to a premium of $3 and over, a copy of the Ohio Farmer for one year will be presented. This will distribute several hundred papers. They have adopted the plan of presenting the papers for the smple reason that the Society is now in a condition to be liberal with its members, and offer handsome and liberal premiums, without any reference to the donation of papers.

If other Societies will adopt the plan of distributing agricultural papers *liberally*, we

are sure they will never regret it, as no other means will contribute so largely to the permanent prosperity of their Societies. Let it be tested *on a liberal scale* for one or two years, and we think *diplomas* will be voted *a bore*, and *silver plate* nothing short of an *imposition*.

REMARKS.—The foregoing remarks, from that sterling agricultural paper, the *Ohio Farmer*, are so sensible and true, that we deemed them as well adapted to our own latitude as to Ohio.

The mania that most people entertain for money, strikes us as plenty keen, without any special whetting through the agency of agricultural Fairs. Our own observation has taught us that most of our western farmers prefer a dollar *in cash* as a premium, to any other possible thing; and are as keen as cut-worms to get them. But this has by no means persuaded us that money is the right article for premiums, or that it is the duty of Societies to award it generally as such. We long have, and still firmly believe, that ten per cent. of the amount paid in cash premiums, if invested judiciously in agricultural books and periodicals would prove much more lastingly beneficial to those that would receive them. In conclusion, we would say, that we consider it the duty of the officers of Agricultural Societies to pursue that policy in the discharge of their duties that will do the most good, instead of pandering to the already strongest and most dangerous bias of the age, to wit.: "the worship of the almighty dollar." If the other kinds of premiums were not at first as satisfactory, they certainly would become so in the end, and from the fact that they have the real utility in them. Money, in its very nature, is as slippery as an eel; medals are mere trumpery to an intellectual mind; and diplomas are a downright insult to any but manufacturers and dealers; but well-selected, instructive books or agricultural newspapers are a halo of light and progress in the right direction forever. And notwithstanding it is an age of books and periodicals, still plenty of farmers' houses are nearly or quite destitute of them, and will be until they get them in some accidental and unavoidable manner.

We consider this policy better adapted to County than State Societies, for the reason that in attending the Fairs of the former, little money is usually spent, hence the smaller necessity for the cash premium to replace it. But those who go far from home to State Fairs, may sometimes more fully feel the expenditure of the money in attending and exhibiting. P.

Liberality of the Illinois Railroads in Aiding Fairs.

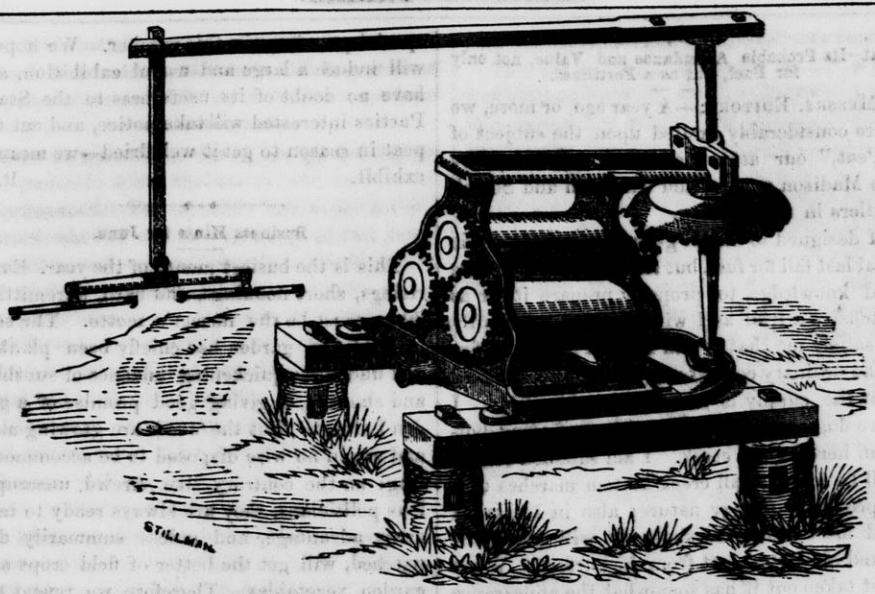
We extract the following from a communication of the Secretary of the Illinois State Agricultural Society, in reference to the forthcoming State Fair, at Centralia.

It shows so well for the statesman-like and far-seeing sagacity of the Railroad men of Illinois, that we thought we would copy it for the edification of our Wisconsin Railroad operators—especially those among them who would do nothing for the Fair last fall, except in the most narrow and begrudging manner, showing the narrowness of their minds, and the meanness of their souls, (only corporations have none.) But some of our companies set a good example last fall even, and we confidently expect that all of them will follow suit next time. The LaCrosse and Milwaukee Co. were the worst we had to encounter, but thanks to Providence and *investigations*, they are now pretty well paid; and as near as we can judge, that company is now getting into more wise and judicious hands, that will have an eye to the sterling agricultural interests of the great central regions of the State through which it sweeps.

We doubt not we shall find them as ready to aid and help on the next State Fair, as their elder sister, the Milwaukee and Mississippi Company, which now does nobly.

"The Railroad companies have given good evidence of their interest in the Fair, by a liberal subscription in money, and the free transportation of lumber and all other materials necessary in fitting up the grounds for the Fair. The Illinois Central Company have also engaged to furnish any number of cars that may be required for sleeping accommodations. They will have on the ground for that purpose *two miles and a half of cars* on the side track. They will give, for the same purpose, the upper stories of their extensive machine factories, together with the station houses at Odin and Tonti.

"With unexampled liberality for the convenience of guests, the Illinois Central will run free trains, night and morning, during the Fair, from the Fair grounds to Jonesboro, and from the Fair grounds to Decatur, one hundred miles in each direction, that the towns on the line may have an opportunity to contribute their aid in accommodating visitors."



HEDGES, FREE & CO.'S HORIZONTAL MILL WITH VERTICAL SHAFT.
Weighs about 900 pounds. Price $90.

Of these they manufacture several varieties. The first, as shown in the engraving above, consists of a simple, geared mill, rigged with vertical shaft, to which the lever is attached, and is worked by two horses, traveling around it, in the same manner as around the Vertical Mill. The yield of juice is 45 to 60 gallons per hour, and for operations of moderate extent, this cannot fail to afford satisfaction.

POSITION OF MILL.

Where operations of considerable magnitude are designed to be carried forward, it will be found advantageous to select a site for placing the mill sufficiently elevated to permit the range of boilers and tank for holding the juice, to be enough below the ground level of the Mill, to permit the juice to flow through a pipe underground, to the boilers, or to a cistern along side of them.

NOTE.—The Boilers, Coolers, and various other apparatus for sugar and syrup making, now manufactured by Messrs. H. F. & Co., are all superior in their kind. We may have cuts of them in subsequent numbers. All who would be well posted in the various mills and machinery they make, would do well to send to them for one of their circulars, containing cuts and descriptions of all their articles of manufacture. One three cent postage stamp would bring them. They illustrate the whole subject. See their advertisement in this number.

THE NATIONAL FAIR OF LIBERIA.—The "Report of the Committee of Adjudication of the National Fair of the Republic of Liberia, held at the city of Monrovia, December 14–21, 1857," has been duly made to President Benson, and printed, and well printed, at Monrovia, by G. Killian. The Fair itself seems to have been a great success. Fine samples were exhibited of coffee, arrow root, yams, (one bale weighing 52 1-2 lbs.,) ginger, (one bale weighing more than 100 lbs.,) cotton, cloth, mechanical products, needle work, &c. Upwards of $300 were distributed in prizes, the premiums varying in amount from one dollar to twenty-five dollars. The Committee recommend that a similar fair be held next year.

Coins of an earlier date than Cæsar's invasion have been found in a house in Marseilles.

BRICKS BY MACHINERY.—A machine for making bricks by steam or horse power, has recently been invented in Philadelphia. Brick machines, however, are no new thing, even as to their success in making bricks nearly, if not quite equal to the hand made. Near the Fish-House, on the east side of the Delaware, there has been a machine in operation for at least five or six years, which makes most excellent bricks out of the dry clay, which is ground before passing into the machine. Improvements may have been made recently, but the successful principle is rather old than otherwise. The reason they have not come more into use, is, that a great majority of the brick yards in the vicinity of the city, are not of sufficient extent to warrant the expense of introducing steam into them.

Correspondence of the Farmer.

Peat—Its Probable Abundance and Value, not only for Fuel, but as a Fertilizer.

MESSRS. EDITORS:—A year ago, or more, we were considerably excited upon the subject of "Peat," our attention being called to it by the Madison papers, and our Irish and Scotch settlers in this vicinity.

I designed to have given the article a fair trial last fall for fuel, but failed for want of time and knowledge, to properly prepare it for as extensive a trial as I wished,—but sufficiently to satisfy me that it will make a good, hot fire in an ordinary cook stove. I am also satisfied that the supply is next to inexhaustible. I have dug eight feet deep without finding bottom, here on the creek. I am satisfied that it will be found in all creek-bottom marshes that appear of a spongy nature; also in tamarack and most other marshes. It will usually be found about one foot from the surface. When first taken out it has somewhat the appearance of half-rotten oat-straw manure, and as it dries, assumes more the appearance of some of the preparations of tobacco—perhaps I ought to add, a little cleaner.

Upon reading, under the head of "Fertilizers," in Patent Office Report for 1856, by Simon Brown, of Concord, and Charles T. Jackson, M. D., of Boston, Massachusetts, I concluded to try it as a disinfectant, or deodorizer, as there recommended. A load of peat that was partly pulverized, was thrown around and under a privy as the contents were drawn out and mixed with the peat with a hoe. The effect was truly astonishing. No increase of odor was perceptible while removing the contents and mixing the two articles together; and now, in passing the place where the mixture yet lies, little or no odor is perceptible, while before it was very offensive. I think if the two bodies were finely pulverized and mixed together, and a little more age given it, any one ignorant of its contents would not mistrust it contained any night-soil whatever. I think you would do well to copy the article alluded to in the Patent Office Report. F. C.

NOTE.—We have no doubt of the extensive existence, and great value of peat, all over the State, and have been impatiently waiting, for years for the subject to be better investigated and understood.

For the purpose of a more speedy development, the State Agricultural Society have offered premiums on its preparation and exhibition at the State Fair the coming Fall. See special premiums in this number. We hope it will induce a large and useful exhibition, and have no doubt of its usefulness to the State. Parties interested will take notice, and cut the peat in season to get it well dried—we mean to exhibit. P.

Business Hints for June.

This is the busiest month of the year. Early risings, short noonings, and hard, unremitting labor, must be the farmer's motto. The seed in field and garden has chiefly been planted, and under the quickening influence of sunshine and showers, is giving good promise of a golden harvest. But the weeds are growing also, and are in no wise disposed to be accommodating; on the contrary, like shrewd, unscrupulous politicians, they are always ready to take every advantage, and unless summarily dispatched, will get the better of field crops and garden vegetables. Therefore we repeat the injunction of last summer:

GIVE THE PLOW AND HOE NO REST.

1. In order to prevent the growth of weeds.

2. To secure needed moisture through the deposition of a greater amount of dew, upon which plants so largely depend during the hot, dry season, by softening the earth, so that the moisture which condenses upon the surface may penetrate more deeply, and by rendering it more porous, for the easier passage of vapor for condensation in the cooler soil below.

3. To secure a greater absorption of ammonia and other fertilizing gases.

4. To aid in the disintegration of minerals, whose elements are the food of plants.

5. Because a clean, well-cultivated field or garden *looks* so much better than one so overgrown with weeds that the pretended crop is only here and there visible.

The Strawberry plants, (and we hope every body has planted them this year), must have daily watering in dry weather—a pint to each plant before sunrise or after sunset. Tan-bark strewn upon the ground will serve the double purpose of fertilizing the soil and keeping it moist. If the young plants blossom excessively it is better to pluck off such a number as will leave them moderate bearers: next year the fruit will be larger and more abundant as the result.

Transplanting of cabbages &c., should always be done in wet weather, and the plants properly shaded until they have taken root.

Vines may be protected from the "striped bug," it is said, by a free sprinkling of snuff upon the leaves while wet with dew.

THE ORCHARD

Must be looked to. Scald the grubs, dig out or punch to death the borers, and capture the apple-moth. For special directions, see our articles in the summer numbers of last year's volumes, and our colleague's in Horticultural Department of this number.

The Plum trees may be treated occasionally, while wet, to a sprinkling of lime: the curculio is no friend to the caustic alkaline earths, and will probably seek other quarters.

It is well to prevent too heavy bearing of all young fruit trees, by pinching off the redundancy of blossoms.

SHEEP-WASHING AND SHEARING.

Many farmers are in the habit of washing their sheep too early in the season. Wait until weather and water are mild. If convenient, wash after a good shower of rain: the "yolk,"—which consists of oil and potash, and is therefore a kind of soap manufactured by the animal for the softening of the wool—will thereby be softened, and thus the more readily make a cleansing suds during the brief operation of washing. The same end may be attained, however, bating the inferiority of river as compared with rain water, by first wetting the sheep, and then allowing them to stand for a while until the yolk is properly softened. Wash thoroughly; the condition of the wool will more than compensate for the loss of weight by removal of dirt. After washing, keep your sheep in a clean pasture until the shearing.

For particulars as to shearing and wool-packing, see article in June number of last year's volume.

HUNGARIAN GRASS SEED.

Sow early this month if not already sown.

HARVEST AND SUGAR MAKING.

Be thinking of these, and provide yurselves with the best implemnts. There is no economy in working with bad tools simply because you have them. If any number of farmers in your neighborhood are cultivating the sugar cane, club with them and get a good mill. See article on that subject.

THE PREMIUM LIST.

Examine it carefully, and select to suit your respective tastes. At all events, be determined to make *some* of them your own. H.

Morrill's Land Bill—Non-Fealty of Public Servants.

This act was passsed by the House of Representatives at Washington the 22d inst., and it is understood to have a fair prospect of passing in the Senate. Mr. Morrill supported it by a strong speech on the 20th inst., in which he forcibly compared the aid given to Agriculture here with that it receives in other countries, and that which our own gives to commerce and manufactures. The bill, as condensed in the Country Gent., is as follows:—

Sec. 1. Provides for the appropriation to the several States of 5,920,000 acres of land, to be apportioned to each at the rate of 20,000 acres for each of its present Senators and Representative in Congress.

Sec. 2. Relates to locating the land appropriated.

Sec. 3. Enacts that no deduction shall be made from the proceeeds of these lands, for any expenses incurred previous to or during their sale,—these to be met exclusively by the State to be benefitted thereby.

Sec. 4. Provides for the investment of such proceeds in safe and not less than 5 per cent. stocks, and that these investments shall constitute a perpetual fund, "the interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of this act, to the endowment, support and maintenance of at least one college; where the leading object shall be, without excluding other scientific or classical studies, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

Sec. 5 and last. Makes these land grants conditional: 1. Upon the replacement by any State accepting them, of any portion of the capital or interest that may at any time be lost in any way, so that the whole fund may be forever inviolate and undiminished, *except* "that a sum not exceeding ten per centum upon the amount receivd by any State under the provisions of this act, may be expended for the purchase of lands for sites or experimental farms, whenever authorized by the respective Legislatures of said States." 2. Upon the non-appropriation, "under any pretense whatever," of any part of the grant for "the purchase, erection, preservation or repair, of any building or buildings." 3. Upon the repayment to the United State of any amount received for lands sold by the States accepting them, should they fail *within five years* to provide at least one such institution as is described in the fourth section. 4. Upon a complete annual report from each institution organized under the act, and 5. Upon the reduction of the *quantity* of the land granted *one-half* when

its *minimum value* has been *doubled* by railroad grants.

The inequality of this bill must be apparent at a single glance, and we are not a little surprised that its author and other Congressional friends of agricultural science, should not have avoided an injustice so palpable. Three prominent objections suggest themselves.

1. The *agricultural* states are mostly new, and have, therefore, but a meagre numerical representation in Congress.

2. The present representation is not of the actual population of to-day, but that of several years ago, as determined by the last census. We are now about to have another enumeration, and the result of eight years' immigration will prove our just title, as Western States, to nearly twice our present representation. If the grant is to be based upon representation, it ought to have been according to the census of 1860; and even then we should be relative losers in the end, since our population must continue to increase with growing rapidity for years to come.

3. But there is another consideration to be borne in mind: An Agricultural College must be essentially the same, as to organization and expense of endowment, wherever located, and justice can only be done to the several States by giving to them equally, if it is intended to completely endow them; while, if it is intended to partially endow them, with this grant, then the apportionment ought to be based upon a proximate calculation of the relative ability of the several States to complete the endowment by drafts upon private pockets or the Treasury of the State. Such a basis as this, would require that the newer States should have a larger share than the older, particularly the Eastern States, which have vastly more surplus wealth and are, therefore better able to help themselves. For example, who does not believe that New York is better able, out of her own resources, to build up an agricultural college than Wisconsin? And yet, while the latter has really and just as truly need of such an institution, her representation in Congress would give her but one seventh as much land for an endowment. In other words, Morrill's bill gives to New York nearly three-quarters of a million of acres—more than is necessary,—and to Wisconsin, one hundred thousand—not half enough.

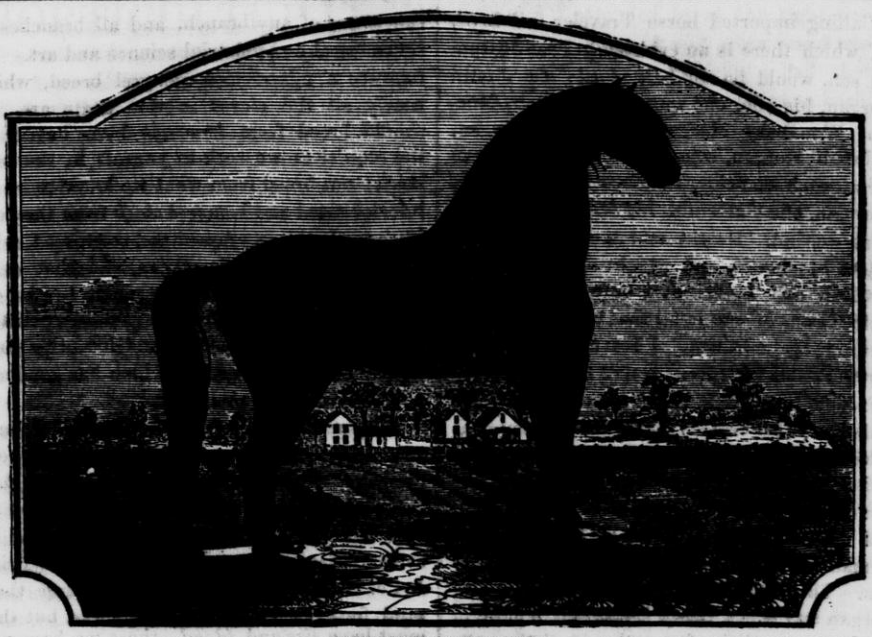
But since the agriculture of Wisconsin has utterly failed to receive anything from the State for the development and diffusion of its science, a donation of even one hundred thousand acres of land would be thankfully received; and we are wholly at a loss for an explanation of the strange course pursued by our representatives in relation to the bill. If Messrs. Billinghurst and Potter, both of whom opposed its passage, have given any explanation of their votes to their constituents—who certainly had a right to expect a recognition of their most important interests—we have not been favored with a transcript of their objections. And the absence from the House, pending action upon the only measure of special interest to Wisconsin, of our own special representative, whose reputation for prompt attention to busines is Union-wide, looks slightly singular, to say the least. We hope, however, that all these gentlemen will be able to render a reason for this misrepresentation of their constituents, and doubt not that they will themselves see the propriety of making that reason public before the next election. H.

Dogs and Colleges.

A proposition was brought before the Ohio Legislature some time previous to its recent adjournment, to tax all the dogs in the State for the purpose of establishing and maintaining an Agricultural College, and it was calculated we believe, that a sum amply sufficient could thus be raised. Ohio, as readers in other States doubtless already know, devotes much attention to wool-growing, and statistics show that dogs annually commit vast havoc among the sheep. The Ohio Cultivator argues against the practicability of the scheme, because

"If the object sought to be gained, viz: the destruction of the dogs, should be accomplished, the revenue would fail. If, on the other hand this object should fail, the law would be of no protection to the sheep. So that honest men and harmless dogs would suffer the burden of taxation for no available object, and men with viscious dogs would purchase a license for their curs to ravage as before."—*Country Gent.*

New Form of Bricks.—A form of bricks for drainage, sewerage, culverts, and other purposes, has been invented, which, instead of showing a plain surface on each joint, presents a small gaggle or toothing, upon each bed, which buts upon the actual joint, and thus, by covering the joint itself, the interstice is met by a resisting force. In circular work, either for shafts or sewers, the joints are radiated upon the same principle. The idea seems to possess no inconsiderable utility, and a positive advantage over the ordinary form.



YOUNG BLACKHAWK.

The property of Wm. P. Bentley, Albion, Dane Co. Bred by Geo. W. Drake, Esq., of Orange Co., N. Y. He is claimed to be a pure Blackhawk, without a drop of Morgan blood; is 16 hands high, weighs from eleven to twelve hundred pounds. He was sired by great Blackhawk, he by Andrew Jackson, out of Sally Miller by young Bashaw, out of a daughter of Why Not, Young Bashaw by imported Arabian Horse Bashaw from a daughter of imported Messenger; Why Not by imported Messenger; Dam Whip mare by old Kentucky Whip, out of Shakspeare; Mambeino by imported Messenger. He is a fine glossy black, five years old, and is claimed to be as fine a horse of his kind as can be found in the State.

Correspondence of the Farmer.

Blood and Black Hawk Horses Again.

MESSRS. EDITORS:—In the February number of the Farmer, I wrote an article on the subject of breeding horses, advocating therein the breeding of *blood stock* of size and action, instead of the mongrel and mixed breeds, composed of part French, part Morgan, and part any thing in the form of a horse, known generally as Black Hawks and Morgans, by men *interested* in this species of horse stock. The article in question seems to have ruffled some one-eighth owner, (or attendant during the season), of some mongrel in the vicinity of Oconomowoc, and instead of using fact to disprove my arguments and statements, he indulges in what he considers some very overwhelming sarcasm, the *point* of which can only be *appreciated* by *himself*. With regard to the very "ungracious fling" which *he says* I indulged in at "fine-wooled sheep," &c., I only mentioned that these men—"Vermont and New Hampshire men,"—who are the greatest admirers of the Morgan (so called) horse, brought in many fine-wooled sheep: that is all I *said*. It is true that they, many of them, shear much larger fleeces the first season than at any shearing *afterwards*, which has induced some purchasers to believe that fraud has been practiced upon them; and because the said sheep had not so dark colored and compact a fleece after the first season, that some mixture had been put on to deceive those who were not good judges, causing them to have a strong *Merino look*. Unless L. M. J., the writer of Oconomowoc, (or Merton), is *tender* on the *sheep* subject, I see no reason why he should draw the inference of a "fling" from what I said in the previous article.

With regard to the Morgan and Black Hawk stocks of horses, I asserted, and I still assert, that they are a mongrel and mixed breed, and not a stallion in this State, or any other, can have more than one-sixteenth of the blood of the old Morgan, unless bred "in and in," and one-thirty-second is all any of Black Hawk's progeny can give their colts.

Calling imported horse Traveler full bred, (of which there is no evidence), True Briton, his son, would be one-half blood; old Justin Morgan, his son, one quarter; Sherman Morgan, Woodbury Morgan, Revenge Morgan, Bullrush Morgan, sons of the Justin Morgan horse, each one-eighth; Black Hawk, son of Sherman, one-sixteenth; his descendants, one-thirty-second. Height and weight of above, 13½ to 14½ hands, and weight *about* 950 lbs. I stated, and L. M. J. finally assents, that their "*want of size* is all that the most fastidious urge against them." I also assert that they have a French mixture. Gale's horse was from a French mare, if it is the same horse, "Bucephalus," that trotted the celebrated match at Oshkosh, where he got badly *beaten*, and the "biter got bit." The hairy legs on all the four sons of Justin Morgan, as well as the general appearance, proclaim a French mixture; no man ever saw a *thorough bred* with hairy legs. The best specimens of the so called Morgan and Black Hawk stock, derive more of their better qualities from *other stock* than the original. Want of size is a great objection, and cannot be overcome by breeding from this poney stock; their advocate, L. M. J., being as much at fault in this as he is in immagining thorough breds to be derived from Arab and Flanders mares,—the hairy legs would be seen if such was the case. The thorough bred is the product of the Arab, Barb, and Turkish stocks bred in England, where climate, soil and wealth, with *scientific breeding*, has produced the *thorough-bred*, the best horse in the world for all the business purposes of man, uniting size, beauty, strength and speed. The redoubtable champion of the Morgans then states, towards the close of his article, that he is not talking for "buncomb" and then offers, as a final clincher, a *fool's argument*, viz.: a wager, which I pass without notice, and presume the owners of the horse named will do the same, as they are gentlemen and not black-legs.

In conclusion, I would advise Mr. L. M. J. when he attempts to quote Shakspeare in order to embelish his productions, to quote correctly, and not bid the ghost of Banquo "to down," the true quotation being one which Mr. L. M. J. would be quite likely to receive on intruding into the society of gentlemen, viz:

"Avaunt, and quit my sight."

I have done with the Oconomowoc champion, and would not willingly have occupied so much of your space, Messrs. Editors, did I not know that your columns are always open to the *advancement* of any branch, and all branches of agricultural and indstrial science and art. To *improve* a mixed and mongrel breed, which nearly all the mares in this State are, we should breed from *thorough-breds* having all the requisites we seek to engraft in the new stock; not breed from what we know to be an inferior sized and *mongrel stock* from the year 1795 to this time, crossed and re-crossed, with this interested man's *say so*, and that one's belief, only to recommend them. Let us enquire into the matter, and examine a little: truth will only injure fraud and deception—not injure, but benefit a cause which has good and honest grounds to rest upon.

The breeding of horses is a branch of business which will pay well if we breed good stock. The amount of money which could be received into this State at the present time for horses on one contract alone, would be no inconsiderable amount. Messrs. John Frink & Co. have a contract to furnish three thousand for army and cavalry purposes, but they must have *size* and *blood*—these we have not. The amount to be received would be about $50,000. Of our celebrated Morgan stock, not one will find sale for this purpose—they are too small, not heavy enough for draft, too small for the saddle, a six foot man looking on one, as if mounted on a French Merino sheep. Much has been written by one *Linsley* in his work on Morgan horses, in praise of them, and many of the best and fastest trotters in the county are claimed by him as being of this breed or mixture, much of which is utterly untrue. The original stock, or four sons of the old Morgan, were none of them *fast*, consequently if speed was a characteristic of them, (which it is not), the other stock upon which they have been crossed would be entitled to the credit of that quality. The statement with regard to the speed of the original Morgans, is from Frederick A. Weir, of Walpole, New Hampshire, owner of the Bullrush Morgan, acquainted with the qualities of the others, also owner of the Gifford Morgan, and an interested party; consequently he would have claimed speed if they had possessed it. Linsley, author of the work on Morgan Horses, wrote his work previous to his visiting the West, and can only be viewed as a *stallion pedlar*, having brought with him *nine* stallion horses of this Morgan breed, some of which he could not dispose of at any price, and left them with friends. His statements should be received with considerable *salt*, being many of them of the *wooly order*.

If any of the advocates of the Morgans or Black Hawks have *facts* with which to *disprove* any of the above statements, let them produce them. "Blood will tell."

Madison, April 10th, 1858.

HORTICULTURAL.

General Remarks.

We have had a remarkably moist, forward, and fine spring for tree, shrub, and strawberry planting, and, despite the hard times, our observation leads us to believe that a good deal has been done at the business. We have planted more than ever—filled up all the *dead blanks* in our orchards, and also added largely to them, (saying nothing about an extensive nursery planted on our 76 premises, by J. C. Plumb, Esq., an experienced nurseryman of the State."

We are still as full in the faith as ever that we shall be able to grow good apple orchards in Wisconsin; but to do it we have got to profit by experience in selecting and cultivating the trees. Home-grown trees of the hardy kinds, branched and cultivated low, are the kinds for us, beyond dispute.

But what we would now particularly call attention to, is the matter of mulching whatever is planted before the dry, scorching heat of summer comes on; and come it surely will. It may, we think, be safely assumed that mulching, in our dry, hot climate, is the great panacea for making newly planted articles live and thrive. The earlier it is done after planting, the better; but if it is not yet done, it is still "better late than never."

Common fruit trees well set and well mulched, can hardly die at all, no matter how dry the season; but omit the mulching, and they can hardly live. Such, experience teaches us, is the effect and value of mulching. To do it, any old straw, leaves, or litter that will hold moisture and is not particularly obnoxious to the tree, is suitable. Let the circle of it around the tree or shrub be of good size, and from three to four inches deep. Omit it not, ye who have planted, unless you would lose your labor, and charge to *Providence and the climate* what you might easily have avoided with a light draft on the barn yard and a small amount of labor.

CATERPILLARS, BARK-LICE, LEAF-LICE, (*Aphides*), AND BORERS.

Of these mischievous rascals we will add a word.

1st. The Caterpillers must be watched and nipped in the bud, before they get settled all over the trees and orchard. Like other settlements, they start from small colonies in the outset, and if attended to at the right time, are easily destroyed. A *ripe* worms-nest upon an apple tree, makes decidedly a bad show. In fact they should not be allowed to harbor anywhere upon one's premises.

The Bark Louse seems to have a semi-vegetable and semi-animal life. Yet slow and lifeless as they appear, still, like a cankering leprousy, they sometimes gradually spread from tree to tree until they entirely destroy well-grown orchards. Various remedies are recommended as infallible for their destruction; but we doubt if any of them are efficacious unless adopted early, and when they first make their appearance, at which time they may usually be destroyed by scraping and washing with strong lye, with, perhaps, a coat of white wash to finish off with. But after they have spread over the body and limbs of a tree, about the best remedy is to cut it down and burn it, root and branch. In fact, many serve a tree so, whenever the lice appear upon it. They are said to be active from the middle to the last of June, at which time they are probably the easiest destroyed. The following is another remedy recommended in *Fessenden' Complete Garderer:*

"Mix two gallons of water with two quarts of soft soap, then add lime enough to make an ordinary white wash, which apply, any time in the early part of the season, to all the parts of the tree affected. It will not only kill the lice, but also give the tree a healthy growth and appearance."

Grease and oil have sometimes been recommended; but we deem them of doubtful utility, if not absolutely prejudicial.

The Plant or Leaf Louse is another nuisance which is very apt to infect young apple trees upon the under side of the leaves and stems. The best way of getting rid of them is to squirt strong soap suds, lime water, or tobacco water upon the insects with a syringe; two or three applications will kill them without hurting the trees. If they are allowed to remain they will materially check the growth. Find them out early, and "give them fits," before they get too numerous.

THE APPLE TREE BORER

Is the most dangerous enemy of all. Like other hidden sins, they work in the dark and unseen, often nearly or quite destroying a tree before their presence is suspected. Watch sharply for them; never pass a tree without eying it closely, and if dead bark appears, cut

into it with your knife, and see what is underside. If you find dust, (*powder post*), be sure the rascals are at work, and cut right and left among the dead bark until you find them. It is a matter of life and death. If you do not destroy them, they will destroy the tree, sooner or later, as sure as comsumption kills its victim.

Eternal vigilance is indispensible in the growth of fruit trees in every country, and those who will not bestow it, had better not invest money in the young trees, as it will only prove a loss and aggravation to them in the end. There are so many more that love fruit than ever will know how to grow it, that it removes all danger of an overplus of the better kinds, for all time. Reader, look well to your fruit trees, at least every week during the summer months.

P.

Correspondence of the Farmer.

Orchard Cultivation.

Messrs. Editors:—Having read that the best way to raise an orchard was to keep the ground plowed, free from grass and weeds, and cultivated with some hoed crop, such as potatoes, corn, beans, etc., I thought for a few years that experience rather confirmed that view; but now, sad experience has made me thing quite differently.

My orchard consists of two parts: one where the trees are never disturbed by the plow, and where they stand rather close, say about 22 feet apart, each way. These continue to grow, slowly, it is true, but still they live and bear abundantly. That part occasionally receives a light coat of manure. The soil is in grass, and the sod never disturbed except by a light hoeing around each tree about as far as the roots are supposed to extend. Some of these trees, 17 years from the seed, have borne as many as six and even eight bushels of apples in a single season.

The other, and by far the larger portion has the trees planted nearly forty feet apart, and I have each year manured the land, plowed and planted with hoed crops. *More than one half of those trees are dead, dying, or injured;* hardly one is thrifty in body and limb. The borer makes frightful ravages among them. Here are facts, Messrs. Editors, of the truth of which any one can satisfy himself.

And now for the causes:

Either the plow injures the roots, or disturbes them, and leaves them in loose ground, —whereas roots of trees love to be compactly surrounded by soil adhering to them—or the loose soil admits the frost to the roots in winter, and hurts them by not taking it out at thawing time in the usual way; or the cultivation makes them grow too fast and too late; or they are too tender and *sappy* to withstand the intense cold of winter. At any rate the trees do not thrive. Let every one draw his own conclusions.

I have seeded my whole orchard to clover, and the plow shall not enter it again. I shall plant the trees closer, continne to manure lightly and hoe each tree around as far the roots will be supposed to extend.

Besides, the plow is objectionable, as you can hardly get a man careful enough ta avoid hurting the bodies of young trees by the whipple-trees while plowing. The trees are barked and hardly ever recover; the wood remains exposed, and the tree suffers.

I believe plowing among trees while young, say for two or three years after setting, taking care not to plow very close, to be beneficial, but after that, hurtful.

G. De NEVEU.

Fond du Lac.

Grapes to be Grown in Wisconsin.

The fact that the grape grows naturally in all parts of the United States, and most luxuriantly between the 30th and 45th parallels of latitude, long ago awakened expectations in Europe that America would yet vie with the old continent in the production of this luscious fruit. And although vineyards have been planted, and grapes and wines produced in considerable abundance, still grape-growing has, as yet, received but little attention, compared with its deserts.

For the more tender varieties, Wisconsin is doubtless a little too far north; but there are varieties which we believe will succeed in any part of our State, and we hope, ere many years, to see our well-adapted but now unproductive hills covered with beautiful vineyards.

The country along the Milwaukee & Mississippi Railroad has appeared to us just fitted for that business, and we have whispered it in the ears of a few enterprizing Germans, who have promised to test the correctness of our judgment.

But whether grown extensively or not, grapes are a delicious and wholesome fruit, and every farmer ought to delight his autumn table with their glorious purple clusters.

H.

WISCONSIN
STATE AGRICULTURAL SOCIETY.

Regulations and List of Premiums for the Fair of 1858

OFFICERS OF THE SOCIETY.

President—J. F. Willard, Janesville.

Vice Presidents—A. D. Kirkpatrick, Dayton; O. F. Bartlett, East Troy; F. D. McCarty, Fond du Lac.

Secretary—D. J. Powers, Madison.

Treasurer—David Atwood, Madison.

Additional Members of the Executive Committee—Adam E. Ray, Little Prairie; Geo. H. Williston, Janesville; Geo. Messersmith, Mineral Point; David Williams, Springfield; L. W. Joiner, Wyoming; S. S. Daggett, Milwaukee; Temple Clark, Manitowoc; W. R. Taylor, Cottage Grove.

Ex-Presidents, Members of the Ex. Board.—H. M. Billings, Highland; E. W. Edgerton, Summit; Harvey Durkee, Kenosha.

Official Arrangements for the Eighth Annual Fair

TO BE HELD AT

MADISON, OCTOBER 4, 5, 6, 7 and 8, 1858.

EXECUTIVE COMMITTEE OF ARRANGEMENTS FOR THE FAIR.

J. F. Willard, (President,) S. S. Daggett and D. J. Powers. Empowered to carry out the plans of the Society in all things pertaining to getting up the Fair and providing everything requisite therefor, and subsequently disposing of everything thereof remaining on hand after its close.

EXECUTIVE COUNCIL OF GENERAL MANAGEMENT AND DIRECTION DURING THE FAIR.

J. F. Willard, (President), S. S. Daggett and F. D. McCarty. Empowered to employ help required during the Fair for gate tenders, watchmen, police or laborers. To fill all vacancies in the lists of Superintendents and Committees of Judges; and generally to direct and manage the entire grounds and exhibition, and to determine all questions of difference that may arise.

COMMITTEE OF REVISION.

Geo. O. Tiffany, David Williams and Adam E. Ray. Appointed to review the returns of the Committees of Judges, and make them conform to the regulations and terms of the Premium Lists, ready for immediate report to the Society.

SUPERINTENDENTS OF DEPARTMENTS.

Cattle.—A. D. Kirkpatrick, Brooklyn, Green Co.

Horses.—Wm. R. Taylor, Cottage Grove, Dane Co.

Sheep, Swine and Poultry.—Wm. H. Tripp, Rock, Rock Co.

Agricultural Hall.—O. Ellsworth, Milwaukee.

Manufacturer's Hall.—G. H. Williston.

Operative Machinery.—N. A. Wiard, Janesville.

Farm Implements.—Peter W. Matts, Montrose.

Fruit and Floral Hall.—Mr. and Mrs. H. J. Starin, Whitewater.

Hall of Fine Arts.—Mr. and Mrs. L. H. D. Crane, Dodgeville.

REGULATIONS FOR 1858.

DAILY PROGRAMME OF THE FAIR.

Monday and Tuesday, Oct. 4 and 5, will be devoted to entering, receiving and arranging articles for exhibition.

On Wednesday, at 11 A. M., the Fair will be formally opened by the President of the Society, at the Executive Office, on the grounds.

On Wednesday, at 1 P. M., the Committee of Judges will meet at the same place, to receive their Books of Entries, and to complete their organization, by filling any blanks that may exist, after which they will at once proceed to the discharge of their duties, which must be completed as early as Thursday afternoon, and the books and reports returned to the executive office.

The Plowing Match will take place on Thursday at 2 P. M., near the Fair grounds.

The Address will be delivered at 10 A. M. on Friday, at the close of which

THE AWARD OF PREMIUMS

will be announced by the Secretary, *and paid* on demand at the Treasurer's office on the Fair grounds during the remainder of the day, and after that at his office in Madison.

The Ladies Equestrian Display will come off at 1 P. M. on Friday.

The Trotting Match and Trials of Speed at 3 P. M. the same day.

Any change of Programme, or important new features, will be duly announced on the grounds by posters.

EXHIBITORS.

All who intend exhibiting and competing for Premiums will confer a great favor on the Society by forwarding their entries by mail to the Secretary (D. J. Powers) at Madison, *at least two weeks* before the Fair, accompanied by the proper entry fee $1, (all the better if a month before.) This will enable the Secretary to have the entries made seasonably and without confusion, and all the requisite tickets ready in a letter envelope, for delivering on demand, when the party arrives and calls for them.

☞ The entry office will be absolutely closed on Tuesday evening, *and no entries for competition will afterwards be received in any event whatever*, except from the Plowing Match, Equestrian Display and Trotting Match, any of which entries can be made at the Secretary's office up to 10 A. M. of each day on which their respective trials take place.

☞ *The foregoing entry rules will be strictly adhered to this year*, and from the absolute necessity of the case, as all experience has shown that delays in entry, invariably and inevitably produce delays and derangements in every subsequent operation, and among other evils, wholly prevents the *announcement and payment of premiums at the Fair.*

It is a fixed determination on the part of the Executive Committee, in all cases hereafter, to thus announce and pay the premiums, according to programme; and to enable them to do this *they will absolutely* and without *fail*, close their entry office on Tuesday evening as before stated, and those who send or come too late, and fail to make their entries, will have none to blame but themselves.

Blank forms of entry will be found in the margin of the premium lists, which persons are requested to use as far as possible, in order to preserve uniformity and avoid mistakes.

NOTICE TO EXHIBITORS.

The Executive Committee will take every precaution in their power for the safe preservation of stock and articles on exhibition, after their arrival and arrangement upon the grounds, but will not be responsible for any loss or damage that may occur. They desire exhibitors to give attention to their articles, and at the close of the Fair, to attend to their removal.

Exhibitors must *see to the delivery* of their articles upon the grounds, and to the *Superintendent of the appropriate Department;* and the Society cannot, in any case, make provision for their transportation, to and from the grounds, or be subjected to any expense therefor, but all expenses connected therewith must, as heretofore, be provided *by the exhibitor.*

FORAGE FOR STOCK.

For the convenience of exhibitors, forage, consisting of hay, oats, corn, and straw for litter, with water, will be supplied on the grounds without charge, so that animals, on their arrival, may be driven to the show grounds, and need not be removed till the exhibition is closed.

TERMS OF ADMISSION.

Members of the Society, and all who may become such at the time of the Fair, by the payment of *One Dollar* to the Secretary, will be furnished with a *member's badge* which will admit the member and his wife upon the grounds at all times, during the continuance of the show. Children under ten years, free.

Single tickets, for one admission, 25 cents each, will be in readiness on Wednesday morning, at the Ticket Office, on the show grounds.

Exhibitors will have tickets to admit any absolutely necessary help, but not transferable.

Omnibuses and other public conveyances, will be licensed to enter the Fair Grounds, to discharge and receive passengers, within prescribed limits, at $10 each during the Fair, all passengers contained within the same to pay 25 cts. each, except the driver.

Private carriages admitted during the Fair at $2.50, containing only the family of the owner.

Private carriages, 50 cents single entry; each passenger therein, except the driver, 25 cents.

Trotting gigs rated the same as other carriages, except at and after 3 P. M., of Friday.

GENERAL RULES.

The Judges *shall, in all cases*, withhold premiums where the animal or article is not worthy, even though there be no competition.

Should any individual enter an animal or article in any other name than that of the *bona fide owner*, the person making such entry shall not be allowed to receive any premium, even though recommended by the Judges.

ARTICLES FOR EXHIBITION.

Articles and animals must be in their proper places on the Fair grounds, and *duly ticketed*, by Wednesday noon, that they may be in readiness for the viewing committees.

No animal or article thus entered for exhibition, will be allowed to be removed from the grounds until Friday afternoon, without the express permission of the Superintendent of the Department to which it belongs.

Exhibitors who disregard this rule, will forfeit their premiums thereby, though awarded by the committee.

SUPERINTENDENTS OF DEPARTMENTS

Are required to be on the ground, *promptly*, by Monday noon, in order to be able to direct parties where and how to place and bestow their articles.

Articles of the same class and kind, should be arranged in the same locality as much as possible, with the view of having them favorably seen and examined by the judges.

INSTRUCTIONS TO COMMITTEES OF JUDGES.

The Judges are requested to report themselves, on their arrival, at the Executive Office.

They are desired to meet at the same place Wednesday afternoon, at 1 o'clock, when they will be presented with the books of entries and instructions, and proceed to decide on the merits of the different articles and animals submitted to them, reference being made to thenumbers affixed to each.

The Judges will report not only the animals entitled to premiums, but also those *next in merit*, in each class, to meet the contingency of any objection which may arise to the awards. Animals which, in the opinion of the Judges, deserve special commendation, will be so reported to the Executive Committee.

The Judges on animals will have regard to the symmetry, early maturity, size, and general characteristics of the breeds which they judge. They will make proper allowances for age, feeding, and other circumstances, on the character and condition of the animals.

OVER FED ANIMALS.

The evils of over feeding for exhibition, are proved to be so pernicious to the subsequent health of breeding animals, that the executive committee feel that it is their absolute duty to direct viewing committees to withhold premiums *in all cases* (except under the head of fat cattle,) on animals that are evidently *over fed* and fatted for the occasion, especially in the breeding classes. Therefore no premiums are to be awarded to bulls, cows, heifers, sheep or swine, except as aforesaid, which shall appear to have been fattened for the butcher; the object of the Society being to have superior animals of this description for breeding purposes only.

The Judges on stock, if not satisfied as to the regularity of the entries on their respective classes, will apply to the executive office for information.

No person will be allowed to interfere with the Judges during their adjudications, and any person who, by letter or otherwise, attempts an interference with them, will be excluded from competition.

The Judges are *especially* requested to hand in their reports to the executive office on Thursday afternoon.

The Judges, especially those on animals, will be expected to give the reasons for their decisions, embracing the valuable and desirable qualities of the animals and articles upon which premiums are awarded. And, as one great object of the Society is to collect valuable information upon subjects connected with Agriculture, the several viewing committees are requested to gather all the information possible from exhibitors in their respective departments, and make their reports as full as circumstances will permit.

DISCRETIONARY PREMIUMS.

No Viewing Committee, with the exception of the Miscellaneous and Discretionary, shall award any discretionary premiums, *without the sanction and approval of the Revising Committee.* Whenever articles of merit, superior in their character, are presented, and which are entitled to special commendation, the Judges are requested to notice them particularly, and recommend them to the consideration of the Revising Committee.

The Judges on Discretionary Premiums, in making their awards, will recommend Diplomas, Certificates, Books, and Transactions, or money, as the merits of the article may require; and, *in all cases, the Diploma of the Society to be awarded* ONLY *as evidence of* SUPERIOR MERIT, *to professional exhibitors.*

COMPETITION FROM WITHOUT THE STATE.

The premiums for Agricultural implements, Manufactures other than domestic, Machinery, Miscellaneous and discretionary articles, will be open to competition from without the State, except when otherwise distinctly specified at the head of its respective list or class.

ENGRAVINGS FOR PRINTING INSTEAD OF CASH PREMIUMS.

The Executive Committee will award Engravings, for printing in the Agricultural Transactions, on such first premium animals, as they may deem proper, instead of cash.

TRANSPORTATION.

Arrangements will be made with the different Railroad Companies, by which passengers, animals and articles will be carried to and from the Fair during the week of its continuance, on the most favorable terms.

STATE AGRICULTURAL ROOMS.

The Society has office rooms in Madison.—Every information requested in relation to the premiums, or on business connected with the objects of the Society, will be furnished on application to the Secretary, either personally or by letter. Farmers are desired to communicate freely with the Secretary, and any aid he can afford them in procuring choice seeds, valuable improvements, or stock, will be most cheerfully rendered. Address D. J. Powers, Secretary of Wisconsin State Agricultural Society, Madison, Wis.

PREMIUM LIST.

In forming the Premium List for the Annual Fair of 1858, the Committee have endeavored to correct such errors as experience has suggested; and they flatter themselves it will be found in the main to be impartial and practical in its workings.

If Committees of Judges will bestow the same care in comprehending and applying its various necessary rules and distinctions, it will probably answer the purpose intended.

CLASS A.

THOROUGH BRED CATTLE.

Competitors are required, in all cases, to file with the Secretary, at the time of making their entry, evidence of the purity of blood, with statement of pedigree, &c.

JUDGES—A. Ludlow, Chairman, Monroe, Green Co.; Milo Jones, Ft. Atkinson; Richard Richards, Racine; H. Conklin, Fond du Lac; J. M. Clark, Marquette.

No. 1.—SHORT HORNS.

Best	Bull 3 years old and over,		Engraving or	$15
2d	do	do		10
3d	do	do		5
Best	Bull 2 years old and under 3,			10
2d	do	do		7
3d	do	do		5
Best	Bull 1 year old and under 2,			7
2d	do	do		5
3d	do	do		3

Best Cow 3 years old and over,.....$15
2d do do 10
3d do do 5
Best Heifer 2 years old and under 3,..... 10
2d do do 7
3d do do 5
Best Heifer 1 year old and under 2,..... 7
2d do do 5
3d do do 3
Best Heifer Calf,..... 5
2d do 3
Best Bull Calf,..... 5
2d do 3

No. 2—Cattle from other States or Canada

Best Short Horn Bull 3 years old and over,....Dip. and $10
" do Heifer or Cow do .... do 10
" Devon Bull, do .... do 10
" do Heifer or Cow, do .... do 10
" Hereford Bull, do .... do 10
" do Heifer or Cow, do .... do 10
" Ayrshire Bull, do .... do 10
" do Heifer or Cow, do .... do 10
" Alderney or Jersey Bull, do .... do 10
" do Heifer or Cow, do .... do 10

Thorough bred cattle and their crosses.

Judges—C. Loftus Martin, Janesville; Hiram Cross, LaGrange, Walworth Co.; Oscar Levake, Wyoming, Iowa Co.; Tho's Marshall, Oak Grove, Dodge Co.; and H. Hubbard, Oakfield.

No. 3.—Devons.

Best Bull 3 years old or over,.....Engraving or $15
2d do do 10
3d do do 7
Best Bull 2 years old and under 3,..... 10
2d do do 7
3d do do 5
Best Bull 1 year old and under 2,..... 7
2d do do 5
3d do do 3
Best Cow 3 years old and over,..... 15
2d do do 10
3d do do 7
Best Heifer 2 years old and under 3,..... 10
2d do do 7
3d do do 5
Best Heifer 1 year old and under 2,..... 7
2d do do 5
3d do do 3
Best Heifer Calf,..... 5
2d do 3
Best Bull Calf,..... 5
2d do 3

No. 4.—Herefords.

Same premiums as Short Horns and Devons.

No. 5.—Ayrshires.

Same premiums.

No. 6.—Alderney.

Same premiums.

No. 7.—Crosses of Blood Cattle.

Best Bull 3 years old and over,.....Engraving or $15
2d do do 10
3d do do 5
Best Bull 2 years old and under 3,..... 10
2d do do 7
3d do do 5
Best Bull 1 year old and under 2,..... 7
2d do do 5
3d do do 3
Best Cow 3 years old and over,..... 15
2d do do 10
3d do do 5
Best Heifer 2 years old and under 3,..... 10
2d do do 7
3d do do 5
Best Heifer 1 year old and under 2,..... 7
2d do do 5
3d do do 3
Best Heifer Calf,..... 5
3d do 3
Best Bull Calf,..... 5
2d do 3

No. 8.—Grade Cattle and Working Oxen.

Judges—J. P. Webster, Ch'n, Fox Lake; A. Pelton, Prairie du Chien; Joseph Spaulding, Harmony, Rock Co.; E. C. Sage, Wauwatosa; John M. Vaughn, Waupacca.

Best Grade Cow 3 years old and over,.....$10
2d do do 7
3d do do 5
Best Heifer 2 years old and under 3,..... 5
2d do do 3
Best yoke Working Oxen,..... 10
2d do do 7
3d do do 5
Best yoke 3 years old Steers,..... 7
2d do do 5
Best 2 years old Steers,..... 5
2d do do 3
Best 1 year old Steers,..... 3
2d do do 2
Best 10 yoke Oxen from any one county, ... $25
" 5 do do town,..... 10

No. 9.—Milch Cows.

Best Milch Cow,.....$15
2d do 10
3d do 5

The cow must be kept on grass only during the experiment, and for fifteen days previous to each period of trial.

Time of trial from 1st to 10th of June, and from 10th to 20th of August.

Statement to be furnished, containing:

1st. The age and breed of cow and time of calving.

2d. The quantity of milk in weight, and also of butter during each period of ten days.

3d. Butter made must be exhibited with the cow, at the Fair, and the statement made verified by the affidavit of the competitor and one other person conversant with the facts.

Fat Animals.

Best pair fat oxen 5 years old and over,.....$10
2d do do 7
3d do do 5
Best pair 4 year old and under 5, ... 5
2d do do 3
3d do do 3
Best fat cow or heifer..... 5
2d do do 3
Best fat sheep, not less than three,..... 5
2d do do 3

☞Superintendents of the cattle, sheep and swine departments, are especially directed to place all animals *that are too fat for health*, in the list of fat animals, instead of among the breeders.

It is the hope and expectation of the executive committee, that this rule will be carefully observed, and rigidly enforced in all cases.

No. 10.—Blood Horses.

Judges—B. R. Hinkley, Ch'n, Summit; Judge Field, Muckwonago; Doct. Dousman, Milwaukee; James Larned, Janesville; A. Burnham, Jr., Fond du Lac.

Best blood Stallion 5 years old and over, having been kept for stock the past season in this State,.....$30
2d do do do 20

Pedigree and satisfactory evidence to be furnished to the judges.

No. 11.—Morgan Horses.

Best Stallion kept for stock the past season within this State, 4 years old and over,..... $20
2d do do do 15

Best Stallion 3 years old and under 4,.....$10
2d do do 5
Best Stallion 2 years old and under 3,..... 5
Best Stallion 1 year old and under 2,..... 3

Black Hawk.

Best Stallion kept for mares the past season within the State. 4 years old and over, ... 20
2d do do do 15
Best Stallion 3 years old and under 4,..... 10
2d do do 5

No. 12.—Carriage Horses.

Best pair Matched Carriage Horses,.....$20
2d do do 15
Best Single Horse,..... 10
2d do 5

To be exhibited in harness.

No. 13.—Horses for All Work, &c.

Judges—Frederic Curtis, Ch'n, Rocky Run, Col. Co.; N. P. Parsons, Cold Spring; Appollos Hastings, Geneva; Harvey Conley, Madison; Alexander Birdsley, Ripon.

Best Stallion kept for stock the past season within this State, 4 years old and over,.....$20
2d do do do 15
Best Mare 4 years old and over,..... 10
2d do do 5
Best pair Matched Horses for all work,..... 15
2d do do 10

DRAUGHT HORSES.

Best pair draft horses,.....$15
2d do 10
Best single draft horse,..... 10
2d do 5
Best single draft mare,..... 10
2d do 5

No. 14.—Mares and Colts.

Best brood Mare, 4 years old and over, with foal at foot,.$10
2d do do do 5
Best Mare Colt 3 years old and under 4,..... 10
2d do do 5
Best Mare Colt 2 years old and under 3,..... 7
2d do do 5
Best Mare Colt 1 year old and under 2,..... 5
2d do do 3
Best Gelding colt 3 years old and under 4,..... 7
2d do do 5
Best Horse Colt 1 year old and under 2,..... 5
2d do do 3
To the owner of any Stallion exhibiting 7 of the best colts the progeny of said Horse, from 1 to 3 years old, a premium of..... 20

No. 15.—Jacks and Mules.

Best Jack,.....$10
2d do 5
Best Jenny,..... 10
2d do 5
Best pair of Working Mules,..... 10
2d do do 5
Best single Mule,..... 5
2d do 3

SHEEP.

Judges—B. F. Pixley, Janesville, Ch'n.; F. D. Weld, Greenfield; C. A. Lewis, Windsor; S. L. Sheldon, Burke, Dane Co.; A. G. Lull, Oshkosh.

No. 16—Spanish Merinos and their Grades.

Best Buck 2 years old and over,.....Engraving or $10
2d do do 7
3d do do 5
Best Buck 1 year old and under 2,..... 7
2d do do 5
3d do do 3
Best pen of 3 buck lambs,..... 5
2d do do 3
3d do do 2
Best pen of 3 ewes 2 years old and over,..... 10
2d do do 7
3d do do 5
Best pen of 3 ewes 1 year old and under 2,..... $ 7
2d do do 5
3d do do 3
Best pen of 3 ewe lambs,..... 5
2d do do 3
3d do do 2

No. 17—French Merinos and their Grades.

Same premiums as above.

No. 18.—Saxons and Grades.

Same premiums as above.

No. 19.—Silesian Sheep.

Best Buck,.....Engraving or $10
2d do 7
3d do 5
Best pen 3 ewes,..... 7
2d do 5
3d do 3

No. 20.—Long Wool, Middle Wool, Leicester, and their Grades.

Best Buck 2 years old and over,.....Engraving or $10
2d do do 7
3d do do 5
Best Buck 1 year old and under 2,..... 7
2d do do 5
3d do do 3
Best pen of 3 ewes 2 years old and over,..... 10
2d do do 7
2d do do 5
Best pen of 3 ewes 1 year old and under 2,..... 7
2d do do 5
3d do do 3

SWINE.

Judges—Wm. Spalding, Ch'n, Harmony; J. A. Carpenter, Waukesha; John Greening, Mazo Mania; Tyler Colwell, Lynde, Waupaca Co.

No. 21.—Large Breeds—Leicester, Woburn, Bedford or Sussex.

Best Boar each of above breeds, 2 years old and over,...$10
2d do do do 7
3d do do do 5
Best Boar 1 year old and under 2,..... 7
2d do do 5
3d do do 3
Best breeding Sow 2 years old and over,..... 10
2d do do 7
3d do do 5
Best breeding Sow, with litter of Pigs, not less than 6, under 3 months old,..... 10
2d do do do 5

SWINE OF SMALL BREED—SUFFOLK AND OTHERS.

Same premiums as above.

No. 22.—Poultry.

Judges—E. A. Tappan, Ch'n, Prairie du Sac; Joseph Axon, Poynette, Col. Co.; Chas. Smith, Waupun.

Best and greatest variety Poultry owned by exhibitor,..$ 5
Best lot Shanghai Fowls, not less than 3, 1 cock, 2 hens, 2
" Chittagong Fowls, do do 2
" Cochin China Fowls, do do 2
" Dorkings, do do 2
" Brama Pootras, do do 2
" Bolton Greys, do do 2
" Java, do do 2
" Spangled Hamburg, do do 2
" Black Spanish, do do 2
" Polands, do do 2
" Bantams, do do 2
" Turkeys, do do 2
" Ducks, do do 2
" Guinea Fowls, do do 2
" Geese, do do 2
" Pea Fowls, do do 2
" Game Fowls, do do 2

CLASS B.—FARM IMPLEMENTS, MACHINERY.

No. 23—Plowing Match.

Judges—Wm. F. Porter, Ch'n, Madison; John A. Fletcher, Johnstown; E. M. Danforth, Oconomowoc; O. G. Ewing, Lagrange; M. C. Bartholomew, Lodi.

The Plowing Match will take place on Thursday, Oct. 8th, and continue as long as the Judges shall deem necessary for a full and perfect trial.

WITH HORSES.

First Premium,	$ 6
Second do	4
Third do	2

WITH OXEN.

First do	6
Second do	4
Third do	2

BOYS UNDER SIXTEEN YEARS OF AGE.

WITH HORSES.

First Premium,	$ 5
Second do	3
Third do	2

WITH OXEN.

First do	5
Second do	3
Third do	2

The competition for plowing open to competitors out of the State.

The name of plowman must be given, as well as the kind of plow to be used, at the time of entry.

RULES FOR PLOWING.

1. The quantity of ground for each team to be one-fourth of an acre.
2. The time allowed to do the work will be two hours.
3. The width of the furrow to be eleven inches, and the depth not less than six inches.
4. The furrow slice in all cases to be lapped.
5. The teams to start at one time, and each plowman to do his work without a driver or other assistant.
6. The premiums offered by the Society, will be awarded to the individuals who, in the judgment of the Committee, shall do their work in the best manner, provided the work is done in the time allowed for its performance.
7. No person except the viewing Committee will be allowed to enter upon the grounds after the work is commenced, until the Committee leave the ground.
8. Each plowman to strike his own land, and plow entirely independent of the adjoining land.
9. Within the fourth of an acre plowed, each plowman will be required to strike two back furrowed lands, and finish with the dead furrow in the middle.

No. 24.—Farm Implements.

Judges—John Hodson, Ch'n, Waukesha; W. H. Prentice, Sheboygan Falls; A. D. Cornwall, Salem, Kenosha Co.; S. W. Field, Fitchburg; Marcellus Finch, Ft. Atkinson.

Best Farm Wagon,	Diploma or $ 5
2d do	3
Best Harrow,	3
2d do	2
Best Corn Cultivator,	3
2d do	2
Best Fanning Mill,	Dip
2d do	3
Best Corn Stalk Cutter,	3
2d do	2
Best Hay and Straw Cutter,	3
2d do	2
Best Corn and Cob Crusher, by horse power,	7
2d do	5
Best Clover Machine,	5
2d do	3
Best Horse Cart for farm,	5
2d do	3
Best Ox Cart,	5
2d do	3
Best Horse Rake,	3
2d do	2
Best Ox Yoke,	2
Best Roller for general use,	5
2d do	3
Best Clod Crusher and Roller combined,	5
2d do	3
Best Horse Hoe for cleaning drilled grain crops,	5
Best and most numerous collection of Agricultural Implements,	Dip
Best and most numerous collection of Agricultural and Gardening Tools and Implements manufactured in the State, by or under the supervision of the exhibitor, materials, workmanship, utility, durability, and prices to be considered in both cases,	Dip and 5
2d do	3

Articles in the above collection may receive individual premiums.

Best Wagon Harness for farm,	5
2d do	3
Best Carriage Harness,	5
2d do	2
Best Single Harness,	3
2d do	2
Best Gent's Riding Saddle,	3
2d do	2
Best Lady's Riding Saddle,	5
2d do	3
Best dozen Axes,	2
2d do	1
Best Churn,	3
2d do	2
Best Cheese Press,	3
2d do	2
Best twelve Milk Pans,	2
2d do	1
Best Potato Washer,	2
2d do	1
Best Grain Cradle,	2
1d do	1
Best twelve Hand Rakes,	2
2d do	1
Best six Hay Forks,	2
2d do	1
Best six Grass Scythes,	2
2d do	1
Best six Cradle Scythes,	2
2d do	1
Best Scythe Snath and Scythe,	2
2d do	1
Best six Manure Forks,	2
2d do	1
Best Potato Digger,	2
2d do	1
Best Hay Rigging	2
2d do	1
Best lot of Grain Measures, not less than six,	2
2d do	1
Best dozen Brooms,	2
2d do	1
Best Pails,	2
2d do	1
Best Tubs,	2
2d do	1
Best Vegetable Cutter,	5
2d do	3
Best farm or Road Scraper,	3
2d do	2
Best Steamboat Bell,	Certificate of Excellence.
" Locomotive Bell,	do
" Hydraulic Ram,	do
" Breaking Plow,	do

Best Sod Plow for stiff soils,.....Certificate of Excellence.
" Sod Plow for light soils,..... do
" Steel Crossing Plow,..... do
" Corn Plow,..... do
" Sub soil Plow,..... do
" Collection or Assortment of Plows in use in this country, with price attached to each,..... do
" Door Lock,..... do
" Bank lock,..... do
" Safe,..... do
" Mortici g Machine,..... do
" Edge To ls,..... do
" Fancy Iron Fence..... do
" Ornamental Cast Iron Vase for public grounds,.... do
" Ornamental Statuary for do ... do
" Iron Chair for do .... do
" Marbled Iron,..... do
" Fruit and Flower Stands,..... do
" Display of Rustic Work,..... do
" Portable Machine for watering gardens,..... do

No. 25.—Exhibition and Trial of Operative Machinery.

Judges—Ira Miltimore, Janesville; A. J. Langworthy, Milwaukee; Joseph Powers, Hebron; Gurdon Montague, Geneva; I. E. Brown, Madison.

Under this head will be embraced all kinds of machinery of any considerable complication or importance, for agricultural or other purposes.

Especial pains will be taken to induce as large an exhibition in this department as practicable, and for this purpose, a correspondence has been opened with many of the prominent inventors, manufacturers and dealers in machinery adapted to the wants of the western country.

Ample arrangements will be made for this department of the exhibition, and as far as desirable, for putting all machinery in actual working operation at its proper business of sawing, cutting, grinding or pumping, as the case may be—this being the best possible test of merit. Ample steam power will be furnished for operating any required amount of machinery.

It will be highly important that all large machinery be on the ground early, to admit of time for its arrangement.

Best portable steam rotary or circular saw mill, in operation, not more than 20 horse power—saw 40 inches in diameter, or larger, to run as much as one entire day,.....Dip and $25
2d do do do 15
Best portable grist mill and bolting apparatus, complete, in actual operation during the Fair, grinding feed and making flour economically and good, and not costing over $500,.....Dip and 25
2d do do do 15
Best grist mill without bolting apparatus,.....$10
2d do do 5
Best feed grinding mill,.....Dip and 10
2d do 5
Best locomotive steam boiler, not less than six horse power,.....Dip and 10
2d do do do 5
Best portable steam engine for farm use,.....Dip and 20
2d do do 10
Best stationary shop engine not less than 6 horse power, 15
2d do do do 10
Best stationary engine not over 2 horse power, particular reference being had to security from fire, economy of fuel, and compactness, adapting it for printing presses,.....Dip and 10
2d do do do 5
Best siding mill in operation,.....Dip and 10
2d do 5
Best dressed French burr mill stones,.....Dip and 5
2d do do 3
Best shingle mill in active operation,.....Dip and 10
2d do do 5
Best planing, tonguing and grooving machine,..Dip and 10
Best operating surfacing only,..... 7
2d do 5
Best set of machinery for manufacturing sash, doors and blinds, in actual operation,.....Dip and 10
2d do do do 5
Best iron castings (dry mould,)..... 5
do (green sand)..... 5
Best brass castings (unfinished,)..... 5
Best finished brass work,..... 3
2d do 2
Best specimens unfinished forged iron work,..... 5
2d do do 3
Best specimens unfinished forged iron work, by an apprentice of not more than two years' service,..... 3
2d do do do 2
Best iron castings by an apprentice of not more than two years' service,..... 3
2d do do do 2
Best finished iron work by an apprentice of not more than two years' service,..... 3
2d do do do 2
Best portable gas apparatus,.....Dip and 7
2d do 5
Best lightning rods and fittings,.....Dip
Best wind-mill for raising water, actual operation,Dip and 15
2d do do do 10
Best corn-stalk and straw cutter for horse power, tested by constant use cutting feed for stock during the fair,.....Dip and 10
2d do do do 5
Best corn-stalk and straw cutter to operate by hand or horse power,..... 5
2d do do 3
Best sweep horse power, actually tested on mill,.Dip and 5
2d do do do 3
Best tread horse power. tested,.....Dip and 5
2d do 3
Best separator,..... 5
2d do 3
Best self-raking reaper and mower combined,...Dip and 10
2d do do 5
Best self-raking reaper,.....Dip and 8
2d do 5
Best hand-raking reaper and mower combined,..Dip and 8
2d do do do 5
Best mower,.....Dip and 7
2d 5
Best horse power churning machine,..... 5
2d do do 3
Best dog power churning machine,..... 5
Best corn sheller, horse power,..... 5
2d do 3
Best corn sheller, hand power,..... 3
2d do 2
Best buckwheat scourer,..... 5
2d do 3
Best pump for farm use,..... 5
Best sewing machine for family use,.....Dip and 5
Best knitting machine do .....Dip and 5
Best portable hay and cattle weighing scales,.....Dip 5

The weighing machine to be adapted to general farm purposes of weighing farm stock, dead or alive, from the weight of a sheep to that of a loaded cart or wagon, and which will indicate the 1-5000th part of the mass weighed, and so arranged as to be readily removed.

Best platform scales,.....Certificate and $ 5
" Counter do ..... do 3
" Apothecary do ..... do 3
" show of Scales of one Manufacture.....Dip and 10
Best grain drill, with apparatus for distributing grain, seed and manure,.....Dip and 5
Best dynanometer for testing the draught of plows and machinery, adapted to general use,.....Dip
Best machine for extracting stumps, to be operated under direction of committee,.....Dip
Best hay press, for pressing hay, to be in operation on the ground,.....Dip

All other useful machines, not enumerated, to be entitled to discretionary premiums, recommended by the Judges and approved by the Revising Committee.

CLASS C.

No. 26.—Farm Products.

Judges—Simon Rublee, Chairman, Beloit; Wm. Mulks, Cold Spring; Richard Arundel,

Dodgeville; M. Aries, Lodi; R. C. Field, Richland City; J. J. Low, Edgerton.

Evidence must be presented showing that grain, vegetables, and products have been grown by the exhibitor.

Best sample winter wheat, not less than one bushel,	$ 3
2d do do do	2
Best sample spring wheat, not less than one bushel,	3
2d do do do	2
Best sample rye, not less than one bushel,	2
2d do do do	1
Best sample oats, not less than one bushel,	2
2d do do do	1
Best sample barley, not less than one bushel,	2
2d do do do	1
Best sample buckwheat, not less than one bushel,	2
2d do do do	1
Best sample flax seed, not less than one bushel,	3
2d do do do	2
Best sample hops, not less than 25 pounds,	3
2d do do do	2
Best sample timothy seed, not less than one bushel,	3
2d do do do	2
Best sample clover seed, not less than one bushel,	3
2d do do do	2
Best sample millet, not less than one bushel,	2
2d do do do	1
Best sample peas, not less than one bushel,	2
2d do do do	1
Best sample beans, not less than one bushel,	2
2d do do do	1
Best sample seed corn, not less than one bushel,	2
2d do do do	1
Best sample Carter potatoes,	2
2d do do	1
Best do Mercer's do	2
2d do do do	1
Best do Pinckeyes do	2
Best show of early do	2
2d do do do	1

Same premiums for any other new and valuable varieties.

Best show of known and excellent varieties,	5
2d do do do	3
Best sample onions,	2
2d do	1
Best sample carrots,	2
2d do	1
Best sample turnips,	2
2d do	1

No. 27.—Garden Vegetables.

12 best stalks celery,	$1 00
2d do	50
6 best heads cauliflower,	1 00
2d do	50
6 best heads broccoli,	1 00
2d do	50
12 best beets,	1 00
2d	50
12 best parsnips,	1 00
2d do	50
6 best heads cabbage,	1 00
2d do	50
12 best tomatoes,	1 00
2d do	50
2 best purple egg plants,	1 00
2d do	50
12 best sweet potatoes,	1 00
2d do	50
Best half peck Lima beans,	1 00
2d do	50
Best half-peck Windsor beans,	1 00
2d do	50
3 best heads lettuce,	1 00
2d do	50
12 best winter radishes,	1 00
2d do	50
12 best summer radishes,	1 00
2d do	50
Best and greatest variety garden products,	5 00
2d do do do	3 00
Best and greatest variety garden seeds raised in State,	5 00
2d do do do	3 00

No. 28.—Dairy and Household Products.

Judges—S. B. Newcomb and lady, Whitewater; Dr. John Tinker and Lady, Clinton, Rock Co.; Wm. A. Pierce and Lady, Pierceville.

BUTTER.

Best 25 lbs June made butter, Book and set spoons, or	$10
2d do do	7
3d do do	5
Best 25 lbs. made at any time, do	7
2d do do	5
3d do do	3

Competitors for premiums must state in writing where the butter was made; the number of cows kept on the farm; the mode of keeping them; the treatment of the cream and milk before churning, winter and summer; the mode of freeing the butter from the milk; also, whether in the use of any variety of salt, injurious results have occurred, and if so, state circumstances.

Butter offered for premiums must be presented in butter tubs, jars or firkins, and preserved only with salt.

CHEESE.

Best three cheeses made in the State,	$10
2d do do	7
3d do do	5
Best single cheese, do	3
2d do do	2

Those who present cheese for the premiums offered, must state in writing the time it was made; the number of cows kept; whether the cheese was made from one, two, or more milkings; whether any addition is made of cream, and the quantity of rennet used; the mode of preparing it; the mode of pressure; and the treatment of cheese afterward, and the kind of salt used.

BREAD, CAKE, ETC.

Best loaf wheat bread, yeast rising,	$ 2
" do salt or milk rising,	2
" Graham bread,	2
" Indian bread,	2
" sponge cake,	2
" fruit cake,	2
" plain cake,	2
Best spec'm'n cake made with Chinese sugar cane molasses	2
" cookies,	2
" crackers,	2
" and greatest variety bread, cake and pies, 1 exhibitor	5

JUVENILE, UNDER FOURTEEN.

Best loaf wheat bread,	2
" Graham bread,	2
Best sponge cake,	2
" cookies,	2
" gingerbread,	2

Mode of manufacture to accompany each specimen.

No. 29.—Field Crops, by the Acre.

The Executive Committee will award the premiums under this head at their meeting in December.

Best one acre winter wheat,	$10
2d do	5
Best one acre spring wheat,	10
2d do	5
Best one acre oats,	10
2d do	5
Best one acre corn,	10
2d do	5
Best one acre barley,	10
2d do	5
Best acre potatoes,	10
2d do	5
Best fourth-acre carrots,	10
2d do	5

Best one acre hops,.....$10
2d do 5
Best one acre timothy seed,..... 10
2d do 5
Best one acre clover seed,..... 10
2d do 5

Accompanying the above a detailed description of the soil, manure, mode of culture and expense must be presented in writing. The land must be accurately measured; also the grain and roots. The accuracy of the statement must be verified by the affidavit of the exhibitor, and one other competent witness.

Competitors for any of the above premiums must file with the Secretary, by the 15th of June, notice that they will enter for competition, and specify the crop or crops.

CLASS D.

No. 30.—Domestic Manufactures.

Judges—Mrs. A. G. Hanford, Ch'n, Waukesha; Mrs. P. Cravath, Whitewater; Mrs. G. C. Gunn, Fox Lake; Mrs. J. C. Holloway, Lancaster; Mrs. R. L. Morris, Fond du Lac.

Best 12 skeins sewing silk,.....$ 2
" specimen cloth or ribbon, 5 yards,..... 2
" woolen kersey blankets,..... 2
" 10 yards flannel,..... 3
" 10 yards woolen cloth, ... 3
" 15 yards wool carpet,..... 4
" rag hearth rug,..... 1
" embroidered hearth rug,..... 2
" rug of other materials,..... 1
" 15 yards rag carpet,..... 3
" wool stockings,..... 1
" wool mittens, striped,..... 1
" 10 knots woolen yarn,..... 1
" 10 yards linen cloth,..... 2
" 10 yards linen diaper,..... 2
" 10 yards tow cloth, ... 2
" pair cotton stockings,..... 1
" pair linen stockings,..... 1
" pound linen sewing thread,..... 2
" patch quilt,..... 2
" white quilt,..... 2
" silk quilt,..... 2
" double carpet coverlet,..... 3
" single do 2
" knit counterpane,..... 2
" wrought do 2
" crotchet wool cape,..... 1
" do shawl,..... 2
" white wove counterpane,..... 2
" exhibition of taste and skill in cutting and making boys clothing, by other than professional artist,... 4
" do do gents clothing, do do 4
" do do ladies dresses, do do 3
" gents shirts,..... 2

JUVENILE, GIRLS SIXTEEN YEARS AND UNDER.

Best pair woolen socks,.....$ 2
2d do 1
Best six skeins woolen stocking yarn,..... 2
2d do 1
Best pair knit woolen stockings,..... 2
2d do 1
Best pair woolen fringe mittens,..... 2
2d do 1
Best patch work quilt,..... 3
2d do 2
3d do 1

Articles in this class to be manufactured within the year and within the State; and in all cases exhibitors to furnish a written certificate that the articles were so manufactured. And no articles manufactured in factories or out of the family, will be received in this or either of the classes of domestic goods. Exhibitors omitting to accompany their articles with a certificate of manufacture as above required, *will not be entitled to premiums.* Discretionary premiums will be awarded on articles of merit not included in the above.

No. 31.—Manufactures other than Domestic, of this State.

Judges—John Hackett and lady, Beloit; Edwin Hillier and lady, Waupun; J. O. Eaton and lady, Lodi.

Best piece broadcloth, not less than 10 yds,.....Dip and $ 5
2d do do do 3
Best piece narrow cloth, do do .....Dip and 3
2d do do do 2
Best piece woolen carpet, do do 5
2d do do do 3
Best piece satinet, do do 5
2d do do do 3
Best piece blanketing, do do 5
2d do do do 3
Best piece flanne', do do 5
2d do do do 3
Best Gent's blanket shawl,..... 5
2d do 3
Best Ladies' do 5
2d do 3

No. 32.—Clothing, Hats, Furs, &c.

Best exhibition men's clothing,.....Dip
do boy's clothing,.....Dip
do men's hats and caps,.....Dip
do children's hats and caps,.....Dip
do hat case,.....Dip
do furs,.....Dip
do gent's fur gloves,.....Dip
do ladies' fur gloves,.....Dip

Discretionary premiums for articles in this department that are not included in the list.

No. 33.—Printing, Bookbinding, &c.

Judges—J. A. Hadley, Ch'n, Watertown; Wm. H. Watson, Madison; J. C. Cover, Lancaster.

Best specimen print paper exhibited by manufacturer,..$ 5
2d do do do 3
Best specimen writing do do 3
2d do do do 2
Best specimen book printing,..... 5
2d do do 3
Best specimen pamphlet printing,..... 3
2d do do 2
Best specimen handbill printing,..... 3
2d do do 2
Best specimen circular and bill-heads,..... 3
2d do do 2
Best specimen card printing,..... 3
2d do do 2
Best specimen blank book binding,..... 3
2d do do 2
Best specimen law book binding,..... 3
2d do do 2
Best specimen library book binding,..... 3
2d do do 2
Best specimen fancy book binding,..... 3
2d do do 2
Best specimen book work all in all,..... 7
2d do do 5

No. 34.—Carriages.

Judges—H. A. Tenny, Madison; H. L. Rann, Whitewater; E. Elderkin, Elkhorn.

Best double carriage,.....Dip
Best single top buggy,.....Dip
Best single riding do,.....Dip
Best pleasure wagon,.....Dip
Best double sleigh,.....Dip
Best single sleigh,.....Dip

Discretionary premiums for articles in this department that are superior, not included in the list.

STOVES, FURNACES, ETC.

Best cooking stove for wood,.....$ 3
2d do 2
Best cooking stove for coal,..... 3
2d do 2

Best cooking range for families,.....$ 3
5d do 2
Best furnace or other apparatus for warming houses, economy of construction, and consumption of fuel, and security to premises, and facility of ventilation, to be taken into consideration,.....Dip and $10
2d do do do 5
Best ornamental parlor stove,..... 2
2d do do 1
Best hall stove,..... 2
2d do 1
Best sample hollow ware,..... 2
Best fire grates,..... 2
2d do 1

No. 35.—Various Manufactures.

Judges—O. Gurnsey, Ch'n, Janesville; Dr. H. W. Hunt, Delavan; Wm. Birge, Whitewater; Robert Fargo, Lake Mills; Henry Clinton, Broadhead.

No. 36.—Leather, India Rubber Goods, &c.

Best specimen trunks,.....Dip and $ 2
" carpet bags,.....Dip and 2
" ornamental leather work,.....Dip and 2
" India rubber goods,.....Dip and 2
" do shoes,.....Dip and 2
" sole and upper leather,.....Dip and 2
" calf skins,.....Dip and 2
" morocco for bookbinding,.....Dip and 2

Discretionary premiums for articles in this department not included in the list.

BOOTS, SHOES, ETC.

Best leather hose for fires,.....Dip and $ 2
Best gents winter boots,..... 3
2d do 2
Best gent's fancy boots,..... 3
2d do 2
Best gaiters,..... 3
2d 2

LADIES' WEAR.

Best and neatest ladies' winter boots, (anti-consumptive,) 5
2d do do do 3
Best every day gaiter shoes, (not too thin soled,)..... 3
2d do do do 2
Best fancy shoes,..... 2
2d do 1

CABINET WARE.

Best assortment cabinet ware,.....Dip
" lot enameled furniture,.....$ 3
" lot rosewood chairs,..... 3
" mahogany chairs,..... 3
" black walnut chairs,..... 3
" rose-wood sofa,..... 3
" mahogany sofa,..... 3
" black walnut sofa,..... 3
" bedstead,..... 3
" bureau,..... 3
" table,..... 3
" washstand,..... 2

No. 37.—Silver Ware, Cutlery & Britannia.

Abner Kirby, Milwaukee; Dr. J. W. Hunt, Madison; Dr. Vanostrand, Jefferson.

Best exhibition silver ware,.....Dip
Best exhibition silver table cutlery,.....Dip
Best exhibition table cutlery,.....Dip
Best exhibition pocket cutlery, American manufacture,.Dip
Best specimen silver ware with agricultural design, suitable for premiums,.....Dip
Best specimen argentine or britannia ware,.....Dip
Best set surgical instruments,.....Dip
Best set dental do .....Dip
Best set mathematical instruments,.....Dip
Best set surveyor's do .....Dip
Best microscope,.....Dip
Best chronometer clock,.....Dip
Best whatch,.....Dip
Best specimen plated ware,.....Dip
Best specimen electro-plated ware,.....Dip

Discretionary premiums for other articles under this head.

No. 38.—Ornamental Needle, Shell and Wax Work.

Judges—Mrs. O. M. Conover, Madison; Mrs. H. W. Hayes, Palmyra; Mrs. K. A. Darling, Fond du Lac; Mrs. R. W. Parker, Janesville; Mrs. William DeWolf, Whitewater.

Best embroidered shawl,.....$ 3
2d do 2
Best embroidered scarf,..... 3
2d do 2
Best muslin embroidery,..... 2
2d do 1
Best lace embroidery,..... 2
2d do 1
Best Worsted embroidery,..... 2
2d do 1
Best specimen of plain needle work,..... 2
2d do 1
Best embroidered skirt,..... 2
2d do 1
Best chair cover,..... 2
Best knit tidy,..... 2
2d do 1
Best crotchet tidy,..... 2
2d do 1
Best wrought slippers,..... 2
2d do 1
Best piano spread,..... 2
2d do 1
Best evidence of skill and taste in hem-stiched h'dk'f,... 1
Best do do embroidered h'dk'f,... 2
2d do do do ... 1
Best ottoman cover, tufted on cloth,..... 2
2d do do 1
Best do tufted on hair cloth, ... 2
2d do do 1
Best do plain on canvas,..... 2
2d do do 1
Best evidence of skill and taste in lamp mat of any kind, 1
" crochet lamp mat,..... 1
" embroidered lamp mat,..... 1
" fringed lamp mat,..... 1
" evidence of skill and taste in fancy work basket,... 2
2d do do do ... 1
Best do do fancy card basket,..... 2
2d do do do 1
Best do do ornamental shell work,.. 2
2d do do do .. 1
Best do do fancy hair work,..... 2
2d do do do 1
Best do do hair flowers,..... 2
2d do do do 1
Best do do embroidered reticule,... 2
Best exhibition of wax fruit representing choice varieties, 5
2d do do do 3
Best do flowers, do 3
2d do do do 2

JUVENILE, UNDER FOURTEEN YEARS.

Best evidence of skill and taste in crotchet work,.....$2 00
2d do do do 1 00
Best plain needle work,.....2 00
2d do 1 00
Best specimen of darning or repairing,..... .2 00
2d do do 1 00
Best evidence skill and taste in ornamental needle work, 2 00
2d do do do 1 00
Best crotchet needles,..... 1 00
2d do 50
Best knit mittens,..... 1 10
2d do 50
Best knit stockings,.....1 00
2d do 50
Best knit socks,..... 1 00
2d do 50
Best specimen hair work,.....2 00
2d do 50

No. 39.—Millinery.

Judges—Mrs. S. S. Daggett, Milwaukee; Mrs. L. W. Hoyt, Madison; Mrs. W. A. Utley, Racine; Mrs. E. M. Danforth, Oconomowoc.

Best silk bonnet, domestic manufacture,.....Dip
2d do do .....$ 3
3d do do 2
Best straw bonnet, do .....Dip
2d do do 3
3d do do 2

Best ladies' cloak, do 3
2d do do 2
3d do do 1
Best ladies' dress, do 3
2d do do 2
3d do do 1
Best bonnet flowers, do 2
2d do do 1
Best and greatest variety of the above and other articles of millinery, manufactured by exhibitor, in this State,.....Dip and 5

No. 40.—Fine Arts.

Judges—I. A. Lapham and Lady, Milwaukee; Dr. E. G. Bartlett and Lady, Madison; Wm. A. Utley, Racine.

Articles in competition in this class must have been executed within the State except as herein provided; but any article of merit executed elsewhere, may receive awards, in the discretion of the committee.

Best specimen of statuary in marble,.....Dip
do carving in wood,.....Dip
do do stone,.....Dip
do do plaster,.....Dip

OIL PAINTING.

Best oil painting .....Dip
2d do .....$ 3
Best specimen of animal painting,.....Dip
2d do do .....$ 3
do portrait painting,.....Dip
2d do do .....$ 3
do fruit and flower painting,.....Dip
2d do do .....$ 3
do Wisconsin landscape,.....Dip
Largest and best exhibition of paintings by the old masters,.....Dip and $ 5

WATER COLOR PAINTING.

Best painting in water colors,.....Dip
2d do do .....$ 3
Best specimen of animal painting,.....Dip
2d do do .....$ 3
do fruit or flower painting,.....Dip
2d do do .....$ 2
do Wisconsin landscape,.....Dip
2d do do .....$ 2
Best crayon drawing,.....Dip
Best pencil drawing,.....Dip
Best specimen of pen drawing,.....Dip
do penmanship, ...Dip
do mapping,.....Dip
do India ink drawing,.....Dip
Best wood engraving,.....Dip
do of animals,.....Dip
Best lithograph,.....Dip
Best specimen of engraving on copper,.....Dip
do do steel,.....Dip
do electrotyping,.....Dip

SUN PAINTING.

Best specimen daguerreotypes,.....Dip and $ 5
2d do do 3
do melainotypes,.....Dip
do ambrotypes,.....Dip and $ 5
2d do do 3
do do of animals,.....Dip
do do of street views,.....Dip
do photographs, plain,.....Dip
do do water colors,.....Dip
do do oil,.....$5 and Dip
do do India ink,.....Dip
do hallotypes.....Dip
Best monochromatics, ...$ 3
" Grecian painting,.....3
" oriental painting,.....3
" specimen of photichomanie,.....3

No. 41.—Fruits.

Judges—Dr. Weeks, Ch'n, Milwaukee; J. M. Clark, Baraboo; O. P. Dow, Palmyra; Dr. J. Dodge, Beetown; G. DeNeveu, Fond du Lac.

APPLES OF WISCONSIN GROWTH.

Best and greatest variety of apples, not less than 3 specimens of each,.....$10
2d do do do 7
3d do do do 5
Best ten varieties,.....5
2d do 3
3d do 2
Best five varieties,.....3
2d do 2

FALL AND WINTER APPLES.

Best show of autumn apples,.....10
2d do 7
3d do 5
Best show of winter apples,.....10
2d do 5
3d do 3

GRAPES.

Best and greatest variety of grapes not less than three clusters each,.....5
2d do do do 3
3d do do do 2

PEARS.

Best and largest variety of pears,.....7
2d do do 5
3d do do 3
Best two varieties of pears, ...5
2d do 3
3d do 2

PLUMS.

Best and greatest variety plums, not less than three each, 5
2d do do do 3
3d do do do 2

QUINCES.

Best show of quinces,.....7
2d do 6
3d do 3
Best two specimens of one or more varieties,.....2

PEACHES.

Best show of peaches,.....5
2d do 3
3d do 2
Best single variety, three specimens each,.....3
2d do do do 2
3d do do do 1
Best and greatest variety of fruits of all kinds, raised by exhibitor, ...Dip and 10

Premiums in the above list not to be awarded on specimens not worthy, though the best exhibited.

WATERMELONS.

Best ice-cream,.....$ 2
2d do 1
Best mountain sprout,.....2
2d do 1
Best black Spanish,.....2
2d do 1
Best Long Island,.....2
2d do 1
Best show of watermelons,.....3
2d do 2
3d do 1
Best citron for preserves,.....2
2d do 1
Best and 2d best muskmelon,.....$2 1
Best and greatest variety,.....Dip
Best cultivated cranberry,.....3
2d do 2

No. 42.—Delicacies.

Judges—Mrs. James Davis, Ch'n, Waukesha; Mrs. Q. P. Dow, Palmyra; Mrs. Delos Mills, Rochester.

PRESERVES.

Process of clarifying and manufacture to accompany them.

Best and greatest variety, not less than 10, one exhibitor,$ 5
" apple preserves not less than one quart, 1
" peach do 1
" strawberry do 1
" gooseberry do 1
" currant do 1
" cherry do 1
" plum do 1
" tomato do 1
" grape do 1
" quince do 1
" pear do 1
" catsup do 1

JELLIES, ETC.

Process of manufacture to be given in all cases in writing.

Best and greatest variety, not less than 8, one exhibitor, $ 5
" apple not less than one quart, 1
" peach do 1
" plum do 1
" grape do 1
" strawberry do 1
" gooseberry do 1
" quince do 1
" cherry do 1
" currant do 1
" cranberry do 1
" crab apple do 1
" raspberry jam do 1
" black currant jam 1
" apple butter do 1
" peach do do 1
" tomato do do 1

PICKLES.

Best and greatest variety not less than 8, 5
" cucumber pickles, 1
" apple do 1
" plum do 1
" cherry do 1
" artichoke do 1
" pear do 1

Mode of manufacture to accompany each.

No. 43.—Flowers.

Judges—Chas. Gifford, Milwaukee; Mrs. Dr. Carr, Madison; Mrs. W. Hughes, Janesville.

PROFESSIONAL LIST.

Best ornamental design of any desirable material, $ 5
2d do do do 3
Best and greatest variety green house plants, 3
" 20 varieties in bloom, 3
" 12 geraniums, 2
" and greatest variety dahlias, 3
" 12 named do 2
" seedling do 2
" and greatest variety of verbenas, 3
" 12 named sorts do 2
" seedling do 1
" 6 fuschias in pots, 1
" 6 petunias do 1
" 6 phlox do 1
" 6 asters do 1
" 6 carnations named, 1
" display in quality and variety of roses, 3
" 12 named sorts do 2
Most tastefully arranged and largest collection cut flowers, 3
Best pair round boquets, 1
" pair flat do 1
" and greatest variety of phlox, 1
do do asters, 1
do do peonies, 1
do do petunias, 1
do do pansies, 1
do do gladiolus, 1
Best and greatest variety of all sorts of flowers, raised by exhibitor, Dip and 5

AMATEUR LIST.

Best floral design of natural flowers, 5
2d do do 3
Best display in quality and variety cut flowers, 2
2d do do do 1
Best and greatest variety named flowers, 2
2d do do do 1
Most tastefully arranged basket of flowers, $ 2
2d do do do 1
Best and greatest variety of wild flowers, 3
" display of dahlias not less than ten varieties, 2
2d do do do 1
Best display in quality and variety of verbenas, 2
2d do do do 1

ROSES.

Best 5 named sorts, $ 3
2d do do 2
Best variety and quality Asters, 2
2d do do 1
Best variety and quality Gladiolus, 2
2d do do 1
Best variety and quality Phlox, 2
2d do do 1
Best variety and quality Petunias, 2
2d do do 1
Best variety and quality Pansies, 2
2d do do 1
Best pyramid boquet, 5
" flat do 3
Most tastfully arranged vase of flowers, 2
Best Herbarium plants and flowers gathered within the year and correctly named, Dip.

No. 44.—Miscellaneous and Discretionary Department.

Judges—D. S. Curtiss, Ch'n, Madison; C. H. Williamson, Baraboo; D. Daggett, Milwaukee; James Giddings, Waupun; Dr. Head, Albion.

For improvements in machinery useful to the farmer, and having valuable properties, and not included under any head of any of the regular premiums, discretionary premiums will be awarded.

The Society are to be entitled to any fruit, vegetables, or natural productions, on which a premium is awarded, that the Executive Committee may deem desirable for preservation in the Museum, or for circulation by the Society, for propagation; though this privilege will not be exercised to the material damage of any one, but simply so far as it seems proper for the benefit of the State.

Under this general head, premiums will be awarded upon articles of ingenuity, usefulness, and merit, which may be exhibited, which are not provided for, in the foregoing list of premiums.

No. 45.—Special Premiums.

CHINESE SUGAR CANE PRODUCTS.

For the purpose of developing this new and promising product, the following premiums are offered.

MANUFACTURED IN THIS STATE.

Best sample sugar made from the sugar cane 10 lbs, $25
2d do do do 10
3d do do do 5
Best samp'e syrup, not less than one gallon, 15
2d do do do 10
3d do do do 5

FROM OTHER STATES.

Best specimen of sugar, 10
2d do do 5
Best specimen of syrup, 7
2d do do 4

A particular statement of the process of manufacture, together with the yield will be required.

Judges will be appointed at the Fair.

PEAT.

It is believed by scientific and observant

men, that exhaustless beds of valuable peat exist in many parts of the State; and that it may be economically and profitably employed, both for domestic use, and in manufactures requiring fuel. (A good article of peat must be superior to green saw-dust for propelling an engine.)

For the purpose of attracting more attention to the subject, and testing the merits of the article, the following premiums are offered:

Best specimen of peat, not less in amount than half a cubic yard, dry and in good condition to burn,..... 15
2d do do do 10
3d do do do 5

A competent committee will carfully test its merits, and scientifically point out its qualities.

SWEET POTATOES.

Mr. J. W. Tenbrook, of Rockville, Parke Co., Indiana, presented the State Agricultural Society. in April last, with a barrel of choice sweet potatoes, to be distributed to cultivators through the State, which has been done.

And he further proposed to present two additional barrels in the spring of 1859, to the Society, to be used as premiums to those who exhibit the best specimens of potatoes grown by them, at the State Fair of 1858.

In conformity with the proposition, the following premiums are offered:

Best sample sweet potatoes, not less than one peck, grown in the State, one of the barrels of potatoes offerred by Mr. Ten Brook, valued at. $15
2d best sample, two-thirds of a barrel of do..... 10
3d do one-third do do..... 5

No. 46.—Ladies' Equestsian Display.

The Executive Committee are aware that in presenting a premium list for the best display of female equestrianship, they have a delicate matter to dispose of. While on the one hand many worthy and respectable people have scruples and misgivings in respect to the propriety of the exhibition, at all, and especially at Fairs, and others who have no objection in particular to the exhibition, think the premiums heretofore offered quite too large, in proportion to those offered in other departments. On the other hand, a large majority think and feel differently, believing that, in this county, where custom ignores almost all kinds of out-of-door exercise for females, that healthful and pleasing pastime should be encouraged; and that our daughters should have the opportuinty of displaying their skill in horsemanship, and competing for some of the out-of-door premiums of the Society, as well as their more robust brothers.

In view of the foregoing, the Executive Committee have endeavored to adjust the premium list and regulations in this department, so as partially, at least, to meet the views of all concerned. And while, in the main, the operations of the Society are confined to the encouragement of objects of more profit and utility, yet they believe that on the occasion of our annual Fairs, the introduction of some features of innocent recreation to be equally promotive of the best interests of the Society. Fairs have come to be regarded as a great annual festival for the whole people—the holliday of the year—not only by the farmer, mechanic, and practical man, but by the entire masses. All look forward to them as the season, of all others, to be devoted to relaxatiou and enjoyment. Then it is obvious that those who have the charge and responsibility of arranging and directing them, should consult the tastes and innocent preferences of all, and provide such entertainments as shall combine profit and amusement—such as shall not only *benefit*, but *please* all.

The Executive Committee have therefore decided to offer the following premiums for competion by the ladies, on horseback, under the following regulations:

At 1 P. M., Friday, the ladies will meet, properly equipped, at the judges' stand, when they will be briefly addressed by the President of the Society. They will then be placed under the escort of the Superintendents of the Ladies' Equestrian Display, and will be under his direction with regard to rate of speed, mode of arrangement, &c., graceful riding and management of the horse being much more desirable than rapid speed.

FOR BEST DISPLAY OF LADIES' EQUESTRIANSHIP.

1st premium, a gold watchworth... .....$25 00
2d do silver ware to the value of..... 20 00
2d do side-saddle, bridle &c., worth..... 15 00
4th do silver flower vase worth..... 10 00
5th do gold pencil worth..... 5 00

The winners of the above prizes have the privilege of selecting any other article of equal value, or the cash, as they prefer.

Superintendents—Dr. E. B. Wolcott, Milwaukee ; Col. G. F. Hastings, Juneau.

Judges—Col. N. W. Dean, Madison; Gen. Rufus King, Milwaukee; Gen. Stevens, Dodgeville; Col. Z. P. Burdick, Janesville; Harrison Reed, Esq., Menasha.

Ladies' Equestrian Display will commence at 1 o'clock on Friday.

No. 47—Trotting and Road Horses.

Judges—B. R. Hinckley, Ch'n, Summit ; Levi Sterling, Mineral Point; Ezra Bingham, Koshkonong.

No unsound horse shall be entitled to enter for the following prizes.

STALLIONS.

Owners of horses contending for these premiums, to furnish *satisfactory evidence* that the horse entered has been kept as a *stock horse*. Persons not complying with the above requisition, will not be allowed to contend for them.

For the best trotting stallion which has been kept in this State the past season as a *stock horse* $30
2d do 20
3d do 10
Entrance fee,.....$3

STALLIONS 5 YEARS OLD AND UNDER.

For best trotting stallion five years old and under,... .$25
2d do do do do 15
3d do do do do 10
Entrance fee,.....$2

Owners of stallions contending for any of the above premiums to furnish the pedigree, age, color, height and weight, *if possible, accurately*, at the time of paying entrance fee.

MATCHED ROAD HORSES OR MARES.

For best pair matched trotting horses or mares,.....$20
2d do do do do 15
3d do do do do 10
Entrance fee,.....$2.

SINGLE ROAD HORSES OR MARES.

For best single trotting horse or mare.....$15
2d do do do 10
3d do do do 5
Entrance fee,.....$2.

All animals offered for the premiums of the Society, must be the *bona fide* property of the exhibitor, otherwise the premiums will be withheld. Horses entered will not be allowed to change, but must go in the manner in which they are first entered.

All horses competing under the class of trotting and road horses, must be on the ground designated by the judges, promptly, at three o'clock P. M., on Friday; and all entries must be made at the Secretary's office previous to 10 A. M., and sooner if possible. The judges will select competent time-keepers, and have every precaution used to insure perfect accuracy in keeping the time made, which will be a matter of record in the transactions of the Society. The distance trotted will be *one mile*, and only *one trial* will be allowed each horse or team, unless from some unforseen accident, and then the judges shall use such discretionary power as shall ensure fairness and impartiality to all concerned. All horses in these trials to go in harness.

Trotting to commence on Friday, at three o'clock, P. M.

REMARKS.—The foregoing premium list has been prepared with extra care and solicitude, on the part of the Committee; and special pains have also been taken to select good and suitable persons for Judges,—those who were supposed to be peculiarly fitted from their tastes and aptitudes for the various places for which they have been selected, and such, withal, as have the confidence and good opinions of their neighbors and community at large —the more important, for the reason that so much depends upon their wisdom and promptitude of action, in the final results of a Fair.

It is the settled purpose of the officers of the Society, to so completely arrange and carry out, not only the general plans, but the details of the forthcoming Fair, as to make it, as far as possible, a sample, in its way, as compared with any thing in the past.

For the achievement of these laudable ends, the officers having the matter in charge invoke the hearty co-operation and aid of all the enterprising citizens of the State.

D. J. POWERS, Secretary.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

JUNE.

BY MRS. HOYT.

How beautiful among the months,
Is June, sweet June!

On the threshhold of the summer,
Half advancing, half retreating,
All the coy unconsciousness
Of Nature's art repeating.

Even now her sun is rising
Where the hills await the dawn,
When the crimson flags of morning
Light their mists, and light the lawn.

By the woodland, in the meadow,
Tufted rock and star-eyed flower,
Gave us presage of this Present,
Chronicled the advent hour.

Scarcely from the earth-mold lifted—
Queen and Artist of the year—
See, her wondrous plans are finished,
And the Possible is here:

Fairy-like, and but in outline,
Yet the lovelier to see,
Woven of all forms and colors
Of the beautiful To Be.

The Flower Garden.

This is an important month to the Rose, as to all flowering shrubs. The Rose should not be allowed to make buds on the stock, (main wood,) and must therefore be looked after, and all such, as all useless suckers, rubbed off every few days. Shoots of last year's buds will grow rapidly this month, and most likely need to be supported, which can easily be done by tying a slight stick to the stem and allowing it to reach six or eight inches above. If the bud makes a very strong shoot it may be pinched off as soon as it has made two pairs of leaves; it will then head the same season.

The same care is needful for all such plants as should not sucker from the root, or grow any shoots that do not add to their vigor or beauty of bloom.

Such plants as the honeysuckle and jasmine may even be propagated by cuttings; carnations by layers; sweet Williams and pinks by layers or slips; wall-flowers by slips of the young shoots of the head, &c. All seedlings, for summer flowering, to the place where they are to remain; while annuals of all hardy varieties may be sown throughout the entire month; indeed they must be if you depend much upon them and would have late blooms.

We hope some day to know our readers are so interested and in earnest about the "Flower

Garden," that they will not be satisfied with mere seed sowings, but cultivate many of our elegant flowering shrubs whose perennial beauty will have an added charm from the associations of years.

We give two beautiful cuts. One, the



DEUTZIA SCABRA,

Or rough-leaved Deutzia, which grows more than six feet high and is covered with a profusion of white flowers. It is said to be perfectly hardy, easily propagated by layers and by dividing the plant. The other,



ZAUSCHNERIA CALIFORNICA,

bearing flowers of a bright scarlet hue. The height, in this climate, could hardly equal that which it attains in its native soil and air; yet if planted on a dry soil, with no unusual exposure, it will be found hardy.

Recipes from Mrs. Horace Mann's Cook Book.

Onions—Should be boiled half tender in water, the water be turned off, and then boiled twenty minutes more in hot milk and water. Onions are doubtless very healthy, but not to be eaten in good society.

Spinach—Should be boiled ten or twelve minutes in a muslin bag. Use a good deal of water, because it has a strong, bitter taste.—Dress it with cream or thickened milk, like parsnips or carrots. Slice hard boiled eggs and lay over it.

Greens—When greens, such greens as beet-tops, turnip-tops, mustard-tops, cowslips, dandelions, &c. are sufficiently boiled, they will sink to the bottom of the kettle.

When Spinach or or any green-leaf vegetable has been washed, ready to cook, it is well to shake lightly in a dry cloth, that as much as possible of the moisture on the leaf may be absorbed. This is to prevent the sudden chilling of the water which should be *boiling* when it is put in and kept so till done; it should also contain a small quantity of salt. [Ed.

Rhubarb Tarts.—Peel the rhubarb, cut it into inch pieces, wrap them in a cloth to absorb some of the juice. Stew them gently in their own juice; cover them closely, and when they are softened a little, add sugar to the taste. Do not let them stew long enough to be broken. Bake the pie-crust before you put in the rhubarb. Lemon is the proper flavoring for this plant. These tarts need no upper-crust, but merely a rim and strips laid across tastefully.

Rhubarb Pie.—This may be made more speedily and economically, thus: Having lightly washed, cut and slice the stalks *without removing the skins.* Have ready the under-crust upon which spread the rhubarb in layers with sprinklings of sugar between, which, in all, should be a large cup full to a pie, and more towards the top than the bottom. Press down the apper-crust nicely and wet the edge with cold water to keep in the juice; bake with rather more heat to the bottom than top.—[Ed.

Soft Sugar Gingerbread.—A quart of rich cream, three pounds of flour, two of sugar—white is the best—half a tea-cup of ginger, or the juice and rind of a fresh lemon. This will keep a long time, and when it becomes dry, it can be renewed by being heated to the boiling point in a covered tin, like any other cake. If brown sugar is used, it should be sifted and heated very hot.

Another.—Five and a half cups of flour, two of molasses, two of sweet cream, and two teaspoonfuls of ginger.

FOR THE CHILDREN.

SPRING VOICES.

The big round world is full of tongues,
That speak to great and small;
The oak tree and the rose have voice,
Snow-drops, and violets all.

From every tiny purple bud,
Half opened leaf and flower,
There comes a voice that tells of God,
His goodness and his power.

And quite as plain as spoken words
Is the sweet song they sing,
When little birds come back to tell
The coming of the Spring.

Dear children, learn to look around
And see what God has done;
So shall you find how fair his works,
And love them ev'ry one.

A Candid Mind.

There is nothing sheds so fine a light upon the human mind as candor. It was called whiteness by the ancients, for its purity; and it has always won the esteem due to the most admirable of the virtues. However sought for or practiced, all felt the power and charm of its influenee. The man whose opinions make the deepest mark upon his fellow man, whose influence is the most lasting and efficient, whose friendship is instinctively sought where all others have proved faithless, is not the man of brilliant parts, or flattering tongue, or splendid genius, or commanding power; but he whose lucid candor and ingenuous truth transmit the hearts real feelings pure and without refraction. There are other qualities which are more showy, and other traits that have a higher place in the world's code of honor; but none wear better, or gather less tarnish by use, or claim a deeper homage in that silent reverence which the mind must pay to virtue.

Telling Mother.

A cluster of girls stood about the schoolroom door one afternoon, engaged in a close conversation, when a little girl joined them and asked what they were doing.

"I am telling the girls a secret, Kate, and we will let you know, if you will promise not to tell any one as long as you 'live,'" was the reply.

"I wont tell any one but my mother," replied Kate. "I tell her every thing, for she is my best friend."

"No, not even your mother; no one in the world."

"Well, then, I can't hear it; for what I can't tell my mother is not fit for me to know."

After speaking these words, Kate walked away, slowly, and perhaps sadly, yet with a quiet conscience, while her companions went on with their secret conversation.

Echoes in the Valley of Life.

Hear the story of the child that went forth into the mountain ravine. Whilst the child wandered there, he cried aloud to break the loneliness, and heard a voice which called to him in the same tone. He called again, and, as he thought, the voice again mocked him. Flushed with anger, he rushed to find the boy who had insulted him, but could find none. He then called out to him in anger, and with all abusive epithets—all of which were faithfully returned to him. Choking with rage, the child ran to his mother and complained that a boy in the woods had abused and insulted him with many vile words. But the mother took the child by the hand and said: My child, these names were but the echoes of thine own voice. Whatever thou didst call, was returned to thee from the hill-side. Hadst thou called out pleasant words, pleasant words had returned to thee. Let this be thy lesson through life. The world will be the echo of thine own spirit. Treat thy fellows with unkindness, and they will answer with unkindness; with love, and thou shalt have love. Send forth sunshine from they spirit, and thou shalt never have a clouded day; carry about a vindictive spirit, and even in the flowers shall lurk curses. Thou shalt receive ever what thou givest, and that alone. Always, said the speaker, is that child in the mountain passes; and every man and every woman is that child.

Manufacture of Marbles.

There is something ingenious in the manufacture of these toys. The greater part of them are made of a hard stone, found near Coburg, in Saxony. The stone is first broken with a hammer into small cubical fragments. and about one hundred or one hundred and fifty of them are ground at one time in a mill, somewhat resembling a flour-mill. The lower stone, which remains at rest, has several concentric grooves; the upper stone is of the same diameter as the lower, and is made to revolve by water or other power. Minute streams of water are directed into the furrows of the lower stone. The pressure of the runners on the little pieces, roll them over in all directions, and in one quarter of an hour, the whole of the rough fragments are reduced into nearly accurate spheres.

The flute with which John Bunyan beguiled the tediousness of his captive hours, is now in possession of Mr. Howells, tailor, Gainsborough, England. In appearance it does not look unlike the leg of a stool—out of which it is said that Bunyan, while in prison, manufactured it. When the turnkey, attracted by the sound of music, entered his cell to ascertain, if possible, the cause, of the harmony, the flute was replaced in the stool, and by this means detection was avoided.

EDITOR'S TABLE.

The Editor among the People—Notes of Fourth Lecturing Tour.

The appintment for Stoughton fell in the muddiest season of the whole winter,—so muddy that the streets of that goodly village were quite impassable, their deep, tenacious clay so effectually serving the purpose of a *tineas* corpus upon our person, that we began to fear our release would not come until the return of fair weather. Even horses, it is said, were stuck fast in the mud, and their resolute riders were obliged to dismount and reach the place of our lecture on foot and across the lots! Of course the attendance was not large, and after a few remarks, we adjourned the meeting. The village of Stoughton is pleasant in its general aspect, and is quite a businnss place, its depot, flouring mills, and stores being central to a large area of country. We were kindly entertained by the gentlemanly editor of the "Signal," and promised the people to visit them again under more favorable circumstances.

Black Earth and Mazo Manie were omitted because of the condition of the roads, and will be served at some time in the future.

At Arena our advent was simultaneous with that of the severest snow-storm of the season. Quartered at the home of our excellent friend, Dr. Brisbane, we were escorted to a neighboring school house, where, notwithstanding the storm, a crowded auditory of farmers awaited us. As the name indicates, the locality of Arena is sandy, and not so well adapted to farming as many other portions of the State. Consisting, however, of a broad, beautiful plain surrounded by hills, it reminds one of the grand amphitheatres of classic times, and makes up in beauty of scenery what it lacks in fertility of soil; which in the immediate vicinity, however, is quite productive, particularly for corn.

The day of our departure for Mineral Point was one of the coldest of the season, (the mercury ranged—12°), and the passage was made in a miserable, open sled, so that we were nearly frozen by the fierce prairie winds. The Point is a quaint looking old town, with crooked streets and weather-worn buildings, and is surrounded by any number of superficial diggings, none of which, however, are at present, as we understood, yielding very large results. The smelting furnaces in the vicinity are considerably dilapidated, and every thing suggested, (to us), the propriety of either a change in the occupation of that people, or a deeper penetration into the bowels of the earth.

Darlington is an enterprising young city (?) lying on tne beautiful Peccatonica, some fifteen miles below Mineral Point, on the Railroad, and bids fair to become a place of some importance. The location is rather handsome, and has the advantage of a good water-power. We were cordially welcomed by Fred. Thearle, Esq., Secretary LaFayette county Agricultural Society, and other stranger friends, and made decidedly comfortable at the excellent hotel of ——— ———. Darlington is quite central to the county, and a vigorous effort is being made by its citizens to secure the county buildings.

Wyota was reached the following day on foot, by a route circuitous and hilly. With a portion of the country intervening we were well pleased, however, and shall expect, at some future peregrination, to find it divided up into well-cultivated farms. But of Wyota itself, what shall we say? Distinguished as the seat of operations of the mining company, it is nevertheless,—well, its one of the towns we read of. There are some excellent people living there, however, and we were very generously and cordially entertained at the pleasant home of John Dean, Esq., director of the mining operations of the aforesaid company. All in all, we left the place feeling better than when we entered it, and by no means regret our visit.

The way to Shullsburg, the Peccatonica once crossed, is over a beautiful prairie, and leads the traveler past some well-cultivated farms. The village, in its business portions, resembles Mineral Point, or *any other mining town*, and almost convinces one that he has been somehow translated into some antediluvian time and county. Here we spent the Sabbath, piously retired within the sanctuary of our own heart, while the beautiful meteor of the snow was falling without. On Monday we donned a suit of miner's clothes and visited the most important "shaft" of the locality, descending by a ladder to the depth of 75 feet, and following the "load" to the place of active operations. We had never visited a lead mine of much consequence before, and were delighted at the rich display of mineral, the load being some six feet broad and two feet thick. The brilliancy of the metal, flashing in the lamp light, kindled within us the real

miner's enthusiam, and we would not leave the diggings until we had, with our own hands, removed a lump of 50 to 100 lbs. weight, which was easily done by a few strokes of the pick and sledge. Shullsburg, as viewed from the Court House, the surrounding country included, is a handsome place, and we wonder the people do not burn up the miserable shanties constitu'ing the present villlage, and build a beautiful town upon the crown of the hill. The lecture was delivered in the Court House, and was well attended by lawyers, judges and professional men generally. To Jno. K. Williams, Esq., we are especially indebted for numerous courtesies and a most genuine hospitality. A few more such men would be worth a million to Shullsburg.

Hazle Green, like many other places visited during the winter, was non-get-at-able at the time of our necessity, except with the means of conveyance furnished by nature, and so, leaving our baggage behind, we made our way thither at the rate of about five knots an hour. Stopped at A. A. Townsends for dinner, and were kindly entertained by his household. Mr. T. is one of the largest farmers of the county, and showed, by his splendid orchard, that fruit is not imposible in LaFayette, if its cultivation is judiciously persevered in. The way thence to Benton, was over a pleasant farming country, and presented not a few finely improved farms. At B. we rested for a time at the hospitable hearth of Father Mazziochelli, and completed the remainder of the 16 miles just in time for our appointment; which through the enterprise of friend Broderick had been so thoroughly announced and provided for, that within thirty minutes we found ourself talking to a church-full of intelligent and interested auditors. Stopped at the house of Mr. B., and the following day, after a survey of the village and a visit to the Corn Planter Factory of Sherman & Mason, and the flourishing Academy, we started for

Platteville, which place we reached partly through the kindness of our host, and partly by *our own conveyauce*.. The distance, (as between all the important towns in the mining district) is about fifteen miles, and the prairies over whlch we passed as beautiful as any in Wisconsin. The Platte Mounds loom up in the distance like young mountains, and make the weary traveler feel, though distant, eternally near. The village of P. is so much pleasanter than any of the mining towns, that it shines by contrast, and seems a jewel. Owing to the impossibility of getting a suitable hall, and the supposed discovery that there was no such place as *Charlotte* in existence, we gave notice in the Grant County Herald of an invertion of our appointments for Lancaster and Beetown, and postponed our lecture at P. until our return from

Potosi, where we arrived on the following day, after a wearying walk and an ague fit by the way,—the hardest place we have yet seen in Wisconsin. Its streets are crooked as the "worm of the still," and its inhabitants, at least some of them, are real patrons of that *bona fide* institution, as we legitimately conclude from the ruffianly disturbance of the meeting by a certain Dr. ———, whose sense of propriqiy and self-respect were all lost in his inordinate love of the "critter." We were complimented, however by the presence of many worthy gentlemen of the immediate vicinity, and from several miles distant, and were cordially entertained by William W. Wright, Esq., so well known in that part of the State, and to agriculturists generally, for his zeal on behalf of scientific farming, and the application of mechanics thereto. His fine array of plows, harrows, rakes, drills, mowers, reapers, threshers and mills, with stables full of splendid mules to *man* them, is well worth a visit, and cannot fail to be beneficial to his neighborhood and county.

The following day friend W. conveyed us to Platteville, where we had the pleasure of addressing a brilliant audience in the beautiful chapel of the Platteville Academy. This excellent institution, under the management of J. L. Pickard, Esq., is, perhaps, the best institution of its kind, in the State, and like the one at Milton, is based upon the philanthropic and christian principle of educating the sexes together. We heartily commend it to all parents anxious to educate their sons and daughters thoroughly and rationally.

Lancaster, the county seat of Grant, and situate some 18 miles from P., in a northwesterly direction, is one of the handsomest towns in Wisconsin,—a regular New England village, in the midst of a beautiful country. Of the character of the community, it is only necessary to say, they are chiefly Eastern people liberalized by Western sentiment and Western scenery. Of the many whom we met and whom we shall ever remember, J. C. Cover, Editor of the Grant Co. *Herald*—a man *sui*

generis, able, earnest, honest and independent; J. C. Holloway, Treasurer of Grant Co. Ag. Soc. and our host; J. G. Clark, Clerk of the Court, of whose bounty we partook in the form of apples, wine and honey—three of the real luxuries of material living; Hon. Joe Mills, scholar and philanthropist; the Messrs. Barber, Harrelson, and Hyde, are gentlemen of the true genuine stamp. Our lecture was delivered to a crowded, intellectual, and enthusiastic auditory, and we left Lancaster the following day, delighted with our visit, and saying in our heart, "If we ever leave Madison ———" &c.

Beetown was reached through the aid of Messrs. Holloway, Welch and Dr. Dodge, who conveyed us successively from point to point, after the manner of couriers, with relays of charriots, as in the olden time. The last named gentleman became our escort into the *city* and arranged for the meeting, which it became necessary to hold in a billiard and whiskey saloon! A queer place to be sure, but the people didn't seem to be afraid of an institution of that sort, and gathered in numbers so large that some fifteen or twenty were tierred away upon the billiard table, where, with chin supported upon the palms of their hands they presented a most ludicrous appearance, strikingly reminding us of an array of mud-turtles on some old log, looking out for an assault. The hour having arrived for the lecture to commence, the clerk called the house to order, and for an hour and a quarter, we "plead at the bar" with usual earnestness and with apparent satisfaction to all present—excepting one old fellow who was denied any more grog until we had done speaking. Spent the night with the generous and gentlemanly Dr., and the following morning, after a careful inspection of his splendid, but half-ruined orchard, was by him conveyed to

Patch Grove, where we were welcomed by a full house of the real substantial yeomanry of that fine farming district, and whence, after a most agreeable night's entertainment at the house of E. Patch, Esq., who became our escort thither, we directed our course over a rather hilly country, to our last appointment,

Prairie du Chien, or rather to the Agricultural Convention of Crawford Co., to be held we knew not exactly where. On arriving at P. du C., we learned that the Convention (for the purpose of organizing a Co. Ag. Soc.) was then in session (11 o'clock A. M.) at Eastman, some twenty-two miles up the Mississippi. Accordingly we obtained a double team, and after a break-neck drive over the slipperiest road ever traveled with smooth-shod horses, arrived before the appointed hour, and had the pleasure of addressing as enthusiastic a convention as we ever saw assembled. A large majority of the leading farmers of the county were present and the organization was effected with a zest and harmony prophetic of the highest success. Of the "city of an hundred years" but little need be said. Every body who has seen it must admire the beauty of the locality and the charm of the distant scenery. The broad, gently undulating prairie whereon it is built, the majestic hills in the back ground, the rocky Iowa and Wisconsin bluffs on the west and south, walling in the two mighty floods which there eagerly hasten to their confluence, all conspire to produce a landscape which is rarely surpassed for beauty or grandeur. The city itself is rapidly improving—the lower town particularly,—and vigorous preparations are making for continued progress in spite of the financial revulsion. Our stay of a day and two nights was more than pleasant, and our entertainment at the home of Messrs. Parish & Sawyer, such as we shall ever remember with the highest satisfaction.

Of the general results of our several tours, and the conclusions deduced from an extended series of observations we shall write again.—For the present let it suffice that we feel our labors have not been in vain, and that within the one short year of our residence in Wisconsin, we have been made proud of our adopted State and have formed strong personal attachments for a multitude of her worthy citizens.

WHICH IS THE BEST GRAIN DRILL?

A correspondent wishes to know where he can get the best grain drill. It is a question that we are often asked, and will one of these days be prepared to answer, as it is a matter on which we are experimenting and studying. That drills ought to be more used by our farmers, we have no doubt. But fields must be clean and free from stumps, stones and roots, to admit of their proper working.

NEW ROCHELLE BLACKBERRIES.

We are in receipt of a couple of bushes of this celebrated variety, from our friend J. L. Townsend, of Cambridge, who we understand is cultivating them very successfully. We are much obliged and will give them a fair trial.

OUR EXCHANGES

Will not attribute our unfrequent references to any lack of interest or sympathy, but rather to a thorough engrossment of our attention and energies in the affairs of our own State. It affords us great pleasure now and then to glance at what our neighbors are doing, and we often crave the time and space for words of congratulation and encouragement.

To the 163 *local papers* which belong to our own State, it is quite immpossible to make separate allusion, however brief, notwithstanding many of them are admirably conducted journals, worthy the highest commendation.

Among the host of Agricultural exchanges that favor us with their regular visits, the Country Gentleman, American Agriculturist, Working Farmer and Rural New Yorker, of New York; the New England Farmer, and Plow, Loom and Anvil, Massachusetts; the Ohio Cultivator, Ohio Farmer, and Ohio Valley Farmer; the Farmer and Planter, of South Carolina; the Southern Cultivator, of Georgia; the Tennessee Farmer and Mechanic; Valley Farmer, of Missouri; and Emery's Journal of Agriculture, of Illinois, are always especially welcome.

Of some of our other numerous exchanges, a few words:

The Atlantic Monthly stands unrivaled for classic purity, pith, energy, and genuine courage. Every number is full of the pure nectar, and is worth an arm-full of the skimmed-milk and dish-water periodicals that flood the country, and have a place on the centre-tables of so many of our people. May it find a home in every intelligent family in the Union.—Three dollars for the Atlantic and *Farmer* one year.

PEABODY'S HAUTBOY SEEDLING STRAWBERRIES.

We are indebted to James O'Zanne, Jr., of Somers, Kenosha Co., for a couple of dozen plants of this famous new variety of strawberry. They are set out and growing finely, and the donor has our thanks for the present. We had previously obtained and planted about the same quantity of them, at a much higher price.

Marcellus Finch, Esq., of Fort Atkinson, has our thanks for a barrel of choice potatoes of Hall's June and the Rough Purple Chili varieties. They are very valuable kinds for Wisconsin cultivation, as we know from our own experience.

WEEVILS IMPORTED BY THE PATENT OFFICE.

Having received last fall several dozen packages of foreign wheat, rye and barley for distribution, from the Patent Office, we laid it carefully by until spring, when, on overhauling it for use, we were surprised to find the Weevils scattering freely through the coarse, cloth bags that contained the grain. And on further examination, we found the kernels of all the different kinds of grain before mentioned bored through and through, until little remained but the shell of the berry, and the fellows that had done it were found in abundance. The regular

WHEAT WEEVIL—(*Calandra granaria*).

Snugly ensconced in each berry, had been safely imported over the sea, and then scattered all over the United States at Government expense. How often this thing may have been done before, or how long before they will find a universal lodgment in the granaries of the nation, is a question of by far more importance than many that attract much more attention. That they are already domesticated in our sea ports, to some extent, we are well aware. But any thing that tends to spread them through the country, cannot be too highly deprecated. Insignificant as the little *varmint* appears, commercially he could injure us more than the proudest navy that ever rode the ocean.

That the Department will at once guard against the danger in their subsequent action, cannot be doubted. Whether there is any way that such foreign seed could, before distribution, be scalt, or kiln-dried, in such a way as to kill the egg of the weevil within it, without killing the germ, is more than we know. But if some such precaution cannot be taken, then all such importations should cease.

After a careful microscopic examination, to certainly identify the creature, we committed the entire batch of seed to the flames, deeming that the safest use that could be made of it.

OBITUARY.

Prof. T. B. Hudson, a member of the Faculty of Oberlin College, and one of the editors of the *Ohio Farmer*, was killed on the Cleveland and Toledo Railroad, a short time since, by being run over by a train of cars, near Olmstead. He was regarded as one of the purest and most gifted men in Ohio, and his loss will be deeply lamented by the Agricultural Press of the whole country.

LEGISLATIVE AFFAIRS—Bills Passed and Bills not Passed.

After a session of 125 days, the legislature finally adjourned *sine die* on the 17th of May, leaving its history to the people in the shape of voluminous Journals and Investigation Reports; which, however viewed from party stand-points, are certainly demonstrative of the fact, that, both houses labored assiduously from beginning to end. Of the most important work *done*, we give the following brief summary, without special, at least without partial comment:

1. *The Land Grant Frauds*, and public steals generally, have been raked up and exposed, until the list of detected scoundrels is so large that honest men seem to have dwindled down to a mere handfull, and the record of villanies is likely to have as great a "run" as Uncle Tom's Cabin.

2. *The Statutes have been Revised*, and, (probably), *improved*. This was a work as important as it was tedious.

3. *A law providing for a State Tax*, of $350,000.

4. *An Assessment Law*, adopting the listing system, under oath.

5. *A law to protect the people from corrupt influences* upon legislation!

6. *A law against wild-cat banking.*

7. *Prohibiting the canvass of supplemental returns.*

8. *Extending the time of foreclosure of mortgages.*

9. *Providing protection* for Railroad stockholders and mortgagers.

10. *Exempting sixty days' earnings* of mechanics.

11. Providing for a *more economical letting of the Public Printing.*

12. A stringent and efficient *anti-gambling* law.

13. Providing for *State Comptroller*—designed to serve as a check upon the Secretary.

14. *For protection of fruits and fruit trees.*

15. Amending the law for the encouragement of County Agricultural Societies.

These are only a moiety of the bills passed, as may be concluded from the fact that over 1,200 bills of various descriptions were introduced.

Of the bills in which we were especially interested, by virtue of our profession and mission, but which did *not* pass, we enumerate three:

1. For the establishment of an *Agricultural School.*

2. *For the encouragement of Sheep Husbandry* by a tax upon dogs and a bounty on wolves—a very important measure, but ridiculed out of hearing in the Senate. There is no State in the Union better adapted to sheep-raising, and yet without due protection, success is impossible. Nevertheless, this important interest must wait until the farmers conclude to send men to the legislature who will make laws for the good of the people, rather than for the advantage of land-sharks and gougers.

3. *For the re-organization of the State Uniuersity.* This was one of the most important measures of the session, and would have succeeded but for the extravagance of a few friends and *pseudo* friends of the Institution, who would not consent that any thing should be done on its behalf, until it had first been thoroughly blotted out of existence. In many of our lecures during the winter, we advocated, in general terms, the re-organization, upon such a basis as would provide for the better industrial and professional education of the youth of the State, and at the same time lift the University above the local jealousies and too general prejudices which are its present bane. We were not willing, however, that injustice should be done to the Board of Regents, and hence were driven on the eve of adjournment, to the extremity of laboring for the defeat of our own measure. The bill substantially passed both Houses, and ere this had been a law, but for certain Senate amendments, in which the Assembly very properly refused to concur.

It is our opinion, however, that the Board will consider themselves authorized by the expressed will of the State to commence and perfect the work of a re-organization, just as faithfully as if a law of the State required it. We shall see.

THE NATIONAL CONVENTION OF AGRCULTURAL EDITORS

Will probably be deferred until next season; meantime as many of the brethren as can make it convenient are urged to be present at the next meeting of the American Pomological Society, at New York, Sept. 14th. To this arrangement we make no objection, unless the United States Agricultural Society intends to hold a Fair this year; in which event we prefer that occasion for the preliminary organization of the proposed Editorial Association, for the reason that a larger number of Editors would be likely to attend.

THE NEXT STATE FAIR AND PREMIUM LIST.

We invite the attention of our readers to the State Fair Premium List, and would apologize for the space it occupies. We deem it of so much general and special interest to the great mass of the people, as to fully warrant its publication in the Farmer, especially as it is so sure to be preserved, ready for all subsequent reference.

It will be seen, by reference to it, that an equally liberal range of premiums as hitherto, is still offered, notwithstanding the hardness of the times. It is the fixed intention of the Society to, in no way, fall behind the past, but in many respects, exceed it.

In fixing upon Madison as a location, the committee having the subject in charge aimed to reach the western and north-western portions of the State, as well as the eastern and central; and it is believed the location will prove an eminently successful one, in all respects. The true object in locating a Fair should be to secure the largest attendance of those *who will be benefitted*, instead of those who will be merely interested for curiosity or amusement. Hence the place where the largest crowd can be got together, is not always the greatest field of practical usefulness. Another year, the location will probably go northward, to some point that will best concentrate that great and rapidly developing region. The interior towns are yet all too small, and too inadequately connected with Railroads, to accommodate these great gatherings, fully, on such occasions. But these impediments are rapidly passing away, and hence are borne, during their existence, with a degree of indifference and even good feeling, that would surprise any body but a western pioneer.

Iowa holds her Fair the present year, in a town, (Oskaloosa), a long way from any Railroad whatever; and Illinois at a town so small as to have no newspaper permanently published in it, (and that, by the way, would be a very small town in Wisconsin.) With such precedents, we think our location may be justified. In a word, we think more; and that is, that those of the people who attend the Fair at Madison the coming fall, notwithstanding a certain springling of *bug aboo stories* occasionally circulated through certain interested and biased channels, will find *about* as much generosity, hospitality, civility and pains-taking for their comfort; and even about as much morality and good behavior, as they are accustomed to see elsewhere, however much it may surprise them. Such are our predictions: let the event prove or disprove them.

It is to be hoped, that every enterprising person, (of either sex), who feels a just and proper pride in the great show and enterprise of the State, will at once give attention to the premium list, and determine what they will produce or fabricate for the occasion. Recollect that it is the duty of all enterprising citizens who properly can, to contribute something, however small. Let the idea be early embraced and acted upon—that that is the true way to make a good and successful show.

Hurry in your entry lists for field crops, as we wish to publish them in the next number.

There are some errors of names in the premium list which will be corrected in the pamphlet edition, a copy of which will be sent to all who wish it. P.

MARKETS—Wool, Grain, &c.

As shearing time is just at hand, those interested will be anxious to know the prospect of prices; and, so far as we can learn, they are not remarkably flattering, nor very well settled, as yet, for this year's clip. We think that prices will run from 25 to 35 cents, according to quality, on wool.

Wheat gets low and lower; when or where it will stop, we cannot even guess. Lake freights are also low on wheat.

All other produce is too low to promise any thing for the West at present.

OHIO ENDORSEMENT OF LANDLORD McDONALD, Late of the Hyatt House, Janesville.

In a recent reference to the preparations at Sandusky, for the next Ohio State Fair, the Editor of the Ohio Cultivator congratulates the public on the fact that the Townsend House is kept by R. D. McDonald. Now the said McDonald may answer a very good purpose in the Buckeye State, but at the Wisconsin State Fair last fall, his exorbitant charges and shabby treatment of guests, proved, next to the continued rain, the greatest drawback of the occasion. The revivals of the past winter may have improved him, somewhat, but otherwise we advise those who visit the Fair, and do not care to be swindled out of baggage and breeches pocket, to seek other quarters.

DRILLING WELLS.

L. Brown, Esq., Patch Grove, Grant Co., wishes to know where he can get machinery for drilling wells. Who can tell him?

FAIRS OF 1858.

As yet we are able to glean but scattering returns from our exchanges as to the times and places when and where the Annual Fairs are to be held—either State or county. The United States Society, so far as we know, is yet mum on the subject, which, to say the least, is singular, considering the lateness of the season. Perhaps it awaits the settlement of the Kansas matter, *and the, perchance, consequent dissolution of the Union*, before determining.

The States, so far as noticed are as follows:

New York, at Syracuse, on the 5th, 6th, 7th and 8th of October.

Ohio, Sandusky, time not known.

Illinois, Centralia, 3d week in September.

Iowa, Oskaloosa, Sept. 28th, 29th, 30th and 1st of October.

St. Louis, St. Louis, 2d week in September.

North Carolina, Raleigh, 20th, 21st, 22d and 23d of October.

Indiana, Indianapolis, Ooctober, 5th, 6th, 7th and 8th.

Kentucky, Louisville, October 5th, 6th 7th and 8th.

South Carolina, Columbia, November 9th, 10th, 11th and 12th.

Of our County Societies, we have only heard, as yet, from Crawford. Their Fair is appointed at Seneca on the 12th and 13th of October.

We acknowledge the receipt from this Society, of honorary membership tickets, for which we are duly grateful. Should be happy to be under the same agreeable obligations to every Society in the State.

THE WISCONSIN EDITORIAL CONVENTION.

Again we call attention to the second annual meetting of the Editors' and Publishers' Association, which will be held on Wednesday, the 16th, at the Capitol in Madison. The objects of the Association are worthy and important, and it is hoped that at least one member of each firm in the State may come prepared to remain until the close. Editorial brethren of other States are cordially invited to honorary seats with the Association.

SORREL IN CLOVER SEED.

A friend inquires how he can kill out sorrel that has got a start upon his prairie, and came by way of clover seed, brought in from some of the neighboring Eeastern States.

There is no safety in buying seed that one does not know to be clean—may as well trust any other stranger with your money. Probably the only way to get clear of the sorrel is to plow it under when in growth, before seeding. Too strict an eye cannot be kept on these evils in this new country,—especially as it is so much easier nipping them in the bud, than to subdue them after they are spread all over our fertile soil.

PLASTER PARIS,

We are in receipt of several barrels of this article from the celebrated mills of Hovey & Co., Grand Rapids, Mich., which we propose trying upon our different soils and crops.

We have no doubt but it will prove highly useful in many cases, and much more than pay cost.

S. R. Fox is agent for them in this city, and will be ready to furnish any that may be wanted.

Hovey & Co. are very large manufactures of plaster, stucco and building marble. Fine specimens of the latter may be seen at our office. The amount of these articles that will soon be used in our State, cannot be otherwise than large, and none are better situated to supply them cheap than the above firm.

LITERARY NOTICES.

LIFE THOUGHTS, gathered from the extemporaneous discourses of Henry Ward Beecher. By one of his congregation. Published by Phillips, Sampson & Co. Price, $1.

Emmerson has said, "The true preacher can be known by this, that he deals out to his people his life,—life passed through the fire of thought." According to this test, Henry Ward Beecher is one of the few true preachers of America. Philosophic, earnest, bold and philanthropic, he always strikes at the root of things, and preaches from out the depths of his own soul with a direct view to better and enoble the lives of his hearers. This book is a collection of such thoughts as bubbled up from their fountain in the moments of his truest inspiration. Buy it and read. For sale by Bliss, Eberhard & Festner, Madison.

NEW ADVERTISEMENTS.

See notice of the removal of the Horticulturist to New York, and its purchase by C. M. Saxton, the widely known publisher of Agricultural Books. That he will sustain the well-established and enviable reputation of that most popular and interesting periodical, we have no doubt. It is one of the gems of American Horticultural Literature.

Premium Reaper.—See card of S. L. Sheldon, advertising this popular machine, and several others. Mr. S. is so well known as a Reaper dealer through the State, as well as the machines he deals in, that neither need any special endorsement.

Turnip Seed, &c.—See card of J. M. Thorburn & Co., old and reliable dealers.

Suffolk Pigs.—See card of A. G. Hanford, advertising these little gents. Nice ones, no doubt.

Let there be no secrets in Medicine, or rather, no pretended secrets. The Medical faculty publish, as soon as made, all their discoveries, and almost all that is known, of real value for the cure of disease, has been discovered by them. *Dr. Ayer* takes the honorable, honest course, and right because it is honest. He goes to work and invents the best remedy that medical skill can devise for the cure of certain complaints; then publishes what it is and maintains his monopoly of it solely by making it cheaper, better, and more perfect than anybody else can. If the people would exact this of all who offer medicines, they would have much less treacle and trash to swallow.—*New Or-Organ.*

REMOVAL TO NEW YORK

OF THE

THE HORTICULTURIST.

A Long connection with the Public as a publisher, and especially of Agricultural and Horticultural works, as well as an innate and fostered love of these topics, has induced me to become the

PROPRIETOR OF THE HORTICULTURIST,

a journal which has long maintained a prominent place in the homes of a large circle of persons throughout the Union, and British Provinces. It is my belief that by devoting almost exclusive attention to this publication, its influenc for good may be greatly extended.

The interest in Horticulture having greatly increased during the publication of this periodical under the successive editorial management of A. J. DOWNING, B MUNN, P. BARRY, AND ITS PRESENT EDITOR, J. JAY SMITH, we hope that it will now enter upon an enlarged sphere of usefulness.

TERMS.

TWO DOLLARS a-year, payable in advance.

The Edition, with colored plates, FIVE DOLLARS.

Pledging every effort in my power to make THE HORTICULTURIST worthy the confidence and patronage of the public, SUBSCRIPTIONS ARE SOLICITED.

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25 Pure Bred Short Horned Cattle, 8 Horses, 25 Southdown and Cotswold Sheep, and 40 Suffolk Pigs.

THE above Stock will be sold at AUC- TION, on WEDNESDAY, JUNE 16th, at 12 o'clock, at the farm of the subscribers. Catalogues furnished on application.

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Elizabeth, New Jersey, 14 miles from the city of New York by New Jersey R. R., trains running every hour. x v 2

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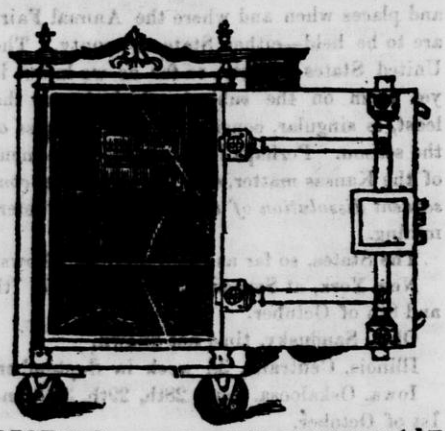
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Waukesha, Wis. x vi 3

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NOT to be surpassed in any respect by any Safe Manufactory in the country. We have just completed our arrangements for manufacturing

THE BADGER STATE SAFES,

Upon a larger scale than we have ever done heretofore, by the introduction of new machinery, and by increasing our manufacturing facilities.

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Our SAFES, as is well known, are more substantially constructed, and more handsomely finished than any other Safe manufactured in America, and consequently it has cost us more in getting up our Safes than any other manufacturing establishment in the country. But, notwithstanding this, we are enabled to offer our Safes to the public at

AS LOW PRICES

As any other Safes manufactured. The following are the former and present prices of some of our Safes:—

No. 1	Badger Safe,	present price,	$135,	former	$150
" 1½	"	"	"	"	160,	"	185
" 2	"	"	"	"	200,	"	225
" 3	"	"	"	"	275,	"	300

and so on.

The severe tests which the Badger State Safe has stood, both in this city and elsewhere, establishes its proof against fire and wate. for the protection of valuables.

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Mil. and Miss. Railroad.

1858 SUMMER ARRANGEMENT. 1858

ON and after Monday, May 17, 1858, and until further notice. Passenger Trains will run as follows DAILY [except Sundays.]

GOING WESTWARD.

LEAVE MILWAUKEE AT—

11.30 A. M.—Mail and Day Express.

5.45 P. P.—Night Express.

6.00 A. M.—Janesville accommodation.

LEAVE MADISON AT—

4.31 P. M. and 12.12 A. M.

GOING EASTWARD.

Leave Prairie du Chien	5.00 A. M.	5.35 P. M.	
" Madison	9.36 "	10.06 "	
" Janesville	11.30 "	11.59 "	3.00 P. M.
Arrive at Milwaukee	2.40 P. M.	8.08 A. M.	8.30 "

These Trains carry the

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WISCONSIN FARMER,

AND

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D. J. POWERS AND PROF. J. W. HOYT, Editors.

VEGETABLE ANATOMY AND PHYSIOLOGY.



THE PLANT.—ORGANISMS.—NO. THREE.

One essential portion of the plant yet remains to be examined,—an organism more highly interesting than either of those hitherto considered, not only because of the important office it performs, but also for the charm it adds to the landscape, otherwise so stiff and bald.

The *leaf*—who has not watched its gradual unfolding, from the tender bud in early spring, until, in the full joy of a summer sun, it spread its delicate palm, with myriads of tiny workshops, for the many-handed architect of the vegetable world! If there were no leaf upon tree, or shrub, or grass, then there were no beauty of the fields,—no gracefully waving foliage to animate the landscape and delight the eye, and fewer shifting shadows, spread out like the paternal hand of the Infinite for the comfort and pleasure of man.

As to *color*, in the vernal season all leaves are green, though with almost infinite variety of tint and shade; while countless hues, fantastic and beautiful, are painted thereon by the chemistry of autumn.

The *general form* is as various as the species are numerous—the special variations as incomputable as the number of individual leaves which clothe the world's great forests; an approximate idea of which may be gained from the fact, that seven millions have been counted on a single tree.

ORIGIN OF LEAVES AND STYLE OF ARRANGEMENT.

Every leaf was once part of a bud; and every bud has its origin in a concentration of the vitalizing force at that particular point of the stem whence it springs; in other words, each bud is an outcrop of vitality. Just why this force should point at that particular place, and no other, except according to a definite plan, we cannot tell you,—it is quite as inexplicable as that the ears of a man should grow one on each side of his head, and never on the top. As found in the bud, each embryo leaf has its special place, and is nicely tucked away in the manner assigned by the laws of the particular plant of which it is a part. *Vernation* is the term applied to the manner in whch they are folded up. Some are rolled inward, some outward; while others are rolled up from one side, or folded like a fan.

The *arrangement* in the bud is the same as afterward upon the stem. Some are scattered indiscriminately, some disposed *alternately*, i. e., with one leaf above another on opposite sides, and others exactly opposite; while in yet other plants they are arranged in a circle about the node or joint (whorled), or in *tufts*, or crowded whorls. Each of these methods has its special systems, some of them—particularly the alternate—very many; which several modes are distinguished in botanical works

by terms indicative of the number of leaves included within one complete spiral curve of the stem. To illustrate: Examine a cherry or poplar sprout and you will find a beautiful regularity,—No. 2, proceeding upwards, instead of being exactly opposite, as well as higher up on the stem, occurs but two-fifths of the way around; the next one two-fifths further, and so on until you arrive at No. 4, which is six-fifths of the way around, or a little *beyond* the vertical line drawn through the first. There will occur another, however, directly over No. 1, but in order to reach it, you must pass entirely around the stem again. This second leaf occurring in a right line over the first, is the sixth in order; so that five leaves belong to one complete spiral. The arrangement of leaves, therefore, upon either of the above plants is called *pentastichous*, or *five-ranked*. Now it is not a little remarkable that the same figure which expresses the number of complete circuits before another leaf occurs directly over the first, is in all cases identical with that which indicates, as the numerator of the fraction, the distance of the leaves apart as compared with the circumference of the stem. Thus, of the poplar, as said before, the leaves are two-fifths of the way, 'round apart, and *two* spirals or circuits are necessary to find the next one immediately over the first,—it is therefore called the *two-fifths* arrangement, expressed thus: 2-5. And it is yet more remarkable that these systems, as compared with each other, observe an unvarying law. For example, the next more *simple* arrangement is not the 1-5, but the 1-3; the next the 1-2, which is the simplest possible, the second leaf occurring just half way around, or directly opposite. Proceeding upwards, the next most *complex* system is the 3-8, the next the 5-13; from which it appears that each secondary system of arrangement is numerically expressed by adding together the two previous numerators, for a new numerator, and the two preceding denominators for a new denominator,—thus unfolding a law of distances which astronomers have shown was observed in the relation of the orbital arrangements of the planetary worlds, and beautifully demonstating the sublime truth that there is nothing without its law,—that the same law was established for the plantlet and the solar system,—and that the author of the vegetable world is also the Architect of the boundless universe!

Again, leaves are named with reference to the portion of the plant whence they spring; being styled *radical*, *cauline* or *ramial*, according as they grow from *root*, *stem*, or *branch*.

ANATOMY OF THE LEAF.

Considered in a general way with reference to its organs, the leaf consists of a *blade*, *a petiole*, and *two stipules*.

1. *Of the Blade.—Its forms*, as said before, are innumerable; nevertheless there appears to be a certain style or type for each particular species. The thickness of most leaves is very small compared with their length and breadth; some, however, as those of the several varieties of cactus, are thick and clumsy, while of others, e. g., the pine, they are almost round and needle-like.

The most important distinguishing features are the general contour and style of edging,—some being long and narrow, some broader at the base, others broader at the apex; some lobed, scolloped, or notched, others smooth-edged, &c., &c.

More specially considered, the blade consists of woody *ribs* or *veins*, which are the framework, and a soft cellular portion, (called parenchyma), which may be viewed as an extension or protrusion of the green portion of the bark of the stem.

The veins comprise a main trunk, called the *mid-rib* and branches, which are often so interwoven as to make a perfect net-work of communication with even the minutest portions of the leaf.

The parenchyma, or cellular portion of the plant is also highly interesting as consisting of several layers or strata, each with its appropriate organs and office. Beginning with the outside, we first observe the skin covering or coverings,—of which there are sometimes as many as three—made up of minute cells, more or less smooth and compact, according to the intended exposure to the sun, nature of the plant, and the climate where it grows; just as the skins and hair-coatings of animals differ and are adapted to the climate where they are native. Within this outside protection, there are discoverable two layers of cells, somewhat different in their offices, and differently arranged. The layer which composes the under portion of the leaf is made of cells, loosely and irregularly arranged; while the upper stratum is condensed by a close and vertical packing of its oblong or cylinder-like cells for the protection of the cell laboratories beneath, against the too rapid and intense action of the

chemical rays of the sun. This theory of its organization is confirmed by the fact that those plants which are destined to be most exposed are best protected. The microscope likewise reveals a multitude of little open pores, called *stomata*, or *mouths*, corresponding to the pores of the skin, and so numerous that the leaves of some plants include as many as 150,000 within a single square inch.

2. *Of the Petiole*, or *Leaf-Stock*.—This is that support of the leaf, variable in length and form, which attaches it to the stem, and which, by prolongation, becomes the mid-rib before referred to. In most cases the petiole is nearly round, but in many of the grasses and other plants it is flat, clasping the stem. Indeed, in some species the petiole is so broad and curved as to serve the purpose of holding water, pitcher-like, for the gradual use of the plant.

3. *The Stipules* are two little rudimentary leaves, situated at the base of the leaf proper, and generally upon the petiole, like which they are often entirely wanting, or so seemingly non-essential as to fall off soon after their first appearance.

PHYSIOLOGICAL FUNCTIONS OF THE LEAF.

We are now prepared to consider the *office* of the leaf; to determine which we may avail ourselves of the results of experiments, and of what we have learned of its structure.

In the first place it is evident that the leaf is a *food-taking* organ, for the reason that the roots and stems have been found incompetent to the task of furnishing all the food required; that the source whence they derive their supplies cannot furnish certain needed elements in sufficient quantity; that the medium in which the leaf exists does contain those supplies, and is actually exhausted of them by it, —that it has organs, (the stomata, or mouths), adapted to the work of absorption; and finally, because if the leaves are all stripped off, the plant soon withers and starves to death.

In the second place, the leaf performs the office of *digestion*—is the stomach of the plant, as well as the mouth. The following facts are demonstrative of this, to wit.: 1. It is well-established that the roots and stems are not supplied with the necessary organs, but consist chiefly of tubes or vessels for the conveyance to the leaf of such food as they are able to furnish, e. g., water and the mineral elements. 2. The leaf is the only remaining portion of the plant, and does contain appropriate organs. 3. The plant only grows while the leaf is living. 4. Experiments have shown that the leaf actually absorbes compound gaseous substances, appropriates such of their elements as are essential to growth and rejects the others; thus proving that it has the power, through some agency, of effecting regular chemical decompositions.

Experiment.—Immerse the twig of a plant bearing a leaf, in a vessel containing carbonic acid in solution: the gas will be decomposed, and fine, bead-like bubbles will collect upon the surface. These are oxygen which the leaf rejected, while it retained the carbon.

Thirdly, the leaf is also an organ of *exhalation*, or *exudation*. In order to the entrance of the mineral substances which help to make up the plant, through the minute circulatory vessels thereof, they require to be dissolved in large quantities of water. But this large quantity must not be retained in the sap vessels, else there would be no room for a new and perpetual influx of the aqueous current, laden with fresh supplies of inorganic materials. Some plan must therefore be contrived by which the plant may rid itself of this surplus of water. And here we discover another beautiful office of those innumerable little mouths before referred to: each one, with its cell or cluster of cells at the base, is an evaporating pan for the boiling down, as it were, of the sap. Indeed the quantity of water which finds its way into the atmosphere by means of the exhalants, is enormous—several ounces a day from one large leaf, as of the cabbage or sun-flower.

But inasmuch as a very rapid evaporation in dry weather, when there is but little water in the soil, must cause the plant to droop and wither, it is evident that there should be some safe-guard against an undue exudation. And here, again we cannot but remark how wise the skill of Him who so amply provided the delicate leaf with ingenious contrivances for self-preservation: In the first place, more than nine-tenths of the stomata are on the under surface of the leaf, where they are less exposed to the direct action of the sun, and are further potected by the compact layer of vertical cells of the upper surface; and, secondly, they are so constructed as to collapse, or close up in hot dry weather, and to relax, to their full capacity when the supply of water is abundant; thereby avoiding death by shrivelling, on the one hand, or by drowning on the other. To prove the importance of

the precaution observed in arranging the stomata on the under side of the leaf, you have but to keep it for a time inverted in the sun, or observe the fact that leaves suspended vertically, i. e., with both sides equally exposed, present no difference in the organization of the two sides, and that such as were designed to rest upon water, have nearly all their stomata on the *upper* surface.

Fourthly, and finally, the leaf is *essential to the free circulation of the sap*,—as must appear from a consideration of the exhaustive process of evaporation,—which is simply pumping the water out of the sap-vessels as fast as it enters,—from the fact that the circulation begins with the development of the leaf, and terminates with its existence,—and from further evidences which will be considered in our next article, under the head of "Forces."

DURATION OF THE LEAF AND CAUSES OF ITS FALL.

The leaves of some plants fulfill their mission in one season and die at its close. These are called deciduous, (from the Latin *deciduus*, falling.) Others continue for a series of years, and are commonly supposed to be perennial. These are styled evergreens, and are illustrated by the pine, *arbor vitæ*, &c.

Why one class of trees should be furnished with deciduous leaves, and another with those which remain for years, is an interesting question for vegetable physiologists. That evergreens *do* survive the cold of winter, may be explained upon the ground of their containing an *oily* sap; which though it may thicken by cold, is not easily frozen; while the deciduous leaf, on the other hand, contains a *watery* sap, which readily crystalizes by even the frosts of autumn—should they remain so long—and bursts the tender vessels, thus putting an end to further flow, and causing inevitable death—death by starvation; just as in the animal, life must soon become extinct after a rupture of blood-vessels and stomach. But the end—the *final cause*—of this provision is not so apparent as the fact and the philosophy of the instrumentality employed.

The crystalization of the sap is not, however, the sole cause of the falling of deciduous leaves, as is proved by the fact that evergreen leaves *do* fall after a time, and that many deciduous leaves fall before the coming of frost in the autumn. We must, therefore, look for yet another cause of the death of the leaf. Nor shall we look in vain.

In treating of the *digestive office* of the leaf, we stated, and now repeat, that the inorganic elements required for the upbuilding of the plant, were furnished in the sap, but so largely diluted, that a concentration by evaporation was necessary in order to its proper consistence for assimilation; and, that the circulation was almost wholly arrested in the deciduous plant during the winter. When, therefore, the vital forces are roused in the spring, and the leaf begins its growth under the influence of stimulating sunbeams and vernal showers, the quantity of inorganic matter which accumulates must be very considerable; and we should not wonder, if, after a time, by gradual deposit within the sap vessels, they should almost wholly obstruct the further flow,—just as the spout of the housewife's tea-kettle becomes, in process of time, so incrusted with carbonate of lime as to require cleaning. Now this is just exactly what does occur; and the wisdom of the Infinite is beautifully apparent in the provision made, not for the cleansing out of the incrusted sap-vessels of the leaf, but for skillfully amputating the leaf, and preparing for a young and more vigorous successor.

To the unobserving, it may not have occurred that leaves which have been *shed* in the fall do not appear to have been rotted or twisted off, but present a smooth surface at the extremity of the petiole, and a yet smoother scar at the place upon the stem whence they were removed. Such is the fact, however, and a careful inspection of the base of the petiole will detect a delicate transverse line, prophetic of its future excision; which really begins sometimes before it is apparent, and proceeds by a gradual disintegration, or "solution of continuity," as surgeons would say, which nicely heals over the wound on the surface next the stem, as the process advances. When the petiole has been nearly severed in this manner, the slightest wind will complete the work of separation,—unless, as is true of the oak, the beech, &c., the stem of the leaf be very tough and wiry; in which case it will probably remain until its successor *pushes it off* to make way for itself. It is in this manner that the leaves of evergreens are removed—there being this difference, however, that the evergreen leaves do not all disappear in one season, but scatteringly, and from near the ground first. Hence the occasional brown leaves on the cedar and pine are not evidence of disease of the tree, but inevitable results of

a wisely provided succession,—a succession which looks not only to a healthy growth of the plant, but likewise to an adornment of the landscape for the enjoyment of man, who, conscious of his own material dissolution, loves often to comfort himself with these beautiful emblems of his soul's immortality.

H.

Correspondence of the Farmer.

Inverted Posts.

MESSRS. EDITORS:—In the May number of the *Farmer* there appears one of those singular productions—the fruit of imagination—that are sure as the Lake tides, (which I am informed, do occur), to find their way into the publications of the day. "Ashfield Farmer" informs us that he was induced to try the plan of inverted posts and stakes, and that he soon had occasion to inquire why the top end of stakes should rot so much quicker than the butt. There was no difference in favor of or against inverted posts. What made the difference in the stakes and none in the posts?

Now whatever the conclusions deduced by the "Ashfield Farmer" from his experience and observations, my own conclusions, after the careful observations of a long life-time, are decidedly *in favor of inverted* posts. Let me mention one fact: In 1802, my father, a resident of Taunton, Mass., having occasion to set a pair of bar-posts, cut a swamp white oak of proper size to split, and set one of the halves in the ground, upright, as it grew, and the other inverted. The result was as follows: Some thirty years, ago I helped my father replace the upright one with a chestnut post; which, also, some three years ago when I visited Taunton, had given place to one of cedar; while the inverted post was apparently as sound as forty years ago.

The same has also been observed of wood stacked up to season: the inverted will be well-seasoned, while the other is heavy and inclined to rot. I have examined many stakes in Iowa and Wisconsin, and have always found the inverted stakes in the soundest condition, and believe ninety-nine out of a hundred reasonable men, who will take the trouble to examine such as have been set five years or more, will become converts to the inverted system, the "Ashfield Farmer" to the contrary notwithstanding. So thinks

ZINA ROUND.

NEVADA, WIS., May 1858.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER VII.

AGRICULTURAL FAIRS—THEIR TRUE MISSION AND USEFULNESS—BY WHOM SHOULD THEY BE PATRONIZED?—AND WHY?

Among the various interesting subjects of the day that are presenting themselves for consideration, it strikes us that something may be thought and said upon the one above referred to, that will not be wholly useless, except with very wise people, who may, perchance, regard the subject as beneath their notice, because not partaking very largely of the *aristocratic element*; or because, perhaps, they have already learned it all, and consider that they are constantly forgetting more than others can tell them. But no matter for these too highly-favored classes; we shall not spend time with them, but address ourselves to the great masses, who, after all, constitute nearly the whole people.

The mission of Agricultural Fairs is to enlighten, liberalize, and advance the people, intellectually, morally and pecuniarily; and the great question and object of those who have the direction and management of them should be to so shape their movements and policy, as to best subserve and accomplish these great primary ends. This can be well done only by the exercise of ample sagacity and good judgment, a good degree of unselfish honesty, patience, perseverance, and good nature.

When the principal and responsible offices of agricultural societies are filled with incompetent or careless and neglectful incumbents, nothing can be expected in the management of their affairs, but delays, disappointments and miscarriages, unsatisfactory and unprofitable to all concerned. Or, suppose them filled by competent, but unscrupulous men; then the matter becomes no better, and perhaps worse. But be officers what they may, who conduct a fair, unless they abound in patience, perseverance, and more than all in *good nature*, then they are unfit for their places, and will fail to carry out the objects and ends of the occasion as fully, harmoniously, and happily as could be desired.

In locating Fairs and Fair Grounds, great care should be taken to as fully accommodate the community in question as possible, either at natural or artificial centres; and by as near a proximity as may be to the town or local-

ity where a fair is held. Grounds should be fitted with express reference to the convenience and comfort of both man and beast, and always in as good taste as the circumstances of the society will admit. A little good taste about a fair ground, adds greatly to the effect and cheerfulness of the occasion, whilst rough shanties, made up of odds and ends by bunglers, (perhaps after the fair has begun), have just the reverse effect, and reflect their hideous shadow upon all around.

Premium lists should not, in all cases, be copied from some old stereotyped standard of a hundred years; but in all their prominent features, reference should be had to circumstances and localities, and to specific objects desirable to accomplish. New interests that are but partially understood require more encouragement than those that are already well established; and the sterling and useful should always take precedence of the fanciful and merely amusing. For instance, a horse for all work, intrinsically is more important than a racer, however swift; a reaper than an automaton chess player, or a loaf of A No. 1 bread than an elaborate specimen of worsted work, or a vase of flowers.

Much of the success and satisfaction at fairs depends upon the good sense and sagacity of the judges in properly discriminating and awarding premiums. They should be selected with great care, reference being had to the especial fitness of each. And those that are selected for such positions should consider it a compliment to their honesty and capacity, and should have as much pride in discharging their duties well, as they would if they were a county or circuit judge, never allowing any side consideration to bias or warp their action. Such is and should be a proper judge at a fair.

Amusements, of what kind and degree, are appropriate and proper at fairs, is quite an open question, and one on which there is no small amount of conflicting opinion. Some would wholly exclude trials of speed on horses, because, forsooth, it partakes of jockeyship; and others of lady equestrianship, because of its *masculinity*. Now those who philosophize, must recollect that as far back as history teaches, it has been the universal practice to close all exhibitions and games with a comedy of some sort. Even a numerous class of our own citizens, of a certain faith, close not only their marriages, but their funerals, by a *good wake*. Under such circumstances, and clear necessities of our natures, then, what are we to expect? The comedy must be had, of course, and undoubtedly will be, to the end of time.

Then the only question is, what shall it be? Can anything be devised combining greater utility with amusement, than *properly conducted* trials of speed, or of lady equestrianship? If there is any harm in either, it must certainly be in their management, and not necessarily in the thing itself. Like all comedies, they should, of course come at the conclusion, permitting all who do not enjoy it to leave if they choose, at the close of the regular play. All must recollect that communities are made up of great varieties of tastes; no one, perhaps, perfect, but many that are quite dissimilar, equally harmless and innocuous in fact, and all working together for good and to make up a world. Liberality of views and feelings, is, beyond doubt, a high Christian virtue.

So much for the consideration of those who are entrusted with the management of fairs: now a few words for those who attend them, both exhibitors and spectators. What proportion of community realize that a fair would be only a dull, crowded mass of people, if no one brought any thing to exhibit? and further, that the more who do their duty in this respect, the greater will be the exhibition—the interest and the pleasure. All who have any thing worthy of exhibition, and can reasonably attend to it, should exhibit, not merely for their own pride or profit, but for the gratification and benefit of others. Individual exhibitions are what make up a fair, as drops make up the ocean. Let all remember this, and, withal, that it is their duty, as good citizens, to do their share. It does not suffice, when you are at a fair, to tell how much you could beat this or that with something you have at home, if you had only brought it. We have often heard this remark made upon fair grounds, and it always struck us as the acknowledgment of a fault that was no credit to the one who made it.

Those exhibiting articles should not always feel chagrined or sour if they do not get a premium, or even a favorable notice; and especially they should be slow to conclude that it was the result of unfairness or partiality, on the part of the judges. This last, by the way is far too common a conclusion, on the part of those who do not win, and is to say the least a very discreditible one in the great

majority of cases, as it implies no less than that the judges are dishonest and mean, and that they will sell themselves without adequate cause or consideration. It is certainly putting a low estimate upon our fellow men, and implies a very bad community, or a very foolhardy conclusion on the part of those who deem themselves defrauded. That incompetent and unsuitable men are sometimes appointed, we have no doubt; but that they are usually as good and honest men and women as can, under ordinary circumstances, be selected, from community, we have as little doubt. There is a certain class of people that are always being cheated, defrauded, humbugged and badly abused, wherever they are, or whatever they do. Unfortunately, specimens of this class sometimes attend fairs, and usually contrive to make every body uncomfortable around them; they are, to say the least, a great nuisance, but have to be borne with patience, and disposed of as best they can.

Those who exhibit should not grumble and complain because, perchance, some body else has got a better position than themselves. All cannot have the same locality, nor the same exact advantages; but such differences are often more imaginary than real, and when coupled with good nature, are usually easily got along with.

A word to those who attend fairs as spectators. The great mass of the people go to see and learn, and for a holiday. When the weather is fine, and all the circumstances are favorable, what can be more agreeable to those who are not too nice, or too much afraid of being jostled about in a crowd, than the lively, bustling, stirring incidents and novelties of a fair? or what can be more interesting to an intelligent, observant mind, than to contemplate the various products of taste, art, and ingenuity that are usually so profusely displayed and contrasted on such occasions? No ordinary school of art contains one half as much for study and contemplation. Here are gathered the products of agriculture in all their luscious abundance and variety, animal and vegetable. Those who would study and understand the best breeds of stock, and varieties of products, where will they find a better opportunity? or those who would get a glimpse of the mechanical world, in it advanced stage of progress, where will they find a more amply illustrated field for study? The same also of the arts. But, over and above all, where will another such a field be found for the study of human nature—the great study of studies? All in all, it is the greatest school of instruction and entertainment, while it lasts, that the country or age affords, hence all who would progress in knowledge and ideas, and keep up with these very fast modern times, should never omit, when reasonably practicable, to attend a fair, whether large or small, as there they can see the collected results of all knowledge and effort, for a much smaller outlay than in any other way. This is especially an object to those who have not much time nor money to spend; hence the great adaptation and usefulness of fairs to the masses. Two or three days spent in their attendance, posts them up, substantially, for the year, in all callings and occupations, besides affording a splendid holiday. Hence if properly gotten up and managed, what could be more economical or useful as a great school of instruction? Then let every fair ground be regarded as a school room, in which all who attend can learn much more than the tuition usually costs. In a word, let those who would learn, lay their plans, if possible, so as to enable them to attend not only their local, but their State Fair, —not with an invidious and fault-finding spirit, but with a determination to see things in a pleasant light, and to profit by them. This kind of an attendance we will warrant always to pay the outlay, in intellectual, moral and pecuniary benefits, of an abundant and lasting character. All in all, Agricultural Fairs are the greatest holiday institution of modern times; and those, be they professional, agricultural, or ordinary, who do not profit by them when they can, are not wise. Especially, every youth in the land, who has the world before him, should not lose their valuable lessons. What is to be said of close-fisted parents, who will keep their boys at home, *perhaps digging potatoes. merely to save a dollar*, while such great instructive life-lessons are passing?—Such persons are penny-wise and pound-foolish, —they may pile up money and hold on to their acres for their children; but those children, for want of proper early advantages, will be likely to grow up narrow-minded and illiberal, and not very rich, even with money. Let all true Republicans and Democrats study this great modern holiday, and aim to understand it and profit by it; such strikes us as the part of wisdom, for the great productive classes of all vocations. P.

Correspondence of the Farmer.

White Clover.

MESSRS. EDITORS:—The white clover is well known to the farmers of this country as a plant that grows spontaneously on land hard trodden,—for example, where an old road has been imperfectly broken up—but as yet it seems not to have come into consideration as a plant well worth extensive cultivation. It is one of the best grazing grasses, for almost any kind of soil, and is therefore always sown in northern Germany, in considerable proportion,—say two-thirds white to one-third red clover, with other grasses. It comes very early in the spring, and covers the ground very thickly, so that it is not liable to be injured, even by very severe droughts; while at the same time it thrives well in wet weather. For hay-making, red clover is preferable; but for grazing milch cows and beef cattle, the white excels. When land is to be laid out in grass for a long term, say eight or ten years, the white clover should be the principle grass seed sown. I sowed, in the spring of 1856, 5 lbs. of white clover seed, freshly imported from Germany, on one acre of land, among barley, and harvested from it, in the middle of July last, about one ton of hay; which, threshed with the flail last winter, gave nearly four bushels of good seed at sixty pounds per bushel. Through the whole season, except the months of June and July, I grazed, on a ten acre piece, laid out in red clover and timothy,—whereof this one acre formed a part—five milch cows, four working oxen, and two calves, all of which, while they had plenty of food the season through, seemed always to give the white clover the preference.

CLAUS OESAN.

NEW HOLSTEIN, Calumet Co. Wis.

Correspondence of the Farmer.

Measurement of Grain.

MESSRS. EDITORS:—Your valuable correspondent D. S. C., in the last February number, has given you an article on the measurment of bins and granaries which is very good so far as it goes; but, as every farmer may not have a bin "6 by 4, or 8 by 5" feet, &c., I have the presumption to think I can improve the same by adding a rule whereby farmers may ascertain, with sufficient correctness for all practical purposes, the quantity of grain any bin is capable of holding.

Rule.—Multiply the length, breadth and depth together, then multiply the product by 8, and cut off the right hand figure. This will give the number of bushels very nearly. To make it quite exact, add half a bushel to every hundred. For instance, D. S. C. says, "A bin 12 by 11 feet, will hold a little over 100 bushels for every foot in depth." Let us see by my rule: $12 \bowtie 11 = 132 \bowtie 8 = 1056$; as the amount exceeds 100, after cutting off the right hand figure, add $\frac{1}{2}$, and the result is $105\frac{1}{2}$, which is nearly correct, as any body can prove by the more tedious process of multiplying the above product by 1728, the number of inches in a cubic foot, and dividing by 2150.4, the number of cubic inches in a bushel.

A crib of corn can be measured in the same way, by taking one-half the product, which will give the number of bushels of shelled corn.

Yours, respectfully,

W. T. WHIRRY.

EAST RANDOLPH, March 1, 1858.

From the London Quarterly Review.

What Chemistry has Done for Agriculture.

If it be asked what has been practically gained within the last twenty years by the investigations of the agricultural chemist, we would answer, *certainty*. We knew many years ago that farm-yard manure was excellent; by the light of chemical science we learn why it is "perfect universal manure,"—we learn how to manufacture and employ it best, and we learn why, on clay soils, it may be safely, nay, advantageously, left for weeks on the surface, before being plowed in. Chemical science again teaches us why lime, which is not an active manure, although valuable as a destroyer of elements hostile to fertility, produces great effect for a series of years, and then not unfrequently ceases to show any profitable results; it teaches us to what crops guano, to what superphosphate of lime, to what farm-yard manure may be most profitably applied, and when a mixture of all three. Chemistry settles the comparative value of linseed cake, cotton cake, and karob beans; shows when pulse should be used for fattening pigs, and how to compound a mixture of Indian corn and bean meal which shall produce fat bacon neither hard nor wasteful. The conclusions of science were previously known empirically to a few, but their range was limited, and their application accidental. They have been reduced to order and rendered universally available for the use of plain farmers, by the investigations of men like Lawes and Voelcker. As the latter observes, "there are too many modifying influences, of soil, climate, seasons, &c., to enable us to establish any invariable laws for the guidance of the husbandman;" but the more we can trace effects to their causes, and ascertain the mode in which nature operates, the nearer we are to fixed principles, and a sure rule of practice.

EPOCHS OF AGRICULTURAL IMPROVEMENT.

It would seem, then, that the first great epoch of agricultural improvement began with Lord Townshend, who demonstrated the truth embodied in the adage,

"He who marls sand,
May buy the land,"

showed the value of the turnip, and, as we presume, must have been a patron of the four-course system, which had its rise in Norfolk, about the same time. The second epoch was that of Bakewell, whose principles of stock-breeding have ever since continued to raise, year by year, the average value of our meat-producing animals. The third epoch dates from the exertions of such men as the Duke of Bedford and Coke of Holkham, the latter of whom, combining usages which had been very partially acted upon, brought into favor drilled turnip husbandry, carried all the branches of farming as far as was permitted by the knowledge of his time, and did the inestimable service of innoculating hundreds of landlords and tenants with his own views. The fourth epoch, if we take each advance from its earliest dawn, would comprise the various duties of the opening of the first railroad, the importation of the first cargo of guano, the publication of Liebig's first edition of the "Chemistry of Agriculture," and the deep draining of the Bonesetter's field on Chat Moss: but in general it may be said to date from the first meeting of the Royal Agricultural Society, at Oxford, in 1839, when farmers began to be familiarized with men of science, and men of science learned not to despise agricultural experience.—This last era is almost the birth of yesterday, and already, as compared with any former period, the results read more like a page from the Arabian Nights than a chapter in the history of agricultural progress. Deep drainage, artificial manures, artificial food, improved implements, and railroad conveyance, have been the leading means by which the change has been wrought. Deep drainage has brought into play the unexhausted fertility of our strong clays: portable manures and purchased food have increased the crops on land of every degree. Mangold and Swedes have been made to flourish on stiff soils, and cereals on sieve-like sands. Downs have been transformed from bare pastures to heavy root and grain-bearing fields. The visitors to Salisbury Plain at the agricultural show of 1857, were surprised to find a large part of it converted into productive corn land—a change which had been almost entirely effected with the last twenty years. The scientific mechanic has provided the tools and machinery for breaking up and pulverizing the ground, for sowing the seed, for gathering the crops, for preparing it for market, for crushing or cutting the food for the stock, with an ease, a quickness, and a perfection unknown before. The railroad is the connecting medium which maintains the vast circulation, conveying the agencies of production to the farmer, and the produce of the farmer to the market. The steam cultivator is, perhaps, about to be added to the triumphs of mechanism, and then will be realized the expression of the fine lines of Mr. Thackeray on the great exhibition of 1851—an expression which was premature if it was intended to be historic, but which we hope, and almost believe, will prove to be prophetic.

"Look yonder where the engines toil;
These England's arms of conquest are,
The trophies of her bloodless war;
Brave weapons these.

Victorious over wave and soil,
With these she sails, she weaves, she *tills*,
Pierces the everlasting hills
And spans the seas."

Work for July.

July is the fervid month—the month for haying and harvest; when every farmer who would preserve to himself the results of his labor must employ every moment of his time. Early in the morning and late at night, with a respectable resting time at noon for the recruit of his physical energies, he must labor, sparing no pains to make an economical gathering of his crops.

HARVEST AND HAYING

Involve two important operations—the *cutting* and the *curing*—of which a few words:

As to the proper time for cutting. It is a common error of farmers to wait too long before commencing this important work. The grain is allowed to become so dead ripe as to half shell off in the operation, and to be decidedly inferior for bread. For, the practice of so many to the contrary notwithstanding, we are very sure that wheat, while yet so tender as to be easily crushed between the thumb and finger, will yield much nicer flour than if allowed to dry to flint hardness. Hay is also worth a half more or as much again, for being cut before it is dead ripe.

Of the modus operandi. The best machinery should be employed in both the hay and grain-fields. By this we do not mean that every man who has five or six acres of grass to cut, and ten acres of wheat, should buy a reaper and mower, at an expense of $150 to $200, for it would not pay; but we do propose that every farmer who has crops of any kind to harvest, should sit coolly down and calculate, without prejudice, the improvements of the day. If his crops are not sufficient to warrant the *purchase* of the best improved machinery, it may be that he could afford to hire neighbor Jones to use his reaper or mower for a sum that would pay.

The best method of curing is quite as important as the time and process of cutting. Too many of our farmers lose half the value of their crops by neglecting to take care of them at the proper time, and in the proper manner.

HAY,

Especially requires to be cured without rain or heavy dews, and had better go into the barn or stack a little too fresh, than a little too dry, if that drying must be at the expense of the most savory and nutritious qualities: a few pounds of salt to the wagon-load will preserve it and give it all the better relish.

Herdsgrass, and red-top, should be stacked, if possible the day on which it is cut, and clover, which, because of larger and more succulent stalks may require a longer time, should be cocked, or, at least, winrowed every night while exposed to the weather. The tidy farmers of New England, who do business on a small scale, are in the habit of using caps made of thick, strong sheeting, and there is nothing more certain than that, during rainy seasons they pay for themselves ten times over. It may be that some of our enterprising farmers of Wisconsin, who do business on a larger scale than is possible down East, would like to make the experiment, and so we propose the following method of preparing the caps:

Take strong sheeting a yard and a quarter, or a yard and a half wide, and cut into pieces of equal length, so that each cap shall be square: paint one side with a mixture of linseed oil, beeswax and japan, in the proportion of two gallons of the oil, eight pounds of wax and two quarts of japan for one hundred caps: the oil to be simmered with the wax until dissolved, and the japan to be added afterwards. Apply with a whitewash brush or with the hand, and dry in the sun. The paint will prevent ravelling, and the cap may be secured in its place by sewing up a small stone in each corner. Caps of this sort would cost about 20 cents each, and would last ten years if properly taken care of. Of course they should only be kept on the hay during the night in fair weather, and during the storms in bad weather.

One word more: Let the farmer remember that three tons of hay *in the barn*, will be worth, in the spring, as much as four wintered out in the storms; and that if the spacious barns are not to be had, the stack should be thatched with straw.

GRAIN CROPS

Require but little less care, and should be threshed as soon as sufficiently dry. This thing of leaving the "shocks" to stand in the field until the straw is ruined and the grain is half sprouted, is a miserable policy which too many see fit to practice.

THE CORN FIELD

Must not be forgotten. Now before the ears begin to set, root out the weeds again and stir the soil with a light double shovel plow. There is less danger that the roots of the corn will be injured in this manner, than that it will suffer for moisture and aeration if neglected.

July is also the month for

SOWING TURNIPS.

We would be glad to see our Western farmers giving more attention to root crops and less to wheat. Nothing is better for stock during the late fall and winter, and certainly no other crop is so economical. Moreover, by a proper system of rotation, in this way, two crops can be grown in one season. That field which has been in clover for three or four years, after the first crop of grass for the season has been cut, may, with advantage, be broken up, thoroughly harrowed, and put into turnips. So also, the oat and wheat stubble, after thorough manuring, may be appropriated to the same use. Some are in the habit of sowing turnip seed with herdsgrass and red-top, and report favorably upon the success of all three.

But whatever the system of rotation, it is certain that turnips require good rich ground, deeply plowed and well pulverized.

The sowing should be in drills, eighteen or twenty inches apart, and so far apart in the rows as to admit of hoeing between. In this way they can be thoroughly cultivated to the exclusion of weeds.

The best varieties for stock are the Swedish; for table use the White Russian. For a full account of varieties, see page 242 of Wisconsin *Farmer*, Volume 2.

Their value as food for cattle, sheep and pigs has been so thoroughly demonstrated, certain *savants* to the contrary notwithstanding, that it is folly to doubt any longer. The exclusive use of turnips has been the settled policy of England so long that, without better natives to begin with than are found in other countries, she leads the world in the production of fine cattle and sheep. Indeed, it has been said by one of her most distinguished

agriculturists, that the failure of the turnip crop in Britain, would be a greater calamity than that of the Bank of England. Again we say to our farmers, *raise turnips.*

BUCKWHEAT

Must also be sown early this month,—does not usually do well later than the tenth.—Though rather unpopular, because of its dark color, it makes a palatable and wholesome food, and made into light pan cakes, with good butter and plenty of sorgho molasses, is by no means *bad to take*, about seven o'clock, of a cold winter morning. Try it, ye who have not.

Many other things must be attended to this month, but the foregoing are the most important. We must not omit, however to remind our readers of approaching

FAIRS.

They are doing an important work for agriculture, and ought, by all means, to be encouraged by every citizen of the State. Let farmer vie with farmer in the products of the field, the stall and the garden—mechanics in the products of human skill; nor let the ladies omit to be present with their butter, and bread, cheese, and preserved fruits, woven fabrics, embroideries and flowers. H.

Correspondence of the Farmer.

Winter Wheat and Spring Wheat.

MESSRS. EDITORS:—Although an Eastern man, I take an interest in Western farming, not only theoretically, but practically. Three years ago I purchased 160 acres of land on Rock prairie, had 90 acres broken, and two years ago I spent six months upon it, took off a crop, broke the remainder, built a house and barn, put down a well ten feet in the earth and 110 in the rock, 5¼ inches in diameter, &c. Last year I let the farm out to the halves. There was about 4000 bushels of grain raised upon it, and this year it is being cultivated on the same terms.

I have had my wheat made into flour in Wisconsin, and brought to Lowell. We find the flour to make excellent bread, but there is one great draw-back to it, viz.: its color. It is not very dark, but not *white*. Spring wheat flour, in this market, is from $1 to $1,50 lower than the best of winter wheat flour. I think I saw an article in the Wisconsin *Farmer* some time ago, alluding to this subject and its remedy, viz.: the *drill*, with a promise of something further. If farmers can be enabled to raise *winter wheat* in those regions where they now feel compelled to raise spring wheat, to say nothing about the increase in quantity, the improvement in quality on every acre would be more in value than the original government cost of the land, *and that every year.* What a benefaction such a discovery would be! Who will make it? *Will the drill do it?*—Who has tried it? and who can tell?

Yours, a seeker for light.

GEORGE MANSFIELD.

LOWELL, Massachusetts.

NOTE.—The problem of raising winter wheat upon the prairies and openings of the Northwest, with sufficient certainty to ensure a safe profit, is probably yet unsolved, either by the use of the grain drill in putting it in, or otherwise. It is claimed by some that drilling adds much to its security, by ridging the ground higher on each side of the seed, as well as by putting it in more uniformly deep, thereby preventing its drying and blowing naked in the spring. Various other safeguards are also recommended, about which we know little or nothing.

We would like to hear from those, on the subject, *who have actually had experience*; for it is, in fact, as stated by our correspondent, a matter of high importance, commercially and generally. Let us have all the information possible on the subject, previous to the season for fall sowing. P.

Cutting and Curing Clover Hay.

According to the thirty years' close observation made by the writer of this article, there is but one method of curing clover hay that pays well for the labor, and that I shall describe shortly.

Observation has taught me, that *the best time* for cutting clover is when two-thirds of the blooms begin to turn brown. At this stage it makes the best hay, and is not sappy enough to reduce much in the curing process.

When the clover is in the above stage, cut it as rapidly as possible; but *never cut when there is dew or rain water on the clover.* Let the green clover be put in small shocks as fast as cut down, so that the sun may not wilt it. When enough is cut and shocked for a large stack, haul up and stack as fast as possible. The stack should be some fourteen or fifteen feet at the base, and sixteen or eighteen feet high, so put up as to make it the shape of a cone. With a hay fork, let *one hand* throw up the green clover, while *two hands* stack and trample it, so as to make it as near *air tight* as possible. Every foot in height should have about one quart of salt sprinkled regularly over it. This will require about 75 lbs. to the stack. In finishing, top it off and rake

it down so as to turn rain. In ten or twelve days it will become wet and hot, and smoke like a coal pit, so as to have all the appearance of rotting; but in ten or fifteen days more it will cool off, and be found dry, bright, sweet hay.

If the clover were allowed to wilt before stacking, the hay would be dark and mouldy; but if put up green, it will be bright, green, and sweet, and free from mould. This process preserves all the leaves of the clover, so certain to be lost by any other process; and it also preserves all the volatile constituents of clover, which are sure to be lost when it is cured in the sunshine or open air.

The whole management may be summed up in a few words. Cut and stack free from moisture, in the perfectly free state; salt it well, and make the stack as nearly air-tight as hard tramping can make it.—*F. H. G. in Genesee Farmer.*

Lucern, or French Clover

In answer to inquiries concerning this variety of clover, we will simply say: We know of no one in Wisconsin who has tested the practicability of its successful cultivation in this climate; but from our knowledge of its character and habits, we incline to the opinion that it will hardly thrive so far north. In France, and the more southern latitudes of this country, it produces three or four crops, and yields a considerable amount per crop. It requires a deep, rich soil, thoroughly disintegrated by subsoil plowing, and should be kept free from weeds until it gets thoroughly established. H.

To Preserve Fence and Gate Posts from Decay.—Robert Masters, Esq., of Jefferson, recommends common salt as a preservative, and is accustomed to employ it by boring a hole diagonally downward and almost through the post, commencing just below the line which the surface of the ground is intended to cover, when the post is set. The hole is then filled with salt and plugged up with hard wood. Worth trying, certainly.

Lard and Resin for Tools.

Take about three pounds of lard and one of resin. Melt them together in a basin or kettle, and rub over all iron or steel surfaces in danger ef being rusted. It can be put on with a brush or piece of cloth, and wherever it is applied, it most effectually keeps air and moisture away, and of course prevents rust. The coating may be so thin as not to be perceived, and it will still be effectual.

Bees and Bee Hives.

Messrs. Editors:—After reading several articles in the *Farmer* on honey and bee culture, I find myself compelled to write a few lines on the subject. Being a great friend of the little insect since my boyhood, it was always my desire so to manage it as not only to derive pleasure, but also some profit from keeping bees. I read a great many books on the subject in old Germany, as well as in this country, and almost in every instance I found that the writer believed the great secret in keeping bees to consist in the construction of the hive.—But in my experience I have found the construction of the hive to make but very little difference. Since I settled in this country—nine years ago—I have kept the larger part of my swarms of bees in boxes made out of bass-wood boards, 12 inches wide, and 12 to 14 inches high. They did well in good years, and I derived a good profit; in bad years all swarms in the diffierent hives were poor. Having tried a dozen or more different hives, I came to the conclusion that bees will make their honey not out of a costly hive, but out of nature's beautiful flowers. Wherever the bees find plenty of food from spring to autumn, they will do well and yield profit; and when there is a scanty supply of food in the summer time, the bees cannot succeed in making honey for their keepers, since they have to collect food enough for the next winter.

If sometimes a swarm is lost by the moth, it is of no great account, as the swarm was either poor, or had no queen. Other swarms, kept in tight hives, will defend their comb from the moth better than the keeper can, if he does not neglect to clean the bottom board of the hive every fortnight. In the neighborborhood of mixed timbered land, where bass-wood trees are very plenty, bees will do well; and if white clover grows on the pastures, and buckwheat is sown in good quantity, early and late, in the vicinity, there is no doubt that bee keeping will pay handsomely. The lack of these natural sources cannot be made up by costly hives. I find that the more you trouble your bees, the less they will be able to perform their natural functions. I can but warn all friends of honey bees not to buy costly, patent hives, and lose not only money and time, but also their swarms, as some of my neighbors have, the last few years.

ADAM GRIMM.

Jefferson, March, 1856.

Correspondence of the Farmer.

"Treatment of Manures,"

MESSRS. EDITORS:—The May number of the *Farmer*, under the above head, contains a very extraordinary article. It "advocates the theory that until manure has undergone such fermentation as to produce sensible heat, there can be no loss of the essential elements of vegetation by gaseous escape. That the escaping gases from fresh or saturated manures, form no part of the gaseous elements which are the food of plants. Hence the offensive smell that issues from them is of no sort of consequence, unless the putrefactive fermentation is going on by the process of sensible heat." If this theory be true, science is at fault, scientific men have labored in vain, and practical observation is useless. Why should we use chloride of lime, gypsum, peat, charcoal, lime, &c., as deodorizers, to fix the ammonia and prevent gaseous escape, if this theory be true?

There are three ways by which manure may be destroyed or wasted. First, by fire: By this process, the mineral portion remains in the ashes, and that which was derived from the atmosphere returns to its original elements. In the second place, "fermentation" "by the process of sensible heat:" In this case the decomposition or combustion is as absolute as by fire, only by a slower process. In the third place, by atmospheric influence: This influence has existed from the day that "there went up a mist from the earth and watered the whole face of the ground." The power of the atmosphere to decompose all bodies destitute of life, whether animal or vegetable, is manifest all around us. All the discoveries of science, and all the art of man, have only been able partially to delay the progress of decomposition. The proposition is self-evident: it needs no proof, no argument for illustration. To deny it, is to deny the evidence of our own senses. What is that disagreeable scent perceived as you pass the manure heap? It is the substance of the manure, and when that scent shall cease, there will not be much substance left. Sheep dung, which is accounted amongst the richest of manures, has been found, by actual obervation, when pretty thoroughly dried, to have lost nearly all its virtue.

The gases escaping from the manure heap are a part of that body, or they are not. If not, then what are they? and what causes the scent which surrounds the manure heap? If they are a part of that body, whether that body be animal or vegetable, or a mixture of both, then they were vegetables, and what once constituted vegetables, is essential to constitute them again. Consequently there can be no escape of gases from the manure heap which do not constitute the essential food of plants.

The Editor of the American Agriculturist, in the last Janury number, remarks, "whatever the theory be, it is found in practice that gypsum has a strong affinity for the ammoniacal gas which are constantly escaping from the privies and stables. It is a good deodorizer, subduing the pungent gases that exist in warm weather around decaying animal matter." Last June he thus wrote: "We will here repeat our oft-given advice, to always have a barrel of plaster at hand, and mix a small portion of it with every portion of animal manure made in the stables and yards."

John A. Porter, Professor of Organic Chemistry in Yale College, thus writes: "As to the retentive power of gypsum for ammonia, in the presence of abundant moisture, as for example, when mingled with putrefying urine, or thrown upon night soil in a vault, there has never been a doubt. As soon as the moisture is gone, the ammonia leaves its new partner, and yoking itself again to the old one, goes on its way as it started, in the form of carbonate of ammonia. If the powdered materials are mixed and moistened, and afterwards exposed a few days to the air, it will be found that the carbonate has left the gypsum entirely, and escaped into the air." Thus it is that, as the manure dries, the ammonia passes into the air, and the manure is not only diminished in bulk, but in value.

But not the least extraordinary part of the article under consideration, consists in the fact that the writer himself contradicts his own theory. He recommends "mixing "fresh manures with carbonaceous manures, such as decaying leaves, &c., and with mold, or soil, if nothing else is at hand, to keep it cool and prevent its waste." Why mix with carbonaceous manures, mold, and soil? What waste would he prevent but "gaseous escape?" If the writer believes his own theory, then this language is totally incomprehensible. If his theory be true, there is no need of mixing manures with other substances to prevent its waste.

The interest of agriculture requires more economy in the management of manures. The practice of leaving manure lying in the yard, exposed to the rains, sun and winds of summer, is wasteful. Fresh, green manure, drawn out and plowed in, in the spring, is worth more than the same would be after having lain in the yard till fall. The loss in value is probably not less than one half. Let any one view the difference between two farms, where one gets its manure in the spring and the other in the fall, and there can be no difficulty in making up a judgment. The loss to the State of Wisconsin on the account of the wasteful management of manures, may be safely estimated at more than the amount of all our taxes. REVIEW.

REMARKS.—It is our opinion that the difference between Prof. Voelcker and the Sparta Georgian, on the one hand, and "Review" on the other, is rather the result of incautious statement on the part of the former, and a want of due allowance for certain ambiguities on the part of the latter. The whole argument hangs upon a determination of the exact time when "sensible heat" *becomes* sensible; for it might be argued by one that sensible heat was the inevitable result of the decomposing process in its first stages, while the other would insist that the evolution of sensible heat required an advanced stage of the putrefactive process. We neglected to comment on the Voelcker theory, because, in the first place, we regarded it as not very startling, and, secondly, because we had already expressed our views in several chapters on Domestic Manures. H.

More About Going to Fairs,

We wrote, in general terms, with a few specifications, in last number, about going to Fairs: let us add a few words further—more particularly of home exhibitions. We said that the Fair was the place to learn; besides this, it is the place to enjoy. But a great many people will not enjoy when they might just as well. We are sorry to say that a great many farmer folks are inclined to be jealous and suspicious. After the managers have spent their time and money, and incurred considerable pecuniary responsibility in fitting up grounds, &c., if they erect a gate and demand a small fee for entrance, some folks are so ungenerous as to grumble, and to charge that it is a speculation, and that these managers, (who have undertaken the thankless task), want to feather their own nests—just as if they had not plucked themselves for the public good already.

This trouble over, and themselves fairly inside, and looking at what is to be seen, these unhappy mortals discover that they have great deal better articles! at home than those which took the premiums. What a pity they did not do their duty and bring them in. Sometimes they do bring in a horse, or a bull, or a pig, and when they do not get a premium, they charge the Judges with being partial, or fools. Now I know we are apt to think our own is the best. I have had a horse that I thought could not be beat, all alone in my stable, or on the road by himself. And then I would drive this pet of mine into a crowd, hitch, and go looking about, and when I got back to where this pet of mine was standing, I could hardly recognize him from the contrast, and would almost swear I did not own such a sorry looking nag. Be just and liberal to your competitors. They may all have eyes very much alike.

May be you do not like the arrangements. Remember it is a great deal easier to find fault than to do things better, and look at both sides of a matter before you condemn. If you are a horseman, you may think there is too much room given to cattle; if a cattle man, that too much space is allotted to sheep; if a pig man, that women take up too much room with their fancy work; if a perfect pattern of modesty, propriety and virtue, you will be shocked if a lady should happen to gallop around the horse-ring, instead of going into ecstacies over a coop of chickens or a pot of posies. Some or all of these troubles, and many more like them, will, perchance, come upon those who go to Fairs; but if you take a modicum of good sense and good nature, and withal a spice of common charity and liberality for the tastes and opinions of others, you can enjoy yourselves, and let others do so, and that is what we advise.

Another thing you should do, and that is, brush up old acquaintances and make new ones. No better time occurs in all the year. Here every body is on equal footing, and nobody has any right to take on airs. Carry your lunch and eat it on the grounds. Be good natured and obliging, and if you dont have a good time, it will be because there is no good time in you.—*Ohio Cuttivator.*

Them's our sentiments.

Correspondence of the Farmer.

Pocket Gophers.

MESSRS. EDITORS:—In the spring of 1855, I procured 50 apple trees from the Delavan Nursery, in this State. The trees arrived in good order, and were as properly set as I knew how to do it. Forty-nine out of the fifty trees grew well; one of the number died. I have lost but few by the frost, yet, out of the fifty

trees which I planted. I have now but about fifteen living, (that is of my first planting; for I have still continued to re-plant.) But the gophers have killed the balance,—not the striped squirrels that are seen on the prairie, but the regular pocket gophers,—(for I see that some call the striped squirrel gophers.) They have been continually killing my trees, year after year, by eating the roots off. I have tried to poison them without success; have succeeded in shooting a few, yet it has not seemed to decrease the number, and, besides, they are so very shy and quick, that it is difficult to get a shot at them. Some of my trees have borne apples, and those which have been untouched by the gophers, look vigorous and are growing well.

Now can you, or any of your readers, give me a remedy for the destruction of the trees by the gophers? or can you inform me of any thing that will destroy the gophers? if so, I think we can raise apples in northern Wisconsin without fail.

I have noticed your article recommending killing them by burning sticks covered with sulphur in their boroughs, but have not tried the experiment, though I expect to, and hope it may prove a remedy for the evil.

Last spring I planted some apple trees which were only one year old. I dug holes for the trees between four and five feet in diameter, and about eighteen inches deep. In the bottom of these I placed flat stones, completely covering the bottom so tightly that a gopher could not get through, then I commenced and set stones up edgewise on the inside of the holes against the earth, making a wall clear to the top of the ground. These stones were placed so closely together that a gopher could not get through, yet there was space enough in many places to let the roots of the trees through. I then filled in earth on the bottom stones. After filling the holes with soil, I then placed a layer of stones over the top, from the outside wall to the body of the tree, again gopher-tight. The trees all grew well last summer; what the result will be I do not know, yet I hope they are secure from the gopher's depredations at any rate. This is an expensive way to plant trees, yet if it succeeds in securing them, I think it will pay.

SMITH R. GUNN.

PRESCOTT, May, 1858.

A friend who has had experience with these pocket gophers, inform us that they may be avoided by spading the soil up lightly about the trees, outside of the roots, to the depth of eighteen or twenty inches—that the gophers, in digging through these soft places, are stopped in their passage by the soft earth caving in upon them. We were assured with the utmost confidence, that it was an infallible remedy. The walling-in process would strike us as an expensive one in the outset, and a bad one in the end. EDS.

The New Law,

For the formation and protection of County Agriculturial Societies, is herewith published. We think that it will be found to be quite an improvement on the old law:

1st. In being much more simple in its provisions, and consequently easily complied with.

2d. It gives important and necessary police powers to societies, to enable them to protect themselves from the intrusion of rogues and interlopers.

3d. It requires societies to make report, not only to the Secretary of State, but to the Secretary of the State Agricultural Society, of their more important proceedings.

This law is so simple in its provisions that any person who is fit to be a Secretary of a County Society, can readily comply with its provisions; and if, as heretofore, the larger half are careless, and do not make their reports in due form and season, we hope that they will not trouble us to patch them up for them.

CHAPTER LIII.

AN ACT for the formation and protection of County Agricultural Societies.

The people of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

SECTION 1. In all cases, when the citizens of a county, or of two counties jointly, shall or may have organized a County Agricultural Society, not exceeding one in each county, by the adoption of a constitution and the choice of the ordinary officers, they shall have all the power of a corporation and body politic, and may sue and be sued, plead and be impleaded, prosecute and defend to final judgment and execution in any court of law or equity, and may purchase and hold any real and personal estate, which shall be necessary to best promote the objects of such association, and which estate shall be exclusively devoted to such objects. Said societies shall also have power to sell and convey any and all such real estate, said conveyance being executed by the President and Secretary of such society. All such land pro-

perty shall also be free from taxation while used as aforesaid by such societies.

Sec. 2. All such societies shall be open and free alike to all the citizens of a county who may wish to become members thereof, and shall comply with the regulations and pay the prescribed fees. They shall hold annual elections for the election of their officers, and the same shall be duly notified by publication of notice in some newspaper in the county. or some county adjoining, in the absence of any in the proper county. They may adopt such by-laws as may be required to carry out the purposes of the society, and may adopt a corporate seal and change the same at pleasure. Their records shall be carefully kept by their Secretary, and may be read in evidence in any court when the interests of such society are concerned.

Sec. 3. The principal officers of such societies, and also of the State Agricultural Society, shall have all jurisdiction and control of the grounds on which the society may exhibit, and of all the streets and alleys and other grounds adjacent to the same during all such exhibitions, so far as may be necessary to preserve and keep good order, and so far as may be necessary to exclude therefrom all other exhibitions, booths, stands, or other temporary places for the retail or sale of any kind of spirituous or fermented liquors, or other article or articles that they might deem objectionable or offensive to said exhibition. The President of any such society, or in his absence, any Vice President, acting in his stead, shall have the power to appoint any necessary policemen to assist in preserving the peace, quelling any disturbance or arresting offenders and conveying them to jail for trial; and all such policemen, thus appointed, shall be vested during such exhibition with the ordinary powers and authority of common constables, and be entitled to similar fees for any service rendered or duty performed. Any person or persons who wilfully and without leave enter any fair grounds during an exhibition, tha are duly enclosed with a proper fence, not less than six feet high, either by climbing over, under, or through said fence, or by fraudulently receiving and using the tickets or badge of another, or by passing the gate-keepers without the proper payments and compliance with the rules of said grounds, shall be deemed guilty of a misdemeanor, and upon conviction thereof before any court, shall be liable to a fine of not less than five nor more than twenty-five dollars; and in case of non-payment, to imprisionment in the county jail not less than one nor more than ten days. Any such offender may be tried before any Justice of the Peace or Police Justice, most convenient to be found.

Sec. 4. That all properly organized County Agricultural Societies aforesaid shall be entitled to an annual appropriation of one hundred dollars each from the State Treasury: Provided that they have complied with the following conditions: 1st. That they have held an annual fair or exhibition during the year in question. 2d. That an amount of not less than one hundred dollars has been received by said society during the year by the sale of memberships and admission tickets, subscriptions, &c., and bona fidely paid into their treasury in cash. 3. That they have, through their Executive Committee and Secretary, made up and published in some newspaper in the county, or county adjacent, a condensed report of their principal acts and doings for the year, setting forth their official organization, their principal meeting, a report of their fair, showing the number of entries, the amount of money received and from what source, together with the amount paid out for premiums and for other purposes. Also a full statement of all the receipts and disbursements of the society for the year, showing from whence all sums were received, and to whom paid, and the correctness of the same, verified by the oath of the Secretary, two certified copies of which report to be deposited, the one with the Secretary of State and the other with the Secretary of the State Agricultural Society, by the first day of November in each year.

Sec. 5. It shall be the duty of the Secretary of State, within ten days after the said first day of November, to issue an order upon the State Treasurer, directing the payment of the said sum of one hundred dollars to or on the order of the Treasurer of each Society, that has substantially complied with the requirements of this act. And the aforesaid sums are respectively and permanently appropriated to the Societies aforesaid, and it shall be the duty of the State Treasurer to pay the same on demand out of any moneys in the treasury not otherwise appropriated.

Sec. 6. All County Agricultural Societies that were properly organized for the years of 1856 or 1857, and held fairs, and realized the amount of money into their treasuries required by section four of this act, shall be entitled to the aforesaid appropiation of one hundred dollars for either or both of said years for which they have been thus organized and have thus complied. And on satisfactory proof being furnished the Secretary of State of the fact of their organization, and of the receipt of the requisite amount of money, as aforesaid, it shall be the duty of the Secretary of State to issue orders on the State Treasurer for the payment of all such appropriations, and it shall be the duty of the State Treasurer to pay the same.

Sec. 7. There is hereby appropriated annually, out of any money in the treasury not otherwise appropriated, the sum of one hundred dollars to each county Agricultural Society, that is or may be entitled thereto under the provisions of this act.

Sec. 8. So much of any former act as appro-

priates money to County Agricultural Societies, is hereby repealed.

Sec. 9. This act shall be in force from and after its passage.

Correspondence of the Farmer.

Pork Against Corn, and Vice Versa.

It may, perhaps, be gratifying to some of the curious to see published in the *Farmer* the calculations of a farmer as to what are the profits, (to say nothing of the loss), of corn and pork raising.

When corn costs 15 cents per bushel, pork costs 2 cents per pound; when corn costs 25 cents per bushel, pork costs 3 cents per pound; when corn costs 50 cents per bushel, pork costs 4 cents per pound; when corn costs 60 cents per bushel, pork costs 5 cents per pound.

The following statement shows what a farmer realizes for his corn when marketed in the form of pork:

When pork sells for 3 cents per pound, it brings 25 cents per bushel in corn; when pork sells for 4 cents per pound, it brings 32 cents per bushel in corn; when pork sells for 5 cents per pound, it bring 45 cents per bushel in corn.

COTTAGE GROVE.

Note.—If C. G. had given the figures on which he bases the above calculations, backed up by actual experience, it would have been much more satisfactory, probably, to most. Facts tell; while men's statements may or may not be correct. It is an interesting subject for others to pursue.

Important, if True.—The Alder Bush.

It is not known to many persons that the common alder bush of our country is a great safeguard to plants against the devastations of bugs. If any one will notice, it will be found that worms, flies, bugs, or insects never touch the alder. This fact was the initial point for experiments of an Englishman in 1794, and he communicated the results on his experiments to a London Magazine. Accident exhumed this old work, and a Kentucky correspondent last year communicated to the Dollar Newspaper a copy of the article. The practical results of the experiments, as asserted by the English experimenter, are, that the leaves of the alder, scattered over cabbages, cucumbers, squashes, and other plants subject to the ravages of insects, effectually shields them. The plum and other fruits subject to the ravages of insects, may be saved by placing upon the branches and through the trees, bunches of alder leaves.—*Painsville Telegraph.*

If girls would have roses for their cheeks, they must do as the roses do—go to sleep with the lilies, and get up with the morning glories.

STOCK REGISTER.

Correspondence of the Farmer.

A Little Talk About Stock.

Messrs. Editors:—The importance to our State of introducing the various improved breeds of animals, is unquestioned. Some few old fogies may, perchance, be found who think anything having the breath of life, and power of locomotion will answer their purpose, and believe it is folly to throw away money on *fancy* stock, as they designate all sleek, thrifty, and well-fed creatures. They would have a sort capable of taking care of themselves the year round, and subsisting upon straw and water during the winter, mixed a little towards spring with the hope, (or instinctive longing) for a bite of grass by and by. But we have yet to find the breed of domestic animals that will do much without attention and care in this northern climate; and while giving our attention to the care of stock, how much greater is the satisfaction and profit attending good, thrifty sorts. Our farmers are, many of them, alive to the value of good stock, and the great question with them is, which is the *best* adapted to our purpose? The tastes of some prompt to the keeping of a certain kind in preference to others; one favoring sheep, another, cattle, and others, horses, &c. Many endeavor to try a hand at all, to some extent, but all want the *best*—(I now speak of progressive agriculturists.)

The dissemination, through such channels as the *Farmer*, of the characteristic qualities of the various improved breeds of animals, will greatly assist us in determining the adaptedness of many of them to our particular locality and purpose. But in order to render this information reliable and of value to the reader, it must be truthful, and divested, so far as may be, of exaggeration and all *gassing*.—Those favored with the use of your columns, should confine themselves to *facts* and well-digested opinions drawn from the close observance of facts. Viewing the matter in this light, I have regretted the course of certain correspondents of the *Farmer* in their discussion upon the respective merits of several breeds of horses, who, in their zeal for their favorite "blood," seem to have digressed somewhat from the subject in hand, and condescended to personal assaults, apparently aiming to discomfit and worst their opponent rather than to *convince* him, or any one

else, of the propositions started with, by fact and argument. Good, sensible farmers are not edified by the lashing of champions at one another, or their brags and threats; nor is the truth that we are seeking for evolved thereby. No, no: discussion is needed and must be had. Notes must be compared, and men will differ in their conclusions; but why cannot it be done in a kindly, pleasant way? Surely we can agree to differ. We protest that the columns of the *Farmer*, only coming to us once a month, are too choice to be used for the gratification of personal pique, or for any merely personal ends. Doubtless our friends, in their zealous advocacy of the "blood," overlooked the bearing of quite all that was written upon the minds of disinterested parties. Bring on your facts, gentlemen, and talk to the point. We want to hear the thing argued out, and if it would not be intruding, should like to have a hand for a little fair play upon the question. I believe my motives are good, and shall endeavor to impute none else to others. "Many men of many minds," is emphatically true in regard to horseflesh. Let us respect another's opinions when they are honestly expressed, though they may differ much from ours. I, for one, should be pleased to see the stock of the English blood horse, (the racer), as crossed upon our ordinary business mares, compared with the like cross by the Black Hawks. It is not merely abstract reasoning that is needed, but actual sight and trial, which can only be obtained by the presence of the stock in question. If the wager proposed in L. M. J.'s article is conscientiously objected to by those interested on the other side, let it be put in some other shape. I supposed it to be designed merely as a prize to be competed for by the colts, for the purpose of covering the expenses attending the fitting and showing of them. I, for one, would willingly contribute towards a purse to be awarded to the *best* colt for *all* business purposes, merely designed to defray expenses and remunerate, slightly, for trouble, thus doing away with the "wager," if none are willing to accept of it. Let us hear from some of the breeders of those competing bloods. The colts will, of course, show their breeding —the "blood will tell." *Mongrel* stock of any kind "sports" in breeding, and cannot be depended upon to transmit its own desirable qualities, if it has any. An array of twelve to twenty colts of each stock horse would show, pretty conclusively, whether there was a strain of "blood" sufficiently strong to infuse itself with certainty or not. In the first place, we want to secure such qualities in a horse as are desirable in themselves, and which, combined with those of the mare, will produce what is requisite;—then, to render him valuable for breeding purposes, he must *transmit* those qualities. This can only be told by trying.

After may generations of careful breeding, certain characteristics seem to be tolerably well established, and are consequently more surely transmitted. But all improved breeds are started by the use of some *individual* animal, deemed, at the time, of superior excellence, combining as many of the characteristics sought for as might be. A continued use of this stock, with a judicious selection of breeders, after a while establishes a "blood," and when thus secured, although in its earlier stages of progress, it is none the less entitled to the rank of a distinctive "blood," its value, of course depending upon its fruits. In most cases, after judicious selections, the progeny, after a while, surpasses in excellence the original stock. Hence, even modest beginnings need not be despised. The English blood horses sprung from the small Arabian, standing but fourteen to fourteen and a half hands high, and now is deemed by horsemen to far surpass the noble original in the requisites of the turf. The Black Hawks, as a family, can claim the same improvement upon the old Morgan horse, and even now are enabled to transmit their action and courage, together with their unrivalled symmetry and beauty, quite as surely as any breed extant; and crossed upon good sized mares, sufficient weight is secured to answer for all ordinary business purposes.

But, as it is an acknowledged principle of breeding that very large size cannot be obtained save at the sacrifice of perfection of form to a greater or less extent, we would not consider it desirable to aim too much after size; for we all know that strength and endurance do not always accompany an increased size, and many a medium-sized animal will out work and out-live, in any place, much heavier specimens. Bone and muscle do not make so great a show of bulk as some other parts of the carcass, and yet they are far more serviceable for work. Most things can be overdone; and, according to my humble opinion, it is the ten-

dency of our farmers to strive too much after size in all domestic animals,—even to the hog of four feet high and nine feet long, requiring two or three years to fatten, and meanwhile consuming the produce of a moderate sized farm; and the Shanghae fowl, which is in good keeping with such hogs. It is easily demonstrated, however, that such stock is not the most profitable for the farmer to raise, nor, by any means, for the consumer to use. Likewise, in determining the suitable size of a horse, when sufficient strength is obtained to perform the service required, with ease and comfort to the beast, all *extra* weight must be maintained at a cost for which no return is made, which amounts to more than many would think of; and what is quite as important an item, activity during light service is frequently lost by too great size.

But, Messrs. Editors, while advocating a reasonable size for stock, it becomes me to consider lest you be unwarrantably incommoded by the *unreasonable* size of this communication; therefore, with the hope that these few plain remarks will offend none, I conclude for the present, remaining,

Yours, &c., E. M. D.

Summit, June, 1858.

Correspondence of the Farmer.

Black Hawks Again.

Messrs. Editors:—Being aware of your appreciation of good stock, and interest in its dissemination throughout the State, I feel prompted to take a few moments from the regular hours of sleep, in order to post you, and through the *Farmer*, some other of our friends, in regard to some recent doings in this vicinity in the horse line,—more particularly as not long since a writer in the *Farmer* considerably disparaged a breed of horses which is now doing more to *improve* the stock of horses in the United States, than any other.

You are doubtless aware that the continued and increasing popularity of the Black Hawk family is exceedingly galling to some parties more especially interested in other sorts of of horse-flesh; and all imaginable devices are resorted to, calculated to depreciate the stock in question. One great harping point with these deprecators of the Black Hawks, is their small size, which, it is asserted, renders them unfit for ordinary business. It is mainly to controvert this untenable position that I now trouble you.

One of the foremost advocates of this favorite stock in our State, is Jno. Gale, Esq., of Merton, Waukesha county, who is pretty well known throughout most of the State, for his earnest efforts to improve the breed of our horses. A reference to the premium lists of our State and county Fairs for two or three years past, will prove his success; and methinks a like reference for some years to come will not reverse the aspect of things! As a step in this course to interest and arouse the breeders of horses hereabouts to their own welfare, the fortunate owners of some of the fine colts sired by "Bucephalus," (Mr. Gale's stallion,) were induced to exhibit them on the 19th instant, at Oconomowoc; when, notwithstanding a shower of rain which moistened up the roads considerably, the laudable rivalry of various other horsemen brought out a goodly number of other classes of horses to compete for the prize of the good opinion of the crowd of several hundreds congregated to view the show; and you may rest assured that the *little* Black Hawks did not suffer by comparison!! To show *how* small they are, I transcribe from the weigh-master's books the entries of six that were called upon the scales as they came along the lines.

A three year old colt, raised by Mr. Ainsworth of Merton, 1140 pounds.

A colt about two and a half years old, owned by Mr. Rowell, of Hartland, 920 pounds.

A colt owned by Mr. Shields, of Merton, (age not entered), 860 pounds.

A three year old, raised by Mr. Hall, of Merton, 1060 pounds.

A three year old belonging to McKirby, of Merton, 900 pounds.

A three year old, raised by E. M. Danforth, of Summit, 960 pounds.

Their height would correspond well with their weight.

This result *astonished* the croakers, and the more generous of them acknowledged the corn! When it is considered that these colts were bred from small to medium sized mares, we may well be satisfied as to the policy of infusing the Black Hawk blood into our stock of horses for *every day business*, as well as for the road and turf.

Their action and endurance, none can doubt; their beauty and symmetry of form, all must admire. There is yet no occasion for the friends of this worthy stock to back down. I notice by an article from L. M. J., in the April number of the *Farmer*, that the gauntlet is thrown down. Let some of the loud talking ones take it up, or talk a little more softly. Yours, &c., SILEX.

Oconomowoc, May 21, 1858.

SUFFOLK SWINE.



SUFFOLK BOAR, MOSES WHEELER.



SUFFOLK SOW, PRIZE.

The above figures were taken from a life portrait by "Marsden," of the imported Suffolk Boar "Moses Wheeler," and the imported Suffolk Sow "Prize," owned by Josiah and Isaac Stickney, of Boston.

They have taken the first premiums and have never been on public exhibition, except on the following occasions, viz:

The Boar, first premium on Suffolks, of the U. S. Agricultural Society of 1855, and the first premium of the Vermont State Agricultural Society of 1854.

The Sow, first premium on Suffolks, of the U. S. Agricultural Society of 1855, the first premium of the Vermont State Agricultural Society in 1854, and the first premium on the best pen of three at the show of the Royal Agricultural Society, Gloucester, England, in 1853.

See advertisement headed "Suffolk Swine for Sale," and signed Sargent Cook.

This stock can be seen at Summit, Cook Co., Illinois.

Hoove, or "Blasting."

When cattle or sheep are first turned into luxuriant pasture, after being poorly fed, or laboring under any derangement of the digestive organs, they are apt to be hoven, blown, or blasted.

Treatment.—Should the symptoms be very alarming, a flexible tube may be passed down the gullet. This will generally allow a portion of gas to escape, and thus afford temporary relief, until more efficient means are resorted to. These consist in arousing the digestive organs to action by the following stimulant and carminative drink:—

Cardamon seeds,	1 ounce.
Fennel seeds,	1 ounce.
Powdered charcoal,	1 table spoonful.
Boiling water,	2 quarts.

Let the mixture stand until sufficiently cool; then strain and administer in pint doses every ten minutes.

The following clyster should be given:—

Powdered lobelia,	2 ounces.
" charcoal,	6 ounces.
Common salt,	1 table spoonful.
Boiling water,	2 quarts.

When cool, strain, and inject.

If the animal is only blasted in a moderate degree, this treatment will generally prove successful. Some practitioners recommend puncturing the rumen or paunch; but there is always great danger attending it, and at best it is only palliative: the process of fermentation will continue while the materials still remain in the paunch. Some cattle doctors make a large incision into the paunch, and shovel out the contents with the hand; but the remedy is quite as bad as the disease.

In all dangerous cases of hoove, we must not forget that our remedies may be aided by the application of external warmth and moisture; flannels rung out in hot water should be secured to the belly: at the same time the legs

and brisket should be rubbed with tincture of assafœtida. These remedies must be repeated until the animal is relieved. Steady and long continued perseverance in rubbing the abdomen often succeeds in liberating the gas. If the animal recovers, he should be fed very sparingly on scalded food, consisting of equal parts of meal and shorts, with the addition of a few grains of caraway seed. A drink composed of the following ingredients will aid in rapidly restoring the animal to health:—

Marshmallows,	2 ounces.
Linseed,	1 do
Boiling water,	2 quarts.

Set the mixture near the fire and allow it to macerate for a short time; after straining through a sieve or coarse cloth, it may be given and repeated at discretion.

Remarks.—As prevention is much more convenient and less expensive than the fashionable system of making a chemical laboratory of a poor brute's stomach, the author would remind owners of stock that the practice of turning the latter into green, succulent pasture when the ground is damp, or permitting them to remain exposed to the night air, is among the direct causes of hooven. The ox and many other animals, are governed by the same laws of nature to which man owes allegiance, and any departure from the legitimate teachings, as they are fundamentally ingrafted in the animate kingdom by the Omnipotent Creator, is sure to subject us to the penalty. We are told that, during the night, noxious gases and poisonous miasma emanate from the soil, and that plants throw off excrementious matter, which assumes a gaseous form, and are more or less destructive. Now, these animals have no better powers of resisting the encroachments on their organization, (through the agency of these deleterious gases), than we have; they must have atmospheric air to vitalize the blood; any impurity in the air they breathe, must impair their health. Still, however, the powers of resistance are greater in some than in others; this explains the reason why all do not suffer. Sometimes, the gases are not in sufficient quantity to produce instant death, but only derange the general health; yet if an animal be turned into a pasture, the herbage and soil of which give out an excess of nitrogen and carbonic acid, the animal will die; just as a man will if you lower him into a well abounding in either of these destructive agents. From these brief remarks the farmer will see the importance of housing domestic animals at night.—*Dadd's American Cattle Doctor.*

CHALK FOR WARTS.—A correspondent—W. H. Bennett, of Warwick, R. I., informs us that by rubbing chalk frequently on warts they will disappear. In several instances known to him in which this simple remedy was tried, it proved successful. We have known slightly moistened pearl-ash to remove warts by rubbing it upon them.—*Scientific American.*

Dead Animals.

If it should be your misfortune to have a horse, a cow, an ox, or other animal to die on your hands, after skinning them haul them into your barn-yard, cut up the carcass into as small pieces as you can conveniently, and form it into compost, thus: spread a thick covering of plaster or charcoal over the body, place four inches in depth under the parts of the animal, then cover them over with six times the weight of the animal, with peat, marsh-mud, river mud or muck, mold from the woods, or any other earthy vegetable matter. Let this remain six months, when the flesh will have been separated from the bones, and the earthly compost will be fit for use, then mix with ten bushels of ashes, and you will have manure enough to fully fertilize an acre of land to go through a rotation of crops. All such composts, when being made, should, as each layer of earth is put on to the depth of six inches, have fine charcoal or fine plaster strewed over it.

The bones should be dissolved with dilute sulphuric acid, and mixed with ten bushels of ashes, which will be found equal to the manuring of another acre of land.

And now let us ask if this disposition of a dead horse, cow, or ox, into twenty bushels of wheat, thirty bushels of barley, twenty bushels of rye, or forty bushels of oats, is not better than to fill the air with the intolerable stench of the animal while undergoing decomposition in the ordinary way in which dead animals are disposed of. Economy, your pecuniary interests, health, comfort and cleanliness answer, yes.—*American Farmer.*

How to Protect Sheep from the Ravages of the Canine Species.

"A subscriber," whose sheep-fold has been often visited by prowling dogs, wishes to know how he can protect his flock. With great pleasure we furnish the following prescription:

Beef Steak,	16 ounces.
Strychnia,	4 scruples.

Directions.—Divide the "*beef steak*" or "*tit bit,*" into sixteen parts; take a sharp knife and make an incision into each one of them, and insert one sixteenth of the above quantity, (which should be five grains), drop a few of these *medicated* "tit bits" around your "sheep preserves," and have a few in your coat pocket, so that when you come across an ugly *cuss* of a dog—a perfect Nena Sahib,—just come the "Rarey" over him—make his acquaintance, coax him to stay by long enough, while you draw forth just one morsel. In the name of *mutton* let the medicine be given.—*Am. Vet. Journal.*

TICKS ON SHEEP.—Ticks, or, in short, any kind of insects, may be destroyed by dropping on them a few drops of an infusion or tincture of lobelia seeds.

HORTICULTURAL.

Correspondence of the Farmer.

Experience with Eastern and Western Fruit Trees.

MESSRS. EDITORS:—You have kindly published that portion of my last communication which might be of practical value to the public. For this I thank you, knowing that you can spare but little space, and that communications intended for your monthly should be practical, useful, and, above all, *concise*.

I am encouraged to say something more, always giving you my own observation and experience. In the fall of 1847, I bought seventy trees from A. Bryant & Co., Buffalo, N. Y. They arrived at Sheboygan, but the roads were impassable, and they could not be brought that fall, and were stored in a cellar there. Next spring I got them early, and planted *with care*. The trees looked fresh, but *every one died!* Not one put out a leaf. They might have been frozen in Sheboygan. In the spring of 1850, I bought thirty apple-trees brought from Huron, Ohio, that spring; nine of them are alive now. Baldwins, R. I. Greenings, and Russets all dead.

In the spring of 1851, I bought twenty Apple trees, four Quince, and six Cherry trees, brought from Stafford, Genesee county, N. Y. They are *all dead*, some lingering three or four years. But one Mayduke Cherry tree is doing well, and loaded this spring. Three of the quinces, (Orange), started again from the roots. I consider the *Mayduke* a good Cherry for this climate. In the spring of 1853, six Pear trees, and five Green Gages, from the nursery of A. J. Downing, Newburgh. N. Y. Five Pear trees still alive; only two, Steven's Genesee and Oswego Beurre, doing well and bearing—are loaded this spring. The others are not doing very well; three of the Green Gage trees are dead.

Fall of 1856, bought thirty-two Apple trees, brought from the nursery of Mr. Frost, Rochester, and buried them over winter. In the spring planted well: ten of them are dead, while the twenty-two remaining are struggling to live, and have, apparently, a hard time of it; seem struck with an incurable consumption.

PER CONTRA.

In the spring of 1841, I raised a few seedling Apple trees on my place, number not known. Transplanted part in 1844, and more than two-thirds are alive and bearing well. Some of them are now thirty feet high, with trunks more than eight inches in diameter, and four or five of them bearing apples equal in quality and size, and superior in appearance to the best imported grafts.

Others of the same origin I got grafted in the limbs, in 1850, by my friend John P. Kramer. At least one half of them are doing well and bearing; the remainder are dead. These are mostly the R. I. Greenings, Russets, Baldwins, Sweetboughs, and Spitzenburghs.

This spring I got from Mr. Kramer seventy Apple trees and twenty-two plum trees, and planted them fresh from the nursery in the latter part of March. *They are all growing but one plum tree*, and even that looks as if it would finally start.

Here, gentlemen, are *facts* for you. I like to let every one draw his own inferences, but in this case I cannot forbear remarking, *en passant*, that we have been very foolish in buying out of the State, and sending out money, (of which we have so little to spare), for trees inferior to those we could get *much cheaper* at home, fresh from the nursery, better acclimated, and far surer to live and grow.

Let us hereafter buy trees for Wisconsin at Wisconsin nurseries. It is, in every aspect, the best policy. For my part, I want no more Eastern fruit trees.

Respectfully yours, G. DENEVEU.

NOTE.—Perhaps our friend DeNeveu's experience, in undertaking to cultivate Eastern trees, has been less fortunate than some others; still it is much of a piece with what we constantly hear from others, and with our own experience in the same matter. We have planted nearly a thousand New York grown fruit trees, Apple, Pear and Cherry, in the last four years, and, notwithstanding the best care we knew how to bestow, have lost nearly all of them. We have uniformly warned our readers against buying trees of Eastern agents, or from Eastern nurseries, ever since we have been connected with the *Farmer*, and have uniformly declined to advertise and recommend them. And our opinion constantly strengthens, that if we ever have good orchards in Wisconsin, they must be grown from home-raised and cultivated trees, and those, too, that experience has demonstrated will stand our climate. This range may not be large, but still we think that it will be found ample for good apple orchards, at least. P.

Correspondence of the Farmer.

Fruit Tree Growing—No. 2.

Having given some hints of errors in practice, and troubles in the way of tree-growing, we now propose to consider the subject further by referring to the physiology of the tree,—for, as by a knowledge of human physiology the physician is enabled to discover the cause and apply the remedy for human *ails*, so the tree grower, by understanding the organization and different processes of development, and by reasoning from *effects*, may discover *causes* for many of the ills of the fruit tree—causes for which we have in vain sought, or to which we have shut our eyes from fancied self-interest, or a false taste which custom has imposed on us.

It is lamentably true that the laws of growth and development, in relation to plants, are little understood or understandingly followed, by practical working men. We cannot except our own profession; for such is the imperativeness of this false taste and fancied self-interest, that nurserymen have been compelled to cater to their demands, or be discarded by the people. Therefore, out of the evil of the destruction of our fruit trees, good may come,—the good of a renovated taste, and a renovated system from first to last, thereby enabling nurserymen to produce trees on nature's plan—more durable, of better fruit-bearing qualities, and cheaper; for my experience is, that the most perfect tree, in all essential points, is the most easily produced.

The first principle to consider in *tree physiology*, is that of *vitality*. We will not undertake to define this in technical terms, which scientific men have failed to do, but simply call it nature. One thing is essential, however, viz.: it is of the greatest importance that the tree have as much of it as possible at the commencement of its growth. Undoubtedly this is best attained by starting trees from the *seed*; to develop which constitutes the whole science of cultivation; or, in other words, to surround the embryo with all the conditions most favorable to increase and develop its vital power, while in infancy it lifts its feeble head, and seeks to establish itself as with instinctive force, and in maturity fulfills its destiny by repaying a thousand fold in shelter and food for animal life,—to know all these conditions and how to supply them, is then, the perfection of the art and science of horticulture.

How shall we know them? By studying natnre. Is it not too true, that we have, by our prevailing system of propagation, pruning and cultivation, robbed our trees of three-fourths of their native vitality? The fruit-grower will answer that this is an evil necessarily attendant upon the purchase of improved qualities of fruit. I grant it true in part; but more truly is it an *un*necessary evil, arising from a false notion relative to the true proportions of a fruit-bearing tree. We are told by one of "terra-culture" fame, that the "seat of life" or centre of vitality of the tree, is located at the point where the cotyledons, or lobes of the seed expand, and that on this hypothesis hangs a theory of cultivation which seems to have wrought wonders nowhere but with the originator. We would not disparage his merits, but with those who listened with us, we do think that, had he given us as many words of plain, simple instruction in the process of his system of cultivation, and been satisfied with a reasonable compensation therefor, his name would be held in more grateful remembrance.

It is true that in the germ there is a vast amount of vitality stored up, which the proper conditions call into action, and that a temporary supply is expended on the young plant, while extending into a congenial soil and atmosphere, where it can increase the stock. But it is also true that that portion which was the starting point of the tree becomes a mere trunk, or circulating medium and frame-work, posssessed of no more vitality than the adjacent parts.

We find the vital functions of *circulation*, *absorption*, *respiration* and *perspiration* are carried on in different parts of the tree, and all except the first, almost wholly in the extremities—in the spongioles, small twigs, leaves, &c.

Another fact, unfolded by vegetable physiology, is, that the power of forming roots lies almost wholly in the germ, or in the bud and its extension. In this respect the bud is second to the germ in supplying the place of seed, or in the propagation of the species; which function nature has every where surrounded with the greatest concentration of vital energy.

All gardeners know the necessity of having active, full-grown buds upon every cutting which they would grow; and from our own observation, we are inclined to believe that

a root cannot be formed upon a cutting without that vital action peculiar to the bud, or its contents developed in the twig with its leaves.

The bud also resembles the germ in its peculiar power of drawing upon the stem or trunk for sustenance, and extending its embryo into the atmosphere, where it can breathe, digest, and assimilate for the good of the whole.

Observe how profusely nature has distributed these "vital centers," upon our perennial plants, especially those of long life. This will appear more striking when we observe that "purely tropical plants produce complete buds, while almost none of the natives of cold regions are without them."

From all these considerations we are prepared to affirm that the seat of life, instead of being confined to any one point, is distributed, —that every bud is a vital centre, possessing that peculiar, vital, self propagating property of the germ, but in a far less degree,—that every twig, as the offspring of the bud, should as far as consistent with form, be preserved, that the leaves may perform their part of the digestive process, thus forming new food for the body, new avenues of circulation, and new sources of supply—for the roots are the offspring of the buds and leaves—thus building up the tree on nature's plan. We also affirm that the practice of close pruning, already referred to, to produce smooth, uniform trunks, originates the worst evils which we have, and will have to contend with for years to come.

In this way we would apply the principles of vegetable physiology to the growing of fruit trees. We are aware that radicalism is unpopular,—that the public taste must be gratified as well as corrected,—that it is a triumph of intellect to redeem from the austerity of nature our delicious fruits, and to preserve and propagate them to an almost indefinite extent. But let us bear in mind that as velocity is gained at the expense of power, so, in producing choice fruit, if governed by prevailing fancy, we may sacrifice vital powers to a ruinous extent.

As the foregoing remarks suggest the subject of pruning, we will close this number by contrasting our prevailing mode, with that indicated by true principles.

Severe pruning does not usually begin until about the third or fourth year from seed or graft, and the tree, being well established, begins to take possession; when the watchful cultivator, fearful lest it shall be in the way, commences the cutting process, usually about the time of the first spring working of the soil—when the pores are filled with a watery sap, leaves not developed enough to carry on the full digestive process, and the spongioles forming anew for active absorption,—all with a view to how he would have the tree grow for the year to come, and especially with an eye to the future orchard, which he intends to "plow and sow, reap and mow," every foot of it. With this ideal, he shapes the tree very smoothly, as if every limb were an excresence to be taken out by the roots.

Mark the result: The pruning commenced at the worst possible time, and every cut made at the point where the pores were the largest, and there is the least possible contracting power, the sap must inevitably flow like blood from a severed artery. There is not foliage enough to repair the injury, and if, finally, from exhaustion, the flow ceases, the wounded and blackened body is at the mercy of the scorching sun and drying winds. The spongioles, called into being by the parent buds, twigs, or branches, have lost their motive power, and quickly disappear; and if nature seeks to repair these injuries by starting a score of dormant buds reserved for this extremity, they quickly disappear under the rude hand of the cultivator. The pruning accomplished, nature succumbs to art, and the tree, if it survives, takes its place in the orchard as a *standard*, to be further scared, blackened, cracked, bored, "eaten of worms," and to die, as thousands of our living orchard trees will bear witness, and tens of thousands that have gone to the shades. Is the picture overdrawn? Certainly not in the effects; and these effects have a cause lying back of the mere exciting cause of "hard winters."

As our limits will not admit a conclusion of this subject at present, we will speak more fully of it again, and close the present number by briefly advising the tree-grower to consider, 1st, the true proportions of the fruit-bearing tree; 2d, how little pruning will possibly answer; 3d, that no kind of cultivation or cropping which interferes with the true proportions or vigorous growth of the tree, is economy,—which lessons are more difficult to learn practically than all theories,—and, finally, let all spring pruning be done at least ten days before the flow of sap. J. C. P.

Correspondence of the Farmer.

A New Enemy to Fruit Trees.

MESSRS. EDITORS:—I find an editorial in your June number, on those old enemies of the apple tree, caterpillers, bark-lice, leaf-lice and borers. I have lately discovered a new enemy to this tree, or, at least, one new to me. It is a small purple bug, about the tenth of an an inch length and nearly round. It commences feeding on the lower leaves of the tree, devouring every part of them except the coarser fibers, and works its way "onward and upward" making a clean sweep as it goes. It not only takes all the leaves on each twig it visits, but is particularly attentive to the blossoms.

About half a dozen trees in my garden have been more or less injured by these bugs, and I anticipate further damage from them. I have killed large numbers of them, and intend to follow up the war until I either conquer or am conquered. I find the best time to attack them to be in the morning, when they are usually found congregated, in greater or smaller numbers, on the under side of the leaves.

If you know anything of this bug, be so kind as to give your views as to the best means of destroying it.

Allow me to add, by way of postscript, that I have a Black Morello cherry tree, *not yet two years old*, upon which I this morning counted four blossoms. Precocious, isn't it?

J. A. HADLEY.

WATERTOWN, May, 1858.

NOTE.—We are not aware that we have ever before heard of this bug, which, like a miniature sloth, devours the foliage of the apple tree. Among our numerous readers, no doubt there are those who may know something of them, and any light they may throw on the subject, we will gladly diffuse.

Correspondence of the Farmer.

Remedy for Bark Lice.

MESSRS. EDITORS:—On page 215, June number of the *Farmer*, you speak of the Bark Louse. I had twenty-five Apple-trees, of the Milam variety, infested for two years. I endeavored to destroy them by scraping, washing, &c., and dispaired of saving the trees. In May, 1855, I thought to try my last experiment on them, in the shape of strong tobacco water. I gave them a thorough shower with a large syringe. This was done the last week in May and about the 10th of June, and I have not discovered any of them since. Trees that appeared nearly dead, made a growth that year, and have been improving since. You need not fear the tobacco, as it will not injure the leaves.

If my experience in this matter is worth anything, I wish it had been in your June number, as the remedy should be applied when the insect is out of the shell.

Truly yours, W. B. HAWLEY.

MILFORD, May, 1858.

Tomatoes—Supporting and Shortening-In.

Few gardens are now found unsupplied with tomatoes, but very few persons take pains to *cultivate* them. The vines are usually left to straggle *ad libitum*. This is both bad economy and bad taste. If tomatoes are planted in rows, a convenient plan is to put up stakes on both sides of each row, and nail on horizontal strips or slats to keep the vines perpendicular. They may be carried up to the height of three to five feet. By this means the vines will show much better, especially when covered with ripened fruit clustering thickly upon their sides. The fruit itself will be much superior to that matured on the ground and in the shade. Strong twine or wires may be substituted for the horizontal slats. A cheaper process of supporting tomatoes is to bush them, in the same manner that beans or peas are treated. Our own tomatoes are planted around the border of the garden, and trained upon the fence, the vines being upheld by strips of leather, doubled around the stalks and fastened to the fence with small nails.

Tomatoes are also benefitted by *shortening-in*. Three-fourths of the mature fruit is produced upon a small part of the vine nearest the root, sap one-third or one-fourth of its length. It is recommended to stop further development of vines after a fair supply of fruit is set, by clipping off the vines growing beyond. The clipping should not be carried too far, as a supply of foliage is required to gather food from the air. One of the most successful cultivators in our acquaintance made it a rule to let no vine extend beyond four feet from its root.—*American Agriculturist.*

CURCULIO.—Mr. Walker, of Kentucky, through the Ohio Valley Farmer, suggests the following remedy: "As soon as the fruit is attacked, take a tin-pan, into which soap-suds has been placed to the depth of an inch or two; place it in the tree and place a small glass globe lamp in the middle of the pan, which permit to burn all night. In darting towards the light, the curculios strike the glass, and are precipitated into the liquid, from which they are unable to extricate themselves."

MECHANICAL.

A New Subsoiler.

A Wisconsin farmer—Mr. R. North, of Rochester, Racine county—has invented a subsoil attachment to the plow, which is described as readily applied to any plow, adjustable to any required depth, from an inch to six or more inches, and which thoroughly pulverizes the subsoil without raising it from its natural position. In other words, by the help of this invention, land may, by one man and one team, be at the same time surface-plowed to the full depth of the former plowing, and subsoiled to the depth of two or more inches, the pulverized subsoil retaining its original place. The subsoiler is said to be very cheap, which is rather indefinite. We have not seen this plow, and, of course, have nothing to say of its merits; but the idea is a good one, if it only impels some farmers to sub-soil who would otherwise continue to neglect it, "for want of time," or any other of the thousand ready excuses. Mr. North's attachment is very strongly commended by a number of his neighbors who have witnessed its operation. —*N. Y. Tribune.*

NOTE.—We have used one of these plows the past spring, and found it a nice and convenient article for shallow subsoiling; it can be run from twelve to fourteen inches deep very handily, and can be sifted from a subsoiler to a common crossing plow in an instant. This adjustability is the great point in its favor. The cost $25 if we recollect. Their advertisement will be found in the *Farmer.*

To use any subsoil plow to advantage, land must be clear of stones and other impediments, of course. P.

An Inch of Rain on the Atlantic.

We have been struck with that passage of Lieut. Maury's "Physical Geography Sea," in which he computes the effect of a single inch of rain falling upon the Atlantic Ocean. The Atlantic includes an area of 25,000,000 of square miles. Suppose an inch of rain to fall upon only one-fifth of this vast expanse, "It would weigh," says our author, "360,000,000,000 tons; and the salt, which as water, it held in solution in the sea, and which, when that was taken up as vapor, was left behind to disturb the equilibrium, weighed 16,000,000 more tons, or nearly twice as much as all the ships in the world carrying a cargo each. It might fall in a day; but occupying what time it might in falling, this rain is calculated to exert so much force—which is inconceivably great—in disturbing the equilibrium of the ocean. If all the waters discharged by the Mississippi river during the year, were taken up in one mighty measure, and cast into the ocean at one effort, it would not make a greater disturbance in the equilibrium of the sea than would the fall of rain supposed. And yet, so gentle are the operations of nature, that movements so vast are unperceived."

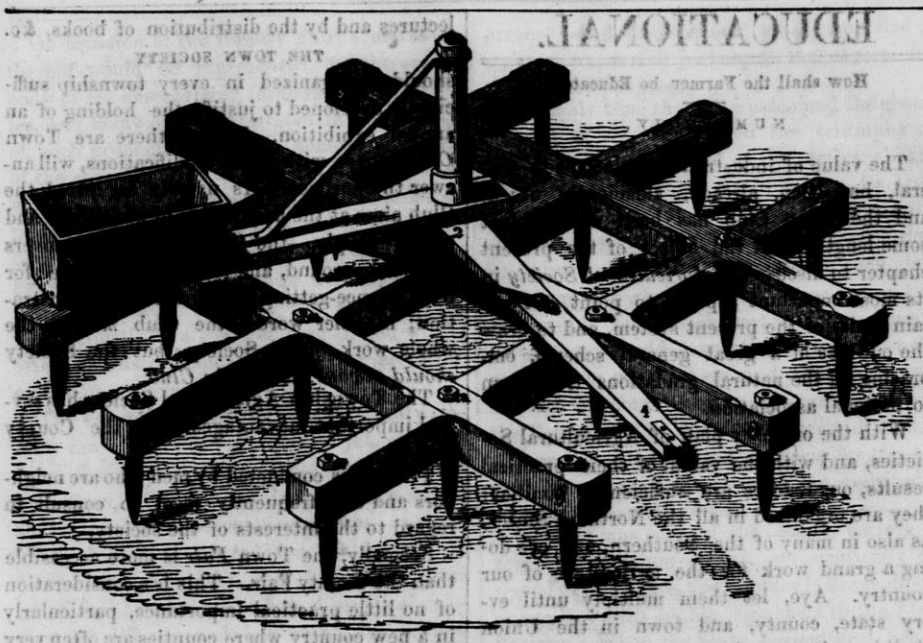
Grinding Mills.

Thomas E. Little, of Janesville, Wisconsin, has invented an improvement in grinding mills, the object of which is to keep an unobstructed space all around the inner or upper stone, between it and the curb, so that the meal will be allowed to escape freely from between the stones, the process of grinding be expedited, and the meal be kept in a much cooler state than in the ordinary mills. The invention consists in having a series of scrapers attached to a rotating head placed on the curb, the scrapers being fitted in the space between the curb and runner, and as they pass around within the space, clearing or scraping the ground meal, as it escapes between the stones into the discharge pipe. This is a most useful and practical invention, and is a valuable addition to all kinds of millstones.—*Ger. Telegraph.*

EFFECTS OF VARIOUS ILLUMINATING MATERIALS IN VITIATING THE AIR.—It has been found by experiment that lights of the same intensity from different substances take different periods to vitiate the same quantity of air, by converting it into carbonic acid. Rape oil, 71 minutes; olive oil, 72; Russian Tallow, 75; common tallow, 76; sperm oil, 76; stearic acid, 77; wax candles, 79; spermaceti candles, 83; common coal gas, 98; cannel coal gas, 152. Thus the cannel coal gas is proved to be the most healthy to burn.

MORSE TELEGRAPH IN FRANCE.—A commission appointed in France to consider the claims of Professor Morse, for remuneration, because his telegraph was employed in that country, have reported in his favor, and have recommended the payment to him of 400,000 francs. As Professor Morse's telegraph was first patented in France, and has been the one mostly used in that country, where all the telegraphs are under government control, the sum is very respectable.—*Scientific Am.*

ANOTHER AMERICAN TELEGRAPH.—There is a project on foot at St. Petersburg for establishing a strictly overland telegraphic communication with North America. The plan has been presented to the government by a Belgian engineer, and consists in carrying a telegraphic line by Siberia, and to establish a sub-marine communication between capes East and Prince of Wales, then to join the line to those of the United States, through the territories of Russia and England.—*Scientific American.*



BUCKEYE ROTATING HARROW.

The above is a representation of the "Buckeye Rotating Harrow," recently patented by Wm. DeWitt and O. D. Barrett, of this city. The toothed frame is made of suitable sized timber, halved together, and fastened by the teeth, which have shoulders that come against the lower side of the timbers and nuts on the upper side. The centre-piece, 1, is made fast to the toothed frame by means of the cast plate, 3. The thimble, 2, has a flange on its lower end, by which it is bolted to the draft-bar, 4. The weighted arm is held on either side by the draft-bar, and at right angles to it by means of a hook, as represented. A weight of twenty-five or thirty pounds is placed in the box on the weighted arm. This weight causes the teeth under it to sink deeper into the ground than the rest. As the Harrow is drawn forward, they meet with more resistance, and consequently cause it to rotate horizontally, pulverizing the ground completely, requiring less force to draw it than it would did it not rotate.

The advantages the patentee claims for this Harrow, are as follows:

1st. It will do twice as much as the common Harrow in pulverising the soil, without any extra labor for the team.

2d. It is the strongest Harrow built, and does not cost as much as the common jointed Harrow.

3d. It is adapted to all kinds of soil, and can be operated like the common Harrow, by taking off the weight. This is of advantage only in reference to newly turned up sod, requiring to be harrowed with the furrows.

4th. By the rotating motion, the teeth are made to move in every conceivable direction. Consequently. they sharpen themselves.

5th. This Harrow leaves the ground smooth and even, as it is impossible to clog it, consequently stones, roots, vines, or other things, cannot be dragged along by it, to leave the ground in furrows as it frequently is by the common Harrow.—*Ohio Farmer.*

Robinson & Co., Cleveland, Ohio, are the general agents for dealing in and disposing of the rights to manufacture said implements. We expect they will exhibit one at our State Fair. They are a novelty in their way, and for ought that we can see must do remarkably thorough work. We saw a similar one at the United States Fair last season, and were much pleased with its appearance and action, although not much used in our presence. P.

Mechanical Force of Lightning.—It has been proved on one occasion that a flash of lightning must have struck a church—St. George's, Leicester, England,—with a force equal to more than 12,000 horse power. A single horse power is equal to raising 32,000 pounds one foot high in one minute. The force of the lightning, therefore, was equal to 384,000,000 pounds raised one foot high in one minute. This is equal to the power of 12 of our largest steamers, having twenty-four engines of 500 horse power each.—*Scientific American.*

EDUCATIONAL.

How shall the Farmer be Educated?

NUMBER IV.

The value of industrial associations in general, has been, already, sufficiently urged, and the Town Club has been discussed at some length; it is the object of the present chapter to discuss the *Agricultural Society* in its most important aspects, to point out certain faults of the present system, and to draw the outlines of a great general scheme, embracing all the natural gradations from town to national association.

With the ordinary plan of Agricultural Societies, and with the value of their practical results, our readers are sufficiently familiar; they are organized in all the Northern States, as also in many of the Southern, and are doing a grand work for the agriculture of our country. Aye, let them multiply until every state, county, and town in the Union shall have its organization, and every farmer of the millions that till our soil, shall be made to feel their stimulating and ennobling influence. The system is, as yet, however, by no means perfect; nor is the plan of the individual society. For if it be admitted that agriculture is not only an art but also a *science*, and as such, comprehensive, and but partially developed, it must be apparent that our agricultural societies, although creditably demonstrative, are not sufficiently educational,—that while they labor assiduously to prove what is the present condition of the agricultural art, and have the effect to increase individual and associated practical effort for its advancement, they are not sufficiently appreciative of the primary importance of the *science*, and do not, therefore, so effectually as they ought, labor for its development and diffusion.

If we had Agricultural Schools in every State in sufficient numbers, then, the Society need aim at nothing further than to demonstrate the practical results of agricultural and mechanical effort; but so long as this is not the case, the society should, as far as possible serve as a substitute. Of course it is not expected that any arrangement could be made by it for direct instruction in the sciences, but a great educational work might, nevertheless, be accomplished in the way of well directed experiments, premium essays on important branches of husbandry, by courses of popular lectures and by the distribution of books, &c.

THE TOWN SOCIETY

should be organized in every township sufficiently developed to justify the holding of an annual exhibition. Where there are Town *Clubs*, these, with slight modifications, will answer the purpose. As usually organized the Club aims at the acquisition of knowledge and ability simply,—the Society properly covers the whole ground, and should be instituted for both science-getting and practical demonstration; in other words, the Club *may* do the whole work of the Society, but the Society *should always include the Club*.

The Township Agricultural Society has several important advantages over the County Society:

First, it is conducted by men who are neighbors and can frequently meet to consult in regard to the interests of the society.

Secondly, the Town *Fair* is more accessible than the County Fair. This is a consideration of no little practical importance, particularly in a new country where counties are often very large. Hundreds who would be glad to attend, find it very inconvenient to do so, while a still larger number feel so little interest in anything outside of their own potato-patch, and have so little faith in any breed of cattle, variety of fruit, grain, or in any method of farming or gardening not handed down in direct line from their grandfathers, that nothing short of locating the fair in their very midst, will induce them to attend.

Thirdly, a good many persons who really feel an interest in the progress of agriculture and make commendable efforts to improve their own system of practice, are nevertheless so modest, or wanting in self-assurance as to decline entering the lists with competitors whom they have never seen, and concerning whose products they have oftentimes, extravagant expectations.

It must be evident, therefore, that the Town Society would result in a more thorough diffusion of intelligence and the spirit of progress.

THE COUNTY SOCIETY

should be organized upon the same principle, care being taken always that the best men within its geographical limits are placed in the most important positions—a desideratum more likely to be secured after the Town Societies shall have been fully organized and in successful operation; for then each town might appoint its own most suitable men to represent it in the Executive Board of the Co. Soc.

On occasion of the County Fair, every town thereof would be represented by the entire body of its enterprising farmers and mechanics, and many others interested in the display of such products and in the honorable rivalry of the several towns in the county; while those who felt themselves deserving, but had failed of premiums at the town fair, would enter the lists again, with the hope of meeting with more impartial judges, and of winning a more valuable prize. To such the County Fair would constitute a court of appeal, and would often be instrumental in rectifying an error or undoing a wrong.

The educational facilities of the County Society must be, for several years yet, confined to a few partial instrumentalities. In the first place, all should be done that is possible through well-discriminated premiums—as much of a prize being offered for the *how* of the product as for the fact, and the highest prize of all for the best scientific and practical solution of difficult and important agricultural problems. Secondly, much might be done in the way of discussions conducted during the continuance or about the time of the Fair, or at the annual meeting for the election of officers.

In the course of years each county will have thorough courses of needed instruction in its academies and high schools; but meantime every effort should be made for the diffusion of scientific knowledge by means of books, periodicals and public lectures.

THE STATE SOCIETY

requires to be conducted on the same general plan, and must sustain the same relation to the several counties, as they sustain to the town associations.

In Wisconsin, it is a fault that the people at large, and many thorough-going practical farmers, have too little to do with the administration of its affairs. At present it is successful because some of the best men of the State happen to have it in control; but it is nevertheless unsafe, as a principle, to leave matters of so great importance wholly in the hands of a half-dozen men. Let the people of the State inaugurate a new era in this respect by being present in large numbers at the annual meetings, and not be content as mere passive recipients any longer. To facilitate this we suggest that the annual meeting for the transaction of important business be held during the Fair, or sometime so near that the hundreds, instead of the individuals, may be present—and that without being compelled to make an expensive journey to the capital for the express purpose.

The Fair time should be esteemed the grand gala-day of the year; when the triumphs of the farmers' science and of the artizans' skill are celebrated, and the State proves its true relative rank in the Union. Every county should be represented in its county capacity; its individuals vieing not only as such, but also as representatives of their Society, and as responsible for its character. Each County delegation should have its own tent for the convenience of members and invited guests; and the evenings during the continuance of the Fair should be devoted to general discussion and popular scientific lectures for the entertainment and instruction of the multitudes who would eagerly attend.

All that was said of the county society in regard to premium essays, systematically directed experiments, and popular lectures should be applied with double emphasis to the State Society. When the State Agricultural School is once established, as we are determined it shall be, that will constitute the head and soul of the great body agricultural of the State—teaching the people the science involved in their business, solving the difficult problems proposed by these several associations, and directing all the grand practical operations of the State.

THE NATIONAL SOCIETY.

Although, in our plan, this occupies the same relative position among the states as is maintained by the State Society to those which are subordinate to it, nevertheless requires certain modifications to adapt it to its peculiar sphere. And herein, if we mistake not, lies the cause of but partial success on the part of the U. S. Ag. Society. The attempt has been to make it a grand State institution on a national scale,—a thing which cannot be done. If it would succeed, its office must rather be educational, than demonstrative,—at least it must not be attempted to make the National Fair, proportionally, such a collection of stock, machinery, and fruits as is the State Fair: the risk and expense of transporting valuable specimens of these classes from remote parts of the Union must always constitute a serious objection to such exhibitions—at least until we have more individual wealth in the country and more abundant and cheap facilities for transportation and travel.

If grand collections could be made of none

but first-premium specimens from the State Fairs, the occasion would certainly be one of intense interest and large advantage to Agriculture and the Mechanic Arts of America; but except under certain limitations, which we have scarcely room to hint at, in this connection, only partial success can be expected for a National Agricultural Show.

The Society should nevertheless exist, and may be instrumental, if properly managed, of great industrial advantage to our country. Its head quarters should be at Washington, and it should have connection in some way with the Patent Office, with a view to the most judicious control of the agricultural enterprises of the government.

For the present, however, the national agricultural gathering should be rather a *Convention* of all the prominent agricultural men of the States, than a mere exhibition of animals and machinery—an occasion not so much for demonstrating what *has been done*, as for organizing plans for the advancement of the agricultaral interests of the whole country. Let the Society be, to a considerable extent, to agriculture, what the American Scientific Association is to Science, and our noble profession will so rise in dignity and authority, that our National Senates, will soon come to regard it, theoretically and practically, as the paramount interest of the country. Thus much of the several grades of the *Society*, educationally considered; it remains to be added, that in order to the highest degree of effectiveness, there must be a more intimate organic relation between them. A system of isolations is no system at all; and that policy is very short-sighted which would not apply the principle of association to associations themselves. Herein our American Agricultural Societies are also at fault. They should be thoroughly interwoven by a complete system of official representation, mutual responsibility and common interest, the Board of Managers of each superior grade being composed of, or selected from the officiary of the several individual Societies of the grade below, and each subordinate Society compelled to make official report to the one next above it in rank.

Such, in brief, is a shadowy outline of the great agricultural scheme whose thorough organization and perfected development, is destined to make realities of our grand possibilities, and to give to our mighty republic a permanent, unrivaled sway over the nations of the earth. H.

Interesting Correspondence.

The students of the University recently addressed a letter to Chancellor Lathrop, a copy of which, with his reply, we subjoin:

STUDENTS' LETTER.

WISCONSIN UNIVERSITY, May 31, 1858.

RESPECTED SIR:—The peculiar circumstances in which for many months you have been tried, have been such as would have crushed the spirit and wasted the energies of any man of ordinary intellect, or of any who possessed not the soul-satisfying knowledge that his every act had been in accordance with justice and right. A time, when the death, by violence, of one beloved son in a far-off clime, and the fatal sickness and subsequent decease of another, combined to bow your head in grief, was selected to make a vigorous assault upon your position and character.

Yet though sorrowing beneath a weight of affliction and distress, though encompassed by foes from within and from without, and assailed by those whom gratitude should rather have made your friends, though the very means of support seemed about to be snatched away, at no time has duty called and you not responded, at no time has any thing which would inure to our welfare as students, in your power to accomplish, been neglected.

And now, though it might well seem as if the very elements were in hostile array, we wish you to know and feel that there is one place where your worth is acknowledged, and your many virtues admired, and yourself beloved; that where you are the best known you are the most respected. We wish you to know that your labors for our benefit are appreciated, and that your toil has not been in vain. We desire to express our heartfelt thankfulness for your constant endeavors to secure to us the benefits for which we are here, and our perfect satisfaction with every means you have chosen to accomplish the end desired. We desire to assure you that we know of no man, *far or near*, whom we would rather see in the position you occupy than yourself, and that we hope you may long retain the Chancellorship of the University of Wisconsin.

But wherever you make your abode, in whatever situation in life Providence may place you, there you will ever possess, most respected Sir, our unbounded respect and esteem.

Thankful for your continued kindness and interest in our welfare, we remain,

YOUR GRATEFUL STUDENTS.

(Signed by every student in the University.)

JNO. H. LATHROP, L. L. D.,
Chancellor of the University of Wisconsin.

THE CHANCELLOR'S REPLY.

UNIVERSITY OF WIS., June 7th, 1858.

STUDENTS OF THE UNIVERSITY, GENTLEMEN:

Seven days ago, your *Declaration*, not of *Independence*, but of *Loyalty* and *Truth*, was placed in my hands. The stirring events of the week have commanded my thoughts, and now, for the first time, since its cursory perusal on presentation, have I had the power to recur to it. You will excuse the delay.

I notice with due sensibility, your touching mention of my double bereavement. Parental hope was never higher or more assured than mine, in the opening years of my lost sons. But alas! the prophecy of the heart has proved but an illusion, and my sorrow is too profound for human observation. Your expression of sympathy is as deeply treasured as the sorrow.

This rough world, my young friends, reads us, in our progress through it, many lessons, of its malevolence, of its ignorance, of its ingratitude. I am, however, too far along in my experience of life, and especially of the difficulties of official position, to have gained much of *doctrine* from the events of which you speak. That *impressions* have been deepened, I may well admit.

But the *patriot*, in the darkest hour, does not despair of the *Republic*. So the *true man* will not let go his confidence in *humanity*—its capabilities—its progress—its destiny. Had events disposed me to falter in this faith, your *Declaraton* would have reassured me.

John Randolph, of Roanoke, was accustomed to say of those whom he represented, that no man ever had such constituents. I am able to say, with greater truth, that no man ever had such pupils. Over the surface of this broad land, there are numbers of noble hearts which beat responsive to the pulsations of the lecture room, and assure me that I have not lived in vain. You have added your testimony.

Young gentlemen, I thank you for the *declaration*. The names of the signers shall be among my household words.

With a devotion to your substantial interests, which scarcely needed the additional attraction your kindness has presented, I am, gentlemen, as ever,

Your friend and servant,

J. H. LATHROP.

At a meeting of the students held in the Chapel, June 7th, it was

Resolved, That if the permission of the Chancellor be obtained, the daily papers of this city, and the Wisconsin Farmer, be requested to publish the whole correspondence.

Whereupon the meeting adjourned.

J. W. SLAUGHTER, *President*.

MISCELLANY.

SONG OF THE REAPER.

BY MRS. HOYT.

Men call me a Machine! I'll show them
What a Reaper is, and owes them—
I, the timbered from the forest;
I, the sinewed from the mine;
Born at last of lapsing ages,
I will show myself divine;
Show myself a peer—
And the hour is near—
For the rustle of harvest days is nigh,
And the field of the world the least I will try.

With a dauntless front, and nerve of steel,
Shoulders to bear, but never feel;
With a breast-work never yielding,
Arm of oak, and tooth of iron;
With a strength that never falters,
With a purpose never alters—
Hands off, and away,
Ye men of but clay!
Who comes as *I* come to the bearded grain
That has waited me long, nor waited in vain?

Glistening dews are bright before me;
Pomp of clouds is floating o'er me,
As I speed my tireless journey
Where the acres lie unshorn,
Will be cradled in my bosom
Ere the night o'ertakes the morn—
Ere the life-beat stop
In the flower I crop,
Or the frighted bird, so lately its guest,
Comes back to look for its little nest.

Then lead me forth where the fields are white,
And come in your pride to the glorious sight,
Where I, the Reaper, will prove my claim
To a victor crown and a deathless name—
Will prove my birth
To the sons of earth,
When the golden sheaves that follow my tread—
With the blessing of millions—are bending with bread,
As I go right on in my mission sublime,
Giving rest unto labor, and moments to time!

Evening Hours for Mechanics.

One of the best editors the Westminster Review could ever boast, and one of the most brilliant writers of the passing hour, was a cooper in Aberdeen. One of the editors of the London Daily Journal was a baker in Elgin; perhaps the best reporter of the London Times was a weaver in Edinburgh; the editor of the Witness was a stone mason. One of the ablest ministers in London was a blacksmith in Dundee; and another was a watchmaker in Bauff. The late Dr. Milne, of China, was a herd-boy in Rhyne. The principal of the London Missionary Society's College, at Hong Kong, was a saddler in Huntly; and one of the best Missionaries that ever went to India was a tailor in Keith. The leading machinist on the London and Birmingham Railway, with £700 a year, was a mechanic in

Glasgow; and perhaps the very richest iron founder in England was a working man in Morap. Sir James Clark, her Majesty's Physician, was a druggist in Banff. Joseph Hume was a sailor first, and then a laborer at the mortar and pestle in Montrose; Mr. McGregor, the member from Glasgow, was a poor boy in Rosshire. James Wilson, the member from Westbury, was a plowman in Haddington, and Arthur Anderson, the member from Orkney, earned his bread by the sweat of his brow in the Ultima Thule.—*Maine Farmer.*

Farmers, Do you take an Agricultural Paper?

The above is an important question, and should be answered in the affirmative. The mechanic has his paper, political parties and religious societies have their's. This is right, and they should be well supported, if severally worthy of support. It is also not only right, but of great utility that agricultural papers should be established in every State, and more than this, in every *distinct agricultural district.*

It is hardly possible for a paper to be of *general* agricultural interest for farmers thoughout the country; and those that make pretentions to that end are worth more for general literary and miscellaneous reading, than for any thing else.

A paper, to be of much utility to the farmer, must give *special* agricultural information. It should come to him treating upon topics of interest suited to his particular locality.—Hence Western Agricultural papers are better for Western farmers, than Eastern ones are: and Northwestern ones are better for the farmers of the Northwest than any others.—*Mitchel County (Iowa) Republican.*

CEMENT FOR BROKEN CHINA.—Stir plaster of Paris into a thick solution of gum Arabic, till it becomes a viscous paste. Apply with a brush to the fractured edges, and draw the parts closely together. In three days, more or less, according to the dryness and temperature of the air, it will be perfectly dry, and the article cannot be again broken in the same place. It is white, and does not show.

HAVE you a good ladder? These are the days to be employed in providing such essentials. Every farmer should have two or three, long and short, about his house and barns. He may save his buildings in consequence. They are better instruments than *some* insurance policies.—*Germantown Telegraph.*

"Can you tell me what becomes of an old horse?" asked a man of an investigating turn of mind, of our friend George, recently in the livery line here. "Why," said George, thoughtfully, shutting his left eye, "the final end of them is that they are traded off."

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

"UPON THE MOUNTAIN'S DISTANT HEAD."

BY BRYANT.

Upon the mountain's distant head,
With trackless snows forever white,
When all is still, and cold, and dead,
Late shines the day's departing light.

But far below those icy rocks,
The vales in summer bloom arrayed,
Woods full of birds, and fields of flocks,
Are dim with mist, and dark with shade.

'Tis that, from warm and kindly hearts,
And eyes where generous meanings burn,
Earliest the light of life departs,
But lingers with the cold and stern.

"Fair Play for Women."

It was just from the office, its pages nicely folded and cut, and with that peculiar odor of dews so reviving in a magazine that has not been digested of its freshness. Just from New England too, the fatherland of that "onward march" whose embryonic ideas find such a wondrous growth in the soil of the West. Something to cheer and invigorate, of course, thought we, as taking it up, a pleased half-hour we turned and read; so pleased that for once we did not feel the old heart-throb, in protest that its several departments were all devoted to the interests monopolized by men. And so we might have remained, had we not unfortunately persevered unto the last page and found a Ladies' Department, with,—shades of the buried Past!—an article entitled, "Fair Play for Women."

Now a woman has no philosophy; for, from where that masculine prerogative sits clothed in State, comes sounding down the ages a voice that declares, "If she seek it, she 'll never find it; if she find it, she'll never use it; if she use it, she never had it!" So, to the wise ones we leave the analysis of the mental condition into which we were all suddenly transformed as we glanced at the *part of a page*, wherein—as our department—was set forth our right to an equal share in the world's broad field of advantage. But the fact itself; what a commentary upon the enlightenment and good faith of the age, when a New England magazine, of leading character, devotes monthly from one, to one-third of a page to its mothers, wives and daughters! and that, in the same act by which it fills the (depart-

ment!) with unanswerable arguments for the equality of the sexes.

A newspaper article next attracted our attention. From this we learned that the University of a neighboring, and but recently admitted State, had just gone into operation: but that the Board of Regents had decided not to admit female pupils, though clearly included in the act that provided the aforesaid institution for its "inhabitants."

"Heart of Hope," asked we, "what next?" as we opened another of the papers before us; but scarcely asked, ere the following significant item met our eye: "*We will endeavor, hereafter, to remember our Lady readers with a good* "yarn" *every week.*"

We did n't read any more that evening, nor talk; for inveterately as they are addicted to the habit, there is one circumstance under which women do not talk; that is, when they are alone—and, we may add, when they are thinking: for despite the world's theory to the contrary, they do sometimes think. As, for instance, when they find their Department in a popular magazine such as a baby could cover with its outstretched palm; when Universities announce through the action of their official Board, that one half of those born into its arms are so far from being citizens of the State that they are not, *educationally*, even the *inhabitants* thereof; or when the sacred office of the editorship of a public newspaper, which should be a fountain of progressive intelligence to the whole people, becomes the medium through which small talents and smaller virtue insults her womanhood with the promise of a weekly "yarn."

Domestic Arts.

Currant Wine.—Let the fruit be fully ripe and free from leaves and defective berries.—Break and press out the juice. To every gallon of the juice add two gallons of water, and to every gallon of this, add four pounds of good clean sugar. Mix thoroughly and put into a clean cask. As the cask or vessel should be kept quite full until all impurities have passed off, it is well to keep a small portion of the mixture in reserve, to fill up with until the process of fermentation is complete, when it may be casked, and the following winter or spring drawn off into bottles. If you would have your wine of the best quality, use good fruit, good loaf-sugar and keep it a good while.—[Correspondent.

Ten Rules to be Observed in Making Butter.

In making good butter there are several nice operations to be gone through with, which require an eye to cleanliness, forethought and experience.

1. On milking clean, fast, yet gently, regularly twice a day, depends the success of the dairyman. Bad milkers should not be tolerated in a herd; better pay double the price for good ones.

2. Straining is quite simple, but it should be borne in mind that two pans about half full each, will produce a greater amount of cream than the same milk if in but one pan; the reason of this is the greater surface.

3. Scalding is quite an important feature in the way of making butter in cool weather; the cream rises much quicker, milk keeps sweet longer, the butter is of a better color, and churns in one-half the time.

4. Skimming should always be done before the milk becomes loppered; otherwise much of the cream turns into whey and is lost.

5. Churning, whether by hand or otherwise, should occupy about fifty minutes.

6. Washing in cold soft water is one of its preserving qualities, and should be continued until it shows no color of the milk by the use of the ladle; very hard water is highly charged with lime, and must in a measure impart to it alkaline properties.

7. Salting is necessarily done with the best kind of ground salt; the quantity varies according to the state in which it is taken from the churn; if soft, more; if hard, less; always taking taste for the surest guide.

8. First working, after about twenty-four hours, is for the purpose of giving it greater compactness.

9. Second working, takes place at the time of packing, and when the butter has dissolved the salt, that the brine may be worked out.

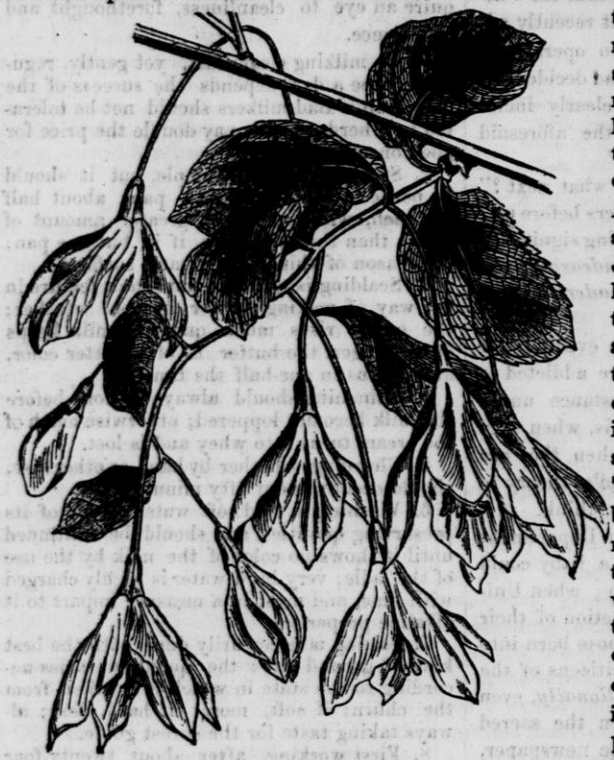
10. Packing is done with the hands or with a butter mall; and when butter is put into wooden vessels, they should be soaked two or three days in strong brine before using. After each packing, cover the butter with a wet cloth and put a layer of salt; in this way the salt can easily be removed at any time, by simply taking hold of the edges of the cloth.

Butter made in this way will keep any length of time required.—*J. C. Adams, G. Farmer.*

Scalding Milk.—The Devonshire mode of managing milk, whether intended for the churn or otherwise, is to scald it immediately, as it is strained from the cow. After this operation, it does not sour so soon, even in summer; and if it is intended for butter making, you have sweet milk for family use, after the cream is taken off. In winter, the cream that is taken from scalded milk, will not require more than fifteen minutes churning to bring it to butter.—*Maine Farmer.*

THE FLOWER GARDEN.

THE FLOWER GARDEN, will begin, this month, to repay the lovers of the beautiful for the time and pains it has cost. As one comes in and the other looks out from the hard, rough toils of life, the father and the mother will be refreshed by the sight of it; young master and maiden will learn sweet lessons of love and purity therefrom; while, to the little children, it will be an every day new treasury of delights. And not to admire and enjoy, alone. In the flower garden of July, every member of the household may find a work to be done, the performance of which will add a new charm to its beautiful creations. For by a wise condition of our being we learn to find pleasure in those things upon which we are accustomed to bestow our care. There is no surer way in which to bring our own spirits into communion with the spirit of Nature, than with our hands to help forward the fragrance and beauty of the landscape. Even the cup of cold water, that a little hand may carry to a thirsty plant, will bring its bloom of bud, its spreading leaf and upward shooting stem into more fraternal relations with the young heart.



HALESIA DIPTERA, ½

To incite our readers to the cultivation of those flowers that become a perennial ornamentation to the home, we give specimens of such as have proved their beauty and worth.

The *Forsythia virdissima*, or dark green, so called from the deep, rich color of its stem and leaves, is natively from Northern China. Its flowers, of bright yellow, open in early spring, and before the leaves.



FORSYTHIA VIRDISSIMA.

The *Halesia diptera*, a rare and very handsome shrub. It blooms later in the season, its soft, rather light colored leaves making it a fine contrast to the Forsythia. The flowers, which are of a very clear white, have, from their form and drooping position, given the plant the name SILVER BELL. Both of these have proved hardy enough for ordinary situations and care.

FOR THE CHILDREN.

FABLE OF THE ROSE-BUD.

BY MRS. HOYT.

Once a little Rosy-Bud
Hung upon a stem,
Oh so bonny! oh so bright!
Like unto a gem;
And two tiny leaves of green
Clasped the Rosy-Bud between—

Clasped and held its little heart
With a loving care,
For they knew that Rosy-Bud
Had a treasure there—
Had a sweetness would perfume
All the beauty of its bloom.

On a day there came the Wind
Blowing cold and rough;
Saying "I have waited long,
Waited long enough;
Open now your leaves of red;
Lift and hold straight up your head."

Then with cruel breath he blew;
Bade its leaves unclose;
Show him all their pretty pink;
Be for him a Rose—
Said he wanted for *his* share,
All the sweetness hidden there.

Closer still the angry Wind
Pressed his ugly face;
Tried to pull the leaves away
From their fond embrace;
But leaves, bidding Wind "depart!"
Closer held that little heart.

Then he dashed it on the ground,
Like a wicked Elf;
For he loved not Rosy-Bud,
Only loved himself—
Dashed it down with all his might;
And blew himself clear out of sight.

Bent and bruised was the stem,
But not broken quite.
So it lifted little Bud,
Bud and leaves upright;
Slowly and with kindly hand,
Lifted up, and helped them stand.

Then the sunshine to the leaves
Came, one summer hour;
Asked them to unclasp the Bud,
Let it be a Flower;
In a voice so soft and low,
Asked the Rosy-Bud to blow.

Then the leaves to softer green
Grew, and fell away;
And the pretty swelling Bud
In the sunshine lay;
Laughing lay, with happy smile,
Brighter growing all the while.

Till, at last, each pinky fold
Came to perfect bloom,
And the heart of Rosy-Bud
Was a sweet perfume—
Filling all the summer air,
Kissing back the sunshine fair.

Poor Boys and Great Men.

A hundred years ago, there lived a poor boy, in the city of Oxford, England, whose business was to clean the boots of students in the University. He was compelled to resort to this menial employment to obtain the necessaries of life. He was an active, energetic, bright, generous lad, and he soon won the confidence of the students. Some of them proposed to instruct him a short time, every day, which proposition he accepted with delight. He surprised his teachers by his rapid progress. He lost not a moment, but gave himself so diligently and perseveringly to his studies, as to excite the admiration of all. Of course he was eminently successful. Every youth with the same excellent qualities will succeed in any laudable undertaking. This lad became the eloquent George Whitfield, who preached the gospel to thousands upon thousands in the open fields. The favor of the students would have availed him nothing without his energy, industry, and perseverance. Indeed, it was these qualities in the boy in connection with others, that first attracted the attention of the students.

Eighty years ago a boy was born in Salem, massachusetts, of obscure parentage, in very lowly circumstances. His mother died when he was ten years of age, though she lived long enough to impress his heart with the love of truth. His father was so poor that he could afford his boy but limited means for education. On account of his poverty this lad wore his summer clothes to school one winter, and became the laughing stock of the scholars. When only 11 or 12 years old, he was apprenticed to a shoemaker, who kept him in the shop, but allowed him a slate and pencil on his bench. Yet this boy improved every opportunity, and without teachers advanced daily in knowledge, and finally became the renowned mathematician, Nathaniel Bowditch.

Patrick Henry was the son of a poor man in Virginia. In early life he struggled hard with poverty, and gave little promise of distinction in any pursuit. He finally devoted himself with energy and perseverence to his studies, and became the most gifted orator of his age.

Benjamin Franklin was the son of a tallow-chandler in Boston. He was the youngest, but two, of seventeen children, and, having a poor father, penury was his lot. At ten years of age he was taken from school, and placed in his father's work-shop. His early advantages were few, but he triumphed over every obstacle by his own exertions, and placed himself in the front rank of Philosophers.

Here is a divine, a mathematician, a statesman, a philosopher, each of whom distinguished himself without any of those worldly advantages to which you so often attach so much importance. The above may be taken as a few illustrations of a large proportion of honored men in the various departments of human effort.

EDITOR'S TABLE.

A WORD TO OUR FRIENDS.

All parties that are in arrears to the *Farmer* office, will oblige us very much by bringing matters around as fast as possible. We have heavy and constant outlays to meet, and need everything that we can avail ourselves of in times like the present to do it. The current sales of produce for the last few weeks will enable many farmers to square up small matters if they choose. So may it prove. P.

FINE FLEECES OF WISCONSIN GROWN WOOL.

Mr. H. Hemenway, of Whitewater, has left in our office for temporary exhibition, some half a dozen fleeces of his superb Spanish Merino wool, of this year's growth. In point of quality, it certainly is as fine and silky as could be wished; and it is washed and put up as wool should be for market, except that of his old Buck *Matchless*, whose fleece was not washed, but is nevertheless very clean, except upon the outside; said Buck's fleece, of one year's growth, and claimed, (which we do not doubt), to be free from all *Cornwalling*, is marked as weighing 16 pounds. Mr. H. reports his fleeces as follows, for the last four years: when a yearling, 12 pounds 2 ounces; when two, 16 pounds 8 ounces; at three, 16 pounds 12 ounces; and as above for the present year at four. This will certainly be admitted to be good shearing for a Spanish Merino Buck of pure blood; and as such it will be recollected, he has taken the first premium, in his class, at the State Fair for the last three years. He certainly stands at the head of his class, and cannot fail of being highly valuable to the neighborhood where he is kept, as well as to his owner. He is stated to have served over two hundred ewes the last season, and to have a numerous progeny coming up about him, that show much of his excellence.

Several other of his lamb's fleeces rate as follows: one yearling Buck, fleece clean washed and thirteen month's growth, 10 pounds 8 ounces; one ewe's fleece of 12 month's growth, 8 pounds 2 ounces; another, 7 pounds 14 ounces. Several others, grown by Mr. Augustus Knox, a neighbor of Mr. H., weigh about the same.

Mr. Knox informs us that he has sold out his small flock as follows: Ewes, after shearing, $6 per head, and lambs, at weaning, for $3. That, certainly, is not bad for hard times, and speaks highly, not only for fine sheep in general, but for this stock of sheep in particular.

When we see and consider what Mr. Hemenway and his neighbors are doing in the way of sheep and wool growing, we are grieved to reflect how few other neighborhoods in the State are following their example,—in fact, how few are keeping sheep of any kind,—probably less, than two years ago. Our State ought to be realizing $1,000,000 per annum for its wool crop; and coming, as it would, just at mid-summer, during the ordinary dearth of money, it would be almost doubly valuable. Instead of this valuable staple crop what do we now raise in its stead but an army of cur dogs, that do not, altogether, yield a dollar of revenue.

Mr. H. will report to us the average weight of the fleeces of his entire flock, after shearing. He will also make a good show of his sheep at the State Fair, as usual, no doubt. Wisconsin should become as famous for its fine horses and sheep as Vermont, even during the present generation. P.

FINE BLOODED STOCK.

J. V. Robbins, Esq., an enterprising and wealthy Cincinnatian, who is fitting up a splendid farm, just outside of our city, (adjoining our 76 farm), is getting up one of the finest herds of blood stock in the State.

He has just received an importation of thorough bred Alderney and Gurnsey cattle; some of them recently from Europe—eight head in all. Also, some extra fine Suffolk swine, of the celebrated Josiah and Isaac Stickney importation. Altogether, the lot are pronounced, by good judges, to be as choice as they have ever seen. Mr. R. will probably take the lead in Dane county, if not of the State, at the next Fair. Success to him. We like to see wealthy men using some of their money in this way, instead of *eternally speculating* until they die. P.

SALE OF DURHAM CATTLE.

We learn by an advertisment forwarded us that A. M. Perry, Esq., of Troy Centre, Walworth County, proposes selling his stock of Durham cattle, consisting of about thirty head of bulls, cows, and calves; also of about a hundred Spanish Merino sheep, at auction, on the 1st day of July.

We have never seen Mr. P.'s stock, but understand from others that it comprises many good animals. The liberal terms of credit that he offers ought to secure him ready sales, even in these hard times.

PREMIUM ESSAYS.

The accompanying premiums are offered by the Executive Committee of the Wisconsin State Agricultural Society, for essays on the subjects specified. The essays to be prepared with reference to subsequent publication in the Transactions of the Society.

Those who compete will prepare their essays and forward them to the Secretary, under close seal, by the 20th of November. The package should contain the name of the author in a separate, sealed envelope, inscribed outside, "Name of the author." The packages will not be opened until the Executive Committee meet on the 1st of December, when each of them will be referred to proper Examining and Awarding Committees, and the packages containing the names of the authors will not be opened until the premiums are awarded. The essays that do not receive premiums, will, on request, be returned to their authors. We have been thus explicit for the purpose of removing all fear of unfairness or partiality.

1st. A PREMIUM OF $25—For an essay of not less than twenty-five nor more than fifty pages of foolscap manuscript, on the best system of general farm management, upon a medium sized farm of mixed husbandry, reference being had to the raising of the different leading Western crops, and embracing the subjects of rotation, stocking down to grass, and manuring: also the proper proportions of the different kinds of stock, together with the best modes of summer and winter feeding.

2d. A PREMIUM OF $25—For the best plans, construction and arrangements of farm buildings, reference being had to utility and convenience, to economy in materials and mode of construction, to durability and good taste; to be accompanied by complete ground plans, showing not only the construction of each particular building, but also the general plan and arrangement of the whole. Also with main outline elevations sufficient to illustrate their general appearance, together with complete estimates of cost throughout. and not to exceed, all in all, from $2,000 to $3,000.

3d. A PREMIUM OF $25—For the best essay on Horticulture, reference being had to Fruit Growing in Wisconsin, and intended as a manual of *practical* instruction for the masses of the people, and founded mainly on actual knowledge, instead of mere theory and speculation for the professional or curious.

Those writing for the press, should write on one side of the sheet only, and as plain and distinct as possible. Printers cannot be expected to follow copy invariably unless they can clearly and surely read it.

D. J. POWERS, Secretary.

NOTE.—We hope that the foregoing subjects on which premiums are offered, will attract the attention of the good, sound writers of the State, and eventuate in calling out something practically useful. Much as each of the subjects have been written upon, still we believe there is room for new and useful ideas—even a whole embodiment of them; and that we have writers in what are considered "the common walks of life," who are capable of calling them forth; let us see. P.

PREMIUM LISTS, FAIRS, &c.

We are in receipt of the Premium Lists of the various State, and some of the County Agricultural Societies of our own State. Every thing about them betokens a determination to get up Fairs in no way inferior to the past. This is especially gratifying to all the lovers of Agricultural progress. We regret that the Fairs of New York, Indiana, and Kentucky, come on the same days as our own. We think, however, that we determined on that time and published it the first of any of them, hence it is not our fault. If other States will pattern after us, we can't help it, of course. We propose attending the Fairs of St. Louis the 2d week in September, and Illinois on the 3d week, after which we shall need to be at home, getting good ready for our own, which, by the way, we do not mean shall be a whit behind any of its neighbors, in any respect whatever if we can help it.

We are gratified at learning from our friends and acquaintances all about the State, that they are intending to come; and we are equally happy in feeling warranted in assuring them in turn, that all possible pains will be taken to make their attendance both pleasant and profitable, both on the part of the officers of the Society, and citizens. The preliminary preparations of the Society are already commenced, and will be more fully detailed in the August number. Suffice it for now to say that the most perfect arrangements possible are being made with the Railroad Companies, Hotels, &c., to render the conveniences as great, and the expenses as light as possible on those who attend from abroad.

COUNTY AGRICULTURAL DELEGATIONS AND EXHIBITIONS AT THE STATE FAIR.

We are glad to learn that several counties are purposing to send large delegations to the State Fair, with their own tents and necessary equipages and provisions for two or three day's housekeeeping. This is a thing that has long been talked of, and one that we have hoped to see. It would afford a cheap and agreeable mode for thousands to attend, who otherwise would not come.

All Societies that have tents can do this thing as easily as not, by just putting them in motion. Beautiful grounds within the enclosure will be furnished on which to pitch their tents. How many shall we hear from for this new feature of Western Fairs.

The Secretary of the Northwestern Union Agricultural Society, (G. B. Salmon, Esq.,) writes to know if their Society can exhibit at the State Fair, through him as Secretary. We answer, yes, of course; and the more Societies that exhibit in that, or any other practicable way, the better. The State Society will welcome them, most assuredly, and render them every convenience in its power. Something fine might be done in this way, if the idea was only seized upon an properly developed. We hope the more enterprizing of our County Societies will be wide awake and on hand, in both the before mentioned capacities.

P.

ENTRY OF FIELD CROPS FOR PREMIUMS.

Some fifteen or twenty of these entries have been received, from different parts of the State, embracing all the different crops on which competition is invited. We had hoped that under the fruitful aspect of the season, they would have been more numerous, but as yet our farmers have not got very energetic in such matters. We hope those who have entered, will report up and win as many premiums as possible.

We thought to have published the names of those entered, but at the request of some modest members we omit it.

P.

AGRICULTURAL TRANSACTIONS.

Those copies of this work,—including the Transactions of the State Agricultural and several County Agriculturl Societies for the years 1854, 5, 6, and 7, in 1 vol.,—which were appropriated to county Societies by the last Legislature, are in the hands of Hon. R. Parks, Superintendent of Public Property, who holds them subject to the order of their respective Secretaries. But we learn from him that he will not distribute them until he learns how many Societies there are in the State; as they are to be equally divided among them, and he cannot determine the quota of each until he knows their number. County Secretaries should forward their notice to him without delay.

STATE FAIR PREMIUM LISTS—

Will be promptly forwarded to such as request them of the Secretary; as also all possible specific information relative to the Fair.

THE PREMIUM LIST OF RICHLAND CO. AG. SOC.

For which we are indebted to the gentlemanly Secretary, L. D. Gage, Esq., shows the progressive and highly prosperous condition of the Society. We were particularly pleased to learn that some 150 bound vols. of the *Farmer* are offered as premiums—an arrangement not more complimentary to us than to its own just appreciation of the superior value of books over mere money. Our most hearty thanks to Richland, and a cheerful compliance with the terms proposed, to wit: that we wait for our pay until the Society get its annual appropriation from the State.

The *time* designated for the Fair, however, surprises us. Were the Ex. Com. not aware that they had fallen upon the two most important days of the State Fair? We were reckoning largely upon a handsome turn out from Richland and shall confidently hope for a change of time. A week sooner or later, friend Gage.

QUERIES AND ANSWERS.

Charles W. Wilder, of Plymouth, whose own experience and obsevation have induced him to believe that second cropping is destructive to clover, wishes to know whether his conclusion is confirmed by the experience of others.

How to Kill Sorrel.—In answer to enqiries heretofore published, Edwin Reynolds, of Metomen, recomends covering the field with straw to the depth of about two feet, allowing it to remain during the whole of the next year, and the burning off. Should any roots still survive, pull them up and burn them!

"How shall we Underdrain for Fruit-Trees.—J. B. Walbridge, of Baraboo, suggests the boring of a hole two or three feet deep, in the centre of the excavation before setting the tree, and filling it up with small stones and gravel.

"How shall we get rid of the Striped Bug?"—One correspondent says, "You may prevent their ravages by soaking the seed in beef brine, and putting a little hen-dung upon the hill after planting." Another recommends the sprinkling of sulpur on the vines while wet with dew. We have tried both of said remedies, together with Scotch snuff, the present season, and found them all to fail—the bugs merely laughed at them. The best method is to protect the hill by a small box, covered over, if necessary, with cheap gauze.

"What shall we do with refuse straw?"—Why, work it over into new straw, by mak-

ing manure of it, of course. Hope you would not burn it, and thus feed its elements to all the "rest of mankind" while your own soil is literally starving for them.

THE APPLE TREE WEEVIL.

A correspondent sends us a regular *bug*, with the request that we name him. His habit is to destroy apple-trees by sawing off the twigs near the junction of the new growth with the old; his appearance rather prepossessing, his garb being a modest gray with longitudinal white lines, and black dots. We call him the Apple-tree Weevil, or, technically, the *Ithycerus Novæboracensis*, and will publish correspondent's communication, with remarks, in the next number.

BUGS IN PEAS.

O. Martin, Esq. of Vienna, writes that a little camphor gum, placed in a cask of shelled peas, will not only kill the bugs, but will entirely prevent their depredations upon the crop grown from such peas as seed.

SALE OF A FARM SHOWING CONFIDENCE IN WISCONSIN.

Our adjoining neighbor, Mr. Wm. F. Porter, sold his farm the other day, of some 600 acres, for the handsome sum of about $20,000, cash down, including crops and various and sundry other property about the premeses. It seems a handsome sum for times like the present, still it was, in fact, low for the property, which is of a character to be very valuable in any times.

The purchaser was a retired and wealthy Boston merchant, who bought it for a son,—a resolute and recently married young man, who prefers to grasp with and make a home among the flowery prairies of the West, than amid the crooked lanes and dingy offices of even the good old city of Boston. We admire his taste, and hope he will find abundant success and happiness in his new vocation.

We are also gratified at seeing, that sensible Eastern people are not yet afraid to come here and invest their money, even in large amounts, in the purchase of homesteads, notwithstanding all the corruption and rascality that has been recently shown up, and the foolish talk about our illegal and defective collection laws. All these matters, when bandied through the newspapers, assume false hues, and appear worse than they really are. The fact is, the masses of the people are as honest in Wisconsin as any where else; and just as they now stand, their collection laws are as good,—all of which will be better understood after the smoke and dust of superficial scribblers have passed away.

MARKET PRICES—CROPS, WOOL, &c.

Wheat has rather improved in price in the last month, and although yet exceedingly low, compared with past years, still, under the circumstances, people rush it into market, to get it off their hands and out of the way, to make room for the forthcoming crop, which is close at hand, and on the whole promising *big*. On low and moist lands, it may have been somewhat injured by the over wet; but in the great mass of cases, it strikes us we have seldom seen it look more promising; and if the season continues favorable, we shall certainly look for a very bountiful crop, not only of wheat but of all sowed grain.

Corn is also coming forward at a rapid rate, and bids fair to be a good crop.

Wool finds buyers at rather lower rates than last year, and, as near as we can learn, is ranging from 30 to 40 cents per pound, which price would pay well, by the way, if people only had enough to sell. How *dog mutton*, (the principal product of some farmers), is selling, we have not heard.

THE EDITORIAL CONVENTION—FINALITY OF POSTPONEMENTS.

The much-vexed question of *time* has finally been settled by compromise, as will appear from the following communication, addressed to all editors who were not present at the meeting on the 16th ult.

As Cor. Sec. our part in the matter of postponement has necessarily been an unpleasant one. We expected our action in the premises would be censured by some—that our motives would be impugned. Let it be so. We have neither shrunk from any responsibility imposed, on the one hand, nor, on the other, omitted to do all in our power to harmonize conflicting interests and promote the objects of the Association.

We refused to participate in the meeting of the 16th because we could not do so in justice to the great majority who had courteously respected the request of the Committee, that they assemble on the 8th of July, and because the leaders in that meeting had treated the Committee with positive disrespect, by forcing themselves upon us, when they knew we were not prepared to receive them, under the absurd plea that the Association *must inevitably die* unless a trifling technicality be observed.

We have ever been ready to sacrifice any merely personal consideration, except a manly

self-respect, to the good of the Press, and that disposition has been in no wise diminished by this new evidence of a necessity for a higher standard of professional ethics.

WISCONSIN FARMER OFFICE,
Madison, June 19, 1858.

DEAR SIR:—Notwithstanding the urgent and respectful request of the Committee of Arrangements that the time for holding the Editorial Convention be postponed to the 8th of July, a considerable number of gentlemen—some through misapprehension—and others, for reasons not fully apparent—convened at the Capitol on the 16th inst., with a view to the transaction of the regular business of the Association.

When, however, it appeared that they were only a small minority of the whole number of the editors of the State, and that two Associations must be the inevitable result, should they proceed, they wisely resolved not to do so, and adjourned their meeting to the 6th of October, respectfully requesting the Committee and the fraternity generally to concur with them in the selection of that day.

Accordingly, after such consultation with those who were partial to the 8th prox., as the brevity of the interim would permit, the Committee, for the sake of that perfect harmony so essential to the prosperity and success of the Association, have decided to make the compromise.

The day selected will fall in the middle of the week during which the State Fair is to be held, and will enable all who would be pleased to attend both the Convention and the Fair, to do so with but half the necessary expense and loss of time.

Believing, therefore, that your preferences and even your personal convenience will, if necessary, be cheerfully sacrificed to the furtherance of the important objects for which the Association was formed, we hope for a ready concurrence with our decision.

Very respectfully yours,
On behalf the Com. of Arrangements,
J. W. HOYT,
Cor. Sec. Wis. Ed. and Pub. Association.

FRUIT

Promises a luxuriant crop, so far as we have seen or heard, the present season. Strawberries must abound in perfect profusion, fully proving what we once stated in the *Farmer*, and on which, doubt was raised by some of our friends, that they could be raised as easy as potatoes, if one only knew how.

Apples must also be a large crop, judging from our young trees, which, by the way, are full.

So of small fruits of all kinds; every bearing shrub is overloaded.

In these abundant returns we hope new encouragement will be found by young and despairing fruit growers. Patience and perseverance will accomplish wonders in fruit-growing, even in Wisconsin, as we expect our next State Fair will testify.

UNFAVORABLE SEASON SOUTH.

MESSRS. EDITORS:—We have the most unfavorable season ever experienced by us to get our spring crops planted. Should the season be so extremely wet in your State, I fear it will be a *damper* on our efforts to introduce the Nansemond Sweet Potatoe this season. It has been impossible to prepare our heavy clay land for planting, and we have been under the necessity of *topping down* our plants in the hot-beds, to two or three inches, that they may bud out again by the time the soil is ready to receive them, which they will do in a few days. Some of your readers might profit by this hint, as very large plants do not bear shipping and planting so well as medium sized ones, or those that have been topped.

Yours, J. W. TEN BROOK.

ROCKVILLE, Indiana.

COMPLETION OF THE P. Ft W. & C. R. R.

The Pittsburg, Ft. Wayne and Chicago R. R which is now in running order from Pittsburg to Plymouth, 82 miles east from Chicago, it is confidently hoped will be completed by the first of October. This is now the shortest route to the eastern cities, and is becoming very popular with the traveling public. We recently passed over the road and were much pleased with its management. See advertisement in this number.

COPARTNERSHIP.—It may interest our brethren of the press to know that Dr. J. C. AYER, of Lowell, (Cherry Pectoral and Cathartic Pills), has associated with him his brother, Frederick Ayer, Esq., long and favorably known as a leading merchant of the West. Mr. Ayer will conduct the widely extended business of the firm, which now reaches to the commercial nations of both hemispheres, while the Doctor will devote himself to his scientific investigations and pursuits.—*Mercantile Journal.*

OBITUARY.

Died May 1st, 1858, at San Leandro, Alameda Co, California, Mrs. Mary Emma, aged 32, wife of Dr. Americus W. Powers, and daughter of Mrs. Lovisa Rockwood of this city.

Little did we dream, when publishing, a few weeks since, the very interesting narrative of the overland route, that the author thereof had just departed for the golden shores of the Spirit Land. Peace to the soul of the true woman!—Thy disciplined heart won for thee earth's truest love; thy soul—all harmonized—wooed thee the early love of Heav n! And when life's desert was es shal' have been traversed, may we too prove worthy of the clime where "they hunger and thirst no more."—*N. W. Home Journal.*

WISCONSIN FARMER,

AND

NORTH-WESTERN CULTIVATOR.

Vol. X. MADISON, AUGUST, 1858. No. 8.

D. J. POWERS AND PROF. J. W. HOYT, Editors.

VEGETABLE DYNAMICS.

THE PLANT.—NATURE OF THE FORCES EMPLOYED IN ITS DEVELOPMENT.—To the philosophic mind mere facts are comparatively worthless until explained in accordance with some principle of established science. It is not enough that the earth each spring puts on its clothing of verdure for the sustentation and happiness of its myriads of animate beings,—the "man of god-like reason" would know the *how* of all this wonderful growth—how it is that the invisible atoms of water, earth and air are selected therefrom and marshalled into such living forms of beauty and use—how the clod becomes the rose-bud and violet, the filth of the sewer ambrosial fruits. Nor, is Nature so ungenerous with her stores of philosophy as the world supposes; nay, she is not even reserved and coy, but gladly opens the door of her treasury to the earnest, truth-loving soul and even strews her most precious jewels along the highways of knowledge.

The varied *forms* of the plant and the uses of its most essential organs have delighted us,—let us next inquire concerning the nature of that intangible force by which those forms and organs came to be.

The origin of the first vegetable germ is as profound a mystery as that of the first embryo of the animal. The nature of that spiritual essence, by virtue of which they are able to reproduce themselves *ad infinitum*, is as yet involved in obscurity; nor is it certain that the human mind is fully adequate to its comprehension. The existence of the embryo once assumed, however, the growth of the plant from germination to full maturity is as simple as the downward flow of water or the fall of ripe fruit from the bough of the tree; moreover, it is not necessary to assume the existence of any *new* force to explain the phenomena. Chemical affinity, cohesion, electricity. capillary attraction, vital force, and perhaps, gravitation, are probably only modifications of the same unit force instituted by the Almighty for all the operations of nature. It matters but little therefore what we call it, but, inasmuch as what scientists choose to call *electric* phenomena are most familiar we shall use that term in our discussion of the *causes of the growth of the plant*, trusting that none of our readers will be repelled by fear of *visionary theories*, on the one hand, nor, on the other, receive as scientific truth anything which we fail to establish by rigid induction.

Germination is the beginning of growth. It is well therefore that it be briefly considered before proceeding to the circulation of the sap and other processes essential to the plant proper,—a subject so concisely discussed under the head of "Seeds," in the April No. of the *Farmer* for 1857, pp. 113, 14, 15, that we will make no other apology for republishing an extract therefrom in this connection:

In order, then, to some possible explanation of the process of germination, let us gather about the little seed with our few glimmering tapers of chemical and physiological science,

in the hope that some inlet may be found into the deeps of the mystery.

If we look to the animal kingdom we find but two agents capable of quickening the embryo—heat and electricity. The warmth of the mother hen quickens into life the embryonic chick—the hot sands of the sun-exposed beach or arid plain, vivify the embryo within the egg of the turtle and crocodile; while electricity is quite as universally applicable for the production of like results. Many of our readers are doubtless familiar with the illustrative experiments of Mr. Crosse, of London, who, with two bricks immersed in a pail of acidulated water, by means of a transmitted galvanic current, called into being small animalcules, which lived their little day and then gave place to yet other multitudes of quick succeeding species; so that, in the course of the experiments, millions on millions were called into being, where the powerful microscope had not been able to detect a single ovum before.

And so we have learned by repeated experiment, that the germs of plants may be hurried into active life through the agency of galvanic action. In view, therefore, of what we know of the philosophy of sensible heat, and of the principle involved in the thermo-electric and galvanic battery—circumstances which strongly favor the theory of the mutual convertibility of heat and electricity, and tend to the philosophic conclusion that these agents are really but phenomenal exhibitions of a single unitary force—may we not hope to find, just here, some clue to the mystery of germination, and the transfer of the substance of the seed, even from its remotest parts, into the little plumule, which thereby increases in volume, from day to day, by this silent, yet constant ingathering of proper food.

Now, if the theory hinted at be correct, there must be present some circumstance or condition of the seed, by virtue of which the current that bears these particles along should always tend inward, *towards* the quickened germ. Well, in every seed there are such conditions, or circumstances of organization.—Thus, there is the decomposable out-side—the cotyledon—corresponding to the oxidizable zinc of the galvanic battery; and the less decomposible inside—the plumula—corresponding to the less oxidizable copper plate of the battery. Thus, as the oxidation of the zinc in the galvanic arrangement determines the consequent current to the copper plate, just so the decomposition of the outer portions of the seed—a circumstance favored still further, relatively, by its more direct contact with the exciting agents, warmth, moisture, and atmospheric air—necessarily generates the electric force, and causes it to tend towards the germ or plumule. To prove the ability of these little currents to perform the office of carriers, we have but to look to the process of electro-plating; where metallic particles of copper, silver or gold, in solution, are borne across the plating trough, and carefully deposited on the receiving substance. Indeed, in this very way we have secured the legitimate action of medicinal agents—causing the transmitted currents to pass through them, in solution, to convey the active principle directly into the stomach or bowels, producing vomiting or purging, according to the agent employed. Here, then, is the true reason, perhaps, why the seed is thus organized anatomically and chemically, why the starch becomes converted into soluble sugar, and a proximate solution of the question, "what is germination?"

Let us see, in the next place, whether there is equal evidence of the employment of this same force in the circulation of the full-organed plant. The *fact* of circulation has long been established; but the cause has not until recently been investigated. Indeed the existence of some mysterious *special* force has been so long unquestioned, that even yet it is difficult to enforce the truth by the most rigid course of argumentation.

That water and other fluids would rise in certain minute tubes had been observed again and again, but the true cause had not been determined, and therefore the application of this principle of capillary attraction was not applied to the circulation of the sap in the tubules of the plant. That the movement of the sap is really ascribable to this force is clearly established, by showing that no other theory can explain all the facts—that this theory *can* explain all the facts—and that all the conditions necessary to capillary action are present in the plant.

The first proposition—that no other theory does explain the facts—requires but brief discussion, since only three hypotheses have ever commanded the faith of intelligent men.

The first was that which evaded the question altogether, by refusing an attempt at any scientific solution, and ascribed all the phenomena to the mysterious power of *vitality*.

The second hypothesis was an unwarranted assumption that the tubules of the plant had the power—by some means, it was not pretended what—to force the sap along their course by alternate contractions and dilitations, in the same manner as the blood was believed to be forced through the arteries of animals.—This theory is unworthy of other reply than that, there is no evidence whatever of such contractility in the first place, and secondly, if there were, such force would be even more inadequate to the circulation of sap in the

plant, than it has since been found to be to the movement of the blood in the animal.

The third hypothesis may be dignified with the title of *theory*, but is also inadequate to an explanation. The exhaustive power of the leaves was the basis of this explanation,—a power which probably does exist, but not to an extent adequate to the great work of elevating hundreds of pounds weight of water to the top of the highest oak or California pine, and is in no way applicable to the *descending* sap, which must often first *ascend* in order to reach the trunk through depending branches.

It now remains to be shown that the explanation which we offer—a theory which is fast obtaining the adhesion of scientific men—is logically deduced.

The term *capillary attraction* (from *capillus*, a hair,) is expressive of the fact, that fluids will rise in tubes of certain kinds if they be sufficiently small. Familiar illustrations are numerous, such as the ascent of water in a sponge or lump of sugar whose under surface, merely, is immersed therein, and the rise of oil or burning fluid in the wick of the lamp. That the capillary tubes are there in the plant is demonstrable even without the aid of the microscope, the woody structure of the stem and branches being as stated in a former chapter, in substance, a bundle of such tubes.—Then, the conditions are there present: the spongioles, or open mouths at one end, the leaf-pores at the other. The analogy between the plant and the wick is rendered more complete by the effect of evaporation on the one and combustion on the other. For it is well known that the oil will no longer move in the fibres of the wick after they have once been filled, unless that which is already in the upper extremity be consumed; and it is equally certain that the circulation of the sap does not fairly begin until evaporation commences on the surface of the leaves.

Our next enquiry shall be concerning this capillary force. Is it some *new* force? or is it rather identical with some one with which we are already familiar? Let us look at simple facts and see to what conclusion they will conduct us. First, not every fluid will rise in every kind of tube. Mercury will not rise in a tube of glass, but will rise in a tube of gold and sundry other metals. Secondly, of those tubes in which any given fluid will rise, in some the ascent will be rapid, in others slow; and the like is also true of two different fluids in their relation to the same tube. Thirdly, the flow of two fluids through an intervening capillary medium is always proportional to the degree of difference in their electrical qualities, and the quantity of fluid passed will be proportional to the degree of electrical affinity between the fluid and the capillary partition. This is easily illustrated by filling a bladder with alcohol and then confining it under water; a mutual transfusion will take place, but the water will pass so much more rapidly than the alcohol, that the bladder will swell almost immediately, and very soon burst under the increasing pressure, if the process be allowed to continue,—for the reason doubtless, that the capillary pores of the bladder, and the alcohol, together, have a stronger affinity for the water, than the water and the membrane have for the alcohol. Oil and any alkaline solution operate in like manner. Fourthly, no fluid will succeed in ascending through any capillary tube with the substance of which it cannot come so completely in contact as to *wet* its surface.

Now to any one acquainted with the properties of the electric force, these facts must all appear as almost conclusive proof that electricity is the agency which, in the circulation of the sap, does the work usually ascribed to capillary attraction; for all the essential conditions are furnished by the plant. Thus, the leaf is provided internally with an arrangement of capillaries partitional between the sets of sap-vessels through which the upward and downward currents flow respectively; while the surface is provided with a multitude of little evaporating pans in which under the influence of the sun a concentration of the sap goes forward, and a deposit of carbon takes place as a result of the decomposition of carbonic acid absorbed from the atmosphere; whereby it appears that there are two fluids provided, with capillaries between, corresponding to the alcohol and the water separated by the capillaries of the bladder—the one a thin liquid sap, consisting of simple water with a few mineral salts and gases in solution, and the other a mucilaginous liquid prepared by elaboration of the ascending sap in the digestive apparatus of the leaf. We should expect, therefore, a pressing of the ascending sap, through these capillaries upon the elaborated sap, which, having itself but little inclination to repass, is driven forward into the vessels with which it communicates without

interference, and is thus forced along the descending vessels to its place of deposit, the work of elaboration and growth going forward with a rapidity proportioned to the amount of available water in the soil, carbonic acid in the soil and atmosphere, and the intensity of the sun's rays.

The conditions being furnished then, it is the *sun* which drives the machinery of the great vegetable world, converting the lifeless atoms of inorganic matters into forms of winning grace or grand magnificence,—aye, the sun is after all the great wonder-worker.

But it is not enough to know that the beams of the sun are the cause of these decompositions, elaborations and consequent growth.—Let us see if we may not satisfy ourselves as to what *particular* principle or agent of the sunbeam—as there are believed to be several—this special work is referable.

1. It cannot be *heat* for the reason that the red or heat ray has but little power to effect decompositions of carbonic acid, and because simple isolated heat has no power of that kind at all.

2. It is not the *chemical* ray as referred to inorganic matter, since that has as little power for the purpose as the calorific (heat) ray.

The conclusion seems inevitable therefore, that the decomposing power must lie in the *color*ific rays of which yellow is the type, and experiment proves that such is the case; for, if delicate plants be exposed to all the several rays of the spectrum, that which is under the influence of the yellow ray will grow much the most rapidly. In view of all these circumstances it must be evident that the yellow ray possesses the power of decomposing organic carbonaceous substances *because it is yellow*. It is the colorific ray, therefore, in which the active decomposing principle or agent resides. But *color* is itself ascribable to electricity as a cause, and the conclusion is hence legitimate, that the force which we choose to call electricity is that to which the decomposition of carbonic acid by the leaf, and consequent circulation are due.

Moreover the validity of these deductions is still further confirmed by certain known laws of electricity. For example, it is well established that it has a strong tendency to an equilibrium, so that if any given body should, from any cause, have more in one part than in another, a flow will immediately take place in favor of the deficiency. It is also known that the process of evaporation is abstractive of electricity: the immense quantity which occasionally disrupts from clouds of vapor, in the form of the lightning flash, is proof of this. We should accordingly expect the leaves of trees to be deficient in electricity, or negatively electric, as compared with the other extremity; indeed such a relative condition is inevitable; and must result in an electric current from the roots in the earth towards the leaves, and that current could hardly fail to bear the sap in its course, just as it bore the store of food on the outside of the seed to the plumule within, or, as it always bears the particles of metal in solution across the trough from the positive to the negative pole of the galvanic battery in the electrotyping process. In a word, the plant is a regular battery, with negative and positive poles and sap vessels for wires.

How, then, could the sap do other than circulate, under this two-fold agency of the electric force? how should it do other than almost cease when the tree is stript of leaves in the winter? or how fail to effect the most rapid growth of the tree during the spring and early summer, when the earth is moist, the heat of the sun intense, the leaves in the best working order, and when but a small portion of the sap is required for the production of fruit? H.

Who would not be a Farmer.—The Louisville Courier pays the following tribute to the occupation of the farmer:

"If a young man wants to engage in business that will ensure him, in middle life, the greatest amount of leisure time, there is nothing more sure than farming. If he has an independent turn of mind, let him be a farmer. If he wants to engage in a healthy occupation, let him till the soil. In short, if he would be independent, let him get a spot of earth; keep within his means, to shun the lawyers; be temperate to avoid the doctor; be honest that he may have a clear conscience; improve the soil, so as to leave the world better than he found it; and then if he cannot live happily and die content, there is no hope for him."

Wealth of Ohio.—According to the annual report of the Commissioner of Statistics, just pubished, the aggregate value of the farm products of Ohio, amounts to $132,700,000 per annum; while the net profit on the same is put down at $57,300,000.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER VIII.

THE COMPARATIVE COST AND VALUE OF STONE, BRICK, WOOD AND GRAVEL OR CONCRETE FOR BUILDING PURPOSES.

In compliance with a former promise, we now proceed to compare the various materials for the walls of farm buildings; and in doing so, will adopt our own farm locality with its circumstances and prices as a basis of calculation, leaving it for others to modify or change their estimates and results according to any difference of circumstances that may surround them in their own respective localities. Further, in estimating prices of materials or labor, we shall aim to be governed by customary rates, instead of any extreme of high or low prices. Let us further premise, that we have good common quarry stone, sand and gravel, all upon our own premises; good lime burnt within a mile; brick within two and a half miles; and a pine lumber market at Madison, within four miles; all of which circumstances assure the various materials, at least at medium fair prices. We would further add, that we have deferred this article somewhat, with a hope of being able to give some additional results, from certain contemplated buildings, which have been deferred on account of the extraordinary wet season.

For the purposes of our illustration then, let us assume to erect the walls of a house 26 by 36 feet square, being about a fair size for the main part of a common farm house, and 20 feet high above the basement wall, which admits of two nine feet stories in the clear, which will also do very well for a country farm house.

In presenting the accompanying estimates, of prices of materials and work, we have aimed to get them as nearly correct as possible, by conferring with those who are constantly building, with the three first mentioned kinds of materials, as well as exercising our own tolerably experienced judgment upon the matter. And in this connection we would say, that we have built several of each, of the different kinds of buildings of which we are talking, some before and some since we came to Madison, and in several different localities; hence it is not mere guess work with us. And in this comparison, we wish it fully understood, that we are only aiming to show the comparative cost of merely the outside walls of a house, built as it should be, of these different kinds of materials; all other parts of the house are supposed to cost the same, of whichever material built. Our figures on the matter are as follows:

Cost of the outside walls of a building 26 by 36 feet square and 20 feet high.

OF PLAIN DRESSED LIME OR SAND STONE.

250 perches stone work (the walls necessarily 18 inches thick) at $2·50 per perch, laid up,	$625
Extra cut stone for window and door sills, water table, &c., say	100
Bond timbers, anchors, furring, &c.,	15
	$740

BRICK WALLS OF SAME SIZE.

55,000 brick at kiln $5 per M.,	$275
Drawing $1·50 per M.,	82
Mason's price for furnishing everything and laying up, $3 per M.,	165
100 feet stone caps and sills for doors and windows, at 40 cts. per foot,	40
124 feet water table at 30 cts. per foot,	37
Bond timbers, anchors, furring, &c.,	15
	$614

WOOD BUILDING.

450 feet square timber for outside frame at 12 cts. per foot,	$ 54
5,000 feet studding and sheeting boards at $20 per M., delivered,	100
4,000 feet finishing and enclosing lumber, plank and siding at $25,	120
Extra carpenter and joiner work on wood building,	130
Extra nails, &c.,	20
Extra painting, over brick or stone,	60
	$454

A balloon frame wonld cost from $50 to $75 less in price.

GRAVEL OR CONCRETE BUILDING.

Gravel and stone for wall to be drawn from the nearest point (we find plenty of gravel in digging a cellar on our premises, for the wall of building,) therefore only costing the digging and wheeling. For such a building as the one in question, it is about sufficient work for a team and man, to dig and draw the gravel, stone and water, for a course of one foot per day, upon a gravel wall, and the labor of two common hands will mix and put it up, with the aid of the boss carpenter, to assist in raising and adjusting the curbing plank, a

good mechanic being necessary for this purpose in order to keep them true, and also in order to place the door and window frames, timbers, furring, blocks, &c. A good carpenter and joiner can just about keep the requisite wood work along with the walls as they progress, with such a force as we have mentioned, besides rendering the aforesaid requisite assistance to the common laborers, mixing and putting up the gravel walls. Thus the expense of such a wall, is arrived at as follows:

One-half the time of a boss hand, who by the way should be a good and capable man at the whole job, say at the rate of $2 per day,	$1 00
Two good common laborers at $1 per day,	2 00
Team and driver per day,	2 50
Making the outlay per day for help,	$5 50
Which at a course per day of one foot, will require twenty days to put up the walls; but add four additional days, for getting ready, placing timbers and other delays, and the time becomes twenty-four days, which at $5·50 per day, amounts to	$132
Add for 150 bushels lime at 20 cts.,	30
For stone window and door sills, say 50 feet, at 40 cts.,	20
Caps and water table omitted.	
Furring, bond timbers, ties, anchors, &c.,	15
Hard finishing, and blocking of the outside in imitation of stone, including all materials,	75
Extra use of lumber for curbing, nails, &c.,	10
Use of tools,	3
Whole cost of walls,	$285

They being completed to the same point, both outside and in, for use, as the stone, brick or wood.

But to put up one of these gravel walls, substantially and cheaply, is just as much of a trade, and requires nearly as much skill, as to put up stone, brick or wood. Hence the theory that has been ordinarily promulgated, by mere fancy writers, on the subject, that any body, even common farmers and laborers, could build a "gravel house," is at least a very erroneous one, and as we have before stated, has led to a thousand blundering attempts, which have resulted in so much miserable botch work of the kind, as to raise a general and almost overwhelming prejudice against the whole system. Suppose a common farmer or laborer should undertake to put up a stone or brick house, what kind of a looking job would he probably make, or how much better would it stand than his gravel wall? Not any better of course. No, bunglers nor ignoramuses, have any business with putting up gravel walls, without a mechanic to boss them, who knows how to preserve a straight or perpendicular line, and generally to put materials together as they should be. With such a boss, the commonest help can be worked in for all the rest.

We have tried nearly all the different ways of putting up these walls, and have finally found the mode which we shall describe the preferable one. It is as follows:

We first put in as good a foundation of stone as we would for a brick or any other building. Cobbling foundations are sure to cause them to crack or tumble down, the same as they would a stone or brick building. We next take our overhead joist, partition studding and rafters, (such stuff as we shall not need until the walls are up,) we lay such studding down in pairs, two and two, and nail strips across them at the top, middle and bottom, like a ladder; the studding being the right distance apart for the thickness of the walls and the curbing boards each side of it. When we get a sufficiency of the stud-ladders made, to stand around the foundation walls once in about three feet, we stand them up all in a line, and stay lath them to a row of tempory studs, tacked up to the floor joists in the centre of the building; and braced so stiff as to keep the whole upright and in place. For the corners, spike two of the top joists together, so that they will constitute a *rabbit* inside, to receive the ends of the curb boards. When this whole superstructure is set up, straighten it by a line on each side, to just the place on the foundation where you would have your wall, and secure them there with some sort of a stay; then plumb each one perpendicular with a plumb staff, and on the centre superstructure before spoken of, make each one fast, being careful that the stay laths are all so arranged, as to be as much as possible out of the way of passing around the wall, inside or out, with run ways and barrows of mortar. This superstructure once up, accurately and properly, and the most difficult part of the whole is done. Next select good sound floor plank, from seven to eight inches wide, and fit them inside the studs so as to make a tol-

erably tight curb, of two courses of plank and at least fourteen inches high. In placing these curb plank, it is well to stick the point of a shingle between each curbing plank and the upright, so that when you wish to raise the curbing, you can loosen it from the wall, by taking out the shingle. Thus far rigged, and the whole is ready for the mortar, which we prepare and put in as follows. We rig a strainer box and mortar bed, the same as for any large job of mason work, have the gravel (and the coarser and cleaner from loam the better, provided there is sand enough in it to embed the gravel,) thrown into the bed until sufficiently full, then strain in the lime, to the amount of about one bushel to ten or twelve of gravel, and mix the whole well with a hoe. When it is ready for use, with a wheelbarrow it can be run around the wall and filled into the mould, much more easily than with a hod. In filling in we make the mortar quite thin, and after placing in a layer about two or three inches thick, we pack it as full as possible of thin flat stone, an abundance of which are found handy on our premises. This layer completed, we then spread another coat of mortar as before, and again embed the stones, using a stone hammer to tamp them as close and solidly together as possible. These stone are not indispensible, but undoubtedly greatly strengthen and improve the wall, making it equivalent to stone, when they are well packed in. When the curb is full, it needs to stand for a day, when if the weather is good, it can be raised and adjusted for a new course, and so on to the end of the job. Experience will soon teach a skillful hand how to temper the mortar, and how to handle every part of it although practice is valuable in this, as in everything else.

For a building of the size and hight referred to, we would make the first story wall twelve inches thick, and the second story ten. Over the doors and windows, flush with the inside, we would put in good stout bond timbers, running at least a foot on to the walls each way. We also put in the centre of the wall over the door and window openings, long strips of seasoned wane, or light rough scantling, to operate as ties to strengthen the wall, also at the corners by crossing them, and nailing firmly together. These little precautions may seem trifling, still they will be found to be very important in practice, rest assured. The object of the narrow curbing plank, is to prevent their warping; to which they are much inclined from being wet only on one side. The warm dry months are the best for this kind of work, although no ordinary rain washes these walls, after they have dried a short time; still in damp weather they cannot be urged up so fast.

Hard or outside finishing this kind of wall, should only be done by experienced hands, who know how to properly temper and put on the mortar, so that it will stay on and be durable, which it will usually do except when the wood finishing is so done, as to allow the water to intrude behind it, which should be carefully guarded against. With people of moderate means, the hard finish can be omitted until convenient, but not so the furring out from the wall and lathing inside. This is indispensible in any stone or gravel house, if one would have them dry and healthful, and should never be omitted when finished inside. Gravel mortar that is properly mixed, hardens with time and becomes almost equal to solid stone. It should be placed up fairly above moisture upon the foundation walls.

Thus much have we said about gravel or concrete walls for houses, not that we prefer them to stone, brick, or even wood in some cases, or because we would advise any who are fully able to build of stone or brick, to build them, for we hold that good stone or brick cannot well be surpassed. But we write on this subject for the thousands dwelling upon the wide gravelly prairies, inconvenient to stone, brick, or even timber, and for any others who may choose to try it. Our purpose is to satisfy all such, that both good and cheap buildings can be made of it, by those who go the right way to work. It is even better adapted for barns and out buildings, than for houses, as in such case it needs no outside finish, nor painting, is both warm and cool, and will endure for ages. P.

NUMBER OF PLANTS TO THE ACRE.—It is often very convenient to know how many plants will grow on an acre at certain distances. For reference, therefore, we give the following table:

Dist. apart.	No. of plants.	Dis. apart.	No. of plants.
1 foot	43,560	9 feet	537
1½ feet	19,360	12 "	363
2 "	10,890	15 "	193
2½ "	6,969	18 "	134
3 "	4,840	20 "	110
4 "	2,722	25 "	70
5 "	1,742	30 "	50
6 "	1,210		

Valedictory Address of Hon. G. W. P. Custis, late Vice President of the U. S. Ag. Society.

Mr. President and Gentlemen of the U. S. Agricultural Society: The time has come when, by the request of our worthy President, I am to bid you Good-Bye. I shall not detain you long. The papers, those oracles of public opinion, say that the Old Orator has been both fortunate and unfortunate in his remarks, for that by one speech, I made a President of the United States; and that by another speech, I killed one; I hope my present address will kill nobody. [Laughter.]

Gentlemen, I congratulate you on the present condition and bright prospects of this Society. I assisted to rock its cradle in its infancy, and I am rejoiced to find that it has become such a bouncing baby. [Laughter.] "There is a tide in the affairs of men which, taken at its flood, leads on to fortune." Advantage has been taken in that turn in agriculture and the coming events foreshadow the near approach of its fortune. I congratulate myself that I am spared to see the Tiller of the Soil honored. *"Palmam qui meruit ferat."* For him you may well wreath your chaplets, for he is the public benefactor—as he who leads you towards advancement in agriculture, leads to the source of power. This principle has been recognized from the earliest days of antiquity. Yes, friends; times have changed. This infant country, now so great though so young, feels the power to which she owes her greatness, and knows the art that sustains the pillars of government. Why, gentlemen, it is but the other day that our country imported everything; in my early days every article of clothing which I wore, was brought across the water; even the toys which amused my infantile hours, were imported. How is it now? We are self-sustaining in all manufactures, so far as concerns the necessaries of life. As old Lord Chatham said to Sir Joseph Banks when the latter was very anxious to obtain specimens of the Bread Fruit, but did not know how to do it—"Go to Bristol and there enquire if there be found any of that race called Marblehead Fishermen. Commit your task to their charge and they will find that which you want, if it be in the world." So it is now in our country—if what you want is in the world, you can find it in the United States. [Laughter.] When the Father of his country was inaugurated he was clothed entirely in fabrics of home manufacture, thus setting an example worthy to be followed by all, in encouraging domestic industry. If his example were followed in this respect at the present day, how great a nation should we not become? How independent! A man out of debt is indeed independent; so is a self-sustaining State. Let us then rely upon our own self-sustaining powers and be independent in fact as well as independent in name.

Let me now call up a reminiscence of the olden time, as a tribute to the Society which I now address. The "pocosen" meadows, as we call them, in contradistinction from fresh water marshes, abound on the shores of the Potomac. Some thirty years ago I attempted the reclamation of a tract of such land. It was cut down and then came such soil and such productions as I never saw before. When it became dry enough to plow, I planted it with corn, in rows three feet three inches apart, each way. In due time there was a forest of stalks twelve feet high, so near together that the mighty ears overlapped and intertwined. At that time I was honored by the visit of two gentlemen eminent in agriculture, one of whom had but lately spent eight years in Europe. I invited them to visit this corn.field; they were greatly astonished, and in order to satisfy themselves as to the actual crop, laid off a portion of the field and calculated its crop, when they were still more astonished to find that it produced twenty-two barrels of corn to the acre! A part of the tract was sowed with timothy which also excited their astonishment, for it grew as thick as the hairs on a dog's back; this they proceeded with in the same way, and found that it would cut four tons to the acre! Another gentleman, Mr. Steinberger, one of the most extensive stock-breeders of the day, visited this reclaimed morass and was equally surprised. He said, "I have seen lands in all parts of the country, but I never before saw lands that were all manure!" On examination we found that the soil was thirty feet deep; and as the crop was not at all dependent upon rains, he calculated that it would annually be worth $100 per acre; never less, perhaps more. You may wonder why I mention this. I will tell you why. It is because there are 100,000 acres at least of such land lying on each side of the Potomac, which, by the same, or better treatment than my land received, might be worth to the possessor $100 per acre, in corn or hay, which land is now the abode of the frog and the muskrat and the mole. Let but these lands be reclaimed and put into proper cultivation, and it would make a difference of one-half in the price of provisions in the National Capitol.

Well, here we are. We need not turn to books to learn our progress and position in the world. Books contain history of old conquerors and ancient conquests. We should learn our position by looking at the temple of our liberties which was reared by patriot hands and cemented by patriot blood, and the sight of which will strengthen us to emulate our forefathers in deeds of equal devotion. As we gaze on that temple we will resolve that its foundations shall never be weakened by the nibbling political rats and mice, but that it shall stand till it shall be crushed by weight of years, and that when it does fall, if fall it must, that the crash shall echo through all future time. Fall! no, it will never fall, for it is supported by the Tillers of the Soil; it

will stand until America is the mistress of the world! [Applause.] Only follow out her destiny—obey her laws—preserve her constitution, and while she is so well supported she can never fall. [Long continued applause.] You wonder that I display so much feeling on this subject in this place. Pardon me—but I was coeval with the commencement of this great government and have watched the progress of this glorious empire from infancy to vigorous youth—so when the Old Man speaks his country must have a part of his argument. [Applause.] Yes, gentlemen; I saw the dawn of the blessings we now enjoy. I have grasped the hand of him we all love;—all my early memories are of the brave, the great and the good; and the remembrances of my childhood go back to the first President and linger among the shades of Mt. Vernon. And now, when called upon to address an audience of my countrymen—I can but point back and say, "See what we once were—look at us now! And therefore, gentlemen, when I see clouds rising and hear the mutterings of far off thunder, I say, "No matter, we have passed the greater trials in the commencement of the Republic—what can we not do now?"—And I put my trust in Providence and believe that all these trials will pass away, and that brilliant sunshine will cause our land to blossom as the rose.

During the fifty years in which the Old Orator has occupied the American Rostrum, he has never stood before an audience for which he had a greater respect. No institution would have found more of love in the heart of him who is now no more. If then you wish to throw laurels on the tomb of the Farmer of Mount Vernon, go on as you have begun.—Agriculture he thought the bulwark of the land. And when he put off the cares of State he retired to Mount Vernon, and gave himself up to the advancement of its interests, thus showing by his example that he considered it the bounden duty of the great man, on leaving the helm of the nation, to retire to the bosom of his family and busy himself in domestic affairs or rural economy. How well his example has been followed. We now see great men lay aside the purple and grasp the handles of the plow. Gentlemen, he and they, by their example, have made Agriculture HONORABLE. If he was a Farmer, who would not be a Farmer? [Applause.] Had you seen him, as I have thousands of times, engaged in rural pursuits, you would have said with me on beholding the spectacle—He has laid his laurels at the feet of the nation, and when engaged in domestic occupations, he is as much to be *loved* as he before was to be honored. You see, then, what Agriculture is;—let the art take its proper place. [Continued applause.] We honor the statesman, the patriot soldier, the philosopher; but we honor still more the man who teaches us to make two blades of grass grow where but one grew before, for that man is a benefactor to the whole race of humanity. This is the great end of our Society, and as we look back to its small beginning among the faithful few—and when we look around upon the highest dignitaries of the land who have, during this meeting, deliberated with us, what have we not to hope? The Institution will thrive, and when it comes under the wings of the eagle, as I trust it soon will, the country will find that our past benefits to Agriculture only foreshadow the greater deeds in the future. Then you can say—Our Government affords it aid and protection and gives its sanction to our acts. And our people will honor and engage in Agriculture.—And surely our government ought, and eventually will, give its aid and protection, for is not the government the people, and the people the government? And is not agriculture the most general, the most useful, and should it not be the most *honorable* employment of the people? [Applause.]

But the time has come for me to say,—*Farewell!* And when a man, on whose head rests the snows of seventy-six winters bids you farewell, the probabilities are that it will be a long farewell. You will now return to your homes with hearts cheered and hands strengthened, by this mutual communion and this brotherhood of farmers from all parts of our great country. And you will come up to our National Capitol in another year, each one with fresh cause of encouragement for the rest, each one with more information, the result of the year's observation and labors, which he will interchange with his follows and thus scatter broadcast over the land. And as you come up from all portions of the country—from these classic grounds where our fathers died—let your hearts be invigorated by their patriotism and your hands labor for the prosperity of the country they bought with their blood.

And now, Gentlemen of the United States Agricultural Society—Farewell! Go back to your homes and tell your friends what has been done at this meeting for the cause of Agriculture, and encourage them as you have been encouraged. Continue your devotion to this bulwark of our country, continue inviolate our great Constitution, obey our self-imposed laws, preserve our blessed Union, and our Republic will be IMMORTAL! [Long continued applause.]

DR. BARKER, a celebrated dentist, says that saleratus and cream of tartar in bread, are destructive to the teeth. He soaked sound teeth in a solution of saleratus, and they were destroyed in fourteen days.

A ROSE bush is in flower in Mr. Dalglish's garden, Providence, R. I., that fills a greenhouse seventy feet in length, and contains six thousand flowers and buds!



PRESIDENT THRIFTY'S HOME.

"Come boys, let us not forget the meeting of the Agricultural Club to-night; there is to be a discussion on the application of Gypsum as a manure for clover. I'll use the fork, and we'll thus close up the work of the day, in time to get ready."

These were the words of neighbor Thrifty, President of the Town Ag. Club—a gentleman of high intelligence, and a farmer of enterprise and ambition. Look at his premises. What an appearance of thrift and neatness they present. The dwelling is ample in its proportions, handsome in style, and provided with every convenience—parlors spacious and always ready for the reception of guests and open for the comfort of the household—library full of the best works of the day—bedrooms large, high and well-ventilated—cellar ample and well-stored with everything needful for the comfort of the family—kitchen, laundry, bath-room neatly furnished, wood-house full of wood cut the previous winter.

The grounds are beautifully laid off and ornamented with flowers, evergreens and forest trees for shade; the garden and green-house the delight of all who visit them.

The barn is handsomer than most country houses, and well-furnished with hay mows, granaries, &c., above, and stalls for cattle and horses below. Moreover, on the northwest, north and east sides there are finely-mangered sheds for the protection of cattle and sheep in the winter. The manures are carefully preserved, and there is a cistern for liquid drainings. His stock is always the best in the State, fine-blooded, healthy and sleek.

The orchard is all living, for years ago neighbor Thrifty learned to plant none but the hardiest varieties. By vigilance and science he has protected his fruit-trees against the depredations of insects, and so every year has an abundance of luscious fruits for his table, while Slovenly and other shiftless neighbors are eating sour bread, fat pork and watery potatoes.

His fields are well arranged, neatly fenced; his crops, scientifically rotated, properly manured, and thoroughly cultivated, and always sold at the right time.

His implements of every sort are the best approved, and no discovery in the science of farming in any of its details is long unapplied. At Agricultural Fairs he is the leading spirit and his products generally sweep the premium list. In the conduct of his farm, *system* is the golden rule.

In his domestic relations he is equally happy. His wife is an equal and is treated as such, appreciates the value of life and is competent to its responsibilities. *System* is her rule also, and perfect tidiness is the result.—Cleansing is done regularly, and cooking scientifically; sour bread and mean pastry are unknown. Her children are a source of pleasure, for they are well instructed and therefore obedient. In a word they are a help and a joy to each other, and furnish, all together, the finest example of true earthly happiness. H.



OLD SLOVENLY'S "DEN."

Everybody has heard of old Slovenly's *Den*, down in ———. Well we traveled that way, and being weary with our journey, and curious to see some new phase of human nature decided to call. We approached leisurely, calculating as to what would be our reception, when the loud baying of dogs, the squawking of geese, and squealing of swine, mingled with half-human execrations saluted our ears. It seemed as if all the fiends of Tophet were let loose, and we unconsciously snuffed the air to see whether it had the smell of brimstone! screwed up our resolution, however, and advanced. The eye confirmed the ear. In the foreground was a miserable old fence of rotten paling, with here and there a gap so large that swine or cattle might enter the yard without effort. And they *had* entered, for one long-nosed, bone-protruding, half-starved porker was making his exit pursued by a hungry bull-dog, whose relish for live souse was an evident stimulant to his energies. Joe had just given his victim a back-breaker with a brick-bat, and was now scratching his head with a grin of mingled regret and satisfaction; while Obadiah was about to cave the snout of another malicious rooter with a regular club of Hercules. A flock of geese and chickens had made their escape with the exception of one old gander, whose clumsy leg had hung him to the fence. The scene was an exciting one you may be sure, and so fully occupied us that our attention was only called to the back-ground of the picture by the following vociferous and damnatory ejaculations of old Slovenly himself, who now suddenly became the hero of this farcico-tragedy.

"Yank 'em Rover! Chaw 'em! Give 'em h—l, d—n 'em! I'll learn the tarnal critters to keep out o' yher, if they don't want to be made into sassinger-meat alive! Joe, how many times have I told you to git some nails and fix up that 'ar fence? Cussed hogs and cussed boys; wish their necks was broke!"

Here the old woman made her appearance at the window, and muttered words of mingled sorrow and anger, which the old tyrant helped her to suppress by a beastly threat of fists and cow-hides.

The house had been dilapidated for years and now seemed to have reached the climax. The chinks were half knocked out and the greasy faces of squallid children stared through the openings. The door was half hung, lopping upon one hinge; the window-panes had been broken, and old hats, straw pillows and rags were stuck in to keep out the storm. The barn located almost in front of the dwelling, was lop-sided—the doors slamming to and fro, and its shingles clattering in the wind.

Here was a man who loved ease and whisky better than good farming—who took no agricultural periodical or newspaper—who trusted to the errors and vices of his grand-father and cursed all science as a humbug. Poor wretch! his "den" is his commentary—who wants to be like him?

H.

Correspondence of the Farmer.

Relative Value of Theory and Practice.

MESSRS EDITORS :—Statements of facts and experiments are, in Agriculture, of greater value than theorizing, at least, in my opinion. Agriculture is, after all, a series of operations founded on past experiments and practical discoveries and results brought about mostly by fortuitous causes, or analogical reasonings founded upon the operations of nature.

Thus we see the beneficial effects of manures, of plaster, of deep plowing, of frequent stirring of the soil, and we do these things accordingly, beeause experience proves them to be beneficial. I think the knowledge of these *results* is of greater value to the practical agriculturist, than a knowledge of the elements which enter into the composition of manures, or of plaster, etc.

I must not be understood as wishing to object to theory in agriculture, to chemistry or vegetable physiology. Far from it. A knowledge of these, when attainable, is certainly desirable. But I insist upon the fact that the mass of the farmers must forever be a class of working men rather than of scientific students, whose education will be limited and to whom definitions of hydrogen, oxygen, azote, ammonia, alkalies, sulphates, phosphates, etc., will remain forever perplexing and unintelligible.

Now, the object of an agricultural paper is to give to the farmers such knowledge as will be *practically* beneficial and available to them, and enable them to raise the largest amount of grain and fruits from the smallest surface of land at the least expense.

I am afraid that my views as here briefly expressed, do not coincide with yours, but I do not ask you to endorse my opinions, and therefore trust that you will insert these remarks in your valuable paper.

I am highly in favor of an Agricultural College in connection with an experimental farm, but I think that practical operations should enter largely into the system of education, and speculative and theoretic instruction should not have an undue share of the time of the pupils. The best surgeons and doctors are those who have listened to the lectures of eminent practitioners in the hospitals, around the beds of patients, where symptoms of disease could be daily followed through their various phases unto cure or death, or where they assisted and helped in the surgical operations, explained while performed.

Yours, G. DENEVEU.

FOND DU LAC, WIS.

REMARKS.—We regret that, in the mind of a man of so much intelligence as we know the author of the foregoing to possess, there should be a necessary contest between *theory* and *fact* —science and practical operations—as though essential parts of the same system could, in any manner, be opposed to each other. If natural philosophers had ignored theory—*by which we mean an exposition of the general principles of science*—where would have been the grand achievments of civilization in the arts—the steam engine, the printing press, the power loom, the electric telegraph? True an observation of facts must have occurred first; but the mere knowing of the fact would have been of but little avail, had there not been a discovery of the *principle*, by virtue of which the fact came to be. If every fact had its own individual and independent law, then there were less necessity for knowing that law; but inasmuch as every fact is one of a countless number based upon a single principle, it must appear to every rational mind vastly important that man, who lives in a world of facts, and is able through a knowledge of the law and its uses, to produce and multiply facts almost at pleasure, should possess a knowledge of the great general laws, their applications and their important exceptions. A theory which is not based upon facts, or has not been logically deduced from actual experiences and careful observations, is simply an hypothetical speculation, and not entitled to rank among *theories*. And here is the ground, probably, of the false prejudice among *practical* men. They assume that science consists solely of theory, and that theories are the product of merely speculative, visionary minds.

A scientific man, in their view, is one who, totally ignorant of the rules of practice, and devoid of all common sense, makes repeated attempts at an execution of his visionary plans, yet never fails to delight his wiser neighbors with most ludicrous failures. He is not the practical philosopher, making his rigid deductions from carefully observed facts, and consequently proving his theories before publishing them to the world, and wisely making application of all the knowledge acquired through the efforts of other men.

The consequence of this erroneous view of the matter, is a persistent ignorance of the pr

tical farmer, and the consequent contempt of those of other professions, who with equal stupidity, gauge the merits of Agriculture as a branch of industry, by the character of those who are its votaries.

"*Let the farmers plow;* that's what they were made for," said an illiterate, would-be Congressman, of the cod-fish aristocracy, on a recent occasion, when an effort was being made for the establishment of an institution of learning for the benefit of the farming population of our State. "Yes, let them plow," says the poor, blind farmer himself. And so he does plow and plod, and, in so far as he adopts that sentiment, feels his own inferiority, and looks with lynx-eyed suspicion upon the devotee of those heaven-born sciences which come to lift him up, and transform him from the ignorant, groveling, groping plod, knowing the *what* of a *few things*, but the *how* and *why* of *none*, into the intelligent man and practical philosopher.

As to the *terms* of science, they are just as important as a knowledge of elementary sounds to him who would learn to read; and the farmer who is not willing to learn the a-b-cs of the science upon which the most successful practice of his occupation depends, must either borrow a knowledge of merely practical results of theoretical applications made by his neighbors, or go it blind, trusting solely to himself, contemning the experience of all time past, and closing his eyes to the increasing light of the science of the present.

It has been our doctrine always that the farmer ought to be a scientific man, both for the sake of economy, and because he *is* a *man*, and *not a mere dumb brute*. Accordingly, since our connection with the *Farmer*, we have been publishing a series of plain scientific articles on the elementary principles of the Science of Agriculture—not expecting that all would read them, but with the hope that such as are ambitious to acquaint themselves more intimately with the phenomena of nature and the principles of their profession, might thus be led gradually, and almost unconsciously, to the attainment of this most desirable object. And we here take occasion to say, that while, on the one hand, there are some to whom the facts and principles therein discussed are already familiar, and too many on the other who care not to know any thing beyound a certain routine of verified practice, it should not be forgotten by either of these classes, that there is another, larger than they both put together, who feel the time consumed in the reading of those articles to have been well employed, and who understand that a knowledge of all that pertains to the Plant, involves a large portion of what is professionally necessary for the farmer to know.

According to our view, "the object of an agricultural paper" should be to help the farmer raise a good crop of *ideas*, as well as a large crop of potatoes. H.

Correspondence of the Farmer.

On Butter and Agricultural Fairs.

MESSRS. EDITORS:—I wish to call the attention of butter makers, and of those who regulate the distribution of prizes at our Agricultural Fairs, to what constitutes good butter; for it is an article rare in market, and still rarer on exhibition, if I may judge from an attendance at our last County and State Fairs.

The "keeping" quality seems the chief one hitherto regarded; but, to my eyes, it was really painful to look through this department and see so much butter, which apparently had once been good, salted and packed and colored, until its glory had departed, and the best one could say of it was, that it was not rancid. This butter is truly better than none for some purposes, and I have even heard some benighted individuals say, that they preferred it to fresh butter, and I know there are some persons on the globe, who would think blubber preferable to either.

Good butter, one of the richest luxuries that can grace the table, is newly-made, solid in texture, delicious in flavor, yellow as an orange, and fragrant as a rose. It is not merely an unguent, but it is a delight to more than half the senses, and its praises fall gratefully on the ear of its maker. It tells not only of skill, but of neatness; it is redolent of dew and flowers; it reminds you of the matins of the birds; Aurora smiled upon it as she opened the gates of the East, and it reflects the golden glory of her smile. Give us the amber colored coffee, and the sweet white bread, made by the same fair hands, with this delicious butter, and at that feast all other luxuries will pall.

Such butter is made upon a few farms around Madison, and such alone should command the highest prize. It is true, that this butter cannot be made in its highest perfection in

winter, but she, who can make it at all, will make winter butter far more grateful to the unvitiated taste, than any June butter, which has been deprived of its best qualities by salt and time.

Dried peaches and dried apples will "keep" much longer than fresh ones; why not offer such prizes for apples and peaches that ripened a year or two ago, as will drive fresh ones from our exhibitions, and adorn the fruit department instead, with festoons of dried ones, on account of their better "keeping" qualities? Dried fruits and packed butter we need to eke out our winter supplies, and they are both deserving of a place in exhibitions, but if we would promote abundance and excellence, whether in fruit or butter, we must award prizes to them both in their fresh state.

If you still think however, that the longer butter can be kept, the higher the prize it will command, I would thank you to inform me, as I have some, made a *year ago last June*, which has "kept" until now, and I have no doubt that I can "keep" it until the State Fair, if desirable. B.

NOTE.—We hope that our fair friend's rather severe criticisms, will not frighten her sisters in the State, from continuing to exhibit their dairy products, at the County and State Fairs, where we think we have seen some as fine specimens of butter, as we have ever seen in any other State. It still strikes us, that the keeping qualities of butter, are of the most essential consequence, and that the idea of having new butter at all times, is about as impracticable, as always being young and handsome on the part of humanity. To be good in the outset, and able to keep so, through all the changes of climate and time, seems to us the essential and most valuable qualities, not only of butter but of everything else. We hope that our fair correspondent will show a specimen of her butter at our next State Fair, coming up to her poetically pictured standard. In fact we would not mind dropping in some time, and testing it with the "sweet white bread, made by the same fair hands." We would say further, that we should like to become acquainted with some of those good butter makers about Madison, and engage from them our winter supply, for which we have gone to Whitewater the last two years. We are fond of patronizing home institutions when we can as well. Who will furnish us 200 lbs. of good butter? P.

Business Hints for August.

Since August is of doubtful character, lying as it does upon the boundary line between summer and autumn, its work is more varied than that of any of the other active months. Sowing, harvesting, and general improvement all claim the farmer's attention.

THE FARM.

Concerning the cutting and gathering of the hay crop, we repeat the injunctions of last month. Clover, timothy and June grass have doubtless been cut already, and, we hope, properly secured; red-top and wild grass are probably yet standing, in most localities. To these also we apply the rule: cut while the bloom is yet quite fresh. It will be well also to cut all you have; the frequent rains have injured the clover and will probably reduce the available fodder of other kinds.

Examine the wheat and other grain stacks, if wet weather continue, to see whether they are water proof. Whether the grain should all be threshed out immediately, or gradually during the winter, will depend upon circumstances. If your men are employed by the year, and you have a convenient horse-power, it would be better, perhaps, to thresh as your stock require the straw. The probable price of the grain, in autumn and spring, respectively, should also be considered.

This is likewise a month for various improvements. *Girdling, bush-whacking, and grubbing* are especially appropriate to this season, i.e., vegetable life is at this stage more easily destroyed than at any other time during the year. The philosophy of the fact seems to be this: After the growth of the wood has pretty much ceased, the sap thickens and commences the work of preparing buds, so to speak, for the succeeding year.—This work is pretty much confined to August, and the destruction of the stem seems to be a finality of the life of the whole plant. We repeat it then, clear off the brush, and sleek up the farm, now while it can be done with best success. No farmer ought to be considered respectable, whose fields are half covered with bushes and unprofitable trees. With the exception of good thrifty trees preserved here and there as ornament or shade for stock, there should no living plant of any kind be allowed on the premises, which is not practically valuable.

Now is the time, moreover, to prevent the fouling of the soil by noxious weeds. Let no

species of the thistle, dock, or other plant of like character, live another year. The dock and mullein may be pulled, and the thistle will die if simply cut off below the crown of the root, while in blossom.

Timber designed for tools, wagons, buildings, &c., should also be cut during this month, rather than during winter; the sap is not so watery and the wood will be less liable to decay and to injury by worms.

The cornfield must not be neglected; stirring the soil even this late is advantageous. For reasons refer to June No. But even after it is too late to plow, hands should go through with hoes and destroy every weed before its maturity.

Ruta-bagas should be thinned out if nearer than eight to ten inches apart. Flat turnips may be sown early in the month.

Ditching and draining are best done at this season because the earth is usually dryer in August than in other months. Thousands of acres now useless, in Wisconsin, might easily be redeemed by drainage and rendered the most valuable lands we have. Try it, and see whether our muck beds and peat bogs—those great manure heaps composted by nature—may not be turned to better account than the raising of a small crop of the meanest kind of grass.

Of tile-draining we shall treat at considerable length under the head of "Cultivation of Plants," meantime we trust our enterprising readers will so far credit our endorsement of the value of this style of improvement as to make a trial of it in the garden. If regular tiles can be had at cheap rates, use them; if not, construct the drains of boards, bricks or flat stones.

THE GARDEN.

Cucumbers and other seeds intended to produce a late crop for pickles, should be planted early. Cabbages, lettuce, beets, winter spinach, "sprouts," and other green vegetables may be provided for, and the summer diet thus be protracted into late autumn. Special efforts should be made to preserve the seeds of all annuals for next year's planting. Medicinal herbs must be saved now if at all.

Celery is a wholesome winter salad, and should be more extensively cultivated. This is the month for "earthing up" the plants.

The Grape Vine must also have some attention. Train the bearing canes for next year from one stalk to the other and cut off any lateral shoots that may spring from the axils of the leaves below the top of the stake.

The strawberry bed should be carefully weeded, and all runners trimmed off, preparatory to the littering for winter. Plants may likewise be set this month, but April and May are better.

THE ORCHARD.

Look out for the moth, and give all "windfalls" to the hogs as soon as they can be gathered; there is a rascally worm in each one, and he will benefit the swine more than the next year's crop.

Budding of the pear, the plum and the apple, should be done in August if at all, The peach may be deferred until early next month.

CARE OF STOCK.

Take good care that your animals do not lose, during this season, what they have gained during the period of luxuriant vegetation. A plenty of water and the best feed you have. Spend a portion of your leisure time in handling and taming them, and in providing better winter accommodations.

DON'T FORGET THE COUNTY AND STATE FAIRS, *nor lose sight of the fact that it is much more creditable and profitable to exhibit the products of your industry and skill than yourselves merely.* H.

What is the best way of disposing of Surplus Straw?

A subscriber wishes to inquire through the *Farmer* the best method of disposing of surplus straw. Our method is to feed liberally to all creatures that will eat it, during the feeding months, and what they do not eat to bed them with, and that most amply; thence into the barn-yard, where after being trampled through the spring's rains and mixed with more or less manure, we have it ridged up in compact masses from three to four feet high, and cover them with swamp muck to the depth of ten to twelve inches. In this shape it ferments and becomes finely mixed manure by fall, with every weed or foul seed in it killed. Then before the next feeding season commences draw it clean out of the yard, and spread it upon your tame grass lands, if you have any, and if you have not, after having had time to stock them down, you are but a poor farmer at the best. What the grass lands do not need may be plowed under or piled ready for spring's use.

That is what we do with our surplus straw, and what every other farmer may if he has stock on his farm anywhere in proportion to his tillable fields.

We know other men who leave their straw in *gauny* piles, just as it comes from the threshing machine, covering maybe an acre of land in the middle of a field, unstacked, so as to wet and spoil the first heavy rains, there to lie while the cattle and hogs go without comfortable beds, until the ensuing spring. And when at length it is found in the way of the plow. then *unthrifty* applies a match to it, but it is so wet that it will not burn, except to smoulder away for a week or two and still have so much half burnt upon the land as to render it a deformity in the midst of the field and a waste for years. Not only so, but he has a light crop of timothy and clover, and finally concludes that it cannot be raised upon the openings and prairies of the West. Let such men quit burning straw and follow our prescription and then see. Straw-burners do not usually think it pays to take an agricultural paper, however cheap; they declare that farming is such a poor business that they cannot afford it. No wonder. Perhaps some one else can give our inquiring friend a still better plan for disposing of surplus straw. P.

From the Homestead.

Indian Corn—Experiments in Hybridizing.

BY THOMAS ANDREWS.

Read before the "Rhode Island Society for the Encouragement of Domestic Economy."

The kind and variety of corn at harvest, depends not on the kind or variety of corn planted, but on the kind or variety from which the planted corn receives its pollen. This I have established by repeated experiments. For instance, I planted the improved Canada corn, and have raised from it a sweet corn, fit for use at the time that the ears of the Canada corn would have been in the milk. The mode of operation was very simple: as soon as the tassels of the Canada corn began to appear, it was cut off. The tassel was also cut from the Sweet corn, and the pollen shaken from it on the silk of the incipient ears of the Canada corn. This will be sweet corn without any intermixture of kernels of the Canada corn, If the tassel be suffered to remain on the Canada corn, and the pollen from the tassel of the Sweet corn be shaken on the silk of the ear, the ear will consist of kernels of the Canada corn and kernels of the Sweet corn intermixed. I have mixed three varieties on one cob, by shaking the pollen from the tassels at different times, and I see no reason why many more might not be added to them. But if the pollen from tassels of different varieties be shaken on the silk of any variety at the same time, the corn produced will have in it combined all the peculiarities of the varieties represented in the pollens. It was by this means that I produced the Rhode Island Premium corn, and the Andrews' Hybrid corn; the first by a combination of the pollens of the large yellow corn, the Adam Anthony, or red-capped corn, and the Canada corn; the other by a combination of the pollen of the Rhode Island Premium, the Dartmouth white, and the improved Canada corn. I have found some varieties that will not intermix on the ear with other varieties. I have never known the Rhode Island Premium corn to do so. There is also one or more of the red varieties that will not. There are probably others that will not mix in the kernel. Why this is so, I am not prepared to say. Further experiments may demonstate the fact more clearly, and perhaps afford the reason for them. It is the pollen from the tassel that decides the kind of corn, and without this pollen there will be no corn. The cob will grow in its covering of husks, but without a kernel of corn on it. An easy way to prove this is one that I adopted: cover the incipient ear so that no pollen can lodge on its silk. This can be done with a paper or cloth; if it be done effectually, you will raise cobs, and that will be all. This led me to let the suckers on my corn alone. I never cut them out or remove them. They yield pollen, if not ears, and thus help fill the ears on the parent stock. I have come to the conclusion, that in those varieties that most abound in suckers, there is a deficiency of pollen in the tassels to fructify the silk, and make well capped ears, and that nature sends the suckers to supply that deficiency. By examining the ears of the Rhode Island Premium corn, or the Andrew's Hybrid corn, it will be seen that the corn grows very close over the butt of the cob, as well as being well capped over at the other end. I have observed occasionally, kernels of corn on the tassels of my corn. These generally resembled the kind planted, but were smaller. In some instances they represented the color of the original planted, but were more round, as if they grew more at their ease than those on the regular cob, and others again seemed partly blighted, and looked much like the Dourah corn. They were all on a substance resembling the ordinary corn cob, but more soft and spongy. I planted some of the most perfect kernels from the tassels in the Spring of 1856. They germinated and grew as well as other corn, and yielded ears of the same variety as the original from which the tassel corn grew, but the cob was much less firm, and much smaller. The last year, 1857, I planted some of the corn from these ears, and the result was ears larger than their immediate seed ears, with an equal diminution in the size of the cob. In these instances I found that the cob bore a less proportion to the grain on them, than did the cobs raised from ordinary seed.

SLATERVILLE, R. I., 1858.

Reclaiming Sandy Land without Manure.

We will suppose that the land is sandy, or, perhaps, a sandy loam, that was once covered with pines, which were cut off, and the land "ryed to death," and then pastured to death, which is full as bad as was the old Irish Judge, who sentenced a man to "be hung and pay forty shillings. Manure the land if you can; if not, plow with one horse, or two if you choose, but do not go down more than four inches; sow rye and harrow it in. When the crop is ripe, thresh on the field, and keep what grain you can get as a compensation for your labor.

Now take the rye straw, and let a man drop it before each furrow, and the plow follows it immediately and covers it up.

Follow this course three years, and then sow it with clover. Cut two crops of this, and the second year plow again and sow to rye, and, if the operation has been well managed, you will probably get twenty-five bushels of rye to an acre, and your land will be in pretty good condition for any crop, with common manuring. We can show you twenty acres that was almost moving sand, reclaimed in this way into fair and fertile lands. Are you encouraged?—*New England Farmer.*

The White Carrot.

The experience of several years has convinced me that this root is one of great value. It is known in some sections as the "White Altringham," or Belgian carrot, and was first introduced into France by M. Vilmorin. It is now, however, cultivated extensively in most, if not all, the "departments" in that country, and is preferred to any other variety, being more succulent and nutritious, and yielding more liberally on every description of soil. It has been asserted by a French writer of much intelligence and critical observation, that it generally exceeds the common varieties of red or orange in weight, from eight to nine tons per acre; and although the circumstances under which I have grown the root, have not been such as to warrant me in expressing any definite opinion as to the extent of its superiority in this respect, I am nevertheless firmly persuaded that, with proper management, it will greatly exceed, both in the extent and quality of the crop. It possesses a short root, and above-ground habits of growth, and is less exhausting to the soil than any variety of the carrot with which I am acquainted.

Le Couteur, a French author of distinguished celebrity, says that "in Jersey, this year, the prize crop of parsnips afforded three hundred and eighteen pounds to the perch, or twenty three tons to the acre; while the prize crop also, which was cultivated experimentally, gave five hundred and twenty-four pounds to the perch, or nearly twenty-eight tons to the acre—an enormous crop, and equally valuable for butter as the parsnips." In the same field, the parsnips, cultivated in the same manner, in every repect, and with the same manuring, produced only sixteen and one half tons.

The root has not yet been generally introduced in this country, though it has been grown to some extent in most of the States. As a field crop, it is unquestionably superior to all other crops, and when fed to milch cows, the milk and butter are never affected by any unpleasant flavor, as is the case when the animals are fed on turnips, and most other roots. In my own efforts in cultivating this root, I have found it to succeed best on light, deep soil, worked to a fine tilth and kept clear of weeds. A little fine manure worked in between the rows, has a good effect upon the crop.—*Germantown Telegraph.* W. P. P.

Beautifully Said.—We make the following beautiful extract on the Homestead Exemption law, from a letter written by a distinguished Judge of Tennessee:

"Secure to each family whose labor may have acquired it, a little spot of fresh earth that it may call its own—that will be an assylum in times of adversity, from which the mother and the children, old age and infancy, can still draw sustenance and obtain protection, though misfortune may rob them of all else, and they feel they still are free—still entitled to walk the green earth and breathe the free air of heaven, in defiance of the potency and power of accumulating wealth and domineering of the pretending and ambitious. The sacredness of that consecrated spot, will make them warriors in time of external strife.—Those shocks of corn, said Xenophon, inspire those who raised them to defend them. The largest of them in the field is a prize exhibited in the middle of the state to crown the conqueror. Secure a home to every family whose labor may obtain one, against the weakness, vices or misfortunes of the fathers, and you rivet the affections of the child, in years of manhood, by a stronger tie than any consideration that could exist. He will remember where he gambolled in his early youth, the stream upon whose banks he felt a mother's love, and the green spot within that little homestead where sleep the loved and the lost."

Will Underdraining Pay?—This depends on circumstances. If good, naturally underdrained land can be obtained in your neighborhood for from $15 to $20 per acre, it would not pay, in all probability, to expend $30 per acre in underdraing low, wet, springy land; but in all districts where land is worth $50 per acre, nothing can pay better than to expend $20 to $30 per acre in judicious underdraining. The labor of cultivation is much reduced, while the produce is generally increased one half, and is not unfrequently doubled; *and it must be remembered that the increase is net profit.* If we get $15 worth of wheat from one acre and $20 worth from the other,

and the expense of cultivation is $10 in both cases, the profit from one is twice as much as from the other. That judicious underdraining will increase the crops one-third, cannot be doubted by any one who has witnesed its effects. If it should double the crops, as it often does, the *profit* would be four-fold.—*Genesee Farmer.*

Dr. Jackson's Process of making Syrup and Sugar from the Chinese Sugar Cane.

In the first place, it is necessary to filter the juice of the plant, as it comes from the mill, in order to remove the cellulose and fibrous matters and the starch, all of which are present in it when expressed. A bag filter, or one made of a blanket placed in a basket, will answer this purpose. Next, we have to add a sufficiency of milk of lime (that is, lime slacked and mixed with water) to the juice, to render it slightly alkaline, as shown by its changing tumeric paper to a brown color, or reddened litmus paper to a blue. A small excess of lime is not injurious. After this addition, the juice should be boiled, say for fifteen minutes. A thick green scum rapidly collects on the surface, which is to be removed by a skimmer, and then the liquid should again be filtered.—It will now be of a pale straw color, and ready for evaporation, and may be boiled down quite rapidly to about half its original bulk, after which, the fire must be kept low, the evaporation to be carried on with great caution, and the syrup constantly stirred to prevent it from burning at the bottom of the kettle or evapoting pan. Portions of the syrup are to be taken out, from time to time, and allowed to cool, to see if it is dense enough to crystallize. It should be about as dense as sugar-house molasses or tar. When it has reached this condition, it may be withdrawn from the evaporating vessel, and be placed in tubs or casks to granulate. Crystals of sugar will begin to form generally in three or four days, and sometimes nearly the whole mass will granulate, leaving but little molasses to be drained. After it has solidified, it may be scooped out into conical bags, made of coarse open cloth, or of canvas, which are to be hung over some vessel to receive the molasses; and the drainage being much aided by warmth, it will be useful to keep the temperature of the room at 80° or 90° F. After some days, it may be removed from the bags, and will be found to be a good brown sugar. It may now be refined by dissolving it in hot water, adding to the solution some white of eggs, (say one egg for 100 pounds of sugar,) mixed with cold water, after which, the temperature is to be raised to boiling, and the syrup allowed to remain at that heat for half an hour. Then skim and filter to remove the coagulated albumen and the impurities it has extracted from the sugar.

By means of bone-black, such as is prepared for sugar refiners, the sugar may be decolored, by adding an ounce to each gallon of the saccharine solution, and boiling the whole together. Then filter, and you will obtain a nearly colorless syrup. Evaporate this, as before directed, to half its bulk, and then slowly until dense enough to crystallize, leaving the syrup as before in tubs, or pans, to granulate. This sugar will be of a light brown color, and may now be clayed, or whitened, by the usual method; that is, by putting it into cones, and pouring a satulated solution of white sugar upon it, so as to displace the molasses, which will drop from the apex of the cone when inverted. It is now refined or loaf sugar.

The methods here described are the common and cheap ones, such as any farmer can employ. It may be advantageous, when operations of considerable extent are contemplated, to arrange a regular system of shallow evaporating pans for the concentration of the syrup, similar to those now used in Vermont for making maple sugar.

It is evident that no ordinary methods can compete with those of a regular sugar refinery, where vacuum pans are employed, and evapotion is consequently carried on at a low temperature. If the planter should raise sufficiently large crops to warrant the expense of such an apparatus on his place, he would not fail to manufacture large quantities of sugar, and to operate with perfect success, but this can be done only in the Southern, Middle or Western States, where extensive farming is common. Those who wish to have their brown sugar clarified, can send it to some of the larger refineries, where the operations may be completed, and the sugar put up in the usual form of white loaves.

A very large proportion of our agricultural people will doubtless be satisfied with the production of a good syrup from this plant. They may obtain it by following the methods described in the first part of this paper, or they may omit the lime, and make an agreeable, but slightly acidulous syrup, which will be of a lighter color than that which has been limed. This syrup is not apt to crystallize, owing to the presence of acid matter. The unripe cane can be employed for making molasses and alcohol, but will not yield true cane-sugar unless it is well matured.—*Agricultural Report of the U. S. Patent Office for* 1857.

NOTE.—We have a prospect of a full and complete exhibition of syrup and sugar manufacture, accompanied by a thorough scientific and practical exposition of all the minutiæ and modus operandi, necessary for ordinary people to practice, at the State Fair. Well posted parties with all the requisite machinery and apparatus, are talking of being on the ground for that purpose; in which case our folks who wish to learn the art and mystery will have the opportunity. We think that the matter in good hands, would be of great interest and usefulness, and shall do what we can to secure its coming off at the Fair. P.

STOCK REGISTER.

Cure for Bots in Horses.

Take a table spoonfull and a little heaped, of alum and the same quantity of copperas; pulverise them fine and put them into a pint of vinegar. Pour it down the horse's throat. It will generally afford relief in five or ten minutes. In 1815, I had a horse very badly afflicted for three days, with bots—lying down, rolling, refusing to eat, biting his sides, and giving all similar proofs of bots. I tried turpentine, beef brine, sweetened warm milk, and many other prescriptions of neighbors, for three days, to no purpose. At length, an Englishman coming along gave me the above prescription, saying he had seen it used in England with perfect success. In ten minutes after the dose was administered, the horse got up and was well, showing no more symptoms of bots. I have used the same medicine ever since, for myself and neighbors—probably in fifty cases in all—and it has always afforded as quick relief. A traveler once had his horse fall in the snow, near my house, and refuse to get up—evidently afflicted with bots. In about five minutes after administering the above medicine he got up of his own accord, appeared to be perfectly well, and cheerfully pursued his journey. It is said one drop of this preparation placed upon a bot, will kill it at once.—*Genesee Farmer.* J. F. BLISS.

Remarks.—Generally speaking we are opposed to the use of powerful medicines, when those which are entirely harmless will answer the purpose. It is true that a horse may take several drachms of copperas with *seeming* impunity, and yet it is difficult for us to believe that an agent which will kill the bot outright is a safe medicine to administer. We have had occasion to treat several cases of "bots," and have always found a pint to a quart of strong sage tea well sweetened, fully competent to a cure. The effect of this palatable dose appears to be to lure the bot from his firm hold upon the intestines. A dose of oil will facilitate their discharge. H.

National Horse Show.—The Springfield Agricultural Society, which first initiated and carried out the idea of a national horse show, is to have a repetition of the same, commencing on the 14th of September, to continue four days. The preparations will be made on the grandest scale, and the prizes offered are quite liberal; $100 is offered to that State Agricultural Society, other than Massachusetts, that sends the largest number of horses to the show. The prizes range from $10 to $200, the largest being for the best stallion for general use.

Correspondence of the Farmer.

A New Disease of Cattle.

Messrs. Editors:—Having long waited in vain for some account of a disease which is afflicting our cattle in this region, I concluded to offer the following account, and ask for information:

Sometime in June, 1857, my cattle came up at night, coughing and wheezing, as if choked—some of them considerably bloated. These symptoms having continued three or four days, they began to discharge from the eyes and nose a yellowish, wax-like matter, mixed in the worst cases with blood. After dosing them with various common remedies without effect, I administered some of Sloan's Condition Powder, together with bran soaked in lye, in such quantity as would include about two quarts of lye in each dose. They continued to cough for about a month, and then gradually improved. They did not winter very well, however, and now as the warm weather and fresh feed are coming on, the disease begins to return, and is causing much anxiety among the farmers of the northwest corner of Dodge county, where it is coming to be almost universally prevalent. Hoping that either yourselves or some of the readers of your valuable journal may have something to communicate on the subject, I am, Sirs,

Respectfully, &c.,

JOHN F. GIBBS.

Farmersville, Dodge Co., Wis.

Correspondence of the Farmer.

Messrs. Editors:—If you have any more Black Hawk gas, let us have it. I do not think we would have to rake from Dan to Beersheba to find as good a horse as a Black Hawk. I have a colt that will be three years old in May, foaled in Wisconsin—neither brought from Maine nor California, at a great expense—yet I think he can travel with any Black Hawk in the State. Did you ever know a good article that needed as much praise as the Black Hawks get?

WILLIAM EDGAR.

Exeter, April 14th, 1858.

Note.—We were not conscious of having dispensed any Black Hawk gas; nor are we aware that we have expressed any opinion either way in the horse controversy. Our plan is to let the parties concerned argue it out; and all we ask is that they keep good natured and candid, treating each other with as much courtesy and forbearance as possible.—[Eds

Wool and Wool Growing.

BY PROFESSOR J. A. NASH, OF MASSACHUSETTS.

It is well known that the fleeces of some sheep make unshrinkable flannel; that those of others work advantageously into fulled cloth; and that those of others will make neither flannel nor fulled cloth of a good quality.

Starting with these well known facts, Peter A. Brown, Esq., of Philadelphia, some eight years ago, commenced a series of investigations on the integumentary covering of the sheep, designing, if possible, to ascertain the causes and supply a remedy.

After examining microscopically, and with the greatest care, thousands of samples from every part of the world and of every variety, Mr. Browne has arrived, with entire certainty, as he supposes, at the following among many other conclusions:—

There were originally two and but two species of sheep, one hair-bearing and the other wool-bearing. Several varieties under each species may have come into being, as happens with other species. The crossing of these varieties was well, so long as the crosses were confined to the same species, for then the progeny, following the specific character of both parents, would produce either pure hair or pure wool unmixed.

But the crossing of varieties from the different species has produced a progeny, whose integumentary covering is neither pure hair nor pure wool but a mixture of both; and as it is the nature of hair not to shrink, when scoured, the mixture is far less valuable than either of its ingredients, the hair injuring the fleece for fulled cloth, and the wool nearly spoiling it for flannel.

The characteristics of sheep's hair, Mr. Browne states to be: 1—its filaments are oval in form; 2—they are perforated by a central duct from end to end, in which the coloring matter flows: 3—each filament is made up of a great number of fibres held together by an appendage, or bark, consisting of many small fragments, these fragments adhering closely to the filaments, or body of the hair, and having the ends so rounded and smooth as to offer little resistence to the hairs sliding freely over each other in any direction.

The characteristics of sheep's wool, on the other hand, are, that it is oval in a much higher degree than hair; it is destitute of a central duct passing through it; is made up, like hair, of a great number of fibres, and is covered by a fragmentary cortex, or bark, each fragment, or scale, terminating, unlike that of hair, in a sharp point, turned outward, so as to form a complete preventive of the filaments of wool sliding over each other.

Mr. Browne believes these and other characteristics of hair and wool to be permanent and unalterable, denoting a specific distinction in the parentage of our present varieties of sheep. According to his microscopic observations, hair is as distinguishable from wool as oats are from wheat, or rye from barley.—If his views are correct, it follows that those, who say that hair will turn to wool when you carry a sheep far to the north, and wool to hair when the transportation is reversed, are in error; and it is only true that either hair or wool may improve or deteriorate in quality by a change in circumstance, but never that one can be changed to the other, any more than you could obtain wheat from oats by sowing them in another climate, or rye from barley by sowing it in a rich soil.

Mr. Browne further states, as a result of long and careful observation with the microscope, that the hybrid sheep, that is, those springing from the two species, as he thinks many of our present flocks are, produce as perfect hair as the pure hair-bearing sheep, and as perfect wool as the pure wool-bearing sheep. The quality of neither is necessarily deteriorated by the mixture of blood, but the value is greatly diminished, because the two are so intimately mixed that no art can separate them, and because in the mixed state they are unfit for either the manufacture of flannel or fulled cloth; not but that they can be wrought into fabrics which we may possibly use as inner or as outer garments, but that a good article cannot be made from them.

Flannel made of wool shrinks; that made of hair and wool not only shrinks, but shrinks unevenly, leaving a rough, undulating surface; that only which is made of pure hair wears smoothly and retains its size till worn out.—Fulled cloth made of hair is impossible, for hair will not felt; that made of hair and wool shrinks unevenly, and though forced into a smooth surface by the skill of the cloth-dresser, looses it and becomes rough the first time it is wet, after being made into garments; and only that made of pure wool can be relied upon to wear handsomely. You may buy a beautiful pair of pantaloons, but if you should wear them on a fishing excursion it would not be strange if the lower extremities should ever after refuse to resume the shape which the tailor intended for them.

If the intermingling of blood between the hair-bearing and the wool-bearing sheep is the cause of many failures, the remedy, Mr. Browne supposes, is obvious—to breed in the two distinct lines. He states further that his inquiries have led to the conclusion that the hair-bearing sheep thrive best in coast or insular situations; the wool-bearing best in hilly and inland regions. Our Atlantic coast, as far inland as tide waters extend, reaching from Maine to Texas, including both, and occupied by a population of some thirteen millions, he believes to be well adapted to the former, while all the rest of our country is admirably adapted to the latter, and ought to produce wool in abundance and of the very best quality.

After detailing the foregoing views of Mr. Browne, Mr. Nash stated that he would be in nowise responsible for the microscopic facts in the case. All he could say was, that Mr. Browne had gathered from all quarters an immense collection of wools, had studied them long, experimented with them in every possible way, and came slowly to his conclusions.

The subject, Mr. N. said, was important.—The flesh of the sheep is wholesome, easy of digestion, to most persons palatable, and perhaps as cheaply produced as that of other animals. It would take a great deal of argument to convince him that it is for our interest to import instead of growing our wool, and more still to convince him that the government does not solemnly owe it to American Farmers, to protect by a reasonable duty both the *raw* and the manufactured article. Such a duty would not much increase the cost of woolens and flannels to the wearer, but it would gradually and surely turn their productions from foreign to American soils.



BETSEY LAKE.

Owned by P. B. Stewart, Eagle, Waukesha Co., Wis. White Roan, 5 years old; got by Eclipse; Eclipse by Prize Bull Meteor (104 A. H. B.) His dam, Arabella, bred by Thomas Bates, Esq., England; Arabella by the Fourth Duke of Northumberland, a Duchess Bull, (3649 E. H. B.) Her dam by Duke of Cleveland (1937 E. H. B.,) g dam by Belvidere (1706 E. H. B.,) g g dam a superior short horned Cow, selected by Mr. Bates for possessing some of the best blood of the Collings stock; dam Kate, known as the Durkee Cow, got by Ajax, bred by Gen. Van Rensselaer; Betsey's grand dam by imported Coplow; g g dam by Comet; g g g dam by Nelson. These Bulls were all imported animals.

London Feats of the Great American Horse Tamer.

The following account is full of interest, not only because it demonstrates the power of the human mind over even the highest order of brute mind, but likewise because it is an *American* triumph.

"Passing from the dull uncertainty of politics and the penny-a-lining of police courts, to what is vulgarly called the fashionable world, decidedly the rage of the season—the legitimate successor of Tom Thumb, Jenny Lind, the Crystal Palace, and the other sights and sounds that have in turn amused and excited the upper ten thousand of London—is the American Rarey, with his tamed savage, the

stallion Cruiser. We were present on Monday at the Round House, when Mr. Rarey made his first appearance mounted on Cruiser, before some two hundred and fifty of the *cream* of London. In the old riding school, hastily and roughly prepared for the purpose, there were closely packed dukes, marquises, earls, peers and M. P.'s. Lady Blantyre was fortunate to obtain a seat in the amphithreatre. The Duchess of Sutherland, coming late, was content to take a chair at the door of the arena. Never, perhaps, were so many aristocratic horsemen and women packed into so narrow a space—all the rank and fashion of Rotten Row. Silence was first prayed, and then a suppressed murmer of surprised applause ran round the assembly, as Mr. Rarey trotted in on the redoubtable Cruiser, in a slight snaffle bridle, with a light switch in his hand. Without dismounting, he opened his lecture; described his mode of approaching, haltering, bridling and subduing a colt, how to make him lie down, how to saddle, mount him, render him obedient, and accustom him to the sight and sound, and feel of an umbrella, riding habit or drum. Then dismounting, with a mere motion of his hand he caused Cruiser to lie down as if asleep, stood on him, knocked his legs together, made him rise and follow him round the ring like an affectionate dog, give up his foot as Ponto gives his paw, carrying Mr. Rarey's cap in his mouth, and, in fact, performing all the tricks of the circus, without that evident fear and compulsion that characterizes the feats of most circus horses. The wonderful thing about this performance, to those who have not heard Mr. Rarey explain his method, is that less than ten days previously, no one dared to approach the animal to dress or feed him; he wore a muzzle and bridle constantly, and the door of his bin was only opened to feed him, when from a peep hole, the groom saw that his back was turned. In one word, a horse whose blood made him worth, at one time, near £1,000, was reduced by viciousness to a merely nominal price. It is rather amusing that this said Cruiser was selected sarcastically by a celebrated writer, as a test of the American horse tamer's powers. He said, 'Let Mr. Rarey go down and try Cruiser, and if he can ride him as a hack, I would guarantee him immortality without a single further advertisement, and an amount of ready money that would make a British bank director's mouth water. Cruiser was the property of Lord Dorchester, and was a good favorite for the Derby in Wild Dayrell's year, but broke down about a month before the race. Like all viscious horses, his temper was not of the mildest kind, and John Day was delighted to get rid of him. When started for Rawcliffe, he told the man who led, on no account to put him into a stable, as he would never get him out. This injunction was of course disregarded; for when the man wanted refreshment. he put him into a country public house stable, and left him; and to get him out, the roof of the building had to be pulled off. At Rawcliffe he was always exhibited by the groom with a ticket of leave bludgeon in his hand, and few were bold enough to venture into his yard.' The answer to this bantering invitation is to be found in a letter from Lord Dorchester, quoted in the Times, in which he says: 'In three hours after taking Cruiser, Mr. Rarey and myself mounted, although he had not been ridden for three years, or dressed for two.'

"We have paid much attention to this new system, because it is not only of great value commercially, but it puts an end to the cruelties and follies of roughriders and breakers. It is sound in theory and practice, and, fortunately, also, the fashion.—*Exchange.* Z. Z."

Weight and Measurement of the Heaviest Ox ever Killed.

The largest bullock ever raised in America, if not in the world, was the ox known as the "George Washington," whose stuffed skin may be seen in life-like proportions in the rooms of the Butcher's Hide and Fat Association in Fifth street. The following particulars of the weight of the Washington, is furnished us by Robert L. Pell, President of the American Institute, who vouches for the correctness of the statement:

The ox Geo. Washington was five years, nine months and fourteen days old when slaughtered in the year 1 49; his live weight was..... 3,204 lbs
Weight of one fore quarter,..... 612 lbs
Weight of the other fore quarter..... 598 lbs
Weight of one hind quarter,..... 437 lbs
Weight of the other hind quarter,..... 477 lbs
2,184 lbs of beef—70 lbs ℔ cwt. of live weight.
Measurement from bottom to root of tail,..... 9 ft. 7 in.
Girth,..... 10 ft. 4 in.
Hight,..... 5 ft. 9 in.
From hip to hip,..... 2 ft. 9 in.

—*N. Y. Tribune.*

Black-Leg Again.

O. Martin, of Vienna, adduces the experience of several stock-growers in favor of bleeding as a preventive of this disease,—says it is his custom to crop the ears and cut off the tip of the tail at the time of weaning, with that view, and has never lost a calf since adopting that course.

Remarkable Lambs.—Wallace Porter, a farmer residing in Fairfield about six or seven miles from this village, has a pair of twin lambs, which weighed at birth *seventeen* pounds and nine ounces. Another weighed twelve pounds and one ounce, while another still weighed but four pounds and six ounces, the latter being as smart as any of them. They are all about one-quarter Spanish Merino.—Has the *Farmer* heard of any thing in this latitude that will beat this?—*Baraboo Republic.*

HORTICULTURAL.

Extraordinary Growth and its Effects.

The remarkably wet spring and summer have produced one of the most luxuriant growths, both of ordinary vegetation and trees and shrubs of every kind, that we recollect ever to have seen. Fruit trees particularly have usually made a most extraordinary growth of wood, and as is natural in such cases rather a scanty development of fruit. Trees that set very full, have generally seemed to windfall largely as the fruit developed, especially apples, until the present prospect, throughout the State, so far as we have learned, is not for a large crop.

The rapid growth of wood that we have spoken of, should not be stimulated for the balance of the season by any extra cultivation or manuring, as it will leave the new wood too tender and sappy to stand the winter. An unnatural overgrowth of this kind is just as hazardous in our climate, as the undue exposure of the human body to cold air, when in a high state of perspiration. Hence we say to all who would escape the effects of next winter, look out for the too rapid growth of your trees from now on. The virgin richness and natural vigor of much of our Western soil, is undoubtedly highly promotive of this same difficulty, and causes a great deal to be charged to our climate which really arises from injudicious cultivation and over-growth. Grassing down around trees is one pretty effectual way of checking an over growth, and repugnant as it may be to the feelings of those who are in a hurry to get an orchard, we doubt not but it is often a good plan to pursue, especially upon very vigorous soils; a proper regard to these tendencies to over growth, are in our opinion, matters of the utmost moment to western cultivators.

Currant Bushes have been a good deal injured the present season by the borer, an insignificant grub who partly saws off the branch and then eats out the pith; the usual consequence of which is, that the branch soon breaks down. We have heard much complaint of this injury from different parties.

The *aphides*, or plant lice, have also largely infested the leaf of the currant, causing them to turn red and *puff* out of shape. Many may have noticed the discoloration and curling, without examining or discovering the cause. We hardly see what remedy can be exercised against either evil. P.

Trial of Patent Office Turnip Seed.

We received the following ten varieties of Turnip Seed from the Commissioner of the Patent Office, for trial in cultivation. We have placed them in charge of our gardener, A. Mitchell, Esq., for the aforesaid purpose, and in the fall will report the result of the experiment, not only to the Patent Office Department, but also to the readers of the *Farmer*. If any better varieties than the White Russian turns up, we shall spare no pains to disseminate them.

We have scattered many thousand packages of the White Russian seed the present season, and have entire confidence that they will please all who cultivate them. A little comparative observation will learn people that there is as much difference in Turnips as in any thing else, and that the best are highly preferable.

NAMES OF THE TEN VARIETIES.

1. Green-topped Six-weeks Turnip.
2. Snowball Turnip.
3. Small Yellow Malta Turnip.
4. Green Round or Norfolk Turnip.
5. Red Globe or Norfolk Turnip.
6. Red-topped Stone Turnip.
7. Green Tankard Turnip.
8. Red Tankard Turnip.
9. Yellow Tankard Turnip.
10. Purple-topped Scotch Turnip.

Planting Strawberries.

A lady friend writes us from Outagamie Co., that she planted a strawberry bed last year, and that they grew and promised remarkably well; but for want of a proper fence, during the winter the hogs wholly destroyed them.—Poor encouragement indeed! Hope she will be more fortunate next time. Presume however that it is the experience of many. Garden labor is usually in vain without proper fences.

Immense Pie Plant.—Mr. Thomas McMillan has presented to this office a single stalk of Pie Plant, raised by Mr. Cochrane, of Portage Prairie, measuring as follows:—Length of stalk, 4 feet 11 inches, breadth of leaf, 2 feet 8 inches, circumference of stalk, 7 inches. Can any one beat this?—*Badger State.*

Correspondence of the Farmer.

Cultivation of Currants for Wine Making.

MESSRS. EDITORS:—For some time I have contemplated writing to the *Farmer*, and making enquiry with regard to the cultivation of currants for the purpose of wine-making.—And being a Yankee, my first question is, Will it pay? and will you or some of the good readers of your valuable paper inform me of the manner of making wine—its cost per gallon—how many bushes will set an acre, or rather how far apart bushes ought to be set, and the probable cost of taking care of an acre? How many currants will it take to make a gallon of wine, and does it need much attention after it is made? Is there any variety preferable for this purpose?

Yours, truly, JOHN BENNETT.

THOMPSONVILLE, Racine Co.

ANSWER.—Currant-growing may be made to pay, we believe, most decidedly. If planted 5 feet apart, 1,742 bushes may be grown on one acre, with a yield of as many gallons of fruit, which at a net profit of but three cents per quart, (the ordinary selling price is 5 to 7) would yield the handsome sum of $209·04.—Or, suppose they are manufactured into wine. Three gallons would yield one gallon of juice, which, after proper dilution with water and necessary sweetening, will produce three gallons of wine; so that the net proceeds of an entire acre may be estimated thus:

Number of gallons of wine	1,742	
Sum total of sales at $1 per gallon		$1,742 00
Cost of sugar necessary, at 10 cts. ℔ lb	$174 20	
Value of labor necessary to cultivate, &c.	800 00	
Value apparatus, casks, &c.	200 00	
Cost of selling and loss	100 00	
Cost of slips (which can usually be had for nothing)	20 00	
Rent of land	10 00	
Sum total of profits per acre		$ 937 80

There! we confess to astonishment ourself that such results should appear, but shall trust the figures until some of those men who raise 15 bushels of wheat to the acre at 50 cts. per bushel, show wherein the figures lie, or our data are incorrect.

Of course our estimate is made up bushes that have come into full bearing. Meantime the rent of land and cost of cultivation may be more than paid by growing some convenient crop between the rows. The wine has a delightful flavor, requiring no miserable drugs to give it character.

The best variety is the *Common Red Dutch*. For method of manufacturing the wine, see July No. *Farmer*. The operation is simple and any one may succeed. H.

MECHANICAL.

Correspondence of the Farmer.

Wind Mills.—Water, and Power for the Prairies.

MESSRS. EDITORS:—The general absence of a supply of water on the prairies, and the sore inconvenience resulting therefrom, is a crying evil, and has become a subject of much discussion, with a view of obviating the difficulty.

Deep wells, dug through many feet of earth, and then drilled as many more through solid rock, have, to some extent, supplied this want, in some places; but then it is attended with severe and difficult labor, to raise the water from such depths, *by hand*, through small bores.

Large cisterns, near the buildings, are another and better mode, resorted to by some, to supply water for the house and stock. This, too, requires considerable labor in drawing and carrying, perhaps more than in using the water from springs and brooks.

But there is another far better means—which is the chief object of this article—that may be employed, with great advantage, and at comparatively small expense—and almost no labor—to obtain the amplest supply of water for all the necessaries of farm and household, even with more convenience and ease than are enjoyed on most farms having springs and brooks on them—because possessing greater number of facilities in the operation.

This better mode is the WIND MILL, which has been recently perfected to such an excellent and yet simple degree, that any one who has seen a good one at work raising a steady, small stream of water from a deep well—from one to two hundred feet deep, or even more—needs no argument to convice him of their almost unbounded utility.

The latest and improved Wind Mills are so ingeniously constructed as to regulate or adjust themselves to any degree of wind, from a light breeze to a stiff gale, performing steady work without interference from human hands; while they are so simple as very rarely to get out of order, and then they are readily repaired.

They can be procured, with pumps all ready for use, at prices from $40 to $120, according to the depth of the well and the size of the stream to be raised, or the amount of power desired of them. They are often very successfully and economically used in propelling

light machinery for shops, threshing and grinding grain, cutting straw and feed, churning, sawing wood, and particularly in pumping water from the deepest wells; which last purpose is, perhaps, really the most important use of all, to the prairie districts, to which these wind powers are applied; they neither run away, burst their boiler, or set fire to the premises, which renders them altogether the safest and cheapest motive power which the farmer can use.

It is true, that where a family has a well 50 or 100 feet deep, or more, they can possibly, *by hand*, draw water enough barely to get along, in ordinary circumstances, by dint of hard pulling; and the supply will necessarily be scanty and grudging—with none to put out fires, or wash sheep, teams and carriages.

But let a man have one of these *wind pumpers*, which continually raises a small stream, night and day, never getting tired, sleepy or hungry, and he will have his troughs, pools, and vats all the time full and running over, in his yards and lots; while the water can be raised to the second story of his house and barn about as cheaply as to the first story.—Thus, not only will his stock have abundance of water, at all times, but there will be plenty for washing sheep, and horses, carriages and harnesses, in muddy or hot weather, and the water be elevated where he can use it to the best advantage.

The writer of this has seen admirable sheep washing arrangements made by raising water into reservoirs by means of wind mills, just when and where it was wanted; and so well is he convinced of the utility of these wind powers, that if he owned a farm at all, he would have one erected on it, near the barn, even if there were springs or creeks on the place, for the various uses of which it is capable above named.

And still, the most forcible and important fact, in this connection, is yet to be particularly noticed—*that of safety in case of fires*, where the buildings or homesteads are situated on dry farms, distant from fire-engines; for these steady, never-tiring, night-and-day laborers will raise and convey the water to any part of the premises, with ease and promptness. This single consideration, alone, of ample, steady and convenient supply of water to isolated residences, it would seem, should prevent any one, possessed of sufficient means to pay for it, from hesitating, at all, about procuring one of these very best house and farm servants—the *wind pumper*.

They can be erected against or upon the gable of the barn, where it is most wanted, for threshing and grinding grain, with connecting rods leading to the well, wood-pile, or other place where the power may be required.

Much more is known, and might be said, in favor of the usefulness of the Wind Power, by those who are acquainted with its operations; but it is believed the above should be sufficient to arrest the careful examination of those who are interested in the matter. This kind of power is well adapted to the wants of railroad depots, small machine-shops, and ware-houses in elevating grain; and in the erection of large buildings, for raising the stone, mortar and other heavy materials of which they may be constructed, the wind mill is peculiarly fitted, as it is capable of raising far more than a horse, is just as easily managed, and can be put in good working order, and kept in use, at less cost than the price of a good horse and harness, while it needs no feeding and never gets tired.

These hints are thrown out merely to call the attention of those who need them to the subject—comparatively so little known, and yet, capable of such large and general advantage.

D. S. C.

Ingenious Invention.—A "postage-stamp distributor" has been invented by S. Durham of Wakefield, England. This instrument is intended for the delivery of postage or other stamps, singly to purchasers, so as to dispense with the attendance of an official for this purpose in post-offices. A penny being put into the hole near the top, unlocks the instrument, and allows a handle to be used to such an extent as to protrude from between two rollers, a single stamp, which the purchaser tears off. One stamp only can be handled at a time, and a half penny or smaller coin will be rejected.

American talent is receiving substantial acknowledgment abroad. Prof. Morse is coming home with $80,000 in his pocket, the fruit of his telegraph in Europe. Hoe has just shipped a mammoth Press for the London *Times*. Eaton & Gilbert are making cars for Cuba and Brazil. The Queen of Spain is buying her War Steamers in New York. The Czar has become a patron of the Novelty Works; and the Pasha of Egypt sends to Watson & Co., of Springfield, Mass., for Railroad Cars.

EDUCATIONAL.

How shall the Farmer be Educated?

NUMBER V.

It is a mooted question among educationists how far it is possible to w sely blend the practical and professional with the general, rudimentary instruction appropriate to the

COMMON SCHOOL.

It is proper and necessary, therefore, that we briefly discuss this question before proceeding to treat of the College and the University.

Two leading considerations are involved, to-wit: The characteristics of the Common School as it exists, and the nature of the art or profession proposed to be taught.

1. *Of the Characteristics of the Common School.*—These properly embrace the grade of the pupils taught, the qualifications of the teacher, and the nature and extent of demonstrative facilities.

For the reason that the Common School, distinctively so called, is primary in its character, the pupils which avail themselves of its privileges are usually of an age and capacity inadequate to anything higher, than the mere *rudiments* of an education: any kind of instruction involving logical processes, or philosophic deductions, would be above their comprehension, or at least difficult of mastery.—And it could hardly be expected, that for the accommodation of now and then one of a higher grade of knowledge and culture, the institution should be so modified as to accommodate the few, to the total exclusion of the many for whom it was established. Moreover, if it were so modified, it would no longer be the one under discussion.

The *teacher* of the common school should be a person of the best natural endowments of mind and heart, and a high grade of acquired knowledge. He should be a philosopher in metaphysics, familiar with the complex mechanism of the human mind, its normal type and abnormal variations, and promptly inventive of special means for special ends—benevolent, patient, earnest and enthusiastic, largely appreciative of the magnitude of his enterprise, and conscientious in its execution—in literature a scholar, and model of taste, having complete mastery of his own language; in science learned, familiar with the things and the phenomena of nature, wooing his pupils to nearer and constant communion by oft unveiling her charms. Such the teacher of our children should be, and such he will be in the better future. But such, alas, he seldom *is*.

The prevalent notion is that any one who can read moderately, write tolerably, speak so as to be usually understood, and "do all the *sums* in the arithmetic," is fully competent to the duties and responsibilities of the common school; and accordingly persons of such qualifications are generally employed,—at least in the rural districts, where the pupils are to be prepared for the "merely" industrial pursuits. Perhaps we over-state the case, but it is no exaggeration to say, that not more than one in ten is properly qualified to perform any one—much less all—of the essential functions of the teacher of youth, as above detailed.

The demonstrative facilities in most schools amount to almost nothing at all. A few charts of simple and descriptive character, blackboards and possibly a globe or two, constitute the *sumum totum*. Expensive apparatus illustrative of the facts and principles of science are usually beyond their means even though the teacher have the knowledge and skill requisite to their appropriate use.

Here then are three sufficient reasons why the more difficult sciences may not be taught to any very considerable extent in the common school, to-wit: first the incapacity of the pupils; secondly the inability of the teacher; and thirdly the lack of necessary means of demonstration.

2. *Of the Nature of the Art or Profession proposed to be Taught.*—Having decided against professional instruction in the common school, as a general proposition, it only remains to be considered whether Agriculture, the particular profession under consideration may not, in its essentialities, constitute an exception to that "kind of instruction involving logical processes or philosophic deductions"—whether as a science it is properly included among the "more difficult;" for there are sciences whose simplicity is such that even the undisciplined youth may comprehend and acquire them.—Nearly all of those embraced under the head of Natural History belong to this class. Botany, Zoology, Human and Comparative Anatomy, &c., are examples. There are others, however, not simply descriptive, but philosophic, such as Chemistry, Natural Philoso-

phy, Meteorology, &c., a mastery of which requires a mature and well-disciplined mind.

Now Agriculture includes both of these classes, not simply in part, but in whole.—There is no individual science in the whole catalogue, which is not necessarily embraced. Furthermore, several of these special sciences are what are sometimes styled experimental, that is, they require in order to their mastery the aid of illustrative experiment. Chemistry and Mechanical Philosophy are especially of this character: they involve principles or laws whose operations must be *witnessed*. But, as we have just said, the common school cannot furnish the requisite facilities for illustration, and if it could, neither the pupils nor the teacher would be competent to their profitable use. It must be apparent therefore, that the complex *science* of Agriculture cannot be properly included within the common school course.

But Agriculture is also a *profession*. It is not alone sufficient that the individual have a knowledge of the several sciences; he must understand their relations to each other and the application of each to the *art* before anything practically valuable can be accomplished.

It is twice clear, therefore, that if Agriculture be tanght at all in our Common Schools it must be very partially and imperfectly taught. Something may be done, however, and this something may prove of great value. The pupil might at least be impressed with the truth that Agriculture as a pursuit is really honorable, and may be made more contributive of happiness than any other occupation of man. To this end we would have a few interesting agricultural books in every district school library, and some fascinating text book on the simple elementary principles of the science in the hands of every advanced pupil; the result of which would be not only the acquisition of important knowledge, on the part of the youth of the country for practical application in after life, but also the infusion of new interest into the minds of the parents and the consequent incidental result of a more rational practice among the farmers of the present.

Several other States are actively engaged in the matter of establishing either town or district libraries, with a fair proportion of agricultural works included, and we sincerely hope Wisconsin will not be the last to move in an enterprise of so great importance. H.

Correspondence of the Farmer.

What some Farmers think about Agricultural Education.

"Most certainly it would seem but ridiculous, and far from good common sense to spend time and money in acquiring that which can be of no possible benefit. O, this new fangled notion of science in farming! Why we know enough about farming without taking books and papers, and attending schools to learn how to farm it." This is the import of language too often used by many who claim the title of Farmer. It has been too generally admitted that men having physical strength and a good degree of energy, mixed with a little common sense, possessed all the requisites for good farmers.

How many of the good old farmers, even now, just at the dawn of an era, the brightness of which will dispel many of their old notions, would laugh and smile and laugh again, at the idea of educating their sons scientifically and practically for nothing but farmers. And they might be considered rational in their conclusions did they expect nothing more as the result than many specimens such as are found in the farming community—specimen farmers I mean, judging of course from the manner in which they do their farming. Yes, the name farmer is too insignificant with them—it would be only with the prospect of securing *higher* sounding titles for their sons that would induce them to manifest their interests and well-filled purses in the cause of education. How many of this peculiar stamp has this State to contend with? In advancing science, needed by the farmer, far too many still cling to the antiquated notions of olden times. Thanks to the causes of reform and progression, all such old fogy ideas as that our sons only need to be educated when they are blocked out for the ministry, the bar, or the dealing out of poisonous drugs under the delusive name of medicine, are fast fading with age; and when this generation shall have passed away, great changes will have been wrought in the work of educating the *people*—farmers as well as doctors, lawyers and priests.

I am inclined to believe that the day is just lighting up in the east and shedding its rays to the far north-west, in which education, viewed in its true light and application, will subserve the best interests of mankind by being made of practical utility. Mind, upon this subject is being awakened and the agricultural

portion of our people are fast loosening the chords which have so long bound them to old notions, for no other perceptible reason only that they were old, and are making some researches after knowledge and truth. Minds active and energetic are being turned to the momentous question of agricultural science, which has so long been neglected by the American people. Who can but reasonably believe that we may judge of the state of civilization in any country by its provisions and facilities for the diffusion of scientific and practical knowledge in agriculture.

It is evident that mind is fast being brightened and aroused in this matter. The theme is agricultural schools, and a more general promulgation of principles and truths (which can only be done through the means of written language) to educate our children—farmer's sons (and daughters too, I hope.) However strange this may seem, these things are breaking in upon us, and must be tested, for it is so declared by the onward march of Yankee progression. Now it is true that we need in this State the means to carry into operation such institutions for the advancement of agricultural science as the necessities and wants of the people demand. Where shall we look for aid? We need not expect it from that class of farmers who hoot at the idea of educating the farmer, nor of such as know enough about farming already, and can learn nothing from what is published in a paper or book upon the subject, and would not if they could; but to all farmers who are farmers in the true sense of that honorable term,—not necessarily such as are in possession of very extensive farms, but all who have noble souls prompting them to labor in the great cause, upon the success of which the prosperity of our country must depend. This matter of establishing agricultural schools rests with you; it is your influence chiefly that must accomplish the work; but all can do something to help on the cause, and the time to work is while the day lasts, whether the Legislature is in session or not.

O. P. D.

Palmyra, Wis., 1858.

Agricultural College of Iowa.—The Legislature, at its session in March, established an Agricultural College, and set apart public lands for its endowment. The farm is to consist of not less than 640 acres. Wm. Duane Wilson, Esq., Editor of the Iowa Farmer, one of the Trustees named in the act, has been appointed Secretary of the Board.

Antioch College Redeemed.

After a struggle of five years with pecuniary embarassment, until it was begining to be feared the enterprise would prove at least a partial failure, this noble Institution has at last risen in its might, and like the young Titan we knew it was, thrown off its load of debt. On Commencement day the miracle was completed, and ere this the glad news, swift-winged, has waked a joyous echo in the heart of each sympathising friend on the continent. We have never believed Antioch would be a failure; for we knew the untiring energy and indomitable will of its distinguished President, and had an unwavering confidence in the triumph of the principles upon which it was based. The distinctive characteristics of Antioch are the following:

First, there is a practical recognition of the equality of the sexes: the regular College course is open to both alike, together with all the honors of graduation.

Secondly, it is religiously free from sectarian bias, while at the same time the pupil is made to feel the stimulus and the restraints of a genuine Christianity.

Thirdly, the science of physiological living, as a branch of study, is continuous through the entire course: the "gospel of the body" is faithfully taught and enforced.

Fourthly, moral integrity is essential to graduation: no immoral person may receive the honors of the Institution.

Such is the platform of principles upon which this most liberal and most christian College of the world is based. With the great public and with great educators in this country and in Europe, their incorporation was deemed an experiment of doubtful issue even in the hands of a President of such wisdom and heroism as Horace Mann was known to possess. But it is no longer an experiment. The last obstacle in the way of the highest success is now removed, and Antioch will quickly take her legitimate rank—first among the Colleges of America.

H.

Minnesota State Agricultural College.—We understand that the deeds of the land for the Agricultural College, located near Glencoe, have been placed in the hands of the Ttrustees of the State Ag. Society, who will report the same to the Legislature soon. We are glad to see the prospect of the speedy erection of such an institution in our thriving State, as the development of its resources will be greatly accelerated thereby.—*Exchange.*

MISCELLANY.

Correspondence about Sheep and their Products East and West.

MESSRS. EDITORS:—I am a stranger to you but not to many of your patrons in Wisconsin. I have spent the most part of the two past years with Hermon Hemenway, in Rock Co. When I went west I took along a good flock of Spanish sheep, thinking to settle somewhere there, but afterwards concluded to return to Vermont, and sold out all but 7 lambs, which I selected out and took back, and have them now. I sold ten ewes and one buck lamb to Asa Pratt, of Lima, Rock Co., and the remainder of my flock, 121 in number, to Henry B. and Charley M. Clark, of Whitewater. Now it is for the benefit of those men and the people of Wisconsin that I write this letter, that people may know where to get good sheep without sending to Vermont after them; I think as good as can be found here, and I have good reason to think so. And now for the reason.

I took those 7 lambs by R. R. and water, after leaving Wisconsin, 2424 miles, and was more than a month on the way, which reduced them very low in flesh by the time I reached West Rutland. I did not put them up to hay till the 11th day of Dec., and they had no more than a common chance through the winter. I kept them up till shearing time, on hay that was cut in September last, with a few roots, but a small allowance at that. Now for the shearing. On the 25th day of May, I sheared 1 yearling buck and 6 yearling ewes. The seven sheared sixty-seven pounds, making an average of 9 lbs. 9 oz. per head.

Now if any of our Vermont farmers can beat this, of course we shall hear from them, and if so I will let you know how much they beat it, taking the same number into consideration. These lambs were sired by Mr. Hemenway's buck, Matchless. I am well acquainted with some of the best flocks in Vermont, and I must say that I never saw a better buck than his for stock. Mr. Hemenway has some very fine stock from his buck, and the people of Wisconsin cannot appreciate him too highly. I have been a breeder of sheep for almost 40 years and still like the business much. I was at the Rock Co. Fair last fall with Mr. Hemenway and Mr. Knox, and had an introduction to you, but left before the State Fair came on. I attended the N. Y. State Fair, at Buffalo, on my return, and took the first premium on foreign lambs there.

Yours, Respectfully,

EBEN'R PORTER.

WEST RUTLAND, Vt., June 14th, 1858.

H. HEMENWAY'S WOOL CLIP FOR 1858.

MESSRS. EDITORS:—As I promised to report to you an average of my entire flock after shearing, I will now do so, not thinking but that there are others who may be doing as well on an average in the weight of their fleeces, but I do think that I can show as even and clean a lot of wool as any other man. All except my stock buck were well washed in a vat under a spout of pure water. I sheared 18 of them the 7th day after washing, the remainder the 9th day. My flock consists of 38 breeding ewes past 4 years old, 17 ewes 1 year old, 7 ewes 2 years old, 7 wethers 2 years old, 17 wethers 1 year old, 11 bucks 1 year old, and Matchless my stock buck, making in all 98. My breeding ewes had each a lamb by their side last year, also again this year. They were fed through the past winter timothy hay in racks, had good shelter well ventilated, also had racks inside convenient for feeding during stormy weather; fed no grain until about two weeks before they began to lamb, when I fed wheat-bran and roots until I turned out to grass the first of May. My lambs began to drop the 20th of March, and continued until the 10th of May. The most of my sheep were sired by Matchless, and were kept in two flocks, one containing 11 buck lambs and 7 wethers 2 years old, fed with timothy hay and four quarts of corn and oats mixed together daily, commencing when I brought them up for winter. The remainder contained 17 ewe lambs, 17 wether lambs, and 7 two-year old ewes fed with the same kind of hay and 12 quarts of corn and oats daily. All had access to water and good shelter. My breeding ewes are pure Spanish. A portion of them were purchased by myself, and the remainder by an experienced dealer in sheep in Vermont.

They were sheared 25th of June, and yielded me 190 lbs. of wool, averaging 5 pounds per head, the heaviest fleece weighing 7 lbs. 15 oz., the lightest 3 lbs. 6 oz. The 17 wethers one year old were dropped during the month of May, and yielded me 102 lbs., averaging 6 lbs. per head. The 7 wethers two

years old clipped 51 lbs. 3 oz., averaging 7 lbs. 5 oz., the heaviest fleece 8 lbs. 4 oz., the lightest 6 lbs. 8 oz.

My present flock consists of 17 ewes 1 year old, 7 ewes 2 years old, and 11 bucks 1 year old, (which I especially report to you as being a choice lot of sheep, not easily excelled in quantity and quality of wool.) The two year old ewes sheared fleeces as follows: No. 1, 6 lbs.; No. 2, 8 lbs. 2 oz.; No. 3, 8 lbs.; No. 4, 7 lbs. 3 oz.; No. 5, 7 lbs. 8 oz.; No. 6, 7 lbs. 4 oz.; No. 7, 9 lbs. 2 oz. Amount of wool, 53 lbs. 13 oz.; average per head, 7 lbs. 9 oz.

The yearling ewes follow next: No. 1, 7 lbs. 10 oz.; No. 2, 6 lbs. 8 oz.; No. 3, 7 lbs. 14 oz.; No. 4, 6 lbs. 8 oz.; No. 5, 6 lbs. 6 oz.; No. 6, 6 lbs. 1 oz.; No. 7, 8 lbs.; No. 8, 8 lbs. 2 oz.; No. 9, 6 lbs. 1 oz.; No. 10, 8 lbs. 7 oz.; No. 11, 6 lbs. 1 oz.; No. 12, 7 lbs. 10 oz.; No. 13, 7 lbs. 2 oz.; No. 14, 6 lbs. 2 oz.; No. 15, 6 lbs. 10 oz.; No. 16, 7 lbs. 4 oz.; No. 17, 6 lbs. 8 oz. Amount of wool, 119 lbs.; average per head, 7 pounds.

The yearling bucks sheared as follows: No. 1, 8 lbs.; No. 2, 6 lbs. 7 oz.; No. 3, 8 lbs. 8 oz.; No. 4, 10 lbs. 8 oz.; No. 5, 8 lbs. 8 oz.; No. 6, 9 lb. 4 oz.; No. 7, 7 lbs.; No. 8, 7 lbs.; No. 9, 7 lbs. 8 oz.; No. 10, 7 lbs. 10 oz.; No. 11, 8 lbs. 8 oz. Amount of wool 89 lbs.; averaging a trifle over 8 lbs. 1 oz per head.

My stock buck Matchless, 16 lbs.; carcass weighs 100 lbs.

This last closes up my report to you of my entire flock of 98 sheep, turning out 621 lbs. of wool, (which I have sold to an eastern manufacturer for 38 cents per pound,) averaging 6 lbs. 5 oz. per head.

Respectfully, yours,

H. HEMENWAY.

Whitewater, July 10, 1858.

Note.—Mr. H. forwarded us some specimens of the aforesaid wool, which is A No. 1. We shall be happy to show it to such as have a curiosity to see good wool.

We are also in receipt of some fine specimens from R. T. Graves, Esq., of East Randolph, Col. Co., the communication accompanying which we herewith publish.

We hope that all good wool-growers will forward us specimens, and statements of their products. We shall be happy to give them publicity as far as practicable and useful.

R. T. Graves' Wool Clip for 1857–8.

Messrs. Editors:—You will recollect publishing in the May number of the *Farmer* of 1857, the weight of ten yearling and two-year old ewes' fleeces, shorn the year previous by me. I will now give you the weight of last and the present year's clip.

Shorn June 29th, 1857. No. 1, 8 lbs, 13 oz.; No. 2, 8 lbs. 6 oz.; No. 3, 8 lbs. 12 oz.; No. 4, 11 lbs. 12 oz.; No. 5, 9 lbs. 5 oz.; No. 6, 10 lbs. 12 oz.; No. 7, 8 lbs. 11 oz.; No. 8, 9 lbs. 11 oz.; No. 9, 9 lbs. 4 oz.; No. 10, 9 lbs. 1 oz.

Shorn June 14th, 1858. No. 1, 6 lbs. 13 oz.; No. 2, 6 lbs. 7 oz.; No. 3, 6 lbs. 12 oz.; No. 4, 8 lbs. 11 oz.; No. 5, 8 lbs. 10 oz.; No. 6, 8 lbs. 13 oz.; No. 7, 7 lbs. 8 oz.; No. 8, 8 lbs. 10 oz.; No. 9, 7 lbs. 11 oz.; No. 10, 7 lbs. 9 oz.

Three, of the ten, raised lambs last season, and the whole ten this year. They were all washed and free from *Cornwalizing*, as friend Hemenway says. We had 37 fleeces last season that averaged 8 lbs. 5 oz, and all washed ewes except 3, which were bucks.

We intend to have our sheep on exhibition at the State Fair, and will endeavor to show the difference between full bloods and high grade sheep.

Yours, respectfully,

R. T. GRAVES.

East Randolph, Col. Co., Wis.

Dog Census and Dog Tax.

A census of the dogs in Rochester has been taken with a view of imposing an annual tax upon them. The number is 1964 males 274 females. The net amount of tax imposed is $1,038.

Note.—We have often thought that one of the most useful items of information to our people would be a dog and sheep census, together with a column showing the number of sheep annually killed by the dogs. We will venture the opinion that it would surprise the masses of our people, and put to shame certain ruffle-shirted, bread-eating, (not bread-earning,) Senators who recently ridiculed the idea of a dog law, and ignominously and indefinitely postponed it, after it had been petitioned for by great numbers of the people and passed by the Assembly. But never mind, "every dog will have his day" in Wisconsin as well as elsewhere.

We will publish such information in reference to sheep killed by dogs as will be generally instructive, when communicated to us.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

From "Home Ballads."

THE HIBISCUS, OR, FLOWER OF AN HOUR.

BY MRS. D. S. CURTISS.

Thou teachest, frail flower, a deep lesson to me,
Like thee I awake, and I wither like thee;
My life is as transient, my moment as brief;
I live but an hou , and then fade as a leaf!
Mortals, immortals,
Like this little flower—
We bud, bloom, and wither,
Our life-time an hour!

Like the foam on the wave, like the dew on the lea,
To-morrow they seek me, but I shall not be;
Like the sparkles that dance on the goblet we sip,
They are quaffed in a moment, and dry on the lip.
Mortals, immortals,
Like this little flower—
We bud, bloom, and wither,
Our life-time an hour!

Like the voice of the echo, the dash of the wave,
We live but a moment, the next is our grave;
Eternity gathers our sands in its glass;
Our life is a fire fly—like shadows we pass!
Mortals, immortals,
Like this little flower—
We bud, bloom, and wither,
Our life-time an hour!

Not in vain, little flower, is thy lesson to man,
Thy errand is weighty, though simple the plan;
An hour is our span—then we wither and die,
But the undying soul, God will raise to the sky.
Mortals, immortals,
Like this little flower—
We bud, bloom, and wither,
Our life-time an hour!

Influence of Flowers.

"Picciola," a charming creation of some French or Italian brain, translated into our tongue, reveals most beautifully the influence of flowers. A gay, handsome and accomplished Count, cast into prison during the revolution that preceeded Napoleon First, full of the philosophy of chance, is converted from infidelity and world-worship, by a simple flower (picciola) springing between two stones in the prison yard, which he beholds from his prison cell. To *chance*, which the Count had inscribed on the walls of his cell, that silent and wonderful agent, as it unfolds its leaves and blossoms, added *perhaps*. The world that lay hidden in its arteries and petals, so adapted and answering to the world around—so full of design and grace—so planted by Providence, which caused the flying dove to drop a solitary seed in the prison yard to solace the human prisoner, wrought a deeper work than all the books and tongues of men. Inspired by it from day to day the Count could no longer resist—he erased from the walls these words of skepticism and doubt, and wrote in their place—"I believe." In this prison world, where humanity chained by perverted passions and blind desires, the "Picciola," and many other gentle flowers, are softening and converting the human heart. By the wayside, in gardens, climbing rocks and cottage eaves, shedding light and fragrance over every grade of life, the flowers, like shadows of angels, cast forward to assure us, are among the most pewerful and solacing teachers of a beneficent God.

True Idea of Civilization.

The true idea of civilization will never be unfolded till woman has been placed upon an equality with man. In the cabin of the Mayflower, in the war of the Revolution, when the wives loaded the muskets, there were such men, because there were such women. The grandest transactions of history are unfolded when she stands nearest to man as an equal; and when Christianity shall have reached its highest point, her heart will be near his hand. Let woman stand upon the ground of her human nature, then there will be mutual honor and mutual help; then there will be no discordant music in the march from the paradise they left together to that paradise they hope to attain.—*Dr. Chapin.*

MOUNTAINS.—Mountains are to the rest of the earth what muscular action is to the body of man. The muscles and tendons of its anatomy are, in the mountains, brought out with force and convulsive energy, full of expression, passion and strength; the plains and lower hills are the repose, and the effortless motion of the frame, when its muscles lie dormant and concealed beneath the lines of its beauty, yet ruling those lines in their very undulation. This, then, is the first grand principle of the truth of the earth. The spirit of the hills is action—that of the lowlands repose; and between these there is to be found every variety of motion and of rest, from the inactive plain, sleeping like the firmament, with cities for stars, to the fiery peaks of which, with heaving bosoms and exulting limbs, with clouds drifting like hair from their bright foreheads, lift up their Titan hands to heaven, saying—"I live forever."—*Ruskin.*

EFFECTS OF ENCOURAGEMENT.—The celebrated Benjamin West related that his mother once kissed him eagerly, when he showed her a likeness he had sketched of his baby sister; and he adds: "*That kiss* made me a painter."

ADVICE, says Colegidge, is like snow; the softer it fall, the longer it dwells upon, and the deeper it sinks into the mind.

Domestic Recipes.

CURRANT JELLY WITHOUT COOKING.—Press the juice from the currants and strain it; to every pint of juice add a pound of fine white sugar. Mix well together till the sugar is all dissolved, then put it into small, glass jars; seal them, and expose to a hot sun for a few days.

CURRANT JAM.—Pick the fruit over very nicely and weigh three-quarters of a pound of sugar to a pound of fruit. Strain the juice from half of the currants and crush the remainder, with the sugar, which, with the juice put together in a kettle and boil, over a moderate fire, until it is a smooth, jellied mass.

TO KEEP GOOSEBERRIES.—Pick when fully ripe, and to every quart of berries take a quarter of a pound of sugar and a gill of water, with which make a nice syrup. Then put in the fruit and boil gently for fifteen minutes.—They should be put up in small stone jars, and, when cold, closely covered and kept for making pies and tarts.

RHUBARB JAM.—Boil gently together for three hours an equal weight of fine sugar and rhubarb stalks, with the juice and grated rind of a lemon to each pound of the fruit.—If the flavor of the rhubarb is very much liked, the lemon may be omitted. A tolerably good jam may be made with a few ounces less of sugar to the pound, if the rhubarb is partly cooked before it is added.—*Lady's Book.*

RHUBARB WINE.—Cut the Rhubarb into small pieces; measure and bruise it in a clean, sweet tub, and to every quart of rhubarb thus cut up, add a quart of water. Let it stand four or five days, stirring frequently; then strain it off and to every gallon of juice add three pounds of good sugar and a pound of chopped raisins. Put the whole, well mixed, into a cask, with a little yeast in the bung hole or a bit of toast. As the process of fermentation goes on the cask should be kept quite full, for which purpose it will be necessary to have a small quantity of the liquid in reserve. When fermentation is complete, bung it up until late fall, when it may be drawn off, the cask well rinsed and the wine put back.—Bottle it as early as March.

BLACKBERRY WINE.—Measure your berries and bruise them, to every gallon adding one quart of boiling water. Let the mixture stand twenty-four hours stirring occasionally. Strain off the liquor into a cask, adding to each gallon two pounds of sugar; cork tight and let it stand till the following October, when you will have wine ready for use as good as good can be, yet growing better, as does all wine, with time.

TO KEEP EGGS.—Among the various ways we have seen recommended for keeping eggs fresh, this one seems to us especially valuable: covering the egg with a mucilage made of equal parts of gum arabic and water. To ensure keeping give two coats, allowing the first to be quite dry before the application o' the second. Of course anything that will effectually exclude the air from the pores of the shell is what is wanted, and perhaps nothing could do this more effectually than the above preparation. To have plenty of good eggs is a great luxury, and every house keeper should avail herself of all reasonable experiments to learn the best way of laying by in summer for the winter's use.—[ED.

TO REMOVE MILDEW.—Take two ounces of chloride of lime and pour on it a quart of boiling water; then add three quarts of cold water. Steep the linen in this for twelve hours, and every spot will be gone.

CEMENT FOR CHINA, or any kind of white crockery.—The following recipe, being nearly colorless, possesses advantages over many others: Dissolve half an ounce of gum acacia in about a half gill of boiling water, and add sufficient plaster of Paris to form a plaster.—Apply with a brush to the parts to be mended.

TO PREVENT IRON AND STEEL FROM RUSTING.—Mix five parts of linseed oil varnish with three parts of rectified oil of turpentine and rub the article over with it by means of a sponge, and dry in a place free from dust.

CUP CAKE.—Three cups of the richest cream, five of flour, five eggs, a little salt, and a lemon, or wine. Currants may be added to this if desired.

Cooling Rooms.

The first necessity is a thorough draft. This can always be obtained by opening every door and window in the basement, the top of every window above, and by throwing each door wide open; but above all, be sure that the trap door in the roof is open, and there is plenty of air room from it down the stairs, so that whichever be the direction of the wind, there will be at least one ascending current of air in the house. Another requisite is shade. Our common slat shutters answer well for the windows, but the most cheap and convenient cover for the roof is to cover it thickly with straw, dried reeds, or rushes. These will resist the influence of the noonday sun, and keep the garret almost as cool as the basement. One of the most simple methods, and at the same time cheapest means of artificially lowering the temperature of a room is to wet a cloth of any size, the larger the better, and suspend it in the place you want cooling; let the room be well ventilated, and the temperature will sink from ten to twenty degrees in less than half an hour.

The above hints will be useful to many, and as a last suggestion we will inform the reader that, in summer, it is well to keep a solution chloride of lime in the house, and occasionally sprinkle it in the more frequented parts, as the passages and stairs.—*Scientific American.*

FOR THE CHILDREN.

THE DOLL'S EXAMPLE.

You tell me your dolly is gentle and good,
And diligent, too, with her task—
That she studies her lessons, and never is rude,
And always will do what you ask.

Her temper is patient, yet cheerful, you say,
And she keeps herself tidy and neat:
To the rest of the dolls she is kind all the day,
And to you, ever loving and sweet.

So obedient she seems, so industrious and mild,
So free from all fault and all folly,
That I cannot but wish that my dear little child
A lesson would learn from her dolly.

SCHOOLFELLOW.

A Fable for the Young.

There was once a king who had a very beautiful garden, and grounds arranged with taste to please the eye, and afford refreshing shade, retired walks, commanding views; and besides all the delightful points that could be produced, there was one superb old oak, so high and grand, that it could be seen for miles around. There were roses and lilacs, and flowering shrubs of every kind; in short nothing was wanting to make it a perfect spot.

One day the king's head gardener came in and exclaimed, "O, king, pray come out and see what is the matter with your garden; everything is wilting, and drooping, and dying." While he spoke, the other gardners came rushing up, and all had the same sad thing to tell. So the king went out, and there, to be sure, he found it all as they had said.

He went first to his grand old oak tree, his pride and admiration, and said, "Why, oak, what is the matter with you, that you are withering and dying?"

"O," said the oak, "I don't think I am of any use, I am so large and cumbersome; I have no flowers or fruit, and I take up so much room; besides my branches spread so wide and thick that it is all dark and shady under them, and no flowers or fruit can grow there. Now if I were a rose-bush it would be worth while, for I should have sweet flowers; or if I were a peach or pear tree or even like the grape vine, I could give you fruit."

Then the king went to his favorite rose bush and said, "Well, rose bush, what is the matter with you? why are you drooping?"

"Why," said the rose bush, "I am of no use; I have no fruit, I have nothing but some flowers. If I were an oak, like that grand one in the middle of the garden, I should be of some use; for then I should be seen for miles around, and should do honor to your garden; but as it is I might just as well die."

The king next came to grape vine, no longer clinging to the trellis and the trees, but trailing sadly on the ground. He stopped and said, "Grape vine, what's the matter with you? why are you lying so dolefully on the ground?"

"Ah," said the vine, "you see what a poor weak creature I am; I can't even hold up my own weight, but must cling to a tree or a post, and what good can I do? I neither give shade like the oak, nor bear flowers like the shrubs. I can't even so much as make a border for a walk, like the box. I must always depend on something else, and surely I am of no use."

So on went the king, quite in despair, to see all his place going to destruction; but he suddenly spied a little heart's ease, low down by the ground, with its face turned up to him, looking as bright and shining as possible. He stopped and said, "You dear little heart's ease, what makes you look so bright and blooming, when every thing around you is wilting away?"

"Why," said the heart's ease, "I thought you wanted me here; if you had wanted an oak, you would have planted an acorn; if you had wanted roses, you would have set out a rose bush; and if you had wanted grapes you would have put in a grape vine. But I knew that what you wanted of me was, to be a heart's ease; so I thought I would try and be the very best little heart's ease that ever I can."—*The Lily.*

MY MOTHER'S INFLUENCE.—"My mother asked me never to use tobacco, and I have never touched it from that time to the present day; she asked me not to game, and I have never gamed; and I cannot tell this day who is winning or who is losing in games that can be played. She admonished me, too, against hard drinking, and whatever capacity for endurance I may have at present, and whatever usefulness I may have in life, I attribute to having complied with her pious and correct wishes. When seven years of age she asked me not to drink, and I made then a resolution of total abstinence at a time when I was the sole constituent member of my own society, and that I have adhered to it through all time, I owe to my mother.—*Thomas H. Benton.*

ARAB PROVERBS.—If your friend is made of honey do not eat him all up. If you travel through the country of the blind, be blind yourself. When you are the anvil have patience; when you are the hammer, strike straight and well. He who cannot take a hint, cannot comprehend a long explanation. Take counsel of one greater and one less than yourself, and afterward form your own opinion.

To give brilliancy to the eyes, shut them early at night and open them early in the morning, and let the mind be constautly intent on the acquisition of knowledge, or on the exercise of benevolent feelings.

EDITOR'S TABLE.

OUR EXCURSION TO AND THROUGH SUMMIT—BEAUTIFUL SCENERY, SPLENDID FARMS AND GLORIOUS PEOPLE.

Who of our readers has not heard of the town of Summit—its beautiful lakes, elysian fields and groves, and princely homes? And its people,—are not the names of Edgerton, and Worthington, and Danforth, Hyde, Hinckley, Stansberry, Douseman and Stone as familiar as household words?

Well, it was to this Eden of Wisconsin that we were invited by the gentlemanly proprietor of the "best farm in the State," E. W. Edgerton, Esq., who, after twenty years of hard labor, aided by science—whose teachings he honors—has succeeded in preparing such a home and farm as any farmer in America might be proud of. We went, of course, not omitting to take with us Mrs. H., who also had been cordially invited. Left at 2 P. M., and at 5 were set off at Genesee, where we were promptly met by Mr. E., and conveyed over a somewhat hilly but picturesque country to the town in question—distant some six miles, and so unlike that portion over which we had passed, as to improvements and a general appearance of thrift, that we were strikingly reminded of the contrast between the opposite banks of the Ohio. We needed not to be told when we crossed the line of Summit: good fences, fine farms, with neat dwellings and spacious barns, all in excellent repair, made the transition as palpable as the line of demarkation between civilization and barbarism on certain panoramic views of the American continent.

Two miles further and we halted at one of the finest springs of water that ever refreshed a way-worn traveler—a crystal fountain, full-flowing, and seeming to gurgle with satisfaction at the comfort it gave—a perfect Jacob's well, hewn out ef the rock, and enclosed by neat paling. The eulogiums passed upon the enterprise and generous public spirit of the person who devised and executed the plan of its improvement, it afterwards appeared were all due to our host, whose beautiful residence we quickly found, nestled so poetically in the midst of locusts and cedars, and under the brawny arms of fatherly oaks.

Here, in this

"Home to quiet dear,
Where hours untold and peaceful move"

we rested, and after such refreshment as the welcome words of our excellent hostess, aided by an indefinite quantity of luscious strawberries and cream, the sight of beautiful gardens, and fresh, green fields could give, we retired, preparatory to the programme of the following day—much admiring and half-envying the quiet joys of this rural home.

The morning came, ushering in the warmest day of the season, gilding the landscape, and making the long shadows which stretched away over wheat-fields and meadows, look as cool as fountains and as tempting as oases.—Strawberries and cream, *et cetera*, despatched, we entered the carriage and went forth to look at the farm of which we had heard so much and so often. And a splendid farm it is—as handsome, well-arranged, and thoroughly cultivated a half-section, as any we have yet seen in the West, to say the least. Gently undulating, and watered by a beautiful perennial stream; a portion of it woodland and the remainder oak-openings, with here and there a tree for ornament and shade, it was a beautiful piece of land in its natural state; and you may rest assured the art employed by Mr. E., so far from deteriorating from the beauty of the scenery—as is too common—has added tenfold charms.

Five characteristics of his system of farming are especially worthy of mention.

1. The division of his farm into fields is simple, convenient and economical. Situated on two roads which cross each other at right angles—one of which runs directly through it—a large portion is convenient of access from the public streets. But to make every lot directly accessible without the intervention of other fields, a beautiful avenue has been run directly through the parallelogram the longest way,—and, what is most remarkable, an avenue without a single weed, or stick, or stone. Each field is enclosed by the handsomest rail fence we ever saw, and is perfectly clean, the entrance from the avenue or public street, as the case may be, being through an excellent gate, nicely painted and always kept in perfect repair. The house, barn, sheds, and sheep-cotes are all conveniently situated, and are ample in their accommodations.

2. The proportion of stock to the number of acres under cultivation corresponds with the demand for annual manuring. Mr. E. seems to understand that repeated croppings must impoverish the soil, unless means are used to restore the elements removed. Most

of his crops are consumed upon the farm.—Moreover all his domestic animals are of the first quality; the raising of mean stock gets no encouragement from him. His sheep—300 in number—are all pure Spanish and the wool-clip proves their economy. His big steer "Dan," whose weight is 2800 and girth 8½ ft., is the wonder of Wisconsin, and has no intention of stopping growth for two years to come. And even his dog—a pure shepard—is worth a million of the miserable yelping, lazy curs that troop about our western door-yards. Every year this wonderful "Queen" saves him the labor of one or two men, besides doing the work of sheep-driving ten times as well.

3. Knowing that animal manures are not sufficient of themselves to restore all the inorganic elements required, he does not hesitate to purchase such fertilizers as he is convinced his soil is deficient in. Gypsum accordingly has found favor with him, and is proving its value by largely increased crops, particularly of clover.

4. Mr. E. has also learned that the continued growing of the same crop upon the same soil must inevitably exhaust it more rapidly of such constituents as are predominant in that crop, than would be the case if occasional changes were made, so that the draft should be upon different elements in succession. He pursues a regular system of rotation, never growing two crops of small grain in succession upon the same field.

5. Everything is done upon a basis of the wisest economy. Money is neither withheld nor expended foolishly, and the profits of the farm are used in its further improvement, instead of being loaned to speculators at high rates of interest on worthless mortgages, or deposited in some breaking bank. The result is, his capital invested yields him more than ten per cent. profit and at the same time affords him a most delightful home. His dwelling was erected in early times, when the Indians' trail passed his threshold, and is to this day, though a "cabin," with neither

"Wide hall nor lordly dome,"

a model of taste and neatness. Mr. and Mrs. E. evidently have learned the philosophy of true living, and seem not only to appreciate but also to illustrate the truth:

"There is no man but may make his Paradise,
And it is nothing but his love and dotage
Upon the world's false joys that keeps him out on't."

The garden, under the direct management of Mrs. E., is perfectly charming, mingling beauty and utility—full of choice vegetables, fruits and flowers. How we wished we had the power to set it down successively by every cottage in Wisconsin, just to see how many would fall in love with it.

Such were some of the results of our rapid survey of these premises: at some time in the future, several individual points not mentioned will serve as a text for occasional discourses.

Next in the order of the day was a drive through Summit, calling upon some of the most enterprising farmers, &c. And so we started off,—Mr. and Mrs. E., Mrs. H. and our humble self—halting first at the delightful residence of Senator Worthington, on the border of Seneca Lake. Fortunately the noble Senator was at home and gave us a most welcome greeting.—We were sorry, however, to find him suffering with rheumatism, and apprehensive of still further embarrassment to his labors. Regarding him as one of the few absolutely incorruptible men of these degenerate times, and as eminently qualified in every respect, to wisely lead in the affairs of State, it is our earnest hope, that no circumstance whatever may in the least abridge his usefulness. Like all true statesmen, of both ancient and modern times, the Senator appreciates the importance of a prosperous Agriculture, and in the halls of legislation is ever ready and foremost to urge its claims with unanswerable logic and persuasive eloquence. He has a beautiful farm, and is strongly attached to its labors and peaceful enjoyments.

Next, we halted at the "Hermitage,"—a really romantic retreat upon the shore of Lake ———, and owned by Col. Hyde, a fine old New England gentleman, anxious to sell and return to the society of his children whose interests have kept them in the East. The farm comprises about 100 acres, and would prove a valuable acquisition to some philosophic gentleman who should care more for the enjoyments of life than the sudden acquisition of wealth. The Col.'s strawberries and cream were capital, and we shall long remember his cordial hospitality.

Thence, by a somewhat circuitous route we arrived at the farm of E. M. Danforth, Esq., at the head of Twin Lake. His residence occupies a sightly eminence, and commands one of the handsomest views in the country.

Mr. D. is a thrifty, ambitious, and scientific farmer, as his ocasional articles in the *Farmer* would indicate, and his excellent lady is a suc-

cessful horticulturist and dairywoman, as the superb quality of her strawberries and cream fully testified.

Neshota Seminary came next in order—a theological institution (Episcopal) founded several years since, when the country was new, on the east shore of the other "Twin." Its immediate grounds are handsomely improved, —the farm consists of some 600 acres. We should have done ourselves the honor to call upon the President, but it was St. Peter's day, and the services were then in progress at the chapel. We understand that some 50 students are in regular attendance, and that the Institution is in a flourishing condition. May its prosperity be proportionate to the amount of real good which it has the ability to accomplish in the world.

At 2 P. M. we arrived at the residence of B. R. Hinckley, Esq., of Summit Corners, where we shared a most bounteous hospitality, and added to the list of our new acquaintances, one of the most hearty, whole-souled, and happy families we have met in Wisconsin. The farm of Mr. H. is just half a mile square, occupies one of the four right-angles made by the crossing of the streets, and is about as handsome a piece of land—every foot of it tillable—as lies out doors. It is amply provided with barns and houses for tenants, and emulates Mr. E.'s in the character of its improvements and its system of cultivation.

Messrs. Stansberry and Stone who live near neighbors, on the shore of Silver Lake, occupy as beautiful sites as coufd be planned. We shall call upon them again.

Thus ended this delightful series of brief visits, and in the evening at 5 o'clock we returned to the home of our host, literally aching with the pressure of condensed happiness.

About sun-down the science-loving farmers of the town, in accordance with a previous invitation, gathered in to listen to our talk on the "Value of Plaster as a Fertilizer;" which accordingly taking our place under the boughs of a wide-spreading locust, we proceeded to give in an off-hand, extempore manner, satisfying ourself, and a few others, at least, that philosophy, as well as experience, sanctions the application of gypsum to clover and sundry other crops. At the close we gave an opportunity for questions and discussions, and the time was thus employed until 10 o'clock, when as a fitting finale to the whole affair, Mr. Edgerton moved the organization of an Agricultural Club for the town of Summit,—a proposition which was cordially received by every one present and eloquently responded to by Senator Worthington, Mr. Hinckley and others.

In the forenoon of the following day, after regaling ourselves with strawberries and delightful domestic wines, we took affectionate leave of the good people whose princely hospitality we had so richly enjoyed, and at 5 P. M. arrived in Madison, more than delighted with our excursion and visit, and newly wedded to our home in Wisconsin.

A LETTER WITHOUT HEAD OR TAIL.

HARRISON Co., Iowa, May 21.

MR. POWERS:—I take the privilege of writing a few lines to you, requesting you to send me some of your White Russian Turnip Seed, and also send my *Farmer* to Woodbine P. O., Harrison Co., Iowa.

NOTE.—The above is a copy of a letter recently received without place, date or signature, or an intelligible post mark upon the envelope, by which to track it. It being of a piece with many that we receive, we publish it to apprise such as need it, of their carelessness. It would not seem that any person of ordinary care would forget so important a part of a letter. Still we are in constant receipt of such as leave us wholly in the dark, or perhaps require us to search them out.

We hope that our correspondents will take the hint, especially that portion of them who need it, and thereby save themselves disappointment and us delay, by putting on all the essential features.

If we were in receipt of but one or two letters per week, we could spend time with them; but from 10 to 30 per day, can receive but little attention each.

ENQUIRIES.

CAN INDIA RUBBER BOOTS BE MENDED?—A subscriber wishes to know if there is any way of mending India Rubber Boots? We doubt it, but perhaps some one can give the desired information. The same party also wishes to know

HOW TO WINTER SWEET POTATOES in our northern climate? Who that has had succesful experience can tell him?

CLOVER HULLER—WHERE TO BE HAD.

CHILTON, June 25, 1858.

MESSRS. EDITORS:—Will you please inform me through the *Farmer*, where I can obtain a machine for cleaning clover seed from the chaff, and the probable cost of the same, and oblige A SUBSCRIBER.

STATE FAIR—SELECTING AND FITTING THE GROUNDS, &c., &c.

As the months roll on, the preliminary steps are being taken one by one, in their order, to prepare for this great annual jubilee.

The committee for the location of grounds, have made a beautiful, ample and convenient location, upon the west side and just on the borders of the city; but a fraction over a mile from the Capitol, and approachable by a number of fine streets and sidewalks from the city, and several great roads from the country; and better than all, less than a mile from the depot of the M. & M. R. R., the track of which runs directly past the grounds, affording the facilities for unloading articles and passengers coming by R. R. directly upon the grounds, and taking them off in the same manner; so that altogether, it is believed that the grounds will prove by far the most approachable of any ever occupied in the State.

The character of the grounds are also as favorable as could possibly be desired in all other respects; being first, ample in extent, fifty-three acres; second, composed of a fine level for a track upon one side, and of a diversified and swelling landscape upon the other, admirably adapted to the erection of buildings, tents, &c., for the exhibition. The highest and crowning eminence near the centre, overlooks the entire fair grounds, city and country, and commands as captivating a view as could well be imagined. This fine site has been selected for the location of the *Hall of Fine Arts*, a neat and tasteful octagon building, some sixty feet in diameter, with a roomy and pleasant ladies parlor appended to the rear, which will be furnished with every comfort and convenience as a retiring and dressing room for ladies, where gentlemen do not intrude; all of which we think will be duly appreciated by those for whom it is intended. The other offices and buildings upon the grounds are planned more ample and convenient than hitherto. Upon one side is good and abundant water, close to the surface of the ground; while upon the other, and only divided by a street, is a luxuriant timothy and clover grass field, of some thirty acres, together with good spring water, which has been secured by the committee and will be furnished free to exhibitors; a great object, by the way, for animals taken up from grass and put upon dry feed, during a fair, by which they are made to look gaunt and hollow, and not unfrequently disordered.

It is in contemplation to get up a large range of sleeping berths, upon one side of the grounds, sufficient to accommodate a thousand or two of single gentlemen, together with eating arrangements to match. This when added to the public house-room, boarding and private houses, and public halls, (of which we have a goodly number,) that will be turned into lodging rooms, will secure as ample a range of accommodations as will probably be needed. Although we count on a large attendance at the fair, as our friends and acquaintances from all quarters, assure us that they are calculating to come, we will ensure all in advance, that no stone will be left unturned on the part of the officers of the Society, or citizens of Madison, to make the occasion as agreeable and useful to all as possible. The citizens have especially promised to be as hospitable as their room and circumstances will possibly admit, and in this way a great deal can be done, as the city contains a large number of roomy houses.

A prominent Eastern man is expected as an Orator. One of the largest and best halls in the city, will also be secured for evening use, in which to hold popular lectures and discussions, on various subjects of high interest to the more intellectual of those who attend fairs. This is a feature that has often been talked about, but never been carried out at our Wisconsin Fairs. We think it may be made highly interesting.

In the way of outside attractions, may be enumerated the Editorial Convention, which is appointed to come off at the time of the Fair. It cannot fail to prove a highly interesting feature, as it will undoubtedly be largely attended, and collectively will represent much of the active intellect of the State. A military encampment is also being talked of, embracing a large number of the best companies and soldiery in the State, on general drill and review during the fair. Add to this several County Societies and Town Clubs that are talking of coming in delegations with tents, for a regular camp meeting time, and we think we will have about as good a time, as well can be, on such an occassion.

ERRATA IN JULY NO.

In the third paragraph, page 266, the word "few" should occur before the words "purely tropical," thus materially altering the sense.

In the third verse, first line, of Bryant's beautiful little poem, the word "thus" should be substituted for "that."

EXPLANATION APOLOGETIC.

Our boys sent out rather a sharp circular during the last month, dunning subscribers yet in arrears for 1857, and especially those that have neither paid up for the past, or renewed for the present year. As was natural enough, although not intended, some of them by accident or carelessness were sent to those who had not only paid for 1857, but also for 1858, and in fact in a few instances, to some of the promptest and best friends we had; in which cases we naturally got back some rather sharp responses. Many who appeared by our books not to have paid, had paid different agents, and hence were no ways in fault. To all such, and to all others who did not deserve such a note, we would fully apologise. It was in a little different language form such as we would have sent. We think that our patrons will give us the credit for having dunned them the least in the world as a general thing, and we will also as a general thing, give them the credit of not having needed it.

CROPS. PRICES, &c.

From all that we can learn by an extended correspondence and personal observation, we are constrained to believe that the present prospect of most kinds of crops is, to say the least, not very flattering. Barley has proved a very light crop, and winter wheat seems not much better, while spring wheat will be very diversified at best, being good in some instances, but usually rather dubious for one reason or another. Some is rust struck, others blighted, and some is badly injured by the chinch bug; altogether we do not believe it will be more than two-thirds of a crop, and that of rather an ordinary quality. Corn, from a bad late start, has in some degree recovered, but with an unfavorable season hereafter, will be a doubtful crop, particularly the larger kinds. Oats and grass, on the other hand, seldom promised better; timothy and clover have already yielded a famous crop, seldom or never better.

Such is a brief aspect of the crops; not very flattering as a whole, to be sure; but perhaps they may turn out better than we talk. We hope so, but to our judgment the prospect ahead admonishes prudence and care.

As to prices, as yet but little can be conjectured with any considerable certainty. We think they will improve, but they may not; these are strange times, and cannot be calculated upon. It is the safest not to expect too much.

PERSONAL.

A. O. Moore, the great Agricultural Book Publisher, (successor to C. M. Saxton & Co.,) gave us a call recently. He is on a tour through the far Northwest for the first time. Seemed much pleased with the country and its progress.

He informs us that he is selling vast quantities of his books for premiums to the County Agricultural Societies of the different Western States, and also to the school districts for their libraries—nearly a thousand libraries of about fifty volumes each, to the districts of Illinois alone. This is right and we think our own State may follow the pattern greatly to its advantage.

Whoever will take the trouble of looking over his highly interesting list of books on the third page of the *Farmer cover*, will see many in the collection that are just what should be in the hands of every student who would acquire real and practical, instead of imaginary knowledge. We would still and continually call attention to that list of valuable books. No one can fail to find some one among them worth to him ten times what it would cost. We hope that our Agricultural Societies will also use them liberally instead of cash premiums.

EIGHT VARIETIES OF STRAWBERRIES—

Were forwarded us by our Horticultural friend, A. O. Babcock, of East Troy. All of them good and many of them nice, although a little too long on the road to appear to the best advantage. The varieties were as follows:

Burr's New Pine.
Hudson.
McAvoy's Superior.
Crimson Cone.
Genessee.
McAvoy's Extra Red.
Royal Scarlet.
Monroe's Scarlet.

WISCONSIN WINE.

Charles Hanford, Esq., of Emerald Grove, Rock Co., informs us that he made some seven and a half bbls. of wine, from grapes of his own raising last year. He claims that the quality is as good as Longworth's best, but on this we cannot testify, as we have not tried it. He will have some of it on exhibition at the State Fair. He is one of our most successful grape growers, as he will also exemplify by his exhibition of grapes.

BOUND VOLUME OF THE FARMER FOR AGRICULTURAL SOCIETY PREMIUMS.

We would say to all County Societies that are arranging to use the *Farmer* as premiums at their fall Fairs, that we will have them bound and ready for them by the first of Sept., so that they can be forwarded in season for distribution at the Fairs. We are gratified at the amount of orders we are receiving for them, and shall take particular pains to make them acceptable and useful premiums. The earlier the orders are received the more promptly we can fill them.

THE EASE OF CULTIVATING WESTERN FARMS.

A gentleman recently informed us that he had 105 acres of sowed, and some 35 acres of hoed crops, that he had sowed, planted, and cultivated ready for harvest, with the aid of a couple of boys, (one eleven and the other thirteen) only hiring about three days labor in the whole time. In the mean time he had broken some thirty acres, in doing which he had had the partial assistance of another older boy who was for a part of the time out of health. The man was forty-nine years of age and as he expressed it, rather broken down to what he had been.

Compare these results with what the same force could have effected upon a rough, stony farm, and then the Western prairies are fully appreciated. The ready facility with which the harvesting of the aforesaid crops can be effected with the reaper, mower and horse rake is fully equal to the comparative ease of putting in the crops.

RICHLAND COUNTY FAIR.

RICHLAND CENTRE, July 10, 1858.

MESSRS. EDITORS:—The time for holding the Richland Co. Fair is changed to the 12th and 13th Oct., so as not to conflict with the time of the State Fair.

Respectfully,

L. D. GAGE, Sec'y.

NOTE.—We are very glad, as we hope to see a good delegation from young Richland in attendance at the State Fair, as it may not be so convenient for them again for some years. Let the enterprise of this new but wide awake counry be seen and felt by the State. P.

ITALIAN RAY GRASS.

An enquirer wishes to know if the above article is cultivated in the State, and if so with what success? Having cultivated it very successfully in Pennsylvania, he believes that it is well adapted to our soil and climate.

WHITEWATER HORSE-SHOW AND TROT.

On Saturday the 10th ult., the first Horse-Show ever held in Wisconsin took place at the village of Whitewater, on the beautiful Fair Grounds of the Farmers' & Mechanics' Club, and was very largely attended, notwithstanding the brief notice, people being present from every part of Walworth, and from several of the contiguous counties.

Pursuant to an invitation to read an essay on the occasion, we were present also, and enjoyed the occasion immensely. Would be glad to report at length, but owing to want of space shall be obliged to defer all further notice to the next number.

The improvement of our breeds of horses is an important subject and we may possibly publish portions of what we said at the Show.

THE MILWAUKEE & MISSISSIPPI R. R.—

In order to the better accommodation of the great traveling public, has again changed its time table, as will be seen by reference to their advertisement. These frequent changes are a source of some inconvenience to way travel, but are doubtless necessary to the welfare of the road itself, and have therefore, as we believe, been unjustly animadverted upon by the press. That policy is certainly very short-sighted and ungenerous, which would demand in these hard times, a sacrifice of the through travel—in which this Road and the State are alike interested—to the greater convenience of individuals resident on the line.

THE ECLECTIC COLLEGE OF MEDICINE.

We call the attention of medical students and of those intending to become such, to our advertisement of the above flourishing Institution. We regard it as the most liberal of any in the country, and are willing to vouch for the ability and scientific character of its Faculty.—Eminently worthy of patronage.

A MASTER-PIECE OUT DONE.—We have until lately supposed Ayer's Cherry Pectoral was the Untima Thule in its line, and that nothing had been or would be invented which could compass it in its fine points of excellence as a medicine. But we are confidently assured by those competent to judge on the subject, that Dr. Ayer's new Pills excel in high medical artistry even that widely celebrated embodiment of his skill. He has succeeded in making them not only pleasant to take but powerful to cure the large class of complaints which require a purgative remedy. —*Lancaster Argus, Ky.*

LITERARY NOTICES.

FIRST ANNUAL REPORT OF PROF. S. W. JOHNSON, Chemist to the Connecticut State Agricultural Society, and Professor of Analytical and Agricultuaal Chemistry in Yale College.

To the scientific Agriculturist this is an interesting Report, comprehending as it does the analitical results from a chemical examination of the Guanos, Superphosphates, Poudrettes, Peats, &c., &c. We have turned down several leaf-corners, and shall give it a careful perusal

LIFE OF DR. KANE, BY WM. ELDER.—Childs & Peterson, Publishers, Philadelphia.

This proves to be a very readable book, as we were prepared to anticipate from the illustrious subject of the biography and from our knowledge of the author. The whole life of Dr. Kane was strangely filled with romance, and we presume this authentic history of the heroic adventurer and scientist will soon find its way into the library of every family in our land.

THE COLLEGE JOURNAL OF MEDICAL SCIENCE.

We read several Medical Journals, but none with so much interest and profit as the above-mentioned. Its articles are altogether original and are furuished by some of the best writers in the country. Professionally considered it has no superior, and mechanically it excels any journal of its kind in America. See advertisement.

THE MONTHLIES.

The Atlantic, Harpers, The Lady's Book, Arthurs, &c., all duly and early received for July, and each and every one of them excellent in its way. The Atlantic is philosophic and substantial; Harpers miscellaneous and instructive; The Lady's Book splendid as a work of art and literature, as is also Arthur's, always abounding in the practical and true.—We repeat they are all excellent in their way, and invaluable to the intellectual and cultivated of the nation.

Meteorological Synopsis for May, 1858.

Barometer stood highest on the 2d, 29.542.
" " lowest on the 28d, 28.712.
Average for the month, 28 9 7.
Thermometer stood highest on the 27th, 78 degrees.
" " lowest on the 11th, 38 "
Average for the month, 42.699 "
Amount of rain, 8.89 inches.
The prevailing winds were North-west.

SYNOPSIS FOR JUNE.

Barometer stood highest on the 7th, 29.808.
" " lowest on the 4th, 28.716.
Average for the month, 28.956.
Thermometer stood highest on the 27th, 89 degrees.
" " lowest on the 12th, 49 "
Average for the month, 70.072 "
Amount of rain, 4.72 inches.
The prevailing winds were South-east.

UNIVERSITY.

County Fairs in Wisconsin for 1858.

It is desirable and important that we know when and where the County Fairs of this year are to be held. Will the Secretaries of the respective Societies favor us with the necessary information? The following meagre list has been gleaned from our exchanges:

Grant,	Lancaster,	Sept. 22–23
Waushara,	Wautoma,	" 22–23
Rock,	Janesville,	" 28–34
Walworth,	Elkhorn,	Sept. 29–Oct. 1
Richland,	Richland Centre,	Oct. 12–13
Crawford,	Seneca,	" 12–13
Bad Ax,	Viroqua,	

State Fairs for 1858

California.	Marysville,	Aug. 23–28
St. Louis,(I)	St. Louis.	Sept. 6–11
Ohio,	Sandusky	" 14–17
Vermont.	Burlington,	" 14–17
New Jersey,	Trenton,	" 14–17
Illinois,	Centralia,	" 14–18
Rhode Island,	Providence,	" 14–18
Maine,	Augusta,	" 21–24
Iowa,	Oskaloosa,	Sept. 28–Oct. 1
Pensylvania,		" 28– " 1
Wisconsin,	Madison,	Oct. 4– 8
Indiana,	Indianapolis,	" 4– 9
Kentucky,	Louisville,	" 5– 8
New York,	Syracuse,	" 5– 8
New Hampshire,	Dover,	" 6– 8
Connecticut,	Hartford,	" 12–15
Alabama,	Montgomery,	" 18–22
North Carolina,	Raleigh,	" 20–23
South Carolina,	Columbia,	Nov. 9–12
U. S. and Va. Central,	Richmond,	Oct. 25–30
National Horse Show,	Springfield, Mass.,	Sept. 14–17

Save your Apple Trees.

THE BARK LOUSE ANNIHILATED.

THOUSANDS of Apple Trees die annually from the ravages of the bark louse and the depredations of other insects combined, which will cause the apple to be a rarity not many years hence, if not attended to. The louse destroys the bark and stops the sap in its passage; other insects blight the leaf, and so between them kill both root and branch. Apples saved from a lousy tree will not keep long; if a tree is diseased the fruit must also be, and consequently injurious to the system.

I offer to the public a SALVE, composed of Vegetable Properties, which I have discovered after years of experiments, which proves to be a final cure for the apple tree disease, healing the bark where it is injured and giving the tree new life, preventing the attack of the insects that blight the leaf, increasing the growth and improving the flavor of the apple. The vegetable has to be cured in September or October, to be used in April, May, or the first of June. Not applying immediately for a recipe, so as to pick the vegetable in time, will be loosing the fruit of next year and probably your trees. The expense of this salve, not including labor, will not amount to ever a dollar. My charge is ten dollars for a recipe, with a bond to keep the discovery a secret for five years. Recollect if October passes without picking the vegetable, you lose a year and probably your fruit trees.

As I have to visit each applicant personally, it is better for all living in a town to acquaint each other, and all apply in one address to

MICHAEL O SULLIVAN.

Burlington, Racine Co., Wis., July, 1858.

TESTIMONIALS.

I offer the following testimonials from a few of those who have seen the operation of the salve, and could add many more if deemed necessary. Among the following, Mr. Perkins will be recognized as one of the most prominent and well-known agricultural men in the county of Racine, while Mr. Martin is an experienced and well-known nurserymen

We the undersigned, fruit-growers of the town of Burlington, Racine Co., Wis., do hereby certify that we have seen Michael O. Sullivan make an application of a salve of his discovery to apple trees, and in our opinion and judgment, it has an effect to kill the bark louse, and from the appearance of the bark after its application, it appears to revive and give a healthy aspect to the tree.

P. FORBES, C. W. BENNETT,
S. PECK, JOHN MARTIN,
P. M. PERKINS, JOHN DAVIS. xviii tf

WISCONSIN FARMER,

AND

NORTH-WESTERN CULTIVATOR.

Vol. X. MADISON, SEPTEMBER, 1858. No. 9.

D. J. POWERS AND PROF. J. W. HOYT, Editors.

GEOGRAPHY OF PLANTS.

WONDERFUL and beautiful is the variety which marks the vegetable world! Were all vegetation confined to one single species, as the mullein, the dog-fennel, or even the beautiful and useful wheat plant, how soon the mind would clog of their charms and nervously turn away for some new plant whose other form of stem, of foliage, or flower might bring relief and a new joy to the weary eye. But such it is not. Nay, on the contrary, so great is the multitude of varieties that botanists have not yet been able to number them—thousands and hundreds of thousands have already stood for their portraits, and every day rewards the eager search of some zealous naturalist with a new discovery. And then the extent of this variety! From the dear little blue-bell on rocky crag, far from the haunts of men, to the earth-screening Banyan and grand old Baobab whose germs began to swell under the sunlight of tne first roseate morn, and whose grateful shadows have been lovingly spread ever since for the laughing sports and idolatrous worship of untold generations, how infinite the variety of color, form, and use!

But not all of these belong to the same locality; as all classes and families of men are not to be found in any one country—except America! Nevertheless the distribution is not of chance but had its origin in certain necessities of soil and climate and in the special wants of the people and animals destined for the various portions of the earth.

If the Creator had made the earth perfectly even on its surface, with the water and land arranged in alternate belts, and perfectly homogeneous in its chemical constitution, then the climatology of the world would have been comparatively simple and the Geography of Plants a mere question of latitude or longitude. It so happens, however, that neither one of these conditions is true; for so far from being perfectly smooth and even surfaced, the earth is exceedingly rough and irregular in the distribution of land and water; and instead of homogeneity, there is no single handful of its substance of one kind, unless it be here and there a lump of one of the few metals which occur pure. Everywhere there is the greatest diversity, both in the general configuration, and in the chemical elements of which the earth is composed: no two square miles of the earth are exactly alike, either in the character of the surface or the nature of their constituents.

It must be apparent, therefore, that the problem of distribution is complex and difficult, requiring in order to its complete solution a perfect knowledge of Geology and Minerology, Botany, Chemistry, Physical Geography and Meteorology. Accordingly, it was not until the great mind of Humbolt, with its wonderful power to grasp the cosmic relations of material things, devoted itself to the task, that anything like a philosophy of distribution was offered to the scientific world.

The materials had been brought piece-meal to the feet of this great man, whose work it was to build out of them the splendid fabric of a great generalization. But even he has as yet been only able to lay the broad foundation upon which the scientist of the future must rear the superstructure of a complete science.

It was natural in the beginnings of botanical science that the description of every new plant, whether new to the world in general, or only in the particular locality, should be accompanied with a mention of the place where it was found, although no reference whatever was had to the deduction of a general law. Thus it was found that a certain class of plants were chiefly confined to a definite zone, or still narrower range, sometimes even limited to a small circumscribed locality, never being found elsewhere or susceptible of easy cultivation in any other part of the world, however like the place of its habitat. For instance, of the numerous species which grow in New Holland, very few are found in other parts of the world; while of the sixty-three or four peculiar to St. Helena, only two have been discovered elsewhere. So also, it sometimes occurs that upon the two sides of a given range of mountains totally different varieties of plants are found; from all of which facts it will appear that the vegetable world is really much less independent of circumstances than the animal, —it seeming to have been the intention that animals being gifted with powers of locomotion should seek such localities as furnish the food to which they are partial. True, we have the power of manufacturing a given climate to order, on a small scale, but the uses of such artificial climate can never be more than very partial and imperfect: the exactions of nature are rigid, her claims imperative.

The nature of the relations which subsist between the vegetable and the animal kingdoms, and the joint relation of both to the climate where they are native is one of the most interesting studies in the whole range of natural science, and might with propriety be noted in this connection; we are not willing, however, to embarrass our present subject with any discussion not strictly essential to its completeness, and shall hence defer it to the general department of Uses of Plants.

The important discovery by Humboldt that the parallels of latitude do not demark either zones or more specific climates was the first great contribution to the science of climate, and gave rise to what are now known as *isothermal* lines, (lines of equal annual temperature,) *isotheral* lines, (lines of equal summer heat,) and *isochimenal* lines, or such as pass through places on the earth whose mean winter temperature is the same.

To any one accustomed to associate a definite climate with a particular degree of latitude, the tortuosity of these several classes of lines will be an occasion of no little surprise. Sometimes in their windings they cross several parallels and then suddenly and by an almost due north or south course return to the parallel of departure, or, even crossing it, deviate as far in the opposite direction.

Now so far as these lines are concerned, they ere quite satisfactorily explained upon the ground of the physical configuration of the surface,—and the astronomical lines which govern the earth—mountain ranges, lakes, rivers, plains, &c., &c., all have a modifying influence, and to the man of science determine what must be the nature of the vegetation of any given locality.

To illustrate briefly: Every one familiar with the mass of the world and the general botany of the old and new continent must have been struck with the fact that fruits and grains belonging to the temperate zone grow much further north on the western coast of Europe than on the eastern coast of America. Indeed so almost identical with the fruits of New England are those of Great Britain, that many, who have not reviewed their geography for some time, find it difficult to believe that the parallel of latitude which just touches the southern coast of England is the same which passes through British America, some two degrees above the extreme northern limit of Lake Superior. A proper understanding of Physical Geography, however, renders the explanation quite simple, as follows: Owing to the spheroidal form of the earth, its revolution on its axis and the peculiar relative position of land and water there exists what is known as the Gulf Stream, whose warm waters moving in a north-easterly direction from the Gulf of Mexico wash the western coast of England and thus raise its temperature above what it would otherwise be; while on the other hand the eastern coast of America is washed by the cold waters and influenced by the cold winds from the regions of Iceland and Spitzbergen; thereby reducing the temperature con-

siderably *below* that which might otherwise be expected. So that in this case we have two opposite causes conspiring to increase the difference between the climates of the two countries.

In like manner smaller bodies of water, as inland seas and lakes, exert a modifying influence, as we who inhabit the northern tier of States can testify from our own observation. Prairies, highlands and forests also enter into the problem of climate, and while they render it, when irregularly arranged, more difficult of solution, yet if properly understood in their individual influence will enable the climatologist to explain many anomalies in the Geography of Plants. This branch of our subject will be discussed, however, under the head of Cultivation of Plants, and may, therefore, be dismissed for the present without further remark—only, that certain specialties in the distribution of plants appear to involve unknown quantities or elements, the determination of which is essential to a complete understanding of the subject. Indeed it is probable that not until more is known of certain intangible elements, and the mean temperatures of localities for less periods than years and half years, many questions of interest and importance must wait for an answer.

If it be true, as we have attempted to prove that the sunbeam is the motive power which drives the machinery of the great vegetable world, then we should naturally look for the most marked results in those portions of the earth where the intensity of this force is the greatest and where it is most persistently applied. In other words we should expect to find the vegetation of the equatorial regions, where the sun's rays fall most perpendicularly, and operate therefore with concentrated force, the most luxuriant, and a gradual dwindling down in thriftiness of growth as we approach the polar zone. And such is really true; for the tropics display the most luxuriant growths in the world.

It is there that the magnificent Ferns and Confervæ shake their evergreen leaves, and shoot toward heaven, and the over-topping Palm waves its tufted coronal high above the other trees of the forest, and there that the Dragon-tree stands suggestive of centuries that have been. No billowy meadows of tender grass carpet the heated plains, for under the powerful stimulus of the tropical sun, every plant aspires to be a tree!

But gradually this luxuriance diminishes, so that proceeding poleward, the Palm dwarfs a little, gradually becoming less and less until at last it altogether disappears. Still there are great forests of ever-green trees, around the mighty trunks of which are trained the Vine and fire-tinted Bignonias; Crucifers and beautiful Rock-roses abound, and the gorgeous colorings of equatorial plants assume more modest hues.

Next we reach the zone which is mixed of the deciduous and evergreen woods, whose sombre hues contrast so beautifully with the bright, soft green of radiant meadows; rich mosses, hitherto unknown, here clothe the trunks of aged trees; leaf-buds before unprotected assume *tegmenta* or coverings; but Lime and Orange groves are there for the refreshment of thirsty man and the Hop and Clematis twine the sturdy stems of giant growths.

Then come the lofty graceful Elm, the massive Plane and Cotton-wood. Among the grasses the Rice-plant holds important rank, furnishing much of the food consumed by the inhabitants of that semi-tropic, semi-temperate zone. A little higher still Oak also begins to appear, and the drooping Cypress. Corn and the Sugar-cane have their best development, and the garden fruits of the summer of more northern latitudes offer their tempting food in the middle of winter.

Even as far north as the 30th parallel, Nature plies her work from the beginning to the end of the fruit-burdened year, nor ever thinks to stop for rest or sleep. Corn and the Cane are important products of her toil, and here she prepares her sweetening for the world of men.

Next we meet—at least on the American continent—with the Beech, the Hickory, the Walnut, the Ash, the Oak, and the Butternut, the 40th to the 50th parallel being their true habitat, although some of them, particularly the Oak and the Beech, are found as far north as the 60th. It is within this range, also that the cereal grains have their most natural growth. Wheat, oats, barley, rye and Indian corn are the chief products of the fields; the last mentioned flourishing, as said before, considerably further south, while the first and third may be, with some difficulty, produced as far north as latitude 65°. This belt of earth also includes the Vine, whose extreme northern limit is the 55th parallel. The Birch, the Larch, the Pine and the Fir are the principal forest trees along

the upper skirt, and even these begin to dwarf after the line of 60° is crossed.

Approaching the pole more nearly the tree becomes the shrub, and finally the shrub dwindles down until the whole of vegetation consists of a few species of Lichens, Mosses, and the Red Snow Alga is alone left to bedeck the wide wastes of ice-covered plains.

Such is a birds-eye view of the Geography of Vegetation, highly interesting in itself, and a thousand times more so when viewed in its relations to the animal kingdom. In our next, we shall enter upon the practical subject of the cultivation of plants. H.

Rust in Oats—What is it?

Under this head the *Southern Homestead* of last week makes the following remarks. The subject is one of great interest to farmers, and the investigations should be prosecuted until the cause of their new enemy is ascertained if possible :

Throughout the whole south western portion of the Union the oat crop has suffered from a terrible blight, which from its resemblance to the fungous substance that sometimes attacks wheat, by that name, has been called *rust*. So far as we are informed, rust in oats has hitherto been unknown. We have never read of anything of the kind, in any section of the country. The fact that it is thus unusual, opens a wide and interesting field to the entomologist, as it invites investigation in a channel, so far as we can ascertain, heretofore unexplored.

While in West Tennessee, a short time since, we took occasion to examine the blade of the oat under a microscope, (kindly furnished us by the Bailey Troupe,) and were greatly surprised with the phenomena which the glass revealed. Since then, we have followed up those examinations, by the aid of more powerful instruments, at the Medical College in this city, in company with several scientific gentlemen.

The cause of all this destruction of the oat crop is a living worm, too small to be plainly seen with the naked eye. A single blade or leaf of the oat sometimes contains hundreds of them. They lie encased in the tissues of the leaf or blade where they have been germinated, beneath the epidermis, or thin pellicle over the exterior portion of the blade, and as they progress in development, the skin of the leaf is raised into curious puffy blisters. The growth of the worm subsequently ruptures these, and it escapes to feed on the plant. When first released from their covering, they are of a beautiful clear red color, almost transparent, but soon beginning to change color and form, getting more opaque and dark in appearance, until, in the course of transformation, they become a black bug, with legs and wings, when they attack the head or grain of the oats.

Under the microscope, the dust which remains on the leaf, closely resembles that on the wings of butterflies.

How this innumerable army of infinitesimal worms originated is yet a mystery. It is a singular fact, however, that wherever the greatest quantity of grain has fallen, there the oat crop has fared the worst. In our recent trip through West Tennessee, we saw but a single field of oats, between the Mississippi and Tennessee rivers which was not a total failure, or in which it would not be folly to put a scythe-blade. That field was near Denmark, Madison county, and was sown very early. It is well known that more rain has fallen in West Tennessee, this season, than in any other part of the State; hence the extreme wet weather must have had some agency in the production of this animalculæ. It is also well known that moisture and heat will produce and multiply animal life, millions per hour, and therein we judge is the secret of this destruction of the oat crop. It is one of those cases of natural phenomena which occur only at a certain stage in the growth of plants, and under peculiar states of temperature and weather. It may happen next season, or it may not occur again for many years.

The Upas Tree.

An exchange says the story that the Upas tree of Java exhales a poisonous aroma, the breathing of which causes death, is now known to be false. The tree itself secretes a juice which is deadly poison, but its aroma or odor is harmless. Strychnine is made from the seeds of a species of Upas tree. Such is the name of a district, the atmosphere of which produces death. This effect is not occasioned by the Upas tree, but by an extinct volcano near Batar, called Guava Upas. From the old crater and the adjoining valley is exhaled carbonic gas, such as often extinguishes life in this country in old wells and foul places. This deadly atmosphere kills everything that comes within its range—birds, beasts and even men, and the valley is covered with skeletons. By a confusion of names, the poisonous effects of this deadly valley have been ascribed to the Upas tree, the juice of which is poisonous, and hence the fable in regard to the deadly Bohun Upas tree.

How to Stop Blood.—Take fine dust of tea, or the scrappings of the inside of tanned leather, and bind it close upou the wound, and blood will soon cease to flow. These articles are at all times accessible, and easy to be obtained. After the blood has ceased to flow, laudanum may be advantageously applied to the wound. Due regard to these instructions will save agitation of the mind, and running for the surgeon, who would make no better prescription, if present.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER IX.

GENERAL FARM MANAGEMENT, IN REFERENCE TO PROFIT, ECONOMY, COMFORT AND USEFULNESS.

The foregoing is a subject on which there is, of course, and ever must be a diversity of opinions, upon many of the minor points at least, but upon the great main features, under similar circumstances, there would not seem to be much ground for radical differences of opinion or action. What will pay or profit one man, all things being alike, will also be equally efficacious with another. This is simply assuming that like causes produce like results, and that accident or chance has little to do with those who attend wisely and well to their business.

The proper management of a farm, presupposes it all fitted to hand, and ready to be managed to advantage, if the occupant is so inclined; and so we will treat the subject. A western farm as well as an eastern one, to be well and profitably managed, should not be so large as to prevent its being all improved and cultivated; each portion in its own proper way.—Mere outlands only half cultivated, or perhaps not at all, only so far as the wild herbage grows, cannot pay a very large interest or profit to the owner. The profits of a farm depend wholly upon its productiveness, and what it is made to produce; not merely a portion of it, but all of it; not merely the principal ploughed field, but the meadows and out-lots. In many countries, much rough and stony land is necessarily allowed to go nearly to waste, because it cannot be tilled, but in our fertile region of the world it is usually otherwise, and with a little reclaiming in the way of clearing or draining, all of our lands can be furrowed by the plow and made to largely increase their production. We dwell somewhat at length upon this feature in the outset, because it largely underlies the subject in a profitable point of view.

Suppose then, that a farm is all properly under cultivation; its uplands with the various grain and grass crops, each in proper rotation from year to year; the meadows drained and into the cultivated grasses, and the wood lot even, properly trimmed out, so as to promote its growth; (and nothing less than this should be the condition of any farm, that the owner has had a reasonable time to cultivate.) Then the next main consideration is, the proper crops to cultivate and stock to grow, to turn the farm to the best account. And in this behalf, primary reference should be had to the needs of the farm in the way of manure; for be it remembered that manure has almost as much to do with the growth of many crops in Wisconsin, as in New England. Manure, properly applied, will double the grass crop upon most of our lands, and add from fifty to one hundred per cent. to the corn; and in many cases, be equally favorable in its effects upon oats, potatoes and even wheat,—not directly applied, but in rotation, first upon the grass field perhaps, then succeeded by corn, and next by wheat.—If manured pretty highly upon good soil, perhaps two crops of grass might best precede the corn. We will warrant that there is very little land in the north-west that is high and dry enough for wheat, that will not be found to be greatly improved in its productions by high manuring, and some proper rotation as mentioned. On the other hand, we know there is a great deal, new as the country is, that does not grow half a crop, for want of the aforesaid manuring. We recently traversed the fields of a friend, who had originally, good land, but it had been cropped successively from ten to fifteen years, and so far as we could learn, without ever having been manured at all. As was natural, the growing crops were all small and unpromising; still he did not seem to realize that it was in the least his fault, *it was all charged to the weather, and to Providence*; when at least three fourths of the difficulty arose from the absolute want of manure, and not because he lacked the manure, for he had some 150 sheep, 30 head of cattle and horses, and only about 50 acres of plowed land; but the manure from this comparatively large stock, instead of being carefully saved and applied properly to the soil where needed, was scattered over the out lots, all the way from the hovels to the watering place, some half a mile distant, and of no earthly benefit. That man did not know that he was loosing at least $200 per annum direct upon his crops, and nearly or quite as much more in the way of injury to his farm, and all for the want of an outlay of from $25 to $50 per annum, in the way of saving and applying his manure. One thing seemed very clear to his mind, and that was that farming was not a very profitable business. Nor would any other business be, if conducted in that wasteful way. Suppose a merchant,

shoemaker, or tailor, should allow one half of his stock and material to go to waste; how long would he escape bankruptcy.

We have not selected the aforesaid farmer because we suppose him the only specimen of the kind in the State, for we know there are thousands like him, and know further, that they have no right to expect to succeed or to make farming profitable. Judicious manuring lies at the foundation of successful and profitable farming in all countries, and not much less in the west than the east.

Thus, those who would farm economically and profitably, must farm all the land they pay interest and taxes upon, not merely with a *scare fence* and wild grass and bushes, not perhaps producing enough to sustain a sheep to the acre, but by careful and thorough tillage of the kind required; nor even then have they a right to expect to make a large profit from year to year on each and every article raised, but can only rationally look for fair average profits, one year with another; not profits that will sustain extravagance and folly, but prudent outlays of such a nature as are beneficial, instead of injurious to the mass of mankind.—Any business is profitable that pays six per cent. from year to year, upon capital and labor, notwithstanding the *fast notions* of recent times to the contrary, and no man can pay a higher rate of interest for any number of years and escape bankruptcy. In determining what is, and what is not profitable, it is both safe and well to compare the results of our operations by these old fashioned standards.

Thus much on the economy and profit of farming. Now for a few suggestions on its comfort and usefulness. Certain essential things are as necessary to farm comfortably as to farm profitably; among which are convenient and handy apparatus of the various requisite kinds. For instance how much disquiet and ill feeling bad fences not unfrequently beget, not only to one's own feelings, but between neighbors. The want of a little preliminary care is often sufficient to sow the seeds of permanent ill-will, perhaps of violence or protracted law-suits. We have known men to idle around courts of law to settle some trivial fence difficulty, until they had spent time and money enough to have built a stone or even an iron fence between them good enough to last until eternity; and when their suits are finally settled they do not build the fences after all, but only make enemies of those who ought to be good neighbors and friendly above all things. Far and speedily remove then these breaches, both from your neighbors and your cattle, "that you may love one another, and dwell in the bonds of brotherhood." Forget not that it is comfortable to meet your neighbor from day to day, with a genuine smile of pleasure and good feeling—that such a relation will greatly brighten the uneven road of life we travel.

Another great promoter of comfort and good neighborhood among farmers, is the having on the part of each, as near as may be, the requisite tools and implements for their daily business; borrowing and lending can be tolerated when indispensible, but a habitual practice of it on the part of trifling things, is not only one of the most expensive but disagreeable modes of getting along, to all parties, that could possibly be immagined. How often is a team hindered an hour or two at the most hurrying season perhaps, for the want of an augur or something else equally as trifling, with which to fix a broken implement; or a plow delayed in the furrow for a half day perhaps, for a single bolt that would have cost but a dime? All of these matters beget expense and delay, and the greatest discomfort of all in farming, the being behind and out of season with work. Pulling weeds up by the tops that might have been hoed up at the proper time with one tenth of the labor, is not largely calculated to enhance one's pleasurable feelings. And the same of everything else. Yes, to be comfortable, do everything at the right time, and as nearly as may be in the right way. Nothing begets a more pleasurable emotion after the close of a hard day's toil, than the consciousness that everything needful is done up, and done well; that no undue rustling of the corn indicates the presence of unruly animals; or the raging of the storms, a thought of crops or creatures unprotected and suffering. Yes, gentlemen farmers, plan your work and business as far as possible, so as to keep out of hot water; and to do this, few things are more important than keeping out of *debt*, that most grievous of all common curses, that hangs like a mill stone around the necks of so many, making them not only slaves but often knaves. The great mass of men get about one year behind pecuniarly, and dearly indeed do they pay for the folly. The difference between being behind and ahead is too

great to be expressed in words, and must be felt and realized to be fully appreciated.

"A most delusive hook is debt,
That the thoughtless freely swallow,
But once in their gills,
'Twill make them sweat,
And in deep trouble wallow.
Then touch it not, ye would be wise,
'Tis but a baited snare;
A temp ing serpent in disguize,
A lion in his lair.

[*Old Song.*

So much for the comfort of gentlemen farmers. Now a word, *en passant*, for the ladies who bear them company, and do the household labors, (or may be, drudgery of the farm.)—How much can their labors be lightened and comforts increased by a proper regard for the adaptations and conveniences of a household establishment. Let us suppose a case, when a family of from six to ten, perhaps, are to be provided for and taken care of, in all the minutiæ of feeding, clothing and cleaning; a dairy of a dozen cows to be seen to, and perchance a cradle to be rocked in the bargain; all of this to be done, may be, with the aid of a single girl, and more than likely a poor stick at that. How much are the evils of such a situation diminished by a few little conveniences of daily and hourly use, such as an ample kitchen, near a well prepared and never failing wood-pile, with an abundance of well and cistern water, upon the right hand and left; a cellar of easy approach, and dairy and dining room in the right place. Add to these a good vegetable garden, well stocked with all the desirables, bordered around with fruits and flowers.—And over all have a comfortable team of some sort, if not quite so stylish, in which they can visit friends and ride to church.—These things as they should be, make nearly one half's difference in the ease and comfort of the round of daily toil. Household toil is so much like a tread mill in its genius and movements, that anything that can diversify or relieve it, is quite as well worth the attention of the economic, wise or even human, as the best modes of speeding the plow or farming the acres.

Lastly, how shall farming be made useful, not merely to each tiller of the soil, but to the world at large? That is the last and final question for every just minded and whole souled man to ask, and answer. What! says Mr. Money Schemer, does it make any difference what crops I raise, so that they bring a good price? Why not raise corn to be distilled, or barley to be brewed, or negroes to be sold South, as readily as wheat for bread? For the simple and good reason, that one tends to curse, and the other to bless mankind; not much difference we are aware in the estimation of too many, but we envy not such uncivilized barbarians their obtuseness of intellectual and moral perception; but for the better class that leaven community, the world would speedily again sink back to cannibalism, and one savage would prey upon another direct, instead of through the insidious *civilized* machinery of drugged whisky and glittering dens of infamy, into which to trap the unwary to guzzle it. Yes, a man that is a true man, and would stand up in the image of his God from the cradle to the grave, and at the last great day; should not let his petty selfishness get the better of him, but always in the prosecution of his business keep the great utilitarian ends of life in view; and remember that that man better never have lived, who left the world the worse instead of the better for his doings. We fear that such a judgment may be pronounced upon many in this half civilized age, when they come to the final trial. Therefore we say, pursue no branch in agriculture, or any other business that tends to degredation or vice, lest the car of Juggernaut that you aid to put in motion may at length catch you beneath its ponderous wheels; such is not unfrequently the end of those who are heedless and indifferent as to the results of their own actions.

Thus in summing up, we would recommend to all who would farm economically and profitably, to farm no more than they can do well, and in season; and if they would farm comfortably, to have a place for everything and everything in its place; and if they would farm usefully, never to set or follow a bad example, nor pursue a course that would lead themselves or others to harm.

The foregoing suggestions may strike fast young men, and conceited old ones, as of little account, and not specially worthy of their notice or consideration; but let all such remember that the immutable principles, truth and error, *right and wrong*, underlie and govern all things, and that none, however crafty or sly, are smart enough to escape their legitimate and final effects. Those who conclude and act otherwise, wake up at last to find themselves the greatest dupes of their own follies, and to learn that they have neither labored profitably, comfortably, or usefully. P.

Correspondence of the Farmer.

Indian Corn vs. Wheat.

From many of the wheat growing States, we hear of a sad *failure of the wheat crop* the present season, in different forms, and from various causes; and it is also an uncomfortable fact, that for some years past, there has been a growing uncertainty in the yield of that important crop.

In view of this state of things, it becomes a matter of deep interest to our agriculturists, as well as others, to examine seriously into the subject, with the two-fold object of averting, as far as possible, this threatening disaster, and of encouraging the culture of an advantageous substitute, to a redeeming extent, of that grain.

This latter, I believe, will be largely effected, by examining and better understanding the virtues of the CORN CROP. Undoubtedly, the wheat crop can be rendered more sure and reliable than it, at present, is, by a better and more scientific culture than that practiced in past years; and I am satisfied there are important facts and principles, well known by many of the more thinking farmers, in regard to raising wheat—when properly analyzed and compared, in reference to different sections of our country—which, if generally practiced, would secure greater safety and profit in raising wheat; the energetic adoption of three main propositions will be necessary—and successful too—in the attainment of this desired end; and which may be presented in a future article, if deemed desirable.

But it is not so much my object, at this time, to consider the *remedy* of the failure in the wheat crop, as it is to present what, in my mind, may be an advantageous *substitute*, by exhibiting, more fully, the high claims of our native and national grain—INDIAN CORN.

It is a surer crop, one year with another, through the whole range of latitudes where it succeeds at all; and is less liable to enemies, or to be injured by rank growth, or be beaten down by storms. And, though the opposite has usually prevailed, it is now well ascertained, by experiment and analyses, that corn possesses about the same amount of nutriment, pound for pound, as wheat, and will sustain as much life and labor; thus, notwithstanding wheat has always commanded double the price of corn, the latter possesses really as much true value as the former, for most of the purposes to which they are applied—the making of fat and muscle.

The richest and most important properties of grains—the wholesome and nutritive ingredients—are *albumen* and *gluten;* all grain being valuable for man and beast just in proportion as they contain more or less of these properties. In view of this position, I have made a somewhat extended examination of specimens of corn and wheat, raised in our Western States, during the past ten years, and find that the bushel (56 lbs.) of corn contains an average of 11 parts albumen and gluten in one hundred parts, while the bushel (60 lbs.) of wheat contains an average of only 13 parts of albumen and gluten in the one hundred; which, when taken weight for weight, shows but a slight trace in favor of wheat, yet the latter grain has always commanded full twice the price of corn, a circumstance somewhat difficult to be accounted for on first thought.

But when more fully examined into, two considerations go far to explain this seeming anomaly, viz: In the native country of our ancestors—the first white settlers of this continent—wheat was the chief staple, nearly the only breadstuff, and sustained the highest value as an article of food; it was introduced into this country at considerable expense, and has since always commanded a price in accordance with that prestige of value. Again, in former years, when the voyages across the ocean were performed solely by sail vessels, the passage occupied so long a time that Indian corn and meal could not well be transported to the old country without material damage—at least only with much difficulty; consequently, there was little or no encouragement to produce a surplus, above domestic consumption, of that grain, in this country; for it could not then be safely calculated upon as a profitable staple of general export; and it could be so cheaply raised, in vast, quantities, at home, that it could not be depended on as the chief staple of agricultural product, under the then existing circumstances.

But the introduction of steam ships has put an entirely different and more favorable phaze upon the exportation interests of this country—an enlarged scope, and has permanently opened the way for increased demand and enhanced price of Indian corn, raising it toward its deserved standard; ocean navigation by steam having so shortened the time of passage, from the new to the old world, that corn and meal may now be exported with comparative safety; and when its true or elemental value is

more fully and adequately known on both sides of the water, it will take that position among breadstuffs and command that price which its intrinsic worth, or ingredients, so richly entitle it to, among our national products. This is, really, the great advantage of steam navigation to the farmer.

I have another article in progress, showing, by authentic tables and facts, the average yield and cost, per acre, of raising corn and wheat, in the three Western States—Illinois, Iowa, and Wisconsin—for several years, since 1848, together with the comparative market price and profit of those grains during the same period—which proves that, with judicious management, corn can be uniformly raised with greater safety and profit than wheat; and, as compared with the latter grain, the former has been greatly undervalued.

D. S. CURTISS.

Correspondence of the Farmer.

The Wheat Crop—Problems for Solution.

MESSRS. EDITORS:—Having examined pretty closely, the trouble with the wheat crop, from its beginning up to the present time, I wish to lay the result of my observations before you, for scientific solution.

Spring wheat was more or less rusted about the time it filled fairly with milk. As the kernel began to harden a very little, the top of many heads, scattered promiscuously through the field, began to whiten and dry up. On a close examination, I found that the stalk of such heads was more or less affected, and that every stalk, coming from the same stool, was likewise affected, and in no case could I find healthy and unsound ones on one stool. The only mark of disease I could find, was a small black spot on the main root, close below the surface of the ground. Soon the whole head turned white, and the stalk was very nearly dead, while all around, its neighbors looked lively, and were ripening in the usual manner. Upon examination now, the kernal was found hard and a good deal shrunken, those in the top of the head, being hardest, and shrunk most. The stalk presented the appearance of having been cut off, when not quite ripe, and the root was entirely dead, while its neighbor, standing within perhaps three inches, was perfectly healthy.

Now what should cause the top of the head to dry up some days before the lower part lost its green color? Where did the disease commence, in the head or in the root? and, what was the cause of it? its name, if it has one, &c. This disease has damaged wheat more in these parts than anything else. Chintz bugs are very scarce, yet there are a few to be seen occasionally.

Very respectfully and truly yours,

S. S. STEELE.

LIMA, Rock Co., July 24, 1858.

NOTE.—Who can answer the foregoing queries for our correspondent. It is a difficulty that we have not noticed sufficiently close to have formed an opinion upon.—[EDS.

Longevity of Persons Engaged in Different Occupations.

The Legislature of Massachusetts have had some tables prepared to show the mean average of life attained by individuals engaged in varieus employments, and from which we cutl the following interesting facts:

Bank officers are the longest lived, their average being 68 to 76; next judges and justices, 65, and then agriculturists whose average is from 63 to 93. Clergymen, coopers, gentlemen, public officers and shipwrights average from and between 55 and 60. Blacksmiths, butchers, calico printers, lawyers, hatters, merchants, physicians, and ropemakers attain ages varying from 50 to 55. Carpenters, masons and traders live from 45 to 50. Bankers, editors, jewelers, manufacturers, mechanics, painters, shoemakers and tailors average from 40 to 45. Machinists, musicians, and printers live from 35 to 40, and clerks, operatives and teachers are the shortest lived of all, being only from 50 to 35. Of course, it is not necessary that a person who follows any of the above business should die at a definite age, but still the table gives a very good test as to the effect of employment in wearing out the human frame.

Game Laws.

Grouse, prairie hen or chicken cannot be killed between the first of January and the 15th of July.

Patridge cannot be killed between the first of February and the first Tuesday in September.

"Quail cannot be killed between the 1st of February and the first Tuesday in October.

"Woodcock cannot be killed between the 1st of March and the first Tuesday in July.

"There is a fine of five dollars for each and every bird killed within the time prohibited, or for any who shall be found in possession after it has been killed.

"Deer cannot be killed between the 1st of February and the first Tuesday in July, without risk of incurring a fine of from five to ten dollars."

It will be seen that it is now legal to kill grouse, prairie hen, woodcock and deer.

The Farm vs. The City.

The farm is the natural home of man. Placed in any other condition he naturally degenerates, both physically and morally, and soon acquires an inferior type. It may be that the Tree of Life has no natural existence, anterior to man's creation, but in every other respect the Garden of Eden was nothing more than a well-arranged farm. It was a place where the wild and useless productions of nature had been cleared off, and such vegetables as were suitable for food for man, and for such animals as man should domesticate, planted in their stead. When Moses tells us that "The Lord God took the man and put him into the Garden of Eden, to dress it and to keep it," he informs the world that man was, not only made to work, but that he is, in every respect, better off when in that condition requisite to produce that which he must consume.

Man cannot maintain, unimpaired, his individuality, without the aid of light, heat and electricity, with a freely circulating atmosphere about his person. The city may afford him light, heat, and electricity, but it cannot afford him a pure atmosphere, without which heat and electricity are injurious, because they heighten the effect of a poisonous atmosphere, just as they increase the vital and renovating influence of pure air.

Cities are, at best, a necessary evil, and should never be considered the abode of man, in successive generations.

We talk about the rise and fall of empires, yet how few there are who note the fact that no empire ever fell until the wealthy became too proud to work, and cities, and city influences, predominated over the country. An Agricultural people, so long as they held to their agriculture, never fell. Switzerland, with her rural predominance, has never been conquered. The Roman Empire was invulnerable, until the city of Rome numbered about four million inhabitants, Agriculture made Rome strong. Her strength gave her conquests. Her conquests brought her slaves. Slavery degraded labor, and the wealthy ceased to work. As work was held to be degrading, and laboring men below par, those who could live without work moved into the city for better society, and thus the City of Rome became the Roman Empire.

The British Empire has legthened out its days by legislating in favor of Agriculture; but as it was in the days of Rome, so is it now in England. The soil is owned by a few individuals, and the tenantry is so degrading as to destroy the spirit of those who cultivate the soil, and Great Britain must abolish her land system, and limit the amount of soil, which any one man may own, to that which he can cultivate, or cease to be the master of the seas. If England does this she will protract her time. If she does not her day is short. The English people are beginning to wake up to the importance of this last resort of that Empire, and their government will take prompt action in the premises.

Here, however, in the United States, where the agricultural interest is as ten to one, compared with all other interests, our national government has systematically withheld from agriculture the slightest encouragement. The agricultural statistics, collected by the Patent Office, are hardly ever permitted to reach the eye of a practical farmer, but are divided out by members of Congress between themselves, to be given as bribes to office holders, and professional men, to secure their political influence. The sanctum of every political Editor, —the office of every Post-master, Lawyer, Doctor, and county officer, is stacked full of agricultural reports, sent to them by members of Congress, whilst one copy cannot be found in the hands of a farmer, in all the land, unless he chances to be a leading politician. Now this whole thing is a mere sham. If a large portion of the Patent Office Reports was not awarded to members of Congress, to be used by them for their individual benefit, they would not allow them printed at all.

If Congress intends these Reports to go into the hands of farmers, why are they not put into the hands of Agricultural Societies, to be awarded to farmers as premiums on agricultural products?

If Congress intends to benefit agriculture by Agricultural Reports, let the government give one thousand copies to each State Agricultural Society, to be placed in the Township Libraries, where there are such, or awarded as premiums where there are no Township Libraries.

This will produce a two-fold benefit. In the first place farmers will acquire the knowledge of their own business which these reports contain, and, in the second place, the reading of these Reports will create a demand in the public mind for agricultural knowledge—for agricultural books, and agricultural papers.

It is in the nature of things that agricultural knowledge pays a larger profit on the expense of acquiring it, than any other kind of knowledge. This grows out of the fact that most other kinds of knowledge pay a profit only on the labor of the intelligent man, whilst the intelligent farmer derives pay from the earth also, whilst he is asleep. Nature loves to work for an intelligent husbandry.

Past legislation in the United States is a blank upon agriculture, and whilst the farmer has borne the weight of government upon his shoulders, he has received nothing in return from the Government, except a calico tax, for the benefit of moneyed corporations, and the annual issue of shinplasters, to pay him for his grain.

There is a better day coming, however, for American Agriculture, and a higher destiny for the working man, of every calling. Farmers have discovered that agriculture is a sci-

ence—that that science is easy to learn,—that scientific agriculture will pay better than any other profession. Under the influence of this fact, farming is becoming popular. The wealthy citizen of the city adds to his nobility by retiring to a farm, and working with his own hands.

This change has been brought about by the patient persevering efforts of a few individuals. Liebig and Johnston set the ball rolling by their investigations in agricultural chemistry.

The facts which these investigations brought to light commanded the attention of all scientific men everywhere. The first tangible effect, following these investigations in agricultural chemistry, was the organization of Agricultural Societies. These societies are the best means that could be devised to demonstrate the utility of agricultural improvement; and no system of association ever accomplished so much good in so short a time.

To give these societies efficiency, Agricultural Journals were indispensible. The first effort to establish these Journals has always been attended with loss to the publishers.—The operations of Agricultural Societies, however, have developed a public demand for agricultural papers, and henceforth Journals of Agriculture will be as well sustained as political papers.

Next, in the progressive development of Agricultural Science, are Agricultural Colleges. These are indispensible to the perfection of that general system of agriculture, which is to work out the most sublime, social, and material reformation which the world has ever realized. Our feelings burn with enthusiasm of national pride and material glory, when we look forward but a few years, as we confidently do, to that time when the very best Colleges in the United States shall be Agricultural Colleges; when our greatest men shall be teachers of agriculture; when our best society shall be found in the rural districts, among those who cultivate the soil. The United States should hold a national jubilee when the Morrill Land Bill shall become a law.—*Indiana Farmer.*

A Profitable Business.—At a meeting of the stockholders of the Company of Wheeler & Wilson's Sewing Machine, held in Bridgeport, on Wednesday last, a dividend of *fifty* per cent. was declared. On the first of January last, a dividend of *twenty* per cent. was declared.—The capital stock is *one hundred and sixty thousand dollars.* The stock is now at a premium of 300 per cent. The Company are now manufacturing at Bridgeport, fifty machines per day, and keep 250 men in constant employment. They pay the patentee of one particular combination in their machine, ten dollars for each machine they manufacture. The same peculiarity is also adopted in the Grover & Baker, and the Singer machines, and the same sum paid the patentee for the use of the right.

Business Hints for September.

Now that the heat of summer has passed and the grain crops have been gathered, other cares than those of last month force themselves upon the farmer; other pleasures too, for there are fruits yet to be gathered, quite as luscious as any of July or August—that is for those who have had the providence and enterprise to plant the apple tree and vine. But the quantity of these is hardly so great as to require much time—only enough here and there to aggravate the appetite, and to prompt new resolves.

THE FARM.

Grain crops are usually poor—wheat not more than two-thirds of a crop, oats not quite so bad; barley, much injured; corn, however, notwithstanding the protracted rains early in the season, and consequent necessary re-planting, is looking very well and growing rapidly. Should the autumn prove favorable, it will yet turn out the best of any of the grain crops in this State. This affords a good text for a thousandth discourse on the stupidity of that policy of so many of our farmers, who practically recognize the value of no other crop than wheat. We have often insisted on the importance of giving more attention to the raising of stock and the cultivation of corn; and now that the season for plowing has come, we again urge the facts and their philosophy upon the attention of those to whose interests we are devoted. Examine the article in this No. on corn *vs.* wheat, wherein, although the case is full favorably enough stated on the corn side, it is nevertheless made sufficiently clear that wheat has been very considerably over-estimated. We repeat it, in planing for next year do not so completely ignore the relative value of corn.

PLOWING FOR CORN,

In the autumn, is quite as important as for Spring wheat: the minerals of the sub-soil are thereby exposed to the action of the weather, and the cut-worm, which descends into the earth for winter quarters, is thus brought up and destroyed. Of two pieces of land, one plowed in the fall, and the other in the spring, the former will invariably yield the better crop, if also plowed in the spring.

The hay crop though very heavy, should, nevertheless, be carefully saved. The partial failure of the grain crops will increase the demand for hay, and the wise farmer will therefore allow none of it to go to waste.

THE TOPPING OF CORN,

As a matter of economy, is rather questionable though dependent entirely upon the use to which the corn is to be put. If the object be perfected grain, then topping should by no means be done, since the leaves are absolutely essential to its maturity; but if the fodder on the other hand, is more desirable, and the ear is pretty well matured, then that portion above the ears may be removed with advantage. (For remarks on *cutting up* see last year's vol.)

DITCHING.

Now is the time to drain your wet land.—The ground is dryer than it will probably be at any other season, and harvest being over, it will be easy to get ditchers at reasonable prices. This draining is an important matter,—don't neglect it.

LAYING DOWN TO GRASS.

We have again and again insisted upon a rotation of crops—that any soil, however rich, must, in process of time, be exhausted of the elements specially required for a particular crop. In a system of rotation, nothing is so important as occasional clovering, for the reason that this plant derives so much of its food from the atmosphere, and leaves so much of its weight in the soil, thereby enriching it. The best method of putting in is to sow with wheat—about one peck to the acre. The succeeding year it will yield a handsome crop, and prepare the soil most beautifully for wheat, oats, or corn. Try it, and prove the notion totally unfounded that clover will not succeed in Wisconsin. We have seen better crops here than we ever saw anywhere else in the Union. Of the profits, &c., of this crop, more anon.

MUCK FROM THE SWAMP

May be better removed now than at any other season, and should be mixed with the manure heaps, and even hauled upon poor, sandy lands, as an independent fertilizer. It is rich in organic matter, and will greatly improve inferior soils.

THE GARDEN.

Root crops must be kept clean of weeds by cultivating and hoeing. Pumpkins, squashes, &c., and all vegetables which are injured by frost must be gathered before injury. Seeds also—gather them at the proper time, and not be dependent upon your neighbors, next season, for such as you might just as well have for your own use and for sale. See suggestions of last month concerning the orchard, and the care of stock.

IMPROVEMENTS FOR WINTER,

should occupy the leisure hours. The dwelling, the barn, sheds, &c., &c.,—see that nothing which properly belongs to this season is deferred to another time.

COUNTY AND STATE FAIRS, ETC.

By no means allow the time of the Fairs to arrive, without having made due preparation. Arrange to be present with the whole family, and let the several members thereof each have something in readiness for exhibition—grain, stock, garden vegetables, fruits, bread, woven fabrics or other products of labor and skill; first because it is your duty to sustain these institutions whose organization is for the advancement of the great interests of the State and the benefit of the whole people; and secondly because your own highest advantage is promoted thereby.

Again we say be not discouraged by the results of the harvest; the increased price of what there is will partially make up for the deficiency, and by and by "the tables will turn." There's nothing like pluck and a strong faith in Providence. Be determined to make the year profitable notwithstanding the loss of labor and the withering of hopes. The rich harvests and high prices of the several years just passed, should have prepared the husbandman for times of adversity, and to those who enjoyed their bounty must be regarded as a reward in advance. Those who are now obliged to taste the bitter without having enjoyed the sweet, must get their compensation in an improved philosophy of nature and human life. The cloud of adversity is not to over-shadow us forever, but will soon be dispelled by the sun of a higher prosperity.

"There's a good time coming;
Wait a little longer."

H.

COUNTY FAIRS IN IOWA FOR 1858.—Polk, at Des Moines, Sept. 14, 15, 16; Wapello, at Ottumwa, October 22, 23, 24; Van Buren, at Keosauqua, Oct. 13, 14; Marion, at Knoxville, Oct. 21, 22; Decatur, at Leon, Sept. 29, 30; Johnson, at Iowa City, Sept. 25, 16; Lee, at West Point, Sept. 15, 16, 17; Pottawattamie, at Council Bluffs, Oct. 14, 15; Henry, at Mt. Pleasant, Oct. 5, 6; Jefferson, Fairfield, Sept. 22, 23; Sac, at Sac City, Oct. 4; Louisa, at Wapello, Oct. 6; Boone, at Boonesboro, Sept. 22, 23.

A LEADING medical practioneer at Brighton, England, has lately given a list of sixteen cases of paralysis, produced by smoking, which came under his own knowledge within the last six months.

Facts and Statistics of American Agriculture.

In a paper by Mr. John Jay, lately read by him before the Geographical and Statistical Society of New York, we are furnished with some most interesting statistics of our nation's agriculture. We make the following extracts from his published essay:

The census taken for 1850 shows Indian corn, our native grain, to be the great staple of the country, yielding at that time six hundred millions of bushels, valued at three hundred millions of dollars; more than the combined value of the three next staples, wheat, cotton and hay. This crop is grown from our northern to our southern limit, and affords a better test than any other of the advance of American tillage. In no State has it retrograded. Its increase from 1840 to 1850 was fifty-six per cent., while the increase of population was but thirty-five per cent. The crop for 1856 was estimated at eight hundred millions of bushels—nearly double the crop of 1840. As a distinguished American agriculturist has remarked, it may be said of our Indian corn, as has been said of the turnip-crop of England, that its failure for three successive years, would nearly bankrupt the nation.

As food for men and animals, it is alike important. To it we owe much of our beef, the greater part of our pork, and a comparatively small quantity is consumed in the manufacture of malt and spirituous liquors. American corn meal is generally used in the West Indies and it is being gradually introduced in Europe. The Prussian Government has instituted experimental inquiries as to its value and mode of preparation.

The wheat-crop from 1840 to 1850 increased only fifteen per cent. In New England, the cultivation during that time declined fifty per cent. It languishes in New York, is nearly stationary in the Middle States, but is increasing largely in the Northwestern States. Chicago, which about twenty years ago imported flour and meal for her own consumption, is now the greatest primary grain market in the world, rivaling Odessa and Galatz, Dantzic and St. Petersburg, and her brands of flour are recognized throughout Europe.

In New York, the wheat-crop from 1840 to 1850 declined twenty-five per cent., while the corn-crop increased nearly one hundred per cent.

Of our exports of breadstuffs, wheat is the largest item. In 1850 the proportion was $40,000,000 worth of wheat to only $7,000,000 of Indian corn.

Our exports of breadstuffs of late years have singularly varied. In 1847, owing to the Irish famine, they rose to $68,000,000. They fell in 1848 to $37,000,000, and in 1852 to $25,000,000, rising again in 1854 to $65,000,000, sinking the next year to $38,000,000, and again rising in 1857 to $77,000,000.

The average export price of flour, as ascertained by the Secretary of the Treasury for these years, does not explain these fluctuations. The price in 1852 was $4.24; in 1853, $5.60; in 1854, $7.80; in 1855, $10. They were probably owing in part to fluctuations in the home supply, as well as in the foreign demand, influenced somewhat by the European and Eastern wars. It is most desirable that the causes of such fluctuations should be accurately ascertained, as they tend to excite doubts in regard to the certainty of agricultural profits; and the elements of uncertainty naturally discourages and deters prudent men.

There are several topics, deserving careful attention in connection with the subject; one, the rapid introduction of labor-saving agricultural implements, overcoming in part our chief difficulty in the high price of labor; and the spread of agricultural science by the aid of the Patent Office, and State, County and Town Societies and Clubs.

Another, of an opposite character, and yet more importance, is the gradual deterioration of the soil going on steadily in the older States, and commencing in the new; reducing the average of crops to the acre far below the average on the soil of Europe, which has been cultivated for centuries. Of wheat, the average in New York, Ohio and Indiana is twelve bushels to the acre, while in England it is twenty-one, in Flanders twenty-three, and in Scotland thirty. How far it might be increased by culture is shown by occasional crops of seventy in England, fifty in New York, and—as reported—eighty-seven at San Jose, in California.

The returns of the census seem to indicate a diminution in the proportion of the population engaged in agriculture, and the next census should determine this point with accuracy.

The tables of mortality should show the average of human life in the towns and in the country. It might tend with the masses to lessen the attractiveness of crowded streets over the rural districts.

In Surrey, England, the average duration of life is forty-five years, while in Manchester and Liverpool it is only twenty-five years. A table at Dorchester, Massachusetts, made the average life of farmers forty-five years; of merchants thirty-three; and of mechanics, twenty-nine. The proportion of male births in the rural districts was found to be 33 per cent. more than in the cities.

All these points may be so elaborated and verified by the tables of the census, that its returns shall teach not simply lessons in political economy, but lessons of daily duty, especially with reference to the transmission of the soil to our children with its fertility unimpaired.

The subject concerns the whole country—it is attracting the attention of scientific and practical minds in every State, and more or less from every State Government; and sug-

gestions from the Society, for the improvement of the schedules for the approaching Federal census, will doubtless be received with favor and carefully considered.

Correspondence of the Farmer.

Sauk County Wheat—Protection from Rust.

MESSRS. EDITORS:—Herewith I send you a sample of my winter wheat; it is of the Blue-Stem variety. It is some shrunken, but much less so than the crop will average in these parts. I think wheat, take winter and spring together, will not be over a half crop, the bug, blight, rust and smut all contribute toward making it a short crop.

What a pity that so very many practical farmers will persist in raising smutty wheat after having been told by the Wisconsin *Farmer* how to avoid it. I have tried the remedy two years. Last year we didn't find the first head of smut, and this year, thus far, but one, and that a very small one. This has been a very bad year for smut, but your blue-stone decoction, if well applied, is, I fully believe, a sure remedy, and yet how few there are that know it, and among that number, how very few there be that practice and profit by their knowledge. There is a lack of duly appreciating it. Why Sirs, let me tell the farmers through the medium of your valuable paper, that I have seen this year, in one field, more of a drawback on the crop occasioned by smut, which if prevented, would have brought a sum sufficient to defray the labor and expense of preparing the seed for an ordinary farm for 25 years, and a dollar a year for the Wisconsin *Farmer* for at least as long a time.

SAM NORTHRUP.

DELONA, July 25, 1858.

REMARKS.—There is no question but what the blue-stone or vitriol remedy against smut, is one of the best known, and may usually be applied with entire success. Why it is not more generally used we cannot divine, except upon the principle of indifference and carelessness so manifest on the part of by far too many of those who call themselves good farmers.

For the recipe referred to, see page 180 of the *Farmer* for 1856.—EDS.

Officers of the Bad Ax County Agricultural Society.

President—Charles Waters.
Vice Presidents—E. Strang, T. H. Taylor, L. Sterling.
Secretary—J. A. Somerby.
Treasurer—Alson Keeler.
Ex. Committee—Annanias Smith, Richard Williams, J. M. McLees.

A brief turn around Whitewater, and what we saw.

In the latter part of July, we snatched a couple of days from the ceaseless toil of office life, and devoted them to a cursory survey of some of the good farms, orchards and gardens about Whitewater, the first field of our enterprise and pioneering in the State. And in our rambles we visited many spots once often trod and familiar, when the whole country was in its infantile robes of early beginning, and ere villages, railroads, or even cultivated farms to any considerable extent changed the appearance of its natural landscape, or added new charms of beauty and usefulness, to its rich and varying scenery.

In company with friend Starin and our ladies respectively, we first drove to the snug and tidy farm of Wm. Mulks, Esq., one of the neatest and best in the region, or State even, both by nature and improvement. Mr. M. was away in the distant hay fields, but his octogenarian father was as usual at home and in the midst of his "Garden of Eden that he hath planted," and, by the way, he has one of the fruit gardens and orchards that it gladdeneth the heart to see; being a square of some ten or fifteen acres, enclosed upon two sides with the most admirable protection ranges of lombardy poplars, now of about ten years growth and some forty feet high, being ranged upon each side in five perfectly straight rows about five feet apart, and producing all in all the most pleasing and tasteful effect imaginable, besides almost wholly breaking off the winds at all seasons of the year. Inside of this square are the fruit trees of all the varieties ordinarily grown in our climate, not only tastefully planted, but as carefully and well cultivated in all things as possible. Most of the apple trees are of some ten or a dozen years growth, and have successfully withstood all the hard winters, looking as healthy and fine perhaps as any other equal number of trees in any State in the Union. We would commend them to the attention of all who doubt our ability to grow apple trees successfully in Wisconsin; and not only his apple, but his plum, pear, and even peach trees; they are all patterns in their way.

The gentleman before mentioned, now turned of his eightieth year, informed us that he had planted and cultivated (almost wholly with his own hands) this fine orchard as the main labor of his life, for the last ten years, and that the pleasure and exercise he had found in it,

had been the charm of his life and had kept him comparatively healthy and well. Verily he has set a handsome pattern for either the young or old to follow. We doubt much if there is a prettier or better cultivated orchard of its size and character in the United States, although we are aware this is saying a good deal, but we'll risk it. The old gentleman is as active and well posted on this and almost every other subject as any of his younger compeers, and will be found a most agreeable and instructive companion for young or old. All who would post themselves in Wisconsin orcharding, either on the score of taste or cultivation, should visit the Sage of Poplar Square, where they will find a man of eighty, not too old to grow an orchard, and an orchard in which there is not a weed nor noxious thing of any kind to mar its beauty.

Adjoining the aforesaid place is the fine farm of our old friend (and neighbor some 20 years ago, in another location,) Giles Kinney. He too is cultivating a good orchard, including good specimens of plums and pears, but not able to bestow upon it the exclusive attention of our old friend M. Mr. K. is Secretary and Treasurer of the Jefferson Co. Agricultural Society, and will look well to its interests.

From Mr. K's. we next brought up at the fine and spacious farm of J. M. Clark; and it being about dinner time, and "the folks at home," we had our team put out, and soon found ourselves comfortably seated in their cool, spacious parlor, and with all the other comforts about us, among the least of which was not a good dinner. Those acquainted with Mrs. C. or her household management need no especial light from us.

Mr. Clark's farm embraces eight hundred acres of as fine prairie land, both in quality and beauty of landscape, as can be found in the wide valley of the Mississippi; even in a state of nature it was perfectly charming, and is still more enhanced by improvement and cultivation. Mr. C. and his sons are among the best business farmers of the State, and are of the few that have made farming pay them an annual profit. They keep a large flock of sheep, and of the finest quality, being mostly full blood Spanish Merino. Mr. C. assured us that sheep keeping had been his main stay in farming, and but for them he could not have maintained the business. He had bargained his entire clip of wool at 37½ cts. per lb. As we contemplated the compact, snowy pile, not more than could be loaded upon a waggon at a single load, and yet worth some $1200 to $1400, we were more forcibly than ever struck with the folly of our farmers generally, who are skimming their farms from year to year with crops of wheat and other grain to their detriment and early destruction. Sheep are the proper counterpart of every grain farm, and when the mania for keeping dogs instead of sheep has passed away, they will be recognized as one of the corner stones on which our agricultural prosperity rests, and among the indispensibles. In taking a too hasty leave of this place and its hospitable owners, we would incidentally mention that it was upon this farm we spent our first winter (1838–9) in the west; and in a small log cabin, with only two or three neighbors in many miles, with no post office or store nearer than Milwaukee, or mill nearer than Beloit; with no amusements but labor and an occasional newspaper from three to six weeks old, we whiled away the first long winter days and evenings of pioneer life, our cabin often serving in the capacity of tavern and church for the transient traveler and itinerant preacher. But time has wrought its changes.

From Mr. C's. we turned down around our old farm, now owned and occupied by Stephen Burrows, Esq. At the foot of the hill, near that never failing and glorious old spring, still stands the snug log house of our early beginnings; still staunch and substantial apparently after a lapse of twenty years. We had not time to run over the premises, nor even to call on our worthy successor, Mr. B., who has made up a fine farm around him. We understood that Mr. Burrows had a Hydraulic Ram, that sends up the water from the before mentioned spring to his buildings, as much as a hundred rods away, and perhaps fifty feet in perpendicular hight.

We wound up the day with an evening call upon S. B. Newcomb, Esq., who has another of the good farms, both in extent and quality. He, too, brings water some sixty rods into his yard with a water ram that works like a charm. Mrs. N. has a nice flower garden, and also a fine show of grapes and sweet potatoes; hope we shall see specimens of them at the State Fair.

A cross road from Mr. Newcomb's back to *Brookside*, took us by the farm of our esteemed and worthy friend Judge Pike, but too late to our regret, to admit of calling.

But speaking of Brookside, everybody who has ever seen it knows what a charming place it is; and those who have not could only get a faint conception of its quiet and shady beauty from any description of our's. Mr. and Mrs. Starin are both passionately fond of cultivating fruits and flowers, and the labors of years are now in full fruition around them.—Their trees are even more various and abundant and individually as good as those in the fine orchard at Poplar Square, but for want of room do not show to as good advantage; they talk of re-planting upon a new location, in which case they will set a hard pattern to beat.

A few other brief calls upon a part of our old and valued friends, and a half hour in the office of our friend Rann, of the *Register*, (which by the way is one of the neatest and best Job offices in the State,) wound up our ramble for the time, and re-impressed us with what we well knew before, and that is, that Whitewater with its surroundings is one of the choice localities of the west, and bound to be second to but few of the interior towns. Success to it and all its good people; many of its older settlers with whom we pioneered in early times, still seem like near and special friends. P.

Correspondence of the Farmer.

Rapid Growth of Plants in the West.

CASSVILLE, July 12th, 1858.

FRIEND POWERS:—Enclosed I send you $1 for annual membership of State Agricultural Society. Rather gloomy prospect about premiums upon wheat this year; winter wheat blighting and rusting; spring, too, to some extent. I have an acre of pure Poland oats, that look quite respectable in connexion with even a State premium list. Also, an acre of "King Phillip," that *absorbed** near 3 pecks of seed; so you see I did not fail to recognize one of the elements of a large yield. I think it settled beyond all question that we can have a good sample of wheat here this season. It has been too favorable for corn and grass, for good wheat. I have some four acres of Hungarian grass that seems to have enjoyed the peculiar character of the weather. It was sown upon the 8th day of June. and is (some of it) at this time 32 inches high as it stands in the field; but such a growth, enormous as it is, is not more astonishing than to find a stalk of June grass, or Kentucky blue grass, (which I have just measured,) measuring 4 feet 4½ inches long! Such conditions of growth never made good wheat, nor ever will.

This same corn I have been measuring, and find sound stalks from 17¼ to 17⅝ inches high, not with leaves pulled up, but as it stands waving in the wind. If the *world* can beat such a growth, I would like to see the record—about an inch a day!!!

Yours, M. K. YOUNG.

*I was planted the 24th of June, in land plowed 11 inches deep, thoroughly saturated with water; hence it did "*absorb*" 8 pecks, &c.

Agricultural Commerce of Ohio.

In 1855, the State sent 32,000 head of cattle to New York City, and in 1857, 50,000 head, besides some 15,000 sent to Philadelphia, and many to Baltimore. At least 70,000 head of cattle were sent to these three cities in 1857. The hog trade is far greater; and notwithstanding that the number of live and dressed hogs exported from the State has, in the past few years, increased rapidly, the numbers packed at Cincinnati have not declined. According to the Annual Report of the Commissioner of Statistics, just published, the aggregate value of farm produce is $132,700,000, and the net profits $57,300,000. The price of wood varies from $1.60 to $2.75 per cord, and is highest in counties through which main lines of rail-way pass, on account of the vast quantities of wood consumed by the locomotives. These roads consume annually the product of twelve thousand acres of land. Farm labor is uniformly high, the average wages being fifteen dollars per month and board. This is owing to the growth of towns and manufactures, which steadily causes the agricultural supply to diminish, so that large farmers are only able to secure their crops by the use of machinery. There are 3,000 steam engines, equivalent to 40,000 horse-power, 2,200 grist mills, 3,749 saw mills, 175 planing mills, 70 oil mills. In 1857, there were made by the principal factories 30,000 agricultural machines.

Effect of Tobacco on the Mouth and Eyes.

Both smoking and chewing produce marked alterations in the most expressive features of the face. The lips are closed by a circular muscle, which completely surrounds them and forms their pulpy fullness. Now, every muscle of the body is developed in precise ratio with its use, as most young men know—who endeavor to develop and increase the muscle in gymnasium. In spitting and holding the cigar in the mouth this muscle is in constant use; hence the coarse appearance and irregular development of the lips, when compared to the rest of the features, in chewers and smokers. The eye loses its natural fire and becomes dull and lurid; it is unspeculative and unappreciative; it answers not before the world, its owner gazes vacantly, and often repels conversation by his stupidity.—*Scalpel.*

Cure for the Bite of a Mad Dog.

A frightful case of attack and biting of a child in the family of one of our friends recently, which the public in this region have generally seen, induces us to give the following remedy to cure the bite of a mad dog, which we hope will be carefully preserved. There is not a year passes in which some rabid dog does not go at large, biting cattle, sheep, swine and horses, and sometimes human beings, and spreading present terror and future anxiety through the neighborhood.

This remedy has no smack of quackery, and in our opinion is worthy of immediate application to any one who has been bitten, either recently or remotely.

A writer in the *National Intelligencer* says that spirits of hartshorn is a certain remedy for the bite of a mad dog. The wound, he adds, should be constantly bathed with it, and three or four doses, diluted, taken inwardly during the day. The hartshorn decomposes, chemically, the virus insinuated into the wound, and immediately alters and destroys its deleteriousness. The writer, who resided in Brazil for some time, first tried it for the bite of a scorpion, and found that it removed pain and inflamation almost instantly. Subsequently he tried it for the bite of a rattlesnake, with similar success. At the suggestion of the writer, an old friend and physician tried it in case of hydrophobia, and always with success.

Declining Production of Breadstuffs.

But few people are aware of the immense falling off in the staple agricultural products of the older States, as exhibited by the census reports. New England, for instance, in 1840, raised over 2,000,000 bushels of wheat, but in 1850 she yielded but 1,000,000—a decline of fifty per cent. in ten years. The population, in the meantime, had considerably increased. There has been a considerable decline, undoubtedly, since 1850. The four States of Tennessee, Kentucky, Georgia, and Alabama, which raised 12,000,000 bushels of wheat in 1840, raised but 5,000,000 bushels in 1850.—The number of sheep in the State of New York had decreased so that there were near 300,000 less than there were thirty years ago. Within a period of five years the decrease has been nearly fifty per cent., while the decrease in the number of horses, cows and swine, is above fifteen per cent. In 1845 the product of wheat was 13,391,770 bushels. It has steadily declined since, and the product of the past year did not exceed 6,000,000 bushels.

The older sections of our country are becoming more and more dependent upon the granary of the Northwest for their supplies of leading agricultural products. Their land is getting worn-out and unproductive, and the people are turning their attention to manufactures and commerce. In time, scientific agriculture, directed by the resource of wealth, will reclaim, in almost all of its old fertility, those districts; but for the present they must look elsewhere, in a measure, for the great supplies of the staff of life. The opening of new Territories, soon to become States, in the west, is the greatest of blessings to the old Atlantic States, not only as relieving them of considerable population they can well spare, but as assisting to keep down the price of agricultural products to a reasonable figure.

NOTE.—From the foregoing statement of facts, let even the North-West learn a lesson in season, and understand that even our rich prairies and openings will very soon exhaust under any system of constant tillage, without ample and thorough manuring. One generation of careless management will run them almost beyond redemption. In fact, much of the best of our lands already show it.—[EDS.

Royalty and Agriculture.

"Let kings to farmers make a bow,
And every man procure a plow."

Such was the conclusion of a hymn sung at an agricultural banquet in our early days. We are reminded of this couplet by a recent account of the Royal Horticultural Society in England, of which Prince Albert is President. The exhibition was held in St. James' Hall, and Her Majesty the Queen inspected both the fruits and the flowers. Prince Albert presided at a business meeting of the Society, and Dr. Lindley, the Secretary, read a lengthy report. Henceforth, we predict, agriculture will be fashionable. If the crowned heads of old England can wake up to the importance of this subject, why cannot the nobility of America do something? More agriculture and less politics would be just as well for the country.

MR. WEBSTER'S DESCRIPTION OF A MORGAN HORSE.—(From a private letter to Mr. Blatchford, dated Washington, March 12th, 1851.) The Morgan horse is a cross between a Normandy horse, now spread all over Canada, and the English blood horse; it has the sloping hip and strong shoulder and crooked hind leg and broad shin of Normandy, with the spirit of the English hunter. Its *chef-d'œuvre* is best performed in a single waggon. In two respects he resembles the Narraganset horse, to wit, he has a broad spread nostril and great breadth between the eyes; the line from the top of his head along his mane and back to his hips is nearly straight; on a level road therefore his draught is nearly parallel to the surface of the ground, whereas, a horse who carries his head very high, though the ground be level, is constantly pulling up hill. So much for Morgan, and a dissertation on horses. If you wish to see a perfectly graphic thing on such a subject, turn to Walter Scott's description of Lord Marmion's horse flying from Flodden Field.

STOCK REGISTER.

Correspondence of the Farmer.

A few remarks about Breeding Horses.

MADISON, July 20th, 1858.

MESSRS. EDITORS:—I took occasion to write an article for the Feb'y number of the *Farmer*, on the subject of breeding horses, setting forth some facts with regard to the origin of the Morgan and Black Hawk stock of horses, and also referring to the qualities of thorough bred stock or blood horses. An article was written by some one signing his name L. J. M., which was not a reply to mine, as he did not seek to controvert or disprove a single statement I made, but pretty much foreign to the subject. To this I replied with some additional statements, as I considered personal insults conveyed in the communication. A new "Richmond" or two is in the field in the July number of the *Farmer*.

I will take Mr. E. M. D., of Summit, whose article comes first. After some preliminary skirmishing, Mr. E. M. D. says "those favored with the use of your columns should confine themselves to facts and well digested opinions drawn from the close observance of facts. Very true sir. It was a fact in the belief of many, that the earth was stationary, until proved to the contrary, especially those whose interest lay that way. What may appear a fact to some, may not to others, and vice versa. You speak of "threats and brags" (your communication is too long to copy here) that good sensible farmers are not edified by them, &c. Who has made any? Not I.

You protest against the columns of the *Farmer* being used for "personal pique" or "personal ends," and now, sir, I feel just as you do about it, (if such had been the case,) but as I know no instance of the kind, I think you have set up a "man of straw" just to knock him down again. I think the editors of the *Farmer* quite competent judges of the matter their columns should contain. You say "Bring on your facts gentlemen." I have stated facts, if you can disprove any statement made by me either of the origin, size, or quality of the stock in question. You propose to contribute toward a prize if the wager is conscientiously objectionable. It would be to the owners, but I am not particular provided the amount is sufficient to pay expenses. I contend that the common breed of the country is better for the farmer's use than any of your improved breed of Morgan and Black Hawks, and as this State has had the benefit of these stocks for 15 or 20 years, I propose that you have on hand at the Fair ten spans, and draw them against ten spans of horses I can pick up promiscuously for $100 a span; this will make $1,000, which you can take off if you have the farmer's horse. We want a team that can break greensward, take a cord of wood through mud, draw the reaper through heavy grain, &c. You state one proposition which I think is erroneous, that "all improved breeds are started by the use of some individual animal," (unless you allude to Noah's stallion.) The improved breed called Thorough-bred, is derived from the Arab, Turk and Barb, the original stock having nearly an equal admixture of the blood of each.

You say, "the Black Hawks as a family can claim the same improvement on the old Morgan horse." In what way? If any, because their better qualities are derived from other stocks with which they have been bred, while the blood horse has been crossed and not mongrel bred as all Morgans are, whether Black Hawks or not.

Now you are a sheep breeder. Mr. E. M. D., we will suppose to improve your wool you breed to sheep whose origin and progress have followed the same course as these Morgan horses, would it not be more judicious to commence with a pure blood merino? You have an object to attain different in each case, but the course to pursue to get the perfect animal is the same. "Modest beginnings need not be despised," but what kind of a beginning to breed Durham stock, to commence with a 16th or 32d part bred animal? This is the course which all advocates of breeding Morgan and Black Hawk horses virtually propose to have followed. Let each one form his own conclusions of its correctness. Bone and muscle vary in quality, and the only objection that can be urged against the blood horse is that he is light boned. This shows the ignorance of those who advance it, as the density as compared with coarse bred horses is as ivory compared with beef bones. The muscle of the thorough-bred is tendinous and not of that meaty and softer consistence, which characterises the coarse breeds.

The next article to Mr. E. M. D.'s is the weight of some colts at Oconomowoc, sired

by Gales' horse, one of which at 3 years old weighs 1140—more than his sire. Now was not that colt and all of the others whose weight is given, the produce of large mares. Their being bred from small and medium sized mares, as stated, won't go down unless the weight of the dam is also given; no such weight is characteristic of that stock. That they have been patronized liberally is true, (the Morgans and Black Hawks,) that they have had many of the best mares in the country is true, and taken the credit due these fine mares when there has been a good colt and called Black Hawk or Morgan is true, that they have been gassed up and over-rated more than any stock on the continent of North America is also true in the opinion of your correspondent, who will retain his belief that

"BLOOD WILL TELL."

P. S.—Mr. E. M. D. proposes to enter the field. Good, come on, and if you have a fine large colt among those weighed at Oconomowoc, tell us what its dam was, and whether its size is derived from its dam or sire, and also remember that size is the measure of power, all other things being equal.

How Driving Affects the Meat of Neat Cattle.

There is some excuse for the Western grazier's preference for the Durhams, as they drove them over the mountains. The fat of all cattle is the first to run off, the fine particles mixed through the flesh of the first—the kidney being coated over and more solid, holding out longer, and the red meat being the last to fail. One accustomed to driving, fattening and slaughtering, could detect a drove of "drifted" cattle from those taken fresh from the pastures, by seeing them pass on yonder road, as well as the skillful butcher could by handling them; and although the "drift" cattle might have much more kidney, the meat would be as poor as wood; and, instead of being red, would be as blue as a whet-stone, whilst those taken fresh from the pasture or stall, if not so fat, would make juicy, tender and sweet beef. If you see a lot of cattle in the field or elsewhere, with good shoulders, or what a butcher would term showing his shoulder to his ear, without any flank, rest assured that they have been "drifted," or in some way injudiciously handled for slaughtering; for if there is no flank, there is not much fat. A poor bullock does not wear a good shoulder longer than to get rid of his fat, and the tenderest parts of his flesh, and the neck and round would be the only parts of such a bullock left for a steak.—*Major Dickinson's Pen-Yan Address.*

From the Whitewater Register.

Whitewater Horse-Show and Trot.

On Saturday, the 10th inst., the first Horse-Show ever held in this State came off in this village, on the grounds of the Farmers' & Mechanics' Club, and notwithstanding the insufficient notice, and the fact, consequent thereupon, that but few, comparatively, knew anything concerning it, the attendance was very large, and the show of stock highly creditable. We saw people present from every part of the county, and from some towns in Jefferson and Rock the representation was very gratifying. Our friend Watt, of the *Jeffersonian*, exhibited his good-looking and good-natured physiognomy in our sanctum at an early hour, and soon after, Hotchkiss, of the Elkhorn *Independent*, reported himself. Prof. Hoyt, of the *Wisconsin Farmer*, who had consented to read an Essay on the importance of paying attention to the Breeding of the Horse, etc., was on the ground in good season, and at 10 o'clock the town begun to fill up with the farmers from the neighborhood, bringing in as nice looking horses as can be shown in any County in the State of Wisconsin.

The main object of the meeting being the improvement of our stock of Horses, a Committee of three gentlemen was appointed on the ground, to examine such Stallions as might be exhibited, and to report in such manner as they saw proper concerning them. But as no Premiums were to be awarded, and as very little time was given the Committee, their Report is necessarily brief. We herewith subjoin that,

REPORT.

The Committee appointed to examine the several Stock Horses exhibited on the ground at the Wisconsin Horse Show, at Whitewater, on the tenth day of July, 1858, would Report, That they have performed their duty as thoroughly as the very limited time allowed them would permit.—Judging from the cursory examination they were able to make, they wish it understood that they do not pretend to decide upon the relative merits of the different horses. They saw many good ones, and below make mention of such as they deem worthy of notice. They mention them in the order in which the memorandum was kept, with no intention of making place or priority of notice an evidence of the estimation in which they were held by the Committee.

BLACK-HAWKS.

The Committee, in this class, mention favorably Mr. L. W. Cutler's BLACK WEASEL, as a well built, fast Stallion. His qualities as a Stock Horse are better known to people hereabouts than to the Committee

E. A. Smith's HENRY CLAY. He is a handsomly built, fine-stepping Stallion, four years old, and is undoubtedly one of the best Black-Hawks of his age in the State.

LITTLE THUNDER, owned by J. McKenzie, is a fine five year old Black Hawk Stallion, has fine action, is well built and is already ranked among the "fast nags."

BLACK FOX, owned by F. H. Hoyt, and raised by A. Pike, is a small three year old Black-Hawk, but is very handsomely built and has good action.

ADDISON, owned by W. P. Benson three year old, good size, steps well, shows signs of making a fast horse, and is a showy, handsome stallion, very good for his age.

Geo. Milford, of Koshkonong, has a very fine two year old Black-Hawk colt, good size, well got up.

FOX-HUNTERS.

FOX-HUNTER, owned by Thayer & Jaycox, is good sized, of good color, handsomely built, gets up well, and has more than ordinary speed. He may be put down as a first-rate horse, one of the best.

FOX-HUNTER, owned by E. S. & S. Snow, is heavy built, looks well, and appears like a very good Stock Horse.

Fox-Hunter colt, two year old, owned by E. Jacobs, is of good color, very large, and steps well; is a good colt.

MISCELLANEOUS.

BADGER-BILL, owned by C. Harris, is a large clean-limbed, good business Stock Horse.

DUROC, owned by M. R. Farnsworth, is known to be a good stock horse, is good blood, and has very fair action.

Thomas Lake has a very fine two year old Stallion, a good colt, and fair size.

CHAUNCEY BAIRD, Elkhorn,
N. M. BRANCH, Whitewater,
L. C. SMITH, "

In addition to the Horses mentioned in the report of the Committee, there was a large number of fine animals on the ground—good roadsters, nice family horses, and a few pairs of good, well-matched horses, of which a handsome pair of blood-bays, owned by W. McDougall, of LaGrange, were perhaps the best. They were large, well-matched, splendid looking animals—we did not see them move.

A. Gregory, of Elkhorn, showed a fine sorrel mare, a good road horse, capable of making rather better time than common "plugs."

Dr. Bartlett, of East Troy, drove a very fine horse, a large, powerful built, dark-bay gelding, about five years old, and one of the handsomest horses to drive single we have seen in a long time.

Samuel Prince, Whitewater, had a pair of excellent breeding mares, light bay, well matched, and, though small, handsomely built and good steppers. He also showed a black mare, with a fine colt sired by Black Fox.

Victor Egloff, Whitewater, showed his 5 year old grey gelding, a well got up and good-stepping road horse.

Robert Kershaw, Whitewater, exhibited a fine looking two-year old mare, and a good two months old colt, Morgan blood. The colt was large and well-built, and showed his blood.

Hans Alverson, of Whitewater, showed a very fine two year old mare, weight 975, and two fine suckling colts, sired by Duroc, very handsome colts.

Wm. Kinney showed the handsomest colt on the ground, that we saw. He was sired by Duroc, and is good evidence of his superior qualities as a stock horse.

Besides the horses above mentioned there were a large number on the ground of which we could learn nothing. The crowd was great and the arrangements for obtaining information very imperfect. In fact, we did not by any means, expect to see so large an attendance, and had not made preparations for the crowd that came.

The address of Prof. Hoyt was listened to with earnest attention by the audience, and greeted at the close with tremendous applause. As we shall, at no distant day, lay it before our readers, we forbear further comment respecting it. The thing in order, after the address, was the Trot. For the purse of $25, open for all horses that never trotted for a purse, there were four entries.

S. Ellis, Palmyra, entered r. m.	Blueskin.
J. Orr, Whitewater, b. g.	Ben Bolt.
Thos. Peck, Koshkonong, sor. g.	Greenhorn.
D. Sherman, Geneva, g. m.	Gray Lucy.

After an exciting contest, and lots of fun, Blueskin won the race and the money in 3.01½—tolerably good time for a green horse.

On the whole the day passed off well. All appeared satisfied, and those interested were convinced that an Annual Horse Show, at this place, will be amply sustained, and be productive of great good. Next year, we promise those who attend, more for their money.

Wool in Minnesota.

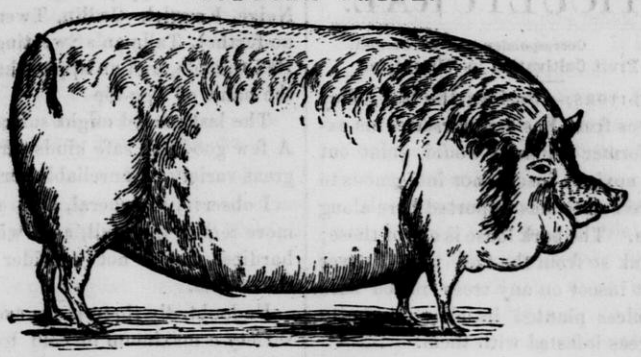
We have received a statement of the number of pounds of wool sheared off of ten head of sheep, a week or two since, by P. S. Carson, residing near Dacota, in this county, which foots up *seventy pounds and seven ounces*—the heaviest fleece weighing *ten pounds and eleven ounces*, and the lightest *six pounds and nine ounces*. If any one in any of the other States—or even in this—can beat this we would like to hear from him.

The sheep were brought to this State last season and were all young. The buck, which sheared the heaviest fleece, is a mixture of French and Spanish, and only two years old; the remainder were all ewes, and of the Merino blood. Mr. Carson, who is a very substantial, reliable man, says that as far as his experience is concerned, Minnesota is far ahead of any other State of which he has any knowledge, in growing sheep and wool. He believes the same kind of sheep raised and kept in this State, will shear at least one pound more per head than in any other; that they require much less care in keeping, and at the same time will be much healthier. It appears to us that it will require very little experience to teach farmers the truth of the above statements.—*St. Peter Statesman.*

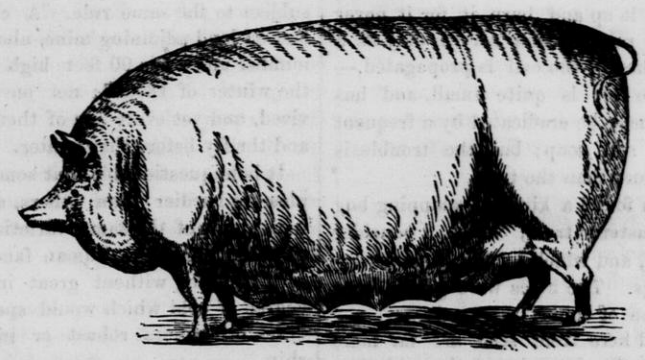
HOGS VS. DOGS.—"What a dog lives upon will keep a hog?" If anybody doubts the truth of the saying, let him kill his useless dog, and put a pig in the pen and give it the dog's allowance. He will find in a few months that he has a fine fat porker fit to be eaten, a use the dog could not be possibly applied to by any Christian man. There are too many dogs in the country, by far too many—if they had all been killed a year ago, there might be two hundred pounds of good fat pork in the country to balance against every dog so set aside, which would be no inconsiderable item in the present scarcity of supplies. Dogs are a nuisance, and should be taxed. While every farmer keeps his dog, and every slave his dog, and every free negro his two or three dogs, sheep stand a poor chance to get through the world and yield their annual fleece with untorn throats. The increase of the dog population accounts for the scarcity of sheep.—*N. C. Planter.*

NOTE.—So it seems that dogs are a great nuisance South, as well as West.—EDS.

SUFFOLK SWINE.



LORD WENLOCK.



SCAR.

Imported by Col. Lewis G. Morris of New York. Winners of the 1st prize in their class, at New York State Show in 1853.

Col. Morris says:—"My importations of Suffolks were made in 1850 and 1852, from the pens of Lord Wenlock and Mr. Crisp. I esteem the Suffolk to be more particularly valuable for the first cross on larger breeds, with more hair.

"The modern Suffolk is a valuable and popular breed. Its origin was a cross of the ancient breed of Suffolk, England, with the Chinese and Berkshire. Youatt says, 'On the whole there are few better breeds in the kingdom than the improved Suffolk.' Martin says, 'This breed stands first;' and Rham says, 'Suffolk pigs are perhaps, on the whole, the most popular breed in England.' It differs from the Essex in making more fat and less lean, being better adapted to barreling. The Suffolks attain maturity at an early age, and may always be in a condition to kill from the time they are a month old. The carcasses command a considerable extra price over the common hogs of the country, partly on account of the greater weight in proportion to the bone, and partly from the pork being of better quality and flavor."

This stock can be seen at Summit, Cook Co., Illinois.

Age of Animals.—A bear rarely exceeds 20 years; a dog lives 20 years; a fox, 14 or 15; lions are long-lived—Pompey lived to the age of 70; the average of cats is 14 years; squirrels and hares 7 or 8 years; rabbits 7.—Elephants have been known to live to the great age of 400 years. When Alexander the Great had conquered Porus, King of India, he took a great elephant, which had fought very valiantly for the King, named him Ajax, dedicated him to the sun, and let him go, with this inscription, "Alexander, the son of Jupiter, has dedicated Ajax to the sun." This elephant was found 354 years after. Pigs have been known to live to the age of 30 years; the rhinoceros to 20; a horse has been known to live to the age of 62, but averages 20 to 25 years; camels sometimes live to the age of 100 years; stags are long-lived; sheep seldom exceed the age of 10; cows live 15 years. Cuvier considers it probable that whales sometimes live to the age of 1000 years. Dolphins and porpoises attain the age of 30. An eagle died at Vienna at the age of 104. Ravens have frequently reached the age of 100. Swans have been known to live 360 years. Pelicans are long-lived. A tortoise has been known to live to the age of 107 years.

HORTICULTURAL.

Correspondence of the Farmer.

Notes on Fruit Cultivation in Wisconsin.

MESSRS. EDITORS:—Besides the bad policy of buying trees from Eastern nurseries as exhibited in a former article, I would point out the fact that noxious insects not indigenous to Wisconsin are sometimes imported here along with the trees. The bark louse is one of these; at least I think so from the fact that I never observed that insect on any trees raised here from seed, unless planted in close proximity to Eastern trees infested with them.

Wherever they are found on a tree, the best way is to root it up and burn it, for it never will be worth raising, and serves only as a focus from whence the evil is propagated.—Still, when the tree is quite small, and has but few, they may be eradicated by a frequent washing with soft soap; but the trouble is often worth more than the tree.

I have often found a kind of snapping bug issue from Eastern trees, which I consider the true borer, and which I had never observed on seedlings. The holes were generally at the intersection of limbs.

Trees raised here from seed are far more hardy to resist the intensity of the cold than the imported, even after grafting, especially if grafted a few feet above ground.

Let those who wish to set out orchards plant a share of seedlings of Western growth and raise them until they bear, and graft those only whose fruit is inferior or worthless.

An astonishing proportion of good fruit will be the result, and the trees will resist the climate. The writer has produced half-a-dozen very superior kinds in that way.

Generally, eastern fruit deteriorates by being brought into the drier atmosphere of Wisconsin; only a few retain their original excellence, while I believe none has ever been known to have improved; therefore I think that sorts of western origin will prove in all respects best for western climate and soil.

The trees which, with me, have proved most tender are—Sweet Bough, R. I. Greening, Golden Russett, Baldwin, Winesap, Early Strawberry, Juneating, Gravenstein.

Less tender than the above, but yet not sufficiently hardy for this latitude—Tart bough, Rambo, Swaar, Golden Sweeting, Yellow Bellflower, Newtown Pippin, Esopus Spitzenburgh.

The most hardy and reliable—Red Astrachan, Fall Pippin, Fameuse or Pomme de Neige, Keswick Codlin, Twenty-ounce, Seek-no-further, Tallman's Sweeting, Northern Spy, Red Canada, and an apple that goes here by the name of Egg-top.

The last named might suffice for an orchard. A few good and safe kinds are better than a great variety of unreliable sorts.

I observe, in general, that summer fruit is more tender than fall, and winter apple-trees hardiest, but do not consider this as an invariable rule.

Undoubtedly there is for every fruit tree or variety a maximum of cold to endure, beyond which death is certain. Even forest-trees are subject to the same rule. A cluster of poplars on land adjoining mine, about 60 or 70 in number and some 90 feet high were killed by the winter of 1856–7; not one of them survived, and yet every one of them was healthy and thrifty before that winter.

It is unquestionable that some kinds of apples are hardier than others, and even some individuals of the same varieties; just as we can observe in the human family, some persons resisting without great inconvenience a degree of cold which would speedily freeze to death others less robust or inured to hardship.

Therefore it is proper that every one should record his experience and observations through the columns of agricultural papers. A mass of facts will be brought forth from which men of science may deduct valuable general rules and theories. For one I have faith that fruit can be produced here. All we want to know is, what kinds and what course of treatment are best. If I could help the cause one ounce, I should feel gratified.

Yours, truly,

G. DENEVEU.

FOND DU LAC, July 13, 1858.

NOTE.—We hope that friend D. will exhibit some of those fine seedlings at the State Fair, so that our best pomologists can pass upon them, and all can see them. We doubt not but good varieties may be originated from the seed, but do not believe that it is so easy and frequently done as some suppose. Propagation by grafting, both on root and stock, when judiciously done, with reference to variety and mode, we still have full faith in, even for Wisconsin; although we think the plan of cultivating some seedlings among other orchard trees as an experiment, to be a good

one, as they can be grafted in the limb in after years if not satisfactory. But the growing of orchards in that way, as an established rule, we are not prepared to recommend.—EDS.

Correspondence of the Farmer.

Multiplier Onions, Strawberries, &c.

MESSRS. EDITORS:—A few days since I dropped in at your rooms and left a specimen of onion, known by the name of "Multipliers."

The variety is of English origin, I believe, and is destined to prove a valuable one, much superior to any potato or top onion that I have ever seen. The bunch sent to you is composed of twelve small onions, growing in the form of an old-fashioned bee-hive, (this is the readiest description I can give,) and you will perceive they are regular in their gradation as to size. These are the proper seeds or sets, and by division, singly, may be set next spring, merely on the surface of the soil, and the product will be an onion oftentimes as large as a man's fist. These are the onions proper, and are the part used for culinary purposes.

The next season you will set these large onions out, and you will find that they will cleave apart and divide up into small onions or sets, the same as the specimen sent you.

Thus you see there is nothing to prevent the success of an onion crop every year after the seed is once obtained.

They ripen and are ready to take off the ground before the last week in July, and can be used for early onions in six weeks from the time they are set. I have known the variety for three or four years and can speak from actual knowledge of their qualities and am perfectly satisfied that they are a great acquisition. As to qualities for cooking they are equal to any other onion.

Please keep the specimen sent, on exhibition at your Rooms, for the benefit of our horticultural friends, and in the spring set them out for propagation. I have but a small quantity on hand, and have none to dispose of. I send you a specimen of the full grown onion to show its manner of division.

While my hand is in I may as well say that I have this season fruited the McAvoy's Superior Strawberry, in Madison, and find them in every respect a splendid strawberry. I will send you some plants the first damp day.

I have also had an opportunity of examining the Wilson Albany Strawberry, in its growth and fruitage, and must say that it exceeds all my expectations. It is, as far as I can judge, hermaphrodite in character, a strong grower and prodigious bearer, equal in size to the far-famed Hovey's seedling. If it should localize itself with us, it will prove the best strawberry in the West.

My experience in strawberry growing, has satisfied me, that actual trial of these new varieties is necessary, before forming an opinion on their merits, as there is no fruit more uncertain in its adaptation to climate and soil —varieties succeeding eminently in some locations and failing entirely in others.

Excuse haste in my communication.

Yours, E. B. QUINER.

MADISON, Aug. 5, 1858.

NOTE.—The aforesaid specimen of an onion is quite a novelty in its way, and may be seen at our office.—[EDS.

Correspondence of the Farmer.

English Russet.

MESSRS. EDITORS:—The last apples of our crop of '57 is gone. Our English Russets are no more. Their like we may not soon again see, for the English Russet, in common with most others, this season, has cast its fruit.

Forthwith we resolved to do something to perpetuate the name and virtues of this favorite variety. Its origin is unknown. Its name would indicate England as its place of nativity, but Mr. Downing says he has not been able to identify it with any English variety. It is cultivated extensively on the Hudson, under this name and also that of "Poughkeepsie Russet," as a market fruit, for which it is admirably adapted, by its great productiveness, long keeping quality, and good flavor. It is not in eating condition until February, and may be kept until July, or even later, with a little care, until its place is supplied with early ripening sorts.

The tree is a fair, upright grower, bears early and heavily, its branches being literally covered with fruit. Size medium, color greenish yellow, partially covered with thin russet. Flesh yellowish white with a pleasant, mild, sub-acid flavor.

The English russet, and indeed all russets, should be kept in tight barrels. If exposed to the air they are liable to wilt and become shriveled.

This is distinct from the English Golden

Russet, (Golden Russet of N. Y.,) another excellent variety, worthy of extended culture in this State.

KESWICK CODLIN.

An early kitchen apple, of first rate quality, is a desideratum with every family. This is found in the Keswick Codlin, an old English favorite. It may be used when half grown, say mid-summer, until ripe in November. It cooks tender, with an agreeable acid flavor.

Tree a good grower, an early and profuse bearer; fruit large, oblong, ribbed, pale yellow; flesh white, tender, juicy.

A. G. HANFORD.

WAUKESHA, Wis., July, 1858.

Fruit-Growers' Society of Western New York.

The Summer meeting of this society was held at Rochester, commencing on the 30th of June and continuing for two days.

The exhibition of strawberries was very large, with a good show of cherries, and a few foreign grapes.

After a free and full discussion of the merrits of the strawberries most prominently before the public, such as Peabody's Seedling Burr's New Pine, Hooker, Wilson's Albany, Hovey's Seedling, Triumphe de Grand, &c. A list was handed in by each person present of the varieties he would recommend for market, and for amateur cultivation. The result was as follows, omitting those which received less than four votes:

FOR MARKET.		FOR AMATEURS.	
Early Scarlet	8	Hooker	12
Wilson's Albany	7	Burr's New Pine	7
Crimson Cone	7	Early Scarlet	7
Genesee	5	Wilson's Albany	4
Hovey	4	Hovey	4
Hooker	4		

Peabody's received two votes for amateurs, and one for market culture, while the berry which at one time bore off the palm over Hovey, viz: M'Avoy's Superior, received but two amateur votes. Longworth's Prolific had two votes for market and one for amateur cultivation. Most of those present agreed that early spring planting was best, and that there was little danger of manuring the ground too much, although a few had succeeded on poor soil.*

The diseases of the Peach and Cherry were next discussed, but no satisfactory conclusions arrived at, other than that the curl of the leaf was more observable upon the outside rows, especially upon the northeast side, suggesting the necessity of protection.

Summer pinching of the Pear was recommended as needful to secure a proper form, check the leader, or rampant side branches, and to induce fruit buds.

The curculio remedies were canvassed; and the most feasible method of saving a crop of Plums, or nectarines, appeared to be jarring the trees every day while the fruit was setting, for about a week, catching the insects in sheets spread upon the ground. When they begin to grow scarce, every other day will answer, and finally, once or twice a week. In this way, several gentlemen present had secured a full crop of fruit.

Several members then engaged in a discussion, relative to the summer pruning of the Grape-vine. The general conclusion seemed to be, that summer pruning was not sufficiently attended to. Mr. Salter being called upon, detailed his mode of pruning, at length. His plan is quite similar to the *Spur system*, briefly alluded to in our last number, page 212 (fig. 3), and described more minutely in the *Agriculturist* of last November, vol. XVI, page 260.

The Society finally adjourned, to meet again in Rochester next Autumn—time not named.

Correspondence of the Farmer.

Madison Horticultural Association.

This young society was organized in the city of Madison, July 7th, 1858, by electing A. L. Collins, President; J. G. Knapp, Vice President; D. J. Powers, Treasurer; and D. S. Curtiss, Secretary. It now has an existence of only two months; has held one exhibition, which was encouraging; has a goodly number of members; some funds in bank; and it is designed to hold another show about the middle of September, when several premiums will be awarded for superior excellence in articles offered for competition.

The Association is open for membership to persons in any of the towns of this county; while exhibition of articles from other counties, are invited to our monthly shows.

Fruits, flowers, garden vegetables, and products, as wines, jellies, preserves, catsups, &c., are all recognized as proper for exhibition, by the Society.

D. S. CURTISS,
Secretary.

BIG CABBAGE.—Mr. S. M. Walker, of this vicinity has growing in his garden a cabbage-head, which on Wednesday last, measured ten feet in circumference, and it is, apparently, still spreading itself. It will, when ripe, make something less than a barrel of *krout*. We'd like to hear from the man who has a larger one.—*Mankato, (Min.,) Independent.*

* Manuring as above recommended may do for the poor lands of the east, but certainly is not safe for the west. We lost a good crop the present season from having covered the the plant last winter with coarse straw manure. The extraordinary wetness of the season in conjunction with the light manuring, forced the bed mainly to vines—being nearly as tall as potatoes. We say this much to caution those who do not understand it, not to follow the above suggestion on rich western soils. P.

EDUCATIONAL.

The State University.

"The trumpets have flourished—the name is changed, and that is all."—CHANCELLOR'S COMMUNICATION.

We had hoped to be able to say congratulatory words, in this number, of the State University; to heartily endorse its new policy, and urge its claims upon the people of Wisconsin. The sequel has shown, however, that we were more hopeful than was warranted by the conservative character of the Board.

The new Ordinance, which claims identity with the Assembly Bill of last winter, although in the *plan*, an improvement upon the old scheme, is nevertheless the imperfect product of an unwilling compromise, and will probably prove to be a perpetuation of the *college* system; while the essence of the Assembly Bill is a recognition of the paramount importance to our country and people of what may be termed the practical sciences, and of the duty of the State to provide at least one institution where the dead languages of two thousand years ago, shall not be considered of more worth than the living philosophies of to-day,—wherein might be acquired a thorough knowledge of those scientific principles which underlie the occupations of men, and are the main-spring of the world's civilization. This should be the central idea of the State University, and nothing less than this will satisfy the demands of the public.

We acknowledge that the Ordinance referred to affords evidence, that there is a looking in that direction; and we have pleasure in recording the fact that a respectable minority would have put the institution upon the basis we advocate, and are still looking hopefully to the time when there will be a majority of like opinion with themselves.

One other serious fault we are compelled to charge upon the Ordinance: It perpetuates the unwise and unjust prohibition of females, by neglecting to make provision for their admission to all the departments on equal terms with males. The Institution was established and endowed for the benefit of the "inhabitants" of Wisconsin, and we, therefore, deny the right of the Board of Regents to virtually proscribe one entire half of the whole population by offering its privileges exclusively to males, and hereby enter our most hearty and standing protest against the wrong.

Of the *appointments* we are equally sorry that we cannot say commendatory words; and, could we satisfy ourselves that they had been made with sole reference to the good of the University, would forbear that censure which under the existing circumstances duty seems to require.

That the Board has a right to improve the quality of the Faculty from time to time, we are free to admit, nay, we maintain that it is most imperatively its duty so to do. But that it has the right to decapitate an able, and faithful professor for no other assignable reason than that he entertains more liberal views concerning the policy of the Institution, and has the manly courage to declare those views, we do most emphatically deny. Might is not right; and as long as the Board of Regents offer nothing in explanation of their rejection of Prof's Conover and Kursteiner other than its supreme will in the matter, so long will we protest against the injustice.

Of these gentleman it is but just to say, the former has been an earnest and self-sacrificing teacher in the University almost since its origin, and by continued growth in attainments and influence, was every day becoming a more valuable member thereof; moreover, that he is a man of progressive energy and popular sympathies, and therefore actively interested in the important work of making the Institution more really and practically a benefit to the whole people of the State. The latter, though connected with the University for a shorter time, had proven his merit, and stood deservedly high in the estimation of the students, and of such citizens as were best acquainted with his qualifications. For both we bespeak the good will and favor of those among whom they may be called to labor elsewhere.

But let us not deal uncharitably with the Board, particularly since a goodly number of its members would have had all these things quite otherwise. It is not impossible, after all, that the majority were so infatuated as to really believe these unfortunate changes necessary to the welfare of the Institution. This being granted, we would respectfully urge upon their attention the consequences of that suicidal policy which marks these recent appointments. If the gag or guillotine is to be the alternative for each professor in the University, how long will it be ere no true man will consent to either accept or hold a position therein?

H.

Correspondence of the Farmer.

Letter from Hon. John F. Potter, Pertaining to Morrill's Land Bill.

MESSRS. EDITORS:—Since my return home, my attention has been called to an article in the June number of the Wisconsin Farmer, in relation to "Morrill's Land Bill," in which I find the following: "But since the agriculture of Wisconsin has utterly failed to receive anything from the State, for the developement and diffusion of its science, a donation of even one hundred thousand acres of land would be thankfully received, and we are wholly at a loss for an explanation of the strange course pursued by our Representatives in relation to the bill. If Messrs. Billinghurst and Potter, both of whom opposed its passage, have given any explanation of their votes to their constituents—who certainly had a right to expect a recognition of their most important interests—we have not been favored with a transcript of their objections. And the absence from the House, pending action upon the only measure of special interest to Wisconsin, of our own special Representative, whose reputation for prompt attention to business is Union wide, looks slightly singular to say the least. We hope, however, that all these gentlemen will be able to render a reason for this *misrepresentation* of their constituents, and doubt not that they will themselves see the propriety of making that reason public before the next election."

In reply to this, permit me to say that it is hardly fair to ask us, or any one of us, for a reason for *misrepresenting* our constituents, until it is proved that we have done so. In the vote which I gave I thought I was *representing* my constituents—certainly I would not knowingly misrepresent them upon a matter of this kind, nor upon any other, unless they requested me to do that which I felt was *morally* wrong. No man in the State feels more deeply interested in the promotion of agricultural science in Wisconsin than I do. I am a farmer, and have been so since I first came into Wisconsin—more than twenty years since. I would be glad to see an Agricultural College amply endowed in this State, and in every other state in the Union. And I do not doubt but that my colleagues feel as deep an interest as I do in all that pertains to a full and thorough developement of agricultural science. and yet I believed it to be my duty to vote against Mr. Morrill's land bill, and should undoubtedly vote in the same way again for similar reasons. The objections alleged by yourself in this same article against the details of the bill, are of themselves sufficient to condemn it; you say truly, that "its irregularity must be apparent at a glance," "that its injustice is palpable," and you have illustrated this more ably than I can do. I urged Mr. Morrill to amend his bill to avoid this injustice to Wisconsin, and expressed an intention of offering such amendments myself. But I refrained from doing so at the earnest request of Mr. M. and other friends of the bill, who feared that if any amendments were offered, it would go over, and they were anxious for a vote on it then. I had still other objections to the bill, one of which I will mention. By the terms of the bill, scrip was to be issued to those states in which there is no public land. This scrip was made receivable for all sums due for public lands. The practical result would be, that the scrip would be sold, the market glutted with it, the most of it would fall into the hands of land sharks and speculators, and be located in the new states, keeping out of our state for an indefinite period the actual settler, who might desire the land for agricultural purposes, thus retarding to far greater extent the developement of our agricultural resources in one direction, for the avowed purpose of prosecuting such developement in another. It was my opinion then, and is yet, that the new states would thus lose far more than they would gain. Under the provisions of the bill, Wisconsin would have received 100,000 acres of lands worth say $100,000.

New York would receive more than 700,000 acres. There being no public lands within her limits, a large portion of the scrip issued to her would be located in large quantities on lands within our State. The whole amount of land granted by the bill was nearly six millions of acres. It would be a reasonable estimate that of this land, one sixth would be located in Wisconsin by speculators, thus keeping out of the State at least 6000 farmers with their families, until they could accept the terms of sale and settlement offered them by the speculator. My impression is that the State would be a great loser by the transaction, and that it would be far better for us to invite the 6,000 farmers with their families to come in here and occupy and improve these lands while they can obtain them at a low price, and then by a

general tax on the property of the State, endow as liberally as you may desire, an Agricultural College. But before we fix upon any plan or system of endowment, let us first count the cost of the system or plan, and when one shall be fixed upon, which will not take *ten* dollars from one source in order to give *one* for the endowment of an Agricultural College, you will find me ever ready and glad to aid you in this most desirable object. But when you ask me to vote for a bill which does not even give to our State the mere pittance of her own land to which her population would entitle her, while the old states were to receive under its provisions even more than their present population entitles them to, and more than enough for the endowment of a college, a bill so manifestly unjust, unequal, and so detrimental to the best interests of the State, you ask more than I can do. Unpleasant as it was to separate from many friends in the vote which I gave, and unpleasant as it ever is to disappoint those for whose opinions and wishes I entertain great respect, I felt it to be my duty to vote against Mr. Morrill's bill, and in doing so, I have no doubt but that I was representing the true interests of the people of the State and of my own immediate constituents.

Your remarks do great injustice to Mr. Washburn. He was absent from Washington when the bill came up, having been called away by the dangerous illness of his mother. I do not know how he would have voted had he been present, but *as he is a very sensible man*, I have no doubt he would have voted *against* the bill. Very truly yours,

JNO. F. POTTER.

East Troy, Wis., July 24th, 1858.

Remarks.—We are glad to know that our Representatives feel an interest in the endowment of an Agricultural College for Wis., and that their reasons for voting against the Morrell Bill were solely prudential. Would have been still better pleased had they evidenced more regard for the perfection of the Bill, than for the wishes of any of its friends.—[Eds.

Benefits to be Derived from Agricultural Colleges.

Some of the benefits which Mr. Morrill proposed from the passage of the Bill, introduced by him, in behalf of Agricultural Colleges, are thus comprehensively summed up:

Pass this measure and we shall have done—

Something to enable the farmer to raise two blades of grass instead of one;

Something for every owner of land;

Something for all who desire to own land;

Something for cheap scientific education;

Something for every man who loves intelligence and not ignorance;

Something to induce the father's sons and daughters to settle and cluster around the old homesteads;

Something to remove the last vestige of pauperism from our land;

Something for peace, good order, and the better support of Christian churches and common schools;

Something to enable sterile railroads to pay dividends;

Something to enable the people to bear the enormous expenditures of the national Government;

Something to check the passion of individuals, and of the nation, for indefinite territorial expansion and ultimate decrepitude;

Something to prevent the dispersion of our population, and to concentrate it around the best lands of our country—places hallowed by church spires, and mellowed by all the influences of time—where the consumer will be placed at the door of the producer; and thereby

Something to obtain higher prices for all sorts of agricultural productions; and

Something to increase the loveliness of the American landscape. Scientific culture is the sure precursor of order and beauty. Our æsthetic Diedrich Knickerbockers, who have no land, will have a fairer opportunity to become great admirers of land that belongs to others.

Many of our wisest statesmen have denounced our general land system as a prolific source of corruption; but what corruption can flow from endowing Agricultural Colleges? Here is neither profligacy nor waste, but a measure of justice and beneficence. Without meaning to express my opinion for or against the homestead policy, I ask, in all candor, what man is there in the whole length and breadth of our country, who would not prefer, if he could have his choice, such an education as might be obtained at one of these colleges to a warrant for one hundred and sixty acres of land?

The persuasive arguments of precedents; the example of our worthiest rivals in Europe; the rejuvenation of worn-out lands, which bring forth taxes only; the petitions of farmers every-where, yearning for "a more excellent way;" philanthropy, supported by our own highest interests—all these considerations impel us for once to do something for agriculture worthy of its national importance.

By the recent statements of the Land Office, we have 1,088,792,498 acres of land to dispose of; and when this bill shall have passed, there will then remain about one thousand and eighty-three millions of acres. We shall still be the largest landholders in the world, while confessedly we are not the best farmers. Let it never be said we are "the greatest and the meanest of mankind."

For the Wisconsin Farmer.

The Education of Farmers—Its Importance.

BY CHARLES SEYMOUR.

Agriculture forms the basis of commerce throughout the world, and may very properly be regarded as the ground work of permanent national prosperity. In every country that has attained to a position of eminence and greatness, the yeomanry form the pillars on which the whole social and commercial fabric rests. Transcending in importance all other interests, agriculture is entitled to receive at the hands of every intelligent member of society, the fostering attention that is manifestly due to a leading element of a nation's substantial greatness. The extent of our common country and the variety of its climate, soil and productions, afford ample scope for the liberal development of the best faculties and ene;gies of the people. *The first and chief point* that should be secured, is the education and instruction of those who are engaged in this important branch of industry, so that they may pursue their calling with the aid of all those improvements, discoveries, and helps that tend to lighten the cares and burdens of life, to diminish the expense and difficulty attending their labors, to increase and augment the value of the fruits of their exertions, and generally to promote the happiness of man. A neglect of this duty results in the comparative disfranchisement of a large portion of the community from exercising their proper degree of influence in the social and political councils of the country; for unless the son of the farmer, endowed with the same intellectual faculties, and noble aspirations that belong to the most favored sons of other classes of society, can find the avenues to distinction and usefulness as open, accessible and frequented as any, he will break the shackles that hinder his progress and happiness, and identify himself and his posterity with those professions and employments that favor his ambitious and commendable purposes of life; and then, one by one, will the best brains of the agricultural portion of the community be abstracted and diverted into other avocations, and the farmer will soon be regarded as an ignorant, hard-working creature, with no compensating qualities to offset the disabilities. To the neglect of this essential duty of securing the generous diffusion of knowledge among the industrial classes, and the consequent neglect of the cultivation of their intellectual faculties, is to be ascribed the fact that the legitimate benefits and securities of a free, republican form of government are not fully realized; for "*the few govern the many*," and the legislative bodies of the country come to consist of those, who, through much cunning and ingenuity, contrive to live without work, and who practically set at nought the divine injunction—as wise as it is beneficent—that "man shall earn his bread by the sweat of his brow." Concentration and centralization of political power and influence soon follow in logical order, and "*the people*" become the tax-payers and tools of men who, by profession and practice have little or no interest in common with the great industrial masses of the community, except a few days about election time. Mechanics through their judicious organizations, such as Mechanics Institutes, Libraries, Reading Rooms, Popular Lectures, etc., have done much to assert their right and ability to participate in the social and political honors and privileges of life, as demonstrated in the comparatively recent elevation of a son of a cotton spinner to the office of Premier of England, and the still later tribute to the dignity of labor, in the selection of a mechanic to preside over the popular branch of Congress, and the election to offices of honor and trust of men who by the force of their talents have proved themselves worthy of the most honored positions in society. Considering the fact that manufacturing districts with a larger population concentrated in a given space, have advantages and facilities for mutual improvement and intellectual culture, that are not possessed by farmers, it becomes a subject worthy of consideration, to supply the requirements of the latter, and place them upon equal footing with their fellow men; and the mind seeks in vain for more efficient relief, aid and protection than are to be found in *the school house and the press.*

To these two agencies they can successfully resort, and in proportion as they are fostered and improved, will the condition of this important portion of the community be raised. After the selection of a good farm, should follow the establishment of a good school, and the selection of one or more good nespapers nnd journals suited to the condition, requirements and employment of the farmer and his family. These instruments for good, having been once tested, will never be laid aside.

La Crosse, Wis., July, 1858.

MISCELLANY.

THE ATLANTIC CABLE.

BY MRS. HOYT.

"Man is a worm and was born to die"
Whines out the Old-time adieu;
"Man is a God, and his kingdom is nigh!"
Rings in the glorious New.

Even now on the hush of a midnight it breaks,
As the nations, with jubilant thrill,
Awake to the triumph, of Toil, Time, and Space
All chained to the nod of his will.

Where only the deep hath answered to deep,
While the ages came, for aye,
Lo, a pathway of flame is laid for the thought
He commissions the lightning to say!

And the heavens that hear, and the earth,
As they see from extremes of the plan,
Are one in their joy at this grandest work
Of the genius and hope of man.

Oh, 'tis meet that the shouts of the people swell high—
That the pulse of the nations be one,—
For now is fair theory wrought into fact,
By a Brotherhood bravely begun.

Henceforth, our humanity, lifted from dust,
Claims kindred anew with the skies;
With Freedom and Science inseperably joined,
Man's triumph—WHATEVER HE TRIES!

The Great Triumph of the 19th Century—First Messages over the Atlantic Cable—Queen Victoria to the President!

VALENTIA BAY, *via* TRINITY BAY, August 16th, 1858.

To the Honorable, the President of the United States:

Her Majesty desires to congratulate the President upon the successful completion of the great international work in which the Queen has taken the deepest interest.

The Queen is convinced that the President will join her in fervently hoping that the electric Cable which now connects Great Britain with the United States, will prove an additional link between the nations whose friendship is founded upon their common interest and reciprocal esteem.

The Queen has much pleasure in thus communicating with the President, and returning to him her best wishes for the prosperity of the United States.

The President to the Queen.

WASHINGTON, Aug. 16, 1858.

To her Majesty, the Queen of Great Britain:

The President cordially reciprocates the congratulations of the Queen, on the great international enterprise, accomplished by the science, skill, and indomitable energy of the two countries.

It is a triumph more glorious because far more useful to mankind, than was ever won by the conqueror on the field of battle.

May the Atlantic Telegraph, under the blessing of Heaven, prove to be a bond of perpetual peace and friendship between the kindred nations, and an instrument, destined by Divine Providence, to diffuse religion, civilization, liberty and law, throughout the world.

In this view will not all nations of Christendom spontaneously unite in the declaration that it shall be forever neutral, and that its communications shall be held sacred in the passage to their places of destination, even in the midst of hostilities. Signed,

JAMES BUCHANAN.

The Electric Telegraph.

"Canst thou send lightnings, that they may go, and say unto thee, Here we are."—JOB.

"*I'll put a girdle round about the earth in forty minutes.*"—SHAKESPEARE.

The prophecy of Job is fulfilled! The words of the immortal poet are well nigh redeemed, and to-day the lightning courses through the deep caverns of old ocean! Grand and glorious is this triumph of science—this work not of a century, but of the ages. Now are all things become possible, and there is no chimera so absurd that it may not become a fact.

This wonderful electric force! so all pervasive, yet so subtile and invisible; so potent that the suns and solar systems which revolve in the infinite spaces are but as toys in the play-house of the universe, yet so gentle that it ministers to the breath of the sleeping child! so everywhere and evermore operative,—now wreathing itself in sunny smiles, and filling the earth with the joy of blooming flowers and waving forests, of gentle rains and refreshing dews, of vapory clouds, and gorgeous sunsets, or with awe and wonder, as flashing in brilliant corruscations from the pole it weaves its coronals of ambient light at the zenith,—now clothing itself with thunder, and startling the world with terrible lightnings and storms, leaving devastation and death in its track,—now going forth as the breath of the destroyer on the red wing of the sirocco,—now causing the earth to rock under the tramp of the earthquake; and anon, yielding itself captive to the will of man, most skillfully and faithfully doing his manifold work;—aye, this wonderful, mysterious force, what is it not doing and what are we not able to accomplish through its agency?

Subtlety and omnipotence are its characteristics, and yet it is the most docile of all the

creatures of God. Already is it become an incomparable artist, a lightning-winged courier, an omnipresent policeman, a wonder-working artizan, a matchless chemist, and mighty warrior. Where in the most extravagant records of the marvellous—in the wildest dreams of fancy is to be found the hero whose exploits are comparable with those of electricity? Yet are its triumphs but half revealed, its victories only beginning to be dreamed of!

This Atlantic Telegraph is the most wonderful achievement of all time; and yet it is only a forerunner of "the good time coming," when man will have gained a complete mastery over the forces of nature—when the lightning will be not only his errand-goer, but his million-handed servant, doing nine-tenths of the great world's work.

Six years ago we predicted this sublime *tete-a-tete* of the old continent with the new, allowing ten years for its accomplishment. Another decade, and that girdle of lightning foreshadowed by Shakspeare in the line above-quoted, will encircle the globe, not in forty minutes, but in the twinkling of an eye!

The time will come, and is not very far off, when these electric telegraphs will work a mighty revolution in the affairs of men—in their social, commercial and political intercourse,—when coach mails and steam mails will be ridiculed out of use,—when merchandise will be bought and sold at the remotest markets of the world in less time than is now required to pack a valise for the journey,—when the diplomacy of nations will have forgotten the tedious delays of the present, scorning other media,—when the proceedings, *in extenso*, of Congresses and Parliaments will be read simultaneously by the people of a whole continent, on the very day of their occurrence,—when the inhabitants of India, and China, and Kamschatka, and Archangel, and Russian America, and Mexico and Patagonia, and Good Hope will have hourly intercourse with each other and the peoples which they encircle,—and when the whole race of men thus knit together will have become one vast brotherhood, dwelling peacefully together in the same great family! H.

An Act for the Protection of Fruit and Fruit Trees, Ornamental Trees and Shrubbery.

Section 1. Every person who shall willfully and maliciously enter any orchard, nursery or garden, and carry away, mutillate or destroy any tree, shrub or vine, or steal, take or carry away any fruit or flower, without the consent of the owner thereof, or who shall willfully and maliciously mutilate, injure or destroy any tree or shrub planted for fruit, shade or ornament, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding one hundred dollars, or by imprisonment in the county jail for a period not exceeding three months.

Sec. 2. This act shall take effect from and after its passage and publication.

Approved, May 17th, 1858.

Correspondence of the Farmer.

Protection Against Smut in Wheat.

Messrs. Editors:—As the season is near at hand for sowing winter wheat, and there seems to be a general complaint from year to year, respecting smut in wheat, I have been looking over different agricultural works, which I have been taking for the last ten years, such as the Genesee Farmer, Northern Farmer, Wisconsin Farmer, and others, and I cannot find a recipe that is satisfactory in my mind for the preventing of Smut in wheat.

Now, sirs, I will give you my proceeding as to the manner in which I prepare my wheat for sowing. Say, I want to sow five bushels of wheat to-morrow. This evening, the last thing, I put on the fire two pails full of water, then I go to the barn, measure out five bushels, and put it in a heap on the barn floor; then as soon as the water boils, I carry it to the barn, pour the water into a tub I keep for that purpose, then I put in three or four stones of good lime, (fresh from the kiln if possible); as soon as the lime has ceased boiling, add two gallons of chamber lie, (the staler the better,) two hands-full of salt, or two quarts of old brine, mix all well together; have a man on hand with a shovel; pour the whole mixture on the wheat, and let it be turned over and over till the whole is completely saturated; have a broom to sweep in every loose kernel, so that the whole may be well pickled.

I have used this preparation over fifty years, thirty years in England and upwards of twenty years in this country, and seldom or ever known it to fail. I would recommend not to sow on a rainy day, and have the seed harrowed close after sowing. I think any man who will carry this out in the way I have prescribed, need not have any fear about smut.

JNO. SERCOMB, Sr.

Milwaukee, August 14, 1858.

Note.—See pp 100, Vol. 7; 255 and 446 Vol. 8; 84, 85 and 368, Vol. 9, of the Farmer.—[Eds.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

A HYMN OF OLD AGE.

BY MRS. HOYT.

When to the banquet of the soul
Life's latest fruits are brought,
And gathered in refulgent whole,
Its added sunsets wrought,—

What glory resteth on his head
Whose lengthened shadow shows,
How dimly far life's cradle bed
Is from its last repose.

There come no more the pageantries
That thronged the path of youth;
Pomp of meridian glories,
That tempted manhood's truth;

And there no more the burning haste
Of passion's treacherous flame,
With conscious virtue's bitter waste,
And self-accusing blame.

But peace, instead, and joy serene,
As, wrapped in faith sublime,
He walks with calm, unfaltering mien
Upon the verge of time.

Temptations conquered, truth achieved,
Falsehood and fear o'erthrown;
Justice and charity retrieved,
To large experience grown.

All individual interests merged
In universal claims,
Divinely moved, and onward urged
To ever nobler aims.

He, on the remnant of his days,
With wise affections crowned,
Sits chanting o'er life's psalm of praise
Against the outward bound;

Where steadfast Hope illumes the way—
Faith-builded, strong and wise—
Foundation-rocks on Death that lay,
With summit in the skies!

Hail, happy Age! when sinks thy sun
In life's last purpling fold,
How precious is the privilege won,
Of calmly growing old.

Our Climate.

Washington Irving speaks thus in favor of our climatic vicissitudes, which are too often made the subject of exclusive repining: If they do anoy us occasionlly by changes from hot to cold, from wet to dry, they give us one of the most beautiful climates in the world. They give us the brilliant sunshines of the south of Europe, with the fresh verdure of the north. They float our summer sky with gorgeous tints of fleecy whiteness, and send down cooling showers to refresh the panting earth and keep it green. Our seasons are full of sublimity and beauty. Winter, with us, has none of its proverbial gloom. It may have its howling winds, and chilling frosts, and whirling snow storms; but it has also its long intervals of cloudless sunshine, when the snow-clad earth gives redoubled brightness to the day—when at night the stars beam with intensest luster, or the moon floods the whole landscape with her most limpid radiance. And then the joyous outbreak of our spring bursting at once into leaf-blossom, redundant with vegetation and vociferous with life and the and the splendor of summer—its morning voluptuousness and evening glory—its airy palaces of sun-lit clouds piled up in a deep azure sky; and its gusts of tempest of almost tropical grandeur, when the forked lightning and bellowing thunder volley from the battlements of heaven, shake the sultry atmosphere, and the sublime melancholly of our autumn, magnificent in its decay, withering down the pomp of a woodland country, yet reflecting back from its yellow forests the golden serenity of the sky. Truly we may say, that in our climate, "the heavens declare the glory of God, and the firmament showeth his handiwork. Day unto day uttereth speech, and night unto night showeth knowledge."

A Beautiful Sentiment.—Shortly before his departure for India, the lamented Heber preached a sermon, which contained this beautiful sentiment:

"Life bears us on like the stream of a mighty river. Our boat glides down the narrow channel—through the playful murmuring of the little brook, and the winding of its grassy borders. The trees shed their blossoms over our young heads, the flowers on the brink seem to offer themselves to our young hands; we are happy in hope, and grasp eagerly at the beauties around us—but the stream hurries on, and still our hands are empty. Our course in youth and manhood is along a wilder flood, amid objects more striking and magnificent. We are animated at the moving pictures of enjoyment and industry passing us, we are excited at home short-lived disappointment. The stream bears us on, and our joys and griefs are alike left behind us. We may be shipwrecked, we cannot be delayed; whether rough or smooth, the river hastens to its home, till tue roar of the ocean is in our ears, and the tossing of the waves is beneath our feet, and the land lessens from our eyes, and the floods are lifted up around us, and we take our leave of earth and its inhabitants, until of our further voyage there is no witness, save the Infinite and Eternal."

Respect for Women.—Nothing sets so wide a mark between a vulgar and a noble soul, as the respect and reverential love of womankind. A man who is always sneering at women is generally a coarse profligate or coarser bigot.—*Washington.*

Domestic Arts.

RECEIPES FROM GODEY.

PLUMS.—The great difficulty in preserving plums is that the skins crack and the fruit comes to pieces. The rule here laid down obviates this, keeping the fruit whole, full, and rich.

TO PRESERVE PLUMS.—Make a syrup of good brown sugar, in the proportion of pound to pound, and clarify it nicely; when perfectly clear and boiling hot, pour the syrup over the fruit, having first removed all unsound ones and stems. Let them remain a day or two, then pour off the syrup, scald and return it to the fruit. Let them stand again, as before, after which they may be poured carefully into a preserving kettle and gently simmered until the syrup is sufficiently rich.

Any small fruit may be done in this way. Tomatoes of medium size picked before they are fully ripe, will, with the addition of a little lemon, make an excellent preserve. The fig tomato done in this way has much the appearance of the pear, being nearly as delicious. —ED.

BUTTERMILK BREAD.—The sponge —Take three pints of buttermilk, (it does not matter how sour it is,) and put it in a saucepan to boil; take one pint of flour and put it into a bowl or jar with half a teaspoon full of salt. When the buttermilk is boiling, pour it over the flour, stirring quickly that the whole may be scalded. Let it stand till it is but milk warm, and add a half pint of yeast. This should be done over night. In the morning take flour sufficient for three large loaves, and upon this pour a pint of water nearly boiling hot, mix well; then add the sponge; knead thoroughly and mould into loaves, putting them into buttered pans to rise. In two hours they will be ready to bake.

ANOTHER.—Take half a tea cup full of sour cream and three eggs; beat separate; a little soda and water or milk enough to make one quart of Indian meal into batter; bake in a quick oven in muffin-hoops or pans. To be eaten warm.

FROM MRS. MANN'S COOK BOOK.

PICKLES.—Pickles should be kept in glass bottles, as glazing is made with poisonous substances, and disastrous effects have sometimes followed their use.

CUCUMBERS.—Wash and drain them in a seive, but do not break the little prickers on the surface, for it makes them soften; put them in a jar, and pour on boiling vinegar. When you gather more, transfer the first you gathered into another jar with fresh vinegar, in which is a bag of spices, and boil the first vinegar again, and pour it over your second gathering. When you have gathered all you wish to pickle, boil again the same vinegar, and scald the whole with it, and lay them back into the spiced vinegar. Examine them occasionally, and add a little vinegar from time to time.

MANGOES —Select small musk melons; cut a piece out of one side of each, take out all the seeds, and fill them with cloves, horse-radish scrapings, peppercorns and mace. Pour boiling vinegar upon them, with a little salt in it, two or three times, and then put them into fresh vinegar, and cover them closely.

EGGS.—Boil them twelve minutes, throw them into cold water. This will remove the shells. Boil red beets till soft, peel and mash them, and put them into cold vinegar. Add salt, mace, cloves, and pepper, and cover the eggs with the mixture.

TOMATOES.—Put the small round tomatoes into hot brine for a few days, then pour over them cold spiced vinegar, and bottle them closely.

SWEET PICKLES—Cherries, peaches, raspberries, tomatoes, plums, and crab apples may be made into very delicious sweet pickles, by adding half their weight of sugar to their full weight of spiced vinegar, when the spices are boiling in it, and pouring it over them while boiling.

FROM HOME MAGAZINE.

CHICKEN CORN-PIE.—A lady contributor sends us the following:

First, prepare two chickens as for frying, then put them down and let them stew in a great deal of good, rich, highly-seasoned gravy, until they are just done. Then, have ready picked, two dozen ears of corn; take a very sharp knife, and shave them down once or twice and then scrape the heart out, with the rest already shaved down; then get a baking-pan, (a deep one,) place a layer of the corn on the bottom of the pan or dish, then a layer of the chicken, with some of the gravy, then a layer of corn, and so on, until you get all the chicken in. Then cover with the corn, and pour in all the gravy, and put a small lump of butter on the top, and set it to baking, in not a very hot oven. It does not take long to cook; as soon as the corn is cooked, it will be ready to send to the table. It can either be sent in the pan it is baked in, or turned out into another dish. There must be a great deal of gravy, or it will cook to dry.

ARTIFICIAL OYSTERS.—Grate as many ears of green corn as will make one pint of pulp; add one teacupful of flour, half teacup butter one egg, and pepper and salt to suit your taste. Dropped and fried in butter.

FOR THE CHILDREN.

THE RAIN—A FABLE.

BY MRS. HOYT.

The Rain looked down one warm, dry day,
And said, "Just see the folks!
The children and the wind at play;
With dust the city chokes."

"I wonder now if I go down
And sprinkle every street,
Dust off the trees and wash the town,
What recompense I'll meet?"

No sooner said than down it poured
In drops, and then in showers;
Along the broad road-side it roared,
And bowed the garden flowers.

"Just look at me!" said Mrs. Gay,
White gloves and ribbons spoiled;
On this mantle, 'broidered night and day,
For full a month I've toiled."

"Too bad! too bad!" cried Master B.,
All dressed up for a call;
"My boots just blacked, all mud and slop!
The Rain, confound it all."

The coachman drove to save his hat
And shelter back so fine;
Sir Gout looked up, thought of his pains,
And growled—"a glass of wine."

The merchant, scowling at poor Rain,
In doors withdrew his goods;
Young misses, tripping home again,
In haste drew down their hoods.

Even some children, girls and boys,
Ran in, this way and that,
Forgetting all their scattered toys,
A-pouting in doors sat.

"We cannot go to Pleasant Hill,"
"Nor we, to ride or walk;"
"Just look, Mamma, it's raining still,"
So loud we scarce can talk."

Though loud the Rain, yet louder far
Was voice of grumbling heard,
Till all the soul of dewy clouds
With honest pride was stirred.

So modestly they drew one side,
And wrapped their faces o'er,
Resolved in self-respect t'abide,
And rain again no more.

But just as this resolve was formed,
Ere yet the vow was sealed,
The big, round sun creation warmed,
And wondrous works revealed.

Then from the earth, and all around,
From every flower and tree,
There rose, in universal sound,
Unwritten melody.

From parched leaf and thirsty blade,
Half-opened sheath of grain,
There came a voice that plainly said,
"Thanksgiving to the Rain!"

Then every tiny grain of sand,
Looked up and cried "How clean!"
The roses blushing deeper red
To see the leaves *so* green.

And more than this, and quite aloud,
The leaping rillets laughed,
As all their minnows in a crowd,
The new-born crystals quaffed;

While bee, and bird, and butterfly,
The general chorus swelled,
And nothing good or beautiful
Against the Rain rebelled.

Well pleased it heard, and spread its hands
To bless the true and fair,
And quickly in its heart was breathed
A right repentant prayer,

As once again, in realms above,
The grateful Rain resolved,
To do its life-long work of good,
All pride in love dissolved.

"Not Letting."—A Story for Children.

There were two little sisters at the house whom nobody could see without loving, for they were always so happy together. They had the same books and the same playthings, but never a quarrel sprang up between them—no cross words, no pouts, no slaps, no running away in a pet. On the green before the door, trundling hoop, playing with Rover, helping mother, they were always the same sweet-tempered little girls.

"You never seem to quarrel," I said to them one day; "how is it you are always so happy together?"

They looked up and the eldest answered, "I 'spose 'tis 'cause Addie lets me, and I let Addie."

I thought a moment; "Ah, that is it," I said; "she lets you, and you let her; that's it."

Did you ever think what an apple of discord "not letting" is among children? Even now, while I have been writing, a great crying was heard under the window. I looked out. "Gerty, what is the matter?" "Mary won't let me have her ball," bellows Gerty. "Well, Gerty wouldn't lend me her pencil in school," cried Mary, "and I don't want she should have my ball." "Fie, fie: is that the way sisters should treat each other?" "She shan't have my pencil," muttered Gerty; "She'll lose it." "And you will only just lose my ball," retorted Mary, "and I shan't let you have it."

The "not letting" principle is downright disobligingness, and a disobliging spirit begets a great deal of quarreling.

These little girls, Addie and her sister, have got the true secret of good manners. Addie lets Rose, and Rose lets Addie. They are yielding, kind, unselfish, always ready to oblige each other; neither wishes to have her own way at the expense of the other. And are they not happy? O yes. And do you not love them already?—*Child's Paper.*

EDITOR'S TABLE.

STATE FAIR ITEMS.

SHOW OF HORSES.

From all quarters we hear but one echo, as to the great and unequalled show of horses that will be made at the Fair. Some parties well posted on the subject, assure us that they think it will much surpass any thing of the kind yet seen in the west.

The troupe of Black Hawks and Morgans alone, will undoubtedly be one of the finest that has, or can be shown out of Vermont. Wisconsin is becoming famous for this stock of horses; and is not much behind on many other breeds. We have a partial promise that the imported blood horse "King of Cymry," will be on the ground. Also, Medoc, and numbers of others. We would merely suggest that perhaps the best way of settling the somewhat animated controversy that has been for some time going on in the *Farmer*, in relation to the comparative merits of the different classes of horses, is to bring them to the Fair in ample numbers with their progeny; and after showing up all their merits to the best advantage, then leave the great public that will be present to decide for themselves respectively. A splendid track on which to show them has already been fitted up; and is overlooked by an eminence from which 20,000 can witness every movement to a nicety. In anticipation of so great a turn out of horses and to make all as convenient and agreeable as possible, the executive committee have arranged with proper parties to fit up one hundred good

STABLES FOR HORSES

on the ground; they will be made snug and tight, and provided with all the requisites for locking up; and will be furnished to those who want them for a reasonable price, to be paid to the parties fitting them up. The Society will as usual furnish good straw, timothy and clover hay, oats, &c., *free* to all exhibitors; hence, the cost of keeping horses safely and cheaply upon the grounds, will be ensured.

Those wishing to engage such stabling in advance, in order to make it sure, can do so, by addressing E. B. Chadwick, Esq., Madison, the party who has the matter in charge.

THE SHOW OF CATTLE

Also promises to be both large and fine, not only among the various thorough breds, but among the native cattle. We know of one steer that will probably be exhibited, that weighs 3,000 on the scales, besides being as nearly perfect in every point as is often seen. The cattle will also be furnished with good sheds and all requisite dry feed, as well as green pasture—close at hand.

STOCK SALES.

It is expected that a good deal of stock will change hands, notwithstanding the snug times, and with that view, ample grounds and conveniences will be furnished, for auction sales upon the spot, and a good auctioneer be in attendance for the occasion. The convenient location of the Fair at Madison, and the favorable arrangements over the western railroads and river boats to the upper river country, will undoubtedly secure the attendance of many from those newer regions wishing to purchase horses, cattle, sheep and various agricultural machinery. This is a matter well worthy the attention *of both buyers and sellers.* The Society will do what they can to render this matter as useful to all parties as possible.

SHOW OF MACHINERY—WIND MILLS—SUGAR MANUFACTURE, ETC.

We are gratified at the encouraging prospect of a large and interesting show of operative machinery at the Fair. Many are already applying for locations upon the grounds for the purpose of exhibition; among the which, wind mill and pump enginery for raising water, and mills for feed grinding—*in operation*—will be conspicuous, and undoubtedly show a progress on anything before seen in their line.

Col. May, the indefatigable inventor and builder of useful labor saving machinery, has secured a fine position for a full show of his many invaluable machines in full operation. His show last year of operative machinery propelled by wind power, including among other things, a printing press in full blast, is undoubtedly well remembered by thousands; he assures us that he will greatly excel it this year.

The Halliday wind enginery, bids fair to be equally well demonstrated, by our friend D. S. Curtiss, who we are glad to learn has taken the general agency of this machine, and intends exhibiting its full capacity on that occasion.

The capacity and usefulness of these improved modern wind mills only, needs to be known by the masses of the people, to make them as common and indispensible as reapers

and mowers. The gentleman before mentioned will push them.

SUGAR AND SYRUP MANUFACTURE.

Last though not least, as intimated last month, there is now almost a certainty that some highly competent parties will make a thoroughly scientific and practical exposition of the matter of making sugar and syrup from the Sorgho in ample quantities; demonstrating every process of grinding, boiling, clarifying and graining, full and to the comprehension and understanding of every one. As this demonstration will be in advance of our crop in general, the present fall, it will be all the more instructive. As there bids fair to be a great scarcity of grinding machines among the people, we also mean if practicable to have a cheap but effectual wooden mill on exhibition, as a pattern for such as do not know the best way of getting them up—such a mill as can be gotten up in three days in any wagon shop, and put right to work. We wish to see the cane of the present year manufactured not only into syrup, but sugar, as extensively as possible, not only as an economy to the people in these hard times, but also to prompt as many as possible into ils cultivation another year, if the fact is demonstrable that it is enconomical and profitable to common farmers.

Ample steam power will be furnished gratis by the Society, to operate all machinery on exhibition.

THE SHOW OF FRUIT.

From all indications we think the show of Fruit will be not only large but good. Not that by any means it is a good fruit year; still among the many new orchards and gardens that are coming into bearing, a great variety and abundance of good specimens can and undoubtedly will be gleaned and gathered together, especially apples and grapes; not a few pears and plumbs will also be brought forward, although the latter have been sadly stung by the Curculio. We really hope that those having fruit will make all the show they can; and for the reason that the masses of our people need encouraging in these matters, and nothing so effectually does it as a sight of the fruit itself, in variety and abundance—*bring it forward.*

RAIL ROAD CARRIAGE.

The Milwaukee and Mississippi Road carry precisely on the same terms as last year; stock and articles for exhibition *free*, and passengers at half price. Freight to be paid on stock when delivered, and refunded on return. The Watertown & Columbus the same. The La-Crosse doubtful. The Racine & Mississippi, Mineral Point, and Lake Shore, probable the same as M. & M. The Illinois Roads at half price all round. The Mississippi River Boats running in connection with the M. & M. Co., will probably also carry at half price.

Special trains will be run from all necessary points on the M. & M. Road, and land directly upon the Fair Grounds.

COUNTY DELEGATIONS AT STATE FAIR.

What is the prospect of a nice turn out of this kind, with regular tents and camp equippage. We really hope that enough will set the example this fall to inaugurate the system for the future.

It will be seen that young St. Croix sets the pattern. Who else is preparing to follow? That's the question.

EDITORIAL HALL AND READING ROOM.

In consideration of the large number of editors and gentlemen connected with the press, expected to be in attendance on account of the additional reason of the Editorial Convention; and in view of the many gratuitous civilities extended from time to time by the PRESS to the State Agricultural Society. The Executive Committee have, as a partial requital, arranged to build a neat and spacious Hall upon the Fair Grounds in a central position, exclusively for the use of the fraternity and their especial friends, during the Fair. To be fitted up both as a reading, writing and *free and easy* room, and to be supplied on the arrival of each mail with the latest news.

It is believed that such an institution will be found a great convenience, and if well gotten up and managed, be duly appreciated both now and hereafter, as one of the indispensible accompaniments of every great Fair.

It is a well known and admitted fact, that the Press renders a great deal of gratuitous aid to all these great agricultural movements, and hence there seems much propriety in the aforesaid reciprocity.

THE STATE HISTORICAL ROOMS.

We are authorized by the Hon. L. C. Draper, the obliging and ever assiduous Secretary of the above Society to say, that the State Historical Rooms will be kept open during the entire Fair, both in the day time and evening, *free of all charge, for the especial convenience* of the thousands who will not miss so good an opportunity of visiting them.

The collection of books, manuscripts and curiosities of every kind, is already much the largest in the State. while the Portrait Gallery is also rich in choice pictures of many of the most eminent men of this and other states. It will exceedingly well repay a visit. It is in the basement of the Baptist Church, just south of the State Capitol.

Mr. Draper, in behalf the Society, will be greatly obliged to such as have any curiosities, old books or documents that should be preserved, if they will bring them along and present them to the Society. Every curious relic of the past, and many of the present, should find an early lodgment in said museum, where all the world can see them; and where they will be preserved may be, long after the present owners are gone to rest. Bring on your curiosities in their line, ladies and gentlemen, and lodge them in the Wisconsin State Historical Society's museum.

HOTEL AND SLEEPING HALL ON FAIR GROUNDS.

The enterprising contractors for fitting the Fair Grounds, Messrs. Stevens, Wyman & Chadwick, are going to erect a spacious temporary Hotel and Eating House, upon the Grounds, with good reception rooms in front, both for ladies and gentlemen; with wash rooms, barber shops, and every appendage necessary for comfort at least, and in the rear a dining hall large enough to seat one hundred and fifty persons at once, at table, with a kitchen apparatus adequate to get up any amount of eatables in good hotel style. This will certainly prove a great convenience to thousands, and we doubt not, remunerative to the proprietors.

They also contemplate erecting a capacious Sleeping Hall, sufficient to lodge a thousand or more, which in case of a crowd would be a great convenience, and could hardly fail of being wanted in any event.

FIREMEN'S DISPLAY AND TRIAL OF ENGINES.

A convention of the Fire Companies of the State was held at Janesville on the 19th August, and the requisite arrangements made for a turn out and trial of engines at State Fair. The spirit and harmony evinced by all parties, guarantees a large turn out, and a first class exhibition. We shall publish their programme for trial in our next No.

PERSONAL.

We shall be off to the St. Louis Fair on the 6th of Sept. If any one has commands they must hurry them up. P.

THE JEFFERSON COUNTY FAIR.

EDITORS:—The Jefferson County Agricultural Society holds its annual fair at this place, on the 24th and 25th days of September next.

Milo Jones, Esq., is the President of the society, and under his management the gathering will be a complete success, and we are confidently expecting to hold the *best* county fair in the State.

The annual address before the society will be delivered by Hon. L. P. Harvey, of Rock county. In the selection of Mr. Harvey, the committee made a fine choice. He is a practical farmer, a man of large ideas, and has a strong hold upon the hearts of the people.

I notice in the premium list that the "Wisconsin Farmer" is well represented.

Can you favor us with a visit at our Fair; come if you can. Fort Atkinson is 9 miles from Whitewater, and is one of the most flourishing and pleasant villages in Wisconsin.

The "Wisconsin Chief" is published at this place, and wields a mighty influence in favor of reform and right. T. W. Brown is eminently popular as a speaker.

More Anon,
FORT ATKINSON.

FORT ATKINSON, Wis., August 12, 1858.

NOTE.—We are gratified to learn that our old home pioneer county of Jefferson, is making such excellent arrangements for a tip-top, successful fair. We will warrant our old friend Jones to give it all the *vim* that it is capable of, and if in our power we will accept the kind invitation extended to us to be present. It would certainly give us great pleasure to meet our many Jefferson county friends and patrons on so interesting an occasion. P.

CLOVER HULLERS.

In reply to "Chilton" in Aug. No. we would say that H. D. Emery & Co., Chicago, Geo. S. West, Milwaukee, and Simon Rublee, Beloit, all deal in Clover Hullers, and they may learn after a while that it would pay them to advertise all such articles in the *Farmer* if they wish to sell them. The many thousand persons that constantly see the *Farmer*, constitute a wide class of customers, and of the right kind for all such articles.

FINE FRUITS.

We are indebted to Gen. Atwood, of the *State Journal*, for fine specimens of Apples and Plums of his own growing, and can certify that their quality was excellent. May his crop increase and multiply, both for his good and our own. P.

WISCONSIN STATE TEACHERS' ASSOCIATION.

The sixth annual meeting of this association was held at Portage City on the 3d, 4th, 5th and 6th of August, and is said to have been in many respects, the most successful of all. The number of teachers in attendance was large, and there was no abatement of interest on the part of either members or citizens, from first to last.

The "Revision of the School Laws," and several other important questions were discussed, and essays were read and address delivered as follows:

Afternoon of Tuesday, Address by the President, Prof. O. M. Conover, of the State University. Subject: "*A Perfect School System.*"

Forenoon of Wednesday, Essay on "*Normal Schools,*" by Rev. J. B. Pratt, of Sheboygan, and an address by Rev. A. L. Chapin, President of Beloit College, upon "*The true end of the work of Education, and the Reciprocal Relation of its Several Departmeuts.*"

Afternoon of Wednesday, essays on "*Education, a Mental Possession,*" by S H. Carpenter, Assistant Sup't Pub. Instruction, and upon "*Phonetics,*" by A. M May, Esq., of Ripon.

Evening of Wednesday, address by Prof. N. Bateman, of Jacksonville. Subject: "*School Government.*"

Forenoon of Thursday, lecture by J. J. M. Angear, Esq., of Berlin, upon a "*Gyroscope Orrery*" of his own construction, and an essay by J. W. Strong, Esq., of Beloit, upon "*Vocal Music in Common Schools.*"

Afternoon of Thursday, address, by J. W. Hoyt, of the *Wisconsin Farmer*. Subject: "*Public Education—The Needs of the People, and the Duty of the State.*"

We very much regret the not having been able to be present, except during the day for which our own address was programmed, but are assured by those who heard them, that the addresses of Prof. Conover and President Chapin, were both productions of the highest merit; and that the essays of Messrs. Pratt, Carpenter and May, were highly creditable to their authors. Of the addresses of Prof. Bateman, the essay of Mr. Strong, and the lecture of Mr. Angear, we are able to speak from personal knowledge. Suffice it to say, we were delighted with them, and shall take occasion, after their publication, to enrich our pages with some of their gems.

The people of Portage proved their appreciation of the importance of the Convention, and of the great cause in which the Association is engaged, by a generosity of hospitality quite unparalleled. Every latch-string in the goodly city hung out in token of welcome, and the generous invitation, "come one, come all," was inscribed upon all the door-posts. Even the omnibus lines and livery establishments were chartered for the use of members.

The day is surely dawning when the Profession of Teaching is destined to rank among the highest, as it is really the most important of all.

WISCONSIN PEARS.

Through the politeness of Col. Crocker, of Milwaukee, we recently visited his fine garden and grounds on Spring street, about one mile from Spring street bridge. As anticipated from frequent previous conversations with Col. C., we found a good many rare and tasty articles of culture about his premises in the way of rare vegetables; Lawton Blackberries (bearing prolific and fine,) but the most notable and prominent hobby of our friend was Pear trees, of which he has some two hundred specimens, large and small; many of these, trees that have been bearing for several years. About one-half of them were fruiting more or less the present season, and some of them were quite full. As a general thing the fruit looked well, and some of it very well, whilst some varieties, especially the White Doyene, seemed in every instance to be affected with a kind of scab or black blight upon the surface that effectually spoiled them, much to the chagrin of the owner, who as well as ourself was wholly at a loss to account for the evil. He suggested however what seemed quite as probable as anything else, that the soil was rather clayey and not well under-drained in the particular localities occupied by these trees, whilst all the rest of the orchard plat was thoroughly under-drained. And this under-draining, by the way, is a matter on which the Col. dwells with more enthusiasm than any one else we have conversed with in the State. He has implicit faith in its saving virtues and in fact believes it indispensable to good orchard culture on all soils. His experience in the matter has persuaded him that under-draining effectually counteracts drouth and over wetness, and produces an equable moisture and temperature indispensible to the growth of all the more delicate fruits, and especially the pear.

But with all his pains-taking, and it obvious-

ly has not been small, he has failed of any such measure of success in pear culture as he anticipated, and was clearly somewhat discouraged in the attempt. If he cannot grow them upon the lake shore with all his care, it is surely going to be a difficult task in the interior and ordinarily. Perhaps, however, perseverence may yet develope some degree of success in pear culture among us.

Col. Crocker intends to exhibit such specimens as he may deem worthy, at the State Fair, hence I will not say more in relation to them at present. P.

WOOL GROWING FALLING BEHIND IN WISCONSIN—THE REMEDY.

The universal complaint among wool buyers the present year is, that the clip is materially and visibly less than in former years. Not that the fleeces are lighter, but that there is less of them, showing conclusively that sheep are actually diminishing in numbers in many of the old Counties of the State. That such is the fact in Dane Co. we well know from our own observation and the common report of our wool growing acquaintances. Among them all we do not know of a farmer who is increasing his sheep or wishing to, but on the other hand, the invariable feeling is generally to get rid of them; and not because there is any valid natural objection in the way of sheep keeping and wool growing in and of itself, but because they are destroyed to such an extent by dogs; that and that almost alone, seems to be the complaint and objection on all hands.

As we stated in the outset, even wool buyers seem to be getting alarmed at this obvious falling off in one of our most important staples, and anxiously ask what can be done to arrest the evil. In reply to one and all we would say, as we have constantly said for some time past, enact a Dog Tax Law, upon a judicious and practical basis, that will thin out the common enemy of the sheep. This and this alone, wisely and well carried out, will wholly revolutionize the business in the State in two years, and put us in the way of our millions of dollars for wool annually, instead of on the road to poverty, whither so many of our dog-keeping farmers are now traveling.

As a preliminary movement in this matter, we would suggest that it be agitated during the State Fair, and an evening meeting held to discuss the subject, and to adopt some line of policy that will be effectual to secure any needed legislation in relation thereto. Such action will be in season to precede election and may be made instructive to those soliciting office at the hands of the *great rural masses.* P.

BOUND VOLUMES FOR 1856-7—

For County Agricultural Society Premiums are now all ready for delivery, and gotten up in the neatest style. They contain hundreds of the most valuable articles, on practical Western Agriculture and many other kindred subjects, and from all the best writers of the times, and hence are the most valuable premium that any of our *live farmers* can possibly have. Worth $1.00 apiece to every man *or woman* who will read and heed them.

Societies intending to use them had better have them forwarded *at once,* so that they will have them on hand *ready for delivery at their Fairs.* They will find this course highly satisfactory to those who receive them and economical to themselves. We are highly gratified at the extent to which they are being offered in the various Premium Lists. Old Walworth offers one hundred and fifty copies, and many other Societies in like proportion. We have no fears but what they will be acceptable to *all reading persons,* who get them as premiums.

Send on your orders, gentlemen, and specify *how and when* we shall send them, and we will forward promptly and in good order.

CROPS AND PRICES.

It seems at length a well settled fact, that crops of all the staple kinds, in all the grain growing States, are short, and in the great majority of cases even light—in many individual cases a failure. Corn however to some extent, still remains an undecided matter, and with a continuation for a few weeks of favorable weather, may in many districts prove a good crop. Grass also appears generally to be a good crop. especially the cultivated kinds.

Under all these circumstances, it seems to follow as a matter of course, that prices generally must improve on the low figures of the past. To just what extent, it is of course hard to tell, as there are so many causes to affect and modify them. Still quite a material improvement seems indispensible, at least in the price of wheat and oats, and probably in corn. Nevertheless we would not advise people who owe money, to hold on for very high prices. To all such seventy-five cents is as good in the fall as a dollar in the spring, beyond all dispute. A thousand losses and wastes hang inevitably upon keeping grain on hand, even with good storage.

CHARACTERISTICS OF THE DIFFERENT VARIETIES OF GRAPES.

Several correspondents are inquiring as to the external peculiarities and appearances of the different varieties of grapes, both foliage and fruit; wishing some means by which they can distinguish them, one from another.

Who can impart the desired information? Whatever peculiarity of form of fruit or leaf, that could be distinctly illustrated by drawings and engravings, we should be pleased to learn, and would lay it before our readers.—The grape is rapidly acquiring interest among our people, and a better knowledge of the varieties and their comparative value, would certainly be both interesting and useful. P.

HYDRAULIC RAMS.

GENEVA, Walworth Co., Aug. 6th, '58.

FRIEND POWERS,

DEAR SIR:—I take the liberty to trouble you for a little information, if you can give it. I wish to bring a spring of water about 100 rods to my house and barn; the spring is some 80 or 90 feet below my house, and I wish to procure a *Hydraulic Ram* with which to do it. Now can you inform me whether I can procure one in this State, say in Milwaukee or elsewhere, and what is the cost; and are they good and reliable. The spring is on the south side of Geneva Lake, about ten rods from shore, and I can get some ten feet fall to the lake. Can I make it operate safe in a lead pipe. Please inform me by letter if you are posted upon this subject.

Yours very truly, JOHN W. BOYD.

NOTE.—Who that has had experience with water rams on so high heads as 90 feet, can give the General the desired information, not only as to the working of the ram, but about the kind and strength of pipe he needs cast, &c. P.

SUGAR CANE MILLS.

We learn from Hedges, Free & Co., of Cincinnati, that they are turning out great quantities of these mills of all the different sizes and patterns, and that they can still supply any of the common sizes on very short notice, together with any other apparatus pertaining to sugar-making required. Their prices and terms will be found in the May and June Nos. of the *Farmer*.

GOOSEBERRIES—FORTY TO THE QUART!

We are indebted to J. C. Plumb, Esq., of Lake Mills, for a jar of the finest Gooseberries we ever saw. Forty berries just filled a quart measure! Who can beat it?

LIME AS A DISINFECTANT.

A liberal and frequent use of lime about our premises, during the warm season, is a matter of the first importance in a sanitary point of view. A single bushel of lime, well applied in damp cellars, sour and offensive places, during the hot months of summer, would often prevent the most desperate cases of disease and even death. Two shillings worth of this preventive timely applied, will often avail more in warding off disease, than all the drugs in creation, in the hands of the most skillful practitioners, can cure. Therefore heed the admonition, ye who would be well and live out half your days. Scatter the lime and keep fevers and pestilence at bay.

TREES BEARING IN NURSERY ROWS.

MESSRS. EDITORS:—Enclosed please find an advertisement for the Farmer, which please set in ordinary type for three months from first of September. Our stock advertised is *very fine*, by far the best we ever offered, especially the seedling roots and small fruits. If you should be in our city before it is too late, we wish you would give us a call and see for yourselves. We will have considerable fruit, but some in the nursery rows is worth looking at, I assure you. Something I never saw before; trees but four years from the graft hanging full. Is that an argument for or against root grafted trees.

Yours most respecfully,

COLBY & WILLEY.

JANESVILLE, Aug. 13, 1858.

COUNTY DELEGATION TO STATE FAIR.

GLENMOUNT, St. Croix Co., Wis.,
August 6th, 1858.

MR. POWERS,

Secretary of W. S. Ag'l Society,

DEAR SIR:—At a late meeting, the Executive Committee decided to send a delegation to the State Fair, the same to be prepared to take articles, &c., for exhibition.

Yours in all the improvements of the day,

GEO. MAY POWELL,

Cor. Sec. N. W. U. Ag'l Soc'y.

All right St. Croix, you will be well be welcome, surely; and the farmers of the older counties will be interested in seeing and comparing the respective products of the new and northwestern counties with their own.

We hope that many other counties will follow the example of our yonng sister St. Croix, and be on hand in their might. If possible, with camping tents, for a good time generally.

P.

HORSE SHOW AT SPRINGFIELD, MASS.

We are happy to remark that our worthy friend, S. S. Daggett, Esq., of Milwaukee, is appointed one of the judges of this grand show, to come off about the middle of next month. We further learn from him that he proposes attending, and we wish him abundant joy of the trip. P.

MINERAL AND GEOLOGICAL SPECIMENS.

Col. G. F. Hastings, of Juneau, Dodge Co., in a late trip to Minnesota, collected a very handsome list of mineral and geological specimens, and presented them to the State Agricultural Society. They make a fine addition to the cabinet; and in behalf of the Society he has our thanks. P.

Horticultural Show.

The Second Monthly Exhibition of the Madison Horticultural Association will be held at Madison, on Thursday the 9th of Sept. inst. A pleasant affair is expected. Persons in adjoining towns are invited to become members, and compete for the premiums, in fruits, flowers, vegetables, wines, jellies, preserves, &c.

D. S. CURTISS, Sec'y.

Juneau County Agricultural Society.

This new county has recently organized an Agricultural Society, and elected the following board of officers. Success to them. It will do the county more good than almost any other thing that could be gotten up.

President—L. Van Slyck, New Lisbon.
Vice President—D. W. Decker, Wonewoc.
Business Sec'y—John Turner, Lemonwier.
Cor. Sec'y—M. M. Baker, Plymouth.
Treasurer—Jonathan Carter, Lindina.

HANEMANN RECONVERTED TO COMMON SENSE.—At a meeting of "spiritualists," an invalid was brought forward dreadfully afflicted with ulcerous scrofula that all the doctors had failed to cure. It was proposed to appeal to the spirit land for advice, and a Homeopathic physician present interrogated the departed spirit of Hanemann as to what remedy should be taken. Loud and distinct raps, audible to the whole audience, told off *A-y-e-r-s C-a-t-h-a-r-t-i-c P-i-l-l-s. Homer (N. Y.) Whig.*

Meteorological Synopsis for July, 1858.

Barometer stood highest on the 1st, 29.942.
" " lowest on the 8th. 28.018.
Average for the month, 29 060.
Thermometer stood highest on the 7th, 85 degrees.
" " lowest on the 11th, 60 "
Average for the month, 72.143 "
Amount of rain, 2.85 inches.
The prevailing winds were North-east and South-east.

NEW ADVERTISEMENTS.

See advertisements of Wheeler, Melick & Co's celebrated Tread Power Thresher and Separator. It is beyond question the best machine for the common farmer, that is made.

Wright & Cash also advertise Hydes Patent Cultivator Plow. It is very highly recommended, as will be seen, by some of the best farmers in the State. We have been using one of them for the last few weeks, and find it all that it is recommended.

John Greening, of Mazo Manie, advertises pure blood Suffolk Pigs for sale.

LITERARY NOTICES.

POPULAR PHYSICAL ASTRONOMY; or, an Exposition of Remarkable Celestial Phenomena. By DANIEL VAUGHAN. Truman & Spafford, 25 West Fourth St., Cincinnati. For sale at Bliss, Eberhard & Festner's, Madison. Price 50 cts.

In this age of book-making; when one can hardly keep the tally of new titles, it is nevertheless still a luxury to lay the hand upon a book not written for money, or a momentary popular favor—a work whose broad foundation and gradual growth under the guidance of a master builder, are a true prophecy of stability and worth.

The work before us is one of a thousand, and is sure to win high rank for the author, both in Europe and America. Indeed several of the treatises which it embodies, have already found favor with scientific men and philosophical societies in England, France, Austria, Prussia and Sweeden. Embracing chapters on "The Doctrine of Gravitation," the "Theory of Tides," "Effects of the Tides," "Movements of Comets," "Fall of Meteors," "The Origin of Solar Meteoric Light," Varible Stars, and the Sun's Spots, &c,, &c., it can hardly fail to be interesting to every philosophic mind. The style is purely Franklinian and adds a charm to the fascinating thought. For number, novelty and importance of original ideas, and for the logical character of its deductions, there is hardly a work of 144 pages in the whole scientific catalogue of modern times that is superior to this. Let every lover of science read it and judge for himself.

THE MOUNT VERNON RECORD.

This beautiful quarto of eight pages has made its second visit to our sanctum, calling to mind by its historic accounts and eloquent appeals, the sublime heroism and virtue of the Father of his country. It is the organ of the "Ladies Mt. Vernon Association of the

Union,"—its object to stimulate the people of the United States to the performance of a long-neglected filial duty, to-wit: the rescue of the grave of the immortal Washington from its half-oblivious neglect, and the bestowment of it upon the country as an inheritance forever inalienable and sacred,—an object which certainly commends itself to every American heart, and will receive a most cordial support from every true patriot.

Terms $1, per annum. Address S. F. Watson, Vice Regent, L. Mt. V. A., Philadelphia.

THE SEVENTH VOL. OF BENTON'S ABRIDGEMENT,

Coming to us full-laden with the rich treasures of American political history, kindles anew the fires of patriotism, and gives fresh sanction to the just pride we feel in those great statesmen, whose sublime oratory not only imparted new lustre to the American name, but made American literature classic forever.

The prominent figures in this period of the history, are Randolph, Webster and Clay—the subjects upon which they expended their mighty powers, the Caucus System, the Missouri Compromise, and the Recognition of the Independence of Greece and of the South American Republics. As we read and re-read the masterpieces of eloquence which grew out of those great occasions, the very scenes, of which they are but the record, seem to pass before us like a splendid panorama, stirring the soul to deeds of heroic virtue.

To every young man who would prepare himself for public life, this work is indispensable, alike for the history it contains and as furnishing a model of oratorical style and of parliamentary usage and ethics. To the old it is invaluable as a remembrancer of deeds and times once familiar, but now half-forgotten. See advertisement.

THE U. S. DEMOCRATIC REVIEW.

The forty-second vol. of this time-honored Review proves to be equal to any of its immediate predecessors, and will be found highly interesting to those who are in sympathy with its political teachings. Conducted with ability by its talented proprietor, and supported by a number of the ablest Democratic pens in the country, its pages are always richly worth a perusal.

The August No. has well-written articles on "Non-Intervention of Nations," "Democracy and Republicanism—Choate and Cushing," "The Contest in Illinois—Senator Douglass on Popular Sovreignty," Biographical Sketches, "&c., &c." Terms $3, in advance. Address Conrad Swackhamer, Editor and Proprietor, 335 Broadway, N. Y.

THE CINCINNATUS

Is one of the neatest and most ably conducted agricultural magazines published east or west. Made up almost entirely of original papers of some of the best writers on rural affairs, it never fails to reward a careful reading from beginning to end. Its earnest and able advocacy of the importance of agricultural education, and of the endowment of the requisite institutions of learning, should especially commend it to all who are interested in the the great work of elevating the farmer to a higher plane of life and scientific practice. Subscription price $2 00. Address W. H. Ongley, Agent, College Hill, Ohio.

AMONG OUR STATE NEWSPAPERS OF RECENT ORIGIN,

We have pleasure in noticing the Darlington *Excelsior*, located at Darlington, Lafayette Co., and under the editorial management of Messrs. Thearle & Lindley. Mr. Thearle has been known to us sometime as the energetic and enterprising Cor. Sec'y of the Lafayette Co. Ag. Society, and as a gentleman whose influence upon the people of his County is very worthily enlarged by this handsome weekly organ. Success to the *Excelsior*.

THE IOWA COUNTY ADVOCATE

Is published at Dodgeville, by Messrs. Stevens & ———, and will doubtless succeed.—The people of Iowa are enterprising and intelligent and will certainly sustain a journal which promises so well as the *Advocate*.

THE WAUPACA CO. REGISTER

Comes to us regularly, and is one of the handsomest sheets published in the State. A. J. Lawson, Esq., the Editor and Proprietor, knows how to make a good paper and is determined to do it. No. 12 contains the Premium List for the Co. Fair, and indicates a healthy and vigorous condition of the Society. Thanks for the *Farmers* provided for therein as premiums.

THE LAKE HURON GRINDSTONES

Are sold by Tibbits, and are by far the best kind in use. See advertisement.

County Fairs in Wisconsin for 1858.

It is desirable and important that we know when and where the County Fairs of this year are to be held. Will the Secretaries of the respective Societies favor us with the necessary information? The following meagre list has been gleaned from our exchanges:

Juneau,		Sept. 14
Grant,	Lancaster,	" 22-23
Waushara,	Wautoma,	" 22-23
Jefferson,	Fort Atkinson,	" 24-25
Winnebago,		" 24-25
Racine,		" 28-29
Rock,	Janesville,	" 28-30
Walworth,	Elkhorn,	Sept. 29-Oct. 1
Richland,	Richland Centre,	Oct. 12-13
Crawford,	Seneca,	" 12-13
Marquette,	Princeton,	" 13-15
Sauk,		" 14-15
Bad Ax,	Viroqua,	

State Fairs for 1858

California,	Marysville,	Aug. 23-28
St. Louis,(!)	St. Louis,	Sept. 6-11
Ohio,	Sandusky,	" 14-17
Vermont,	Burlington,	" 14-17
New Jersey,	Trenton,	" 14-17
Illinois,	Centralia,	" 14-18
Rhode Island,	Providence,	" 14-18
Maine,	Augusta,	" 21-24
Iowa,	Oskaloosa,	Sept. 28-Oct. 1
Pensylvania,		" 28- " 1
Wisconsin,	Madison,	Oct. 4- 8
Indiana,	Indianapolis,	" 4- 9
Kentucky,	Louisville,	" 5- 8
New York,	Syracuse,	" 5- 8
New Hampshire,	Dover,	" 6- 8
Connecticut,	Hartford,	" 12-15
Alabama,	Montgomery,	" 18-22
North Carolina,	Raleigh,	" 20-23
South Carolina,	Columbia,	Nov. 9-12

U. S. and Va. Central, Richmond, Oct 25-30
National Horse Show, Springfield, Mass., Sept. 14-17
Wis. Farmers' & Mechanics' Club, Whitewater, Sept. 21-23

Full Blooded Suffolk Pigs

FOR SALE BY
x ix 3 JOHN GREENING, Mazomanie.

For Chicago and all Eastern Citi s

VIA

Chi, St. Paul & Fond du Lac R. R.

THREE Daily Trains leave Madison, connecting at Janesville with Chicago, St. Paul & Fond du Lac Railroad, without change of cars, direct for Chicago.

Passengers destined for Chicago and points East, should be particular and secure tickets via this route, otherwise they will be subjected to circuitous routes and several hours delay.

This is the only direct route from the interior of Wisconsin to Chicago, and connects direct with all trains going East on the different roads from Chicago.

Passengers and baggage carried FREE OF CHARGE from Depot in Chicago to all Eastern Roads.

Be particular and ask for tickets by the Chicago, St. Paul & Fond du Lac R. R., thereby saving 29 miles travel and several hours time.

No detention or missing of connection via this route.

Through Tickets to all points East can be had at the Depot of the Milwaukee & Mississippi R. R., at Madison, and all principal Railroad offices.

S. F. JOHNSON, Supt.
E. DeWitt Robinson, Gen'l Ticket Agent.

The College Journal of Medical Science.

A MONTHLY MAGAZINE of 48 pages, conducted by the Faculty of The Eclectic College of Medicine, is published at One Dollar a Year, payable in advance. The volume of the Journal commences with the year. Communications for subscription, or for specimen numbers, should be directed to

Dr. C. H. CLEAVELAND, Publisher,
x viii tf 188 Seventh Street, Cincinnati, O.

Grain Drills.

New and Improved Grain Drill and Seeding Machine Combined.

Patented Dec. 1, 1857.

THE subscriber having just purchased the sole right to manufacture and sell these machines in 18 counties in this State, would respectfully ask the attention of those persons already interested in the matter of

DRILLING IN THEIR WHEAT,

and those who should for their own benefit become interested, to this new machine. By it we accomplish all that ever has been, and as we suppose all that ever can be accomplished by any GRAIN DRILL. The advantages of this machine over all others with which we are acquainted, is the superiority and simplicity of its machinery, by which it deposites the wheat in an accurate, uniform and beautiful manner in the ground. Besides which we have another and independent

BROAD-CAST SOWING MACHINE,

for seeds of all kinds, mounted on the same wheels and operated separately or simultaneously with the Drill. There is also a

PERPETUAL REGISTER,

which indicates the number of acres sown and by which the quantity of wheat per acre is regulated.

We will not speak too much or too highly of this machine, as we are determined that it shall stand or fall according to its own merits, and that it shall be its own recommendation when properly brought before an intelligent and generous public.

All communications addressed to the undersigned, will be promptly attended to

All persons who wish to secure one of these Drills for the fall sowing, will do well to send their orders early.

Price of Drill not yet known, but guaranteed to be from $20 to $30 less than any other machine we know of.

All persons are invited to call on the proprietor, where one of the machines may be seen and examined.

A. STONER,
x vii 3 No. 2, Spring Street, Milwaukee, Wis.

Milwaukee Mutual FIRE INSURANCE COMPANY!

CAPITAL, $100,000.

OFFICE, NOS. 3 & 4, MARTIN'S BLOCK,
MILWAUKEE, - - - - - - - WISCONSIN.

The Oldest Company in the State!

As only isolated dwellings and barns, with their contents, are insured, (no risks being taken on stores, taverns, mills, shops, &c.,) Farmers are presented with an unequally safe and cheap means of insurance.

DIRECTORS:

S. S. DAGGETT,	A. GREULICH,	J. H. VAN DYKE,
E. CRAMER,	E. D. HOLTON,	H. FESS, Jr.,
H. L. PALMER,	G. BARRY,	J. B. MARTIN,

P. B. HILL, *Secretary.* S. S. DAGGETT, *President.*
J. B. MARTIN, *Vice Pres't.* M. L. SKINNER, *Office Agt.*

Those desiring insurance on confering with any authorized Agent in their vicinity, if any, or by writing to the office agent, giving a description of the property insured, will meet with prompt attention. May, 1857. tf

Mendota Foundry & Machine Shop.

THE Subscriber has recently established an extensive Foundry and Machine Shop in the city of Madison, (on Fourth or Mendota Lake, between the Capitol and the University,) where he is prepared to make all kinds of Castings, as well as finished Machine Work, in the way of

Steam Engines, Agricultural Machinery, Artesian Well Drilling Apparatus, Sugar Cane Mills, &c., &c., &c.,

and anything else in the line of Casting, Forging, or Finishing in the best manner and on short notice.

All parties wanting anything in our line are solicited to call at our works, or communicate by mail, with the undersigned proprietor.

L. R. BROWN.
Madison, June 20, 1858. x vii tf

WISCONSIN FARMER,

AND

NORTH-WESTERN CULTIVATOR.

Vol. X. MADISON, OCTOBER, 1858. No. 10.

D. J. POWERS AND PROF. J. W. HOYT, Editors.

THE CULTIVATION OF PLANTS.

HAVING treated successively of the germination of the seed, the sources and nature of the food of the plant, the nature of its constituents, the character of its organs, the laws of its developement, and the geographical distribution of plants, we are now prepared to enter upon the discussion of that important branch of the general subject, to which the long series of articles already published were a necessary preliminary.

The discussion of the cultivation of plants, in order to completeness, must be elaborated under two heads, to wit: *the soil*, and *the plant*—the latter branch involving a thorough treatise on each of the plants commonly cultivated as food.

THE SOIL.

Under this head we shall treat first of *natural soils*, and secondly *of the improvement of soils by mechanical or other means.*

By natural soils we mean such as were prepared in the great order of nature and thus present themselves to man for his use. There was, doubtless, a time when there was no proper soil on the earth—when the whole rocky surface offered no genial earthy bed for the growth of vegetation. But forces had been begotten and laws ordained, whereby, in process of time, this needed soil should be formed. The running stream, the slowly wearing storm, and the silent, but ever-working chemical forces were the agents employed; and the work still goes forward. Borne aloft on wings of vapor, the water of the ocean is condensed upon the mountain-top, and thence descends in surface rivulets to the valley below, or through fissures in the rock—becoming in either case the fountain head of a mighty stream whose course is back to the ocean again, and the result of whose silent power and mechanical action, is a gradual wearing of the fragments of rocks, until, at last, reduced to fineness of gravel or even mineral slime, they either become alluvial deposits on the overflown valley, or newly-added leagues to the old continent in the form of a delta at the river's mouth. Or, again, this water, once of the ocean, falling as rain or dew upon the porous rock or stone, penetrates the surface and through the crystalizing force gradually disintregates the rock, until it finally becomes the earth of the field. So also, the law of affinity tends to the same beneficent result by the formation of new compounds upon the surface, whose greater solubility, hastens the destruction of the mass.

Thus it was that the arable soils which now cover the surface of the earth were slowly formed; and thus it is that the "everlasting hills" of to-day, are destined to become the fertile fields of the ages to come.

NATURE OF DIFFERENT SOILS.

Soils may be classified with reference to their chemical or their physical characteristics. Chemically considered, there are certain elements, (already described under the head of Sources and Nature of the Food of the Plant,)

which, because they are present in all plants are essential to all soils; so that the difference between various soils is rather of proportionate quantity than of kind. So diverse are plants, however, in their character, that scarcely any soils are found in nature, without some plant or class of plants to correspond. The question of fertility, therefore, involves the nature of the plant to be grown and will be more fully discussed under the head of Special Plants. It may be remarked, however, that the presence of any particular constituent in extravagant proportions, with a corresponding deficiency of some other, must furnish a soil whose range of fertility will be limited to a very few plants, or which may be altogether barren.

The most important constituents of a good soil are silica, clay and lime, which taken together, constitute the chief bulk and are absolutely essential to every plant.

SANDY SOILS.

The value of a sandy soil depends upon its depth, the nature of the subsoil, its geological position, the character of the climate, and the nature of the plant when reared; and the bearing of each of these circumstances is modified by every other. If very deep the foundation should be impervious to water, else there must be a frequency and copiousness of rains; if very shallow and the climate particularly moist, with abundant rains, the soil below should be sufficiently permeable to admit of the escape of superfluous water.

The geological position should not admit of ready, natural drainage unless the climate be rainy and the fall of water too great for the health of the plant. A sandy soil imbibes less moisture and retains it with less tenacity than any other, its imbibing power as compared with that of clayey, calcareous, and humus (product of the decay of organic matter,) being as 25 to 50, 29, and 100, and its power of retention as 11.6 to 66, 72, and 80. It also has the least power of any, to absorb moisture from the atmosphere.

Again, if the climate be cold and the season short, a sandy soil is desirable, for the reason that it is warmer than any other and therefore hastens vegetation to an earlier maturity.

The tenacity of a sandy soil is likewise so much less than that of clay and humus that, all other things being favorable, it is so much more easily worked as to be considerably more valuable on that account.

CLAY SOILS.

Clayey soils are those in which alumina predominates, and are therefore dense, impervious to water and light-colored. They are also sometimes styled *strong* because of their being adapted to grow the most staple kind of grains, as wheat; *heavy* because of their tenacity and the greater labor of working them; *wet* because the rain which falls does not readily pass into the soil below; and *cold* because, being thus retentive of water they are kept cool by the process of evaporation which must continually go on upon the surface.

The value of a clay soil likewise depends upon a variety of circumstances like those enumerated under the head of sandy soils.

The relative proportion of clay as compared with other constituents, must be determined, within certain limitations, by the character of the climate and the uses to which it is to be put. Should there be present 30 to 40 per cent. of sand or gravel, it is then styled *clay loam*, and will, if properly drained, and manured, answer a good purpose for the growth of some crops. If only 5 to 20 per cent. of sand be contained, it is then unfit for cultivation, and may be devoted to the manufacture of brick and the coarser kinds of earthen ware. The presence of even 5 per cent. of clay, all other conditions being fulfilled, will ensure a good crop, and is styled by chemists a fertile soil. In a very wet climate, the presence of a larger proportion is to be deprecated, unless there be a sandy subsoil, so that drainage would be easy. The fact that it shrinks when dried, also renders it objectionable in a climate subject to extremes of wet and dry weather, inasmuch as when saturated with water, it bakes and cracks on exposure to the heat of the sun. While on the other hand, in a dry warm climate its presence, in considerable proportion is indispensable as a means of longer retaining the rain which falls, and of absorbing water from the atmosphere in cases of drought.

CALCAREOUS SOILS

Are such as abound in lime, which may be either in the form of the carbonate and a product of the disintegration of common limestone—of the phosphate, derived from organic substances, as shells and the skeletons of decayed animals—or of the sulphate, as gypsum, which so largely abounds in some parts of the world. It also exists in the form of the silicate, as in hornblende, which forms a compo-

nent part of so many rocks, and is indeed an important source of lime to the soil in those regions where the carbonate of lime is not present in sufficient quantity.

We have already said that this lime is absolutely necessary in some quantity to the fertility of every soil, and may add that it may be considered deficient, so far as ordinary crops are considered, if present in less quantity than about 6 per cent.

Its practical effect in considerable proportion is to ameliorate both the too clayey and the too sandy soil, rendering the former less tenaceous and the latter more adhesive.

SOILS RICH IN HUMUS.

That dark colored substance which every farmer has noticed in peat-bogs, muck-beds, and which abounds also in our western marshes and is a prominent constituent of our surface prairie soils, is called *humus*, (the Latin for moist earth,) and is also essential to the successful growth of vegetation. Its dark color is owing to the presence of carbon in considerable proportion. It is likewise known as *vegetable mould*, being the product of decay, and for this reason is more abundant in those soils which have been enriched by the decay of successive generations of plants. In some of our primeval forests, as also our low praries, this rich mould is several feet deep, and almost inexhaustible.

Its value lies in three important circumstances. First, it is esssential as food for the plant; secondly, it gives friability or crumblingness to the soil; and thirdly, it has an affinity for water and releases it but slowly. It is an ameliorator of the stiffness and adhesiveness of clay soils, is a moistener of dry sandy soils, and is adapted to the growth of such crops as require a large supply of carbonaceous food. Indeed, its property of keeping moist is so marked that in its crudest, half-formed state it is universally used as a mulch to plants and young trees as a means of protecting them against the effects of severe drought.

To recapitulate;—we have

1. A sandy soil, containing upwards of 90 per cent of sand—adapted to the growth of a few plants, but productive only in a moist climate;

2. A good clay soil, properly enough termed a clay loam, which contains 20 to 40 per cent. of fine sand—a loam with 40 to 70 per cent. of sand, and a sandy loam with 70 to 90 per cent. intervening—and for a dry climate, and the growth of wheat and oats, the best of any;

3. A calcareous soil, abounding in lime and good for any of the cereal grains; and

4. A rich vegetable mould, also appropriate to a dry climate and highly productive for certain grasses and corn.

THE SUBSOILS.

Or those which underlie the surface are quite as various in their chemical and physical characters as those just considered; their influence upon the plant, however, is less marked and direct. It is important, nevertheless, that their nature be determined, and no farmer of proper intelligence will altogether ignore them. And yet, it is too true that the great majority of farmers, totally regardless of what wealth of minerals or of what possibilities for the improvement of the faulty surface may lie in the soil below, spend their whole lives upon miserable, unsightly and unproductive farms, which, with a very little expense, directed by science, might be made both beautiful and prolific.

But of this, more under the head of Methods of Improvement. H.

Correspondence of the Farmer.

Seed Corn will not Rot if Good.

MESSRS. EDITORS:—I noticed in the May No. of the Wisconsin *Farmer*, an article on seed corn. I am a farmer in Wisconsin, and I have never yet found any dificulty with good seed corn, though planted ever so early.

If farmers are sure they have good seed corn, they need not have any fears about planting too early.

Last spring I planted my corn the tenth of May, and when I commenced planting in the morning the frost was about once inch deep in the furrow where it froze the night before, (I mark my corn ground with a plow,) and it was wet and cold for two or three weeks after, but not one grain of it rotted.

I gather my seed corn as soon as it begins to get hard, and string it up in an out-house, and there let it remain until spring. The best way to try seed corn is, to put it out of doors in the ground as soon as the frost is out: if it is good seed it will lay there without rotting until the weather is warm enough for it to grow.

SUBSCRIBER.

LIMA, Aug. 1858.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER X.

SCHOOL HOUSE BUILDING, AND MANAGEMENT OF SCHOOL DISTRICT BUSINESS.

Our treatment of this subject, will be simply in a business point of view, and not as a professional teacher or educator, and we trust we do not refer to it, without a measureable consciousness of its high importance. Underlying as it does, the whole fabric of our society and civil government, its true interests and their proper development, cannot be too well understood, either by the primary school district voters, or those they promote to offices, and entrust with the management of their district school affairs.

In our transition growth, from a new to an older country, the building of the district school house, follows close upon the heels of the private cabin; and in the first instance, in the very new neighborhoods, the structure is usually a cheap and temporary affair. But in the progress of things, many of our districts are now attaining annually, to the point of erecting new and more permanent houses. To this class of districts we mainly direct our suggestions in reference to building.

When a district determines to erect a school house, two main questions at once present themselves; first where shall the house be located; and secondly of what size and shape shall it be. Both of these questions are perhaps of almost equal importance, and require the exercise of the most sound and liberal discretion. First as to where a house shall be located, and what considerations should be taken into account. Centrality in the final permanent district, should first of all be considered, and as equally indispensible, none but an elevated, pleasant and healthy locality, some little distance at least from the public road, and with ample room for all needful exercise, should ever be chosen. In the undulating and changable phases of our landscape, there is perhaps hardly a district in the State, that does not afford plenty of central and appropriate sites for locating the grounds and erecting these great primary colleges of the whole people.

And yet, in traveling through the country, how often do we see school houses located in positions wholly unfit; and not unfrequently upon sites unsuitable even for cattle stalls. At the crossings of the roads, close in some muddy corner, and with the front entrance opening directly into the street or public highway, amid mud, dirt and maybe stumps and stones; and with a miserable half-made step, or perhaps no step at all, for the scores of children of all ages and sizes to get in and out upon, or upon which to stamp and clean their feet of mud and (western free) soil. Many such have we seen, and many such there are, but they are a sure index of a want of taste and common decency even, in the districts where they are tolerated. Such locations made and persevered in, argue an utter lack of regard for the best interests of the young and rising generation.

We are sorry to say, what we nevertheless believe and know; and that is, that no small amount of selfishness and lack of manly generosity, is often manifested by the residents of school districts, and frequently by wealthy and influential parties, in relation to the location and building of school houses. Such parties too often seem to think that any shabby corner will do for a school house site, and that any cheap shabby structure will do for a *district school house.* No matter how ordinary, if it only costs but little. Such parties often allow themselves to feel that district schools are of but little importance to them, or their children. Or perchance they have no children of their own, in which case they too often seem to take it for granted, that common schools are of no importance to them. Now there could be no greater mistake than all this. In these important public projects, men who are men, should exercise their highest manhood and generosity; and especially in developing school houses, feel that they cannot judiciously do too much, provided it is done well; and it makes less difference than they often suppose, whether the children to be educated are their own, or their neighbors. Our system of governmental management is such, that if our neighbors' children grow up ignorant, contracted and perhaps viscious in their habits, all must suffer nearly alike, pecuniarily and otherwise.

Yet it is an undeniable fact, obvious to the senses of every one, that we have no safety for anything short of good thorough general education, throughout the whole community. Then let us not stint our main source of all prosperity; but if a district in which any of us resides needs a school house, let us on talking the subject up for disposal at the an-

nual meeting, consider fully and liberally the wants of the locality; not merely how many children it has to day to be accommodated; but also how many it will have five or seven years hence, and build accordingly. A district that is able to build a house that costs $400, can add another hundred if necessary while they are about it, if they only think so, and thereby secure what is creditable and good instead of something that will barely answer the purpose, perhaps for a few years,and then again have to be rebuilt. Brick or stone as a material, is vastly preferable to wood, when reasonably attainable; not only looking better, but being much more durable and comfortable in all respects when properly built.—Of heating, ventillation and internal structure, in general or in particular, we shall not now speak. We repeat that a few dollars more or less makes but little difference to a community in such a matter. There is no tax-payer, however economical, but what will find himself spending foolishly in some way, during the year, more than all these public needs require of him, in the way of common school education.

Districts about to build, should be doubly cautious in the selection of their officers, who by the way are never any too good; but in such cases, matters should never be trusted to inefficient, selfish, or unsafe men, if possible to avoid it. For it is a fact well understood, that competent persons will accomplish much the most with the same amount of means; and not only that, but their work when done will be what is wanted. We see as many badly planned houses about the country, as we do those that are badly located; and this of course arises from a lack of proper taste and knowledge; hence the matter of a plan should be well attended to, and if those whose duty it is to get it up and determine it, do not know what it ought to be, they should in all cases consult some one who does. Every neighborhood, or at least every town, has some either professional or amateur person of taste in it, who can if necessary be consulted in such matters. Some professional builders have good taste, while many others have none at all, and if left to plan even a school house, will make a perfect fright of it. Therefore we repeat, exercise the best means in your power, to get up an appropriate and tasty plan in the outset, and then strive zealously and persistently to carry it out in such a manner as will make you proud of it when done; and small a matter as it may seem to be proud of, we will assure you that few things will reflect more favorably upon your property and locality, in the estimation of a buyer or stranger, than not only a school house, but a neat and tidy one. Communities often spend largely of their means, in erecting and decorating showy churches, while their school houses are left rough and shabby as of little account.—Such a course however, always strikes us as being in exceedingly bad taste, and anything but creditable either to the heads or hearts of a community. First educate the children well, and the necessary after-work of christianizing them will be well-nigh accomplished.

But in building, stop not as too many do, with merely getting up a house, but persevere in the good work until it is enclosed with a good substantial fence, and furnished with the requisite outbuildings, *and the whole painted or white-washed, to the end.* Now how many among the enterprising rural districts, will do this much for their children—not piece-meal, and during the course of *five or seven years,* but right along, in the first instance of building? Not one we fear, where hundreds should. We do not in traveling, see one such *thoroughly completed institution in all its parts,* to a county, and they seem quite as often lacking in the wealthier and more advanced neighborhoods, as in those of medium or limited ability. Such a state of things arises much oftener from a lack of taste and public spirit, than from the lack of money or means. Wealthy farmers with their hundreds of acres spreading right and left, and shutting out neighbors, are sometimes inclined to feel, and to exercise an overweening arrogance in relation to all these matters, which is anything but creditable to them. It is a species of *fundamental meanness* that their neighbors ought to remember of them, at other times, and in other places, and especially when they perchance come forward for fat and honorable offices. We repeat, let the man who looks down upon the district school, and neglects its interests and gives it the cold shoulder, when he comes up for any office, that he thinks more creditable or profitable, be marked and held either a hollow-hearted or *hollow-headed* fellow, who is not safe to be trusted; such is our opinion of him, to say the least.

In conclusion upon this portion of our subject, we would repeat, that the *district school*

house, is the true foundation stone of the *World's Liberty,* progress and happiness; and just in proportion as its mission is understood and carried forward, just in that same proportion, will everything in the world, worth having, progress and keep pace with it. Let this fact then, be well understood by every parent, guardian and even bachelor, and not only understood but acted up to, in good faith and whole-souled liberality, until every district and locality, has not only its school house and fixtures, but a neat, substantial and good one, that smiles out amid the surrounding shade like a light in a dark place, a credit to its owners, and a pattern for all others to follow. P.

Reasons why Farming Life is not what it should be.

The article in the August number of the *Atlantic Monthly,* on "Farming Life in New England," though faulty in some respects, contains so much truth also applicable to western farm-life that we cannot forbear the publication of the following extract. After commenting upon false notions of labor, the degradation of the farmer's wife, and neglect to cultivate the social element, as causes of the inferior rank of the farming occupation, the author goes on to say:

Traditional routine has also operated powerfully to diminish the attractiveness of agricultural employments. This cause very happily grows less powerful from year to year. The purse is seen to have an intimate sympathy with intelligent farming. Were we to say that God had so constituted the human mind that routine will tire and disgust it, we should say in effect that he never intended the farmer's life to be one of routine. Nature has done all she can to break up routine. While the earth swings round its orbit once a year, and turns on its axis once in twenty-four hours,—while the tide ebbs and flows twice daily, and the seasons come and go in rotation, every atom changes its relations to every other atom every moment. Influences are tossed into these skeleton cycles of motion and event which start a myriad of diverse currents, and break up the whole current of life and being into a healthful confusion. There are never two days alike. The mother sky never gives birth to twin clouds. The weather shakes its bundle of mysteries in our faces, and banters us with "Don't you wish you knew?" We prophesy rain upon the morrow, and wake with a bar of golden sunlight on the coverlet. We foretell a hard winter, and before it is half gone, become nervous lest we should miss our supply of ice. The fly, the murrain, the potato-rot, and the grasshoppers, all have a divine office in tipping over our our calculations. The phantom host of the great North come out for parade without announcement, and shoot their arrows towards the zenith, and flout the stars with their rosy flags, and retire, leaving us looking into heaven and wondering. Long weeks of drought parch the earth, and then comes the sweet rain and sets the flowers and foliage dancing. All the seasons are very late or very early, or, for some reason, "the most remarkable within the memory of man."

This is God's management for destroying routine within the law of stated revolution, and for bringing the mind constantly into contact with fresh influences. The soul, encased by a wall of adamantine circumstances, and driven around a track of unvarying duties, shrivels or gets diseased. But these circumstances need not imprison the farmer, nor these duties become the polished pavement of his cell. He has his life among the most beautiful scenes of Nature and the most interesting facts of Science. Chemistry, geology, botany, meteorology, entomology, and a dozen other related or constituent sciences,—what is intelligent farming but a series of experiments involving, first and last, all of these? What is a farm but a labratory where the most important and interesting scientific problems are solved? The moment that any field of labor becomes intelligently experimental, that moment routine ceases, and that field becomes attractive. The most repulsive things under heaven become attractive, on being invested with a scientific interest. All, therefore, that a farmer has to do to break up the traditional routine of his method and his labor, is to become a scientific farmer. He will then have an interest in his labor and its results above their bare utilities. Labor that does not engage the mind has no dignity; else the ox and the ass are kings in the world, and we are but younger brothers in the royal family. So we say to every farmer,—If you would make your calling attractive to yourself and your boys, seek that knowledge which will break up routine, and make your calling, to yourself and them, an intelligent pursuit.

A recent traveler in England speaks enthusiastically of a visit which he paid to an old farm-house in that country, and of the garden farm upon which it stood, which had descended from father to son through a period of five hundred years. He found a family of charming intelligence and the politest culture. That hallowed soil was a beautiful body, of which the family interests and associations were the soul. To be disassociated from that soil forever would be regarded by the proprietors as almost equivalent to family annihilation. Proprietorship in English soil is one of the prime ambitions of the true Englishman; but we do not find in New England any kindred sentiments of pride in landed property and family affection for the paternal acres. The nomadic tribes of Asia would seem to have quite as strong local attachments as Yankee landhold-

ers, most of whom will sell their homesteads as readily as they will their horses. This fact we cannot but regard as one among the many causes which have conspired to despoil the farmer's calling of some of its legitimate attractions. The son slips away from the old homestead as easily as he does from the door of a hotel. Very likely his father has rooted up all home attachments by talking of removing Westward ever since the boy saw the light. This lack of affection for the family acres is doubtless owing somewhat to the fact that in this country landed property is not associated with political privilege, as it has been in England; but this cannot be the sole reason; for the sentiment has a genuine basis in nature, and, in not a few instances, an actual existence among us.

Resulting from the operation of all the causes which we have briefly noticed, there is another cause of the deterioration of farming life in New England, which cannot be recovered from in many years. Actual farming life has been brought into such harsh contrast with other life, that its best materials have been sifted out of it, have slid away from it. An inquiry at the doors of the great majority of farmers would exhibit the general fact, that the brightest boys have gone to college, or have become mechanics, or are teaching school, or are in trade, or have emigrated to the West. There have been taken directly out from the New England farming population its best elements,—its quickest intelligence, its most stirring enterprise, its noblest and most ambitious natures,—precisely those elements which were necessary to elevate the standard of the farmer's calling and make it what it should be. It is very easy to see why these men have not been retained in the past; it is safe to predict that they will not be retained in the future, unless a thorough reform be instituted. These men cannot be kept on a routine farm, or tied to a home that has no higher life than that of a workshop oa a boarding-house. It is not because the work of the farm is hard that men shun it. They work harder and longer in other callings for the sake of a better style of individual and social life. They will go to the city, and cling to it while half starving, rather than engage in the dry details and the hard and homely associations of the life which they forsook. The boys are not the only members of the farmer's family that flee from the farmer's life. The most intelligent and most enterprising of the farmer's daughters become school-teachers, or tenders of shops, or factory-girls. They contemn the calling of their father, and will, nine times in ten, marry a mechanic in preference to a farmer. They know that marrying a farmer is a very serious business.—They remember their worn-out mothers. They thoroughly understand that the vow that binds them in marriage to a farmer seals them to a severe and homely service that will end only in death.

As a consequence of this sifting process, to which we have given but a glance, a very decidedly depressing element is now being rapidly idtroduced into New England farming life. The Irish girls have found their way into the farmer's kitchen, and the Irish laborer has become the annual "hired man." At present, there are no means of measuring the effect of this new element; but it cannot fail to depress the tone of farming society, and surround it with a new swarm of menial associations.

In our judgment, there is but little in the improved modes of farming, in scientific discoveries, and new mechanical appliances, to be relied upon for the elevation of New England agriculture and the emancipation of New England farming life. The farmer needs new ideas more than he needs new implements.—The process of regeneration must begin in the mind, and not in the soil. The proprietor of that soil should be the true New England gentleman. His house should be the home of hospitality, the embodyment of solid comfort and liberal taste, the theatre of an exhalted family life which shall be the master and not the servant of labor, and the central sun of a bright and happy social atmosphere. When this standard shall be reached, there will be no fear for New England agriculture. The noblest race of men and women the sun ever shone upon will cultivate these valleys and build their dwellings upon these hills; and they will cling to a life that blesses them with health, plenty, individual developement, and social progress and happiness. This is what the farmer's life may be and should be; and if it ever rises to this in New England, neither prairie nor savanna can entice her children away; and waste land will become as scarce, at last, as vacant lots in Paradise.

The Largest Farm in the United States.

On the 18th of December, ult., we published the following sketch of what was supposed to be the largest and most profitable farm in the country. We published it then well knowing that we could soon procure items here, in California, that would far excel it. Here is the Great Farm in Texas:

"AN EXTENSIVE FARMER.—A correspondent of the Silver Creek *Mirror* says that Col. Jacob Carroll, of Texas, is the largest farmer in the United States. He owns 250,000 acres of land (nearly 400 square miles,) in that and adjoining counties. His home plantation contains 8000 acres, nearly all valuable bottom lands, along the Guadalupe river. On this farm he has over 600 acres in cultivation, on which he raises annually about 300 bales of cotton, worth at the plantation from $75 to $100 per bale, and 20,000 bushels of corn, worth about 50 cents per bushel. He has a force of about fifty field hands, and he works

about sixty mules and horses, and fifteen yoke of oxen. Col. Carroll has, on his immense ranges of pasture lands, about one thousand horses and mules, worth $50,000; one thousand head of cattle, worth $7000; six hundred hogs, worth $2000; three hundred Spanish mares, worth $15,000; fifty jennies, worth $2,000; fifteen jacks, worth $9000; and five stallions, worth $2500. Col. Carroll's property, in stock and negroes, is worth at least $150,000; and the value of his landed estate will swell the amount to over half a million of dollars. His annual income from the sale of stock amounts from $5,000 to $10,000; and from the sale of cotton, to from $15,000 to $20,000."

And here we present the following:

A. P. Smith, of Smith's Pomological gardens, at Sacramento, on the American river, cultivated about 60 acres the last year; about fifty acres in orchard, nursery and flower garden, and ten acres in a vegetable garden.

Mr. Smith employs from twenty to forty men; runs one team in the spring to the mines with vegetables, one team twice a day to the city with vegetables, and in the fruit season keeps a team constantly going to the mines.—He has agencies for the sale of his splendid peaches in San Francisco, Marysville, Stockton and Sacramento; and we learn that the gross amount of his sales in the year 1857, exceeded the ronnd sum of $60,000.

What will our great planters and farmers say to this? We can give them the particulars, if they need it.

Each year of those famous gardens only increases the amount. This should teach men who are laboring on their thousand, or five thousand acres, that it is the "little farm well tilled," and not the great Spanish grant that covers all out doors, that makes the money or brings prosperity. If all our large grants were cut up into small farms, our State, and all, would be better off.—*California Farmer.*

Suggestions about Seed Corn.

Corn planting with us was commenced early in the season by many, but the cool damp weather came on,—scarcely a sunbeam found space between the clouds to fall upon the earth for three dark chilly weeks. The stereotyped complaint of corn rotting in the ground, came up on every side. We knew of several instances where it was planted the third time before a growth was secured; twice planting was by no means an uncommon occurrence.

We commenced our planting the 10th, and in consequence of the coming on of damp weather, could do no more for five days, after which we were enabled to go on and finish the piece. More than two weeks passed before this first planted gave any show of appearance above ground. It finally came, however, a few days in advance of that later planted, without the failure of a single hill.

These observations of the last, in connection with the former planting seasons, furnish proof to us that the failures from corn rotting in the ground, arise from defectiveness in the seed. It has been shown to us, clearly, that good seed will remain in the ground uninjured for a period of from two to three weeks, and then send up a vigorous growth. To prevent the evil, then, in future years, farmers must gather and preserve their seed-corn with more care. Of course we would recommend picking the best and earliest ears from the hill, and hanging them in a place where not only the kernel but the cob will be thoroughly dried, and then put in a dry place until planting time. By selecting the earliest ears, the next crop raised from the corn will ripen proportionably earlier.

It is not necessary to have corn become perfectly sound to make good seed. If it is glazed over the kernel, the rudiment of the young plant is formed, and if proper after care is used in curing and preservation, all will be right.

Another cause of seed rotting in the ground in seasons like the last planting, may be that the corn was soaked before planting, an operation that superinduces decay, where collateral causes exist, and should be avoided.—*Country Gentleman.*

W. BACON.

Correspondence of the Farmer.

Seed Corn.

MESSRS. EDITORS:—There are annually a great many complaining of the failure of seed corn; therefore I would give my fellow farmers a few hints.

No weather, however favorable, nor tending, however carefully or skilfully performed, will produce a good crop, unless the seed be sound. The recommendation is, therefore, that you go into the field at the proper time of cutting up your corn fodder, or a little before the stock is killed with frost, and pluck the earliest ears and such as are *well filled.* It is important that you select in the field, and before all the ears are hard, for your seed thus selected will always germinate early, insuring, to a certainty, a strong and hardy sprout that will grow luxuriantly, even though it should be exposed to adverse circumstances.

In selecting seed corn, I leave a few husks attached to each ear, and then tie two ears together, and hang them in the loft or garret. Then I look out that the mice do not destroy them. About January I take it down and shell a few grains from the points of the ear, and put the balance away. An old salt barrel is a convenient place to store it.

Yours truly, C. H. HALSTED.

PLATTEVILLE, Wis, 1858.

The Potato Rot—Its Cause and Cure.

Mr. Alexander Henderson, of Buffalo, N. Y., has discovered that the *Phytocoris Linealaris*, of P. de Barrœ, the *Capris Obliniatus* of Say, or the *Acarus* of Smee, is the cause of the potato rot. His reasons for coming to this conclusion, are the result of much investigation and observation, we will now give, as we have had the benefit of his personal account, and from his plain, straight-forward tale, there would seem to be no doubt that he is the discoverer of the cause and cure of the potato rot. There may be many rots we do not know; investigation can only prove that; but that Mr. Henderson can cure one rot, similar to the one which was in Great Britain in 1847, there is little doubt, and it only remains for extended experiments, by observers in different parts of the world, to prove whether his simple remedy is applicable alike to all rots everywhere. One thing appears certain: Mr. Henderson has discovered that the *Phytocoris* is the primary cause of the potato rot, strictly so called, which first appeared in 1845, and which is identical with that of the present season.

If a tuber be examined with a microscope just before planting, on it may be seen a small, yellowish, translucent, oval object, secured, as is common with insects' eggs, by a gummy substance, to the potato. This will produce unsound potatoes, and the egg is that of the *Phytocoris*. When the tuber is planted at the ordinary depth, this egg hatches, but if the potato is planted deep, the egg is killed, and therefore *deep planting* is one remedy, because air and light are prevented from coming to the delicate egg. After a sufficient amount of warmth and moisture has been obtained by the egg, the shortest time that has yet been observed being six days, the shell opens along its greater axis, and out comes the small insect, without wings, from about the twentieth to a twelfth of an inch long. It has six perfect legs, two antennæ, a proboscis, and a pair of brilliant black eyes. The proboscis is about two-thirds of its body in length, and one-third of its length from the head is thick, seen coiled upon itself at *c*, Fig. 3 (which is an enlarged view of the perfect insect, taken, with the other views, from actual tubers and insects, brought to us by Mr. Henderson,) and the remainder is flexible and needle-like. It contains three tubes, through one of which it sucks up the juice of the plant for its nutriment; through another it probably ejects a poison into the plant, and through the other it may perform part of its respiration. The young insect being born alive, instantly requires nutriment, and commences feeding upon the seed, which, without the young are very numerous, does not perceptibly interfere with its growth. According to the amount of heat and moisture in the soil, this goes on from two and a half to three months, when the insect gets wings, and the vine has attained its full growth.

The insect has all this time been working at the tuber (Fig. 2,) absorbing much of its nutritive juice, and ejecting a poison, which at first appears in spots, as seen at *a*, Fig. 4.—These rapidly spread to blotches, *b*, daily becoming more rotten, as *c*, and at last leaving very little of the sound potato, *d*.

The winged insect, tired of his dark underground quarters, then moves a few stories higher, and settles himself upon the leaves of the vine.



They naturally attack the leaves and main stem, which, having their juices taken from them, wither and die, leaving little save their silicious and carbonaceous skeletons, and producing the appearance of the rot. The best evidence that a poison is also injected into the plant, is found in the fact that fungi in great abundance make their appearance, and these, as is well known, are generally the result of putrefactive fermentation.



Sometimes, in cold and stormy weather, the insect again descends and feeds upon the potato, which by this time is covered with fungi also. In the winter they emigrate, and nestling among the warm leaves of the mullein plant, endeavor to keep alive until the succeeding spring. Mr. Henderson has been engaged observing these insects since 1850, although

for five years previously he had investigated the causes of the potato rot. On page 382 of the present volume of the Scientific American, we gave a brief outline of Mr. H.'s discoveries, from the Buffalo Commercial, which was the first newspaper that gave an extended notice of these facts.

Feeling the importance of the subject, we have given this much space to it, knowing that the majority of our readers will look with eagerness for Mr. H.'s simple remedies, which are, killing the egg by sprinkling quick-lime upon the seeds—preventing its development by deep planting, by hoeing up well round the vine, and filling up the cracks in the soil by pressure—or by preserving an old Scotch method of planting, which is as follows: The ground is plowed about a foot deep, the manu e put in, with three or four inches of soil on that, and then the potato planted. Crops set in this way have never failed, the vines sometimes being attacked, but the tubers always remaining sound. We hope that many of our readers will set to work and experiment on this matter, and although the bug is very active and lively, he may be caught by shaking the vine quickly and picking him up. Mr. Henderson intends going to Europe, to bring his discoveries before the agriculturists of England and France, from whom we sincerely hope that he will meet with that success and attentive consideration that his patient investigation so richly deserves.—*Scientific American.*

Plowing.

There are probably few operations connected with farming of more importance than that of plowing; yet few are more carelessly performed by the generality of husbandmen. In Great Britain the case is the reverse, and wherever the plow takes the place of the spade, the greatest care is exercised, to insure the perfect and complete performance of the work.

The Rev. Henry Coleman, for some years the Agricultural Commissioner of the State of Massachusetts, who visited England and died there while engaged in making observations on the husbandry of that country, speaks in the most glowing terms of the accuracy and artistic neatness with which the lands of that country are plowed. In plowing, it is better to exercise care, and perform a little work well and thoroughly than to run over a large extent of surface in the usual manner. Land that is but partially inverted, is not in a condition to yield more than a very limited part of its alimentary matters to the crop or crops that may be attempted to be grown upon it. Of this fact every one is aware who has had any experience in cultivating land. And when manure is applied with a view to its being turned down for the permanent enrichment of the soil, every one who has had any experience in farming matters is no doubt fully persuaded that, in order to secure the greatest possible advantage from it, the manure should be all turned and covered evenly and thoroughly by the thorough-slice. Some plows used for this purpose, in consequence of a radical error in their construction, always perform the work imperfectly; they crowd the soil, without inverting it, and thus leave the manure exposed between the furrows and in a condition to be dragged to the surface by the harrow. Some of the recently improved plows exhibit a more desirable construction. The share, in such, does not run parallel with the beam, but has the point inclining toward the land. This throws the coulter from its usual perpendicular position, and cuts the furrow slice beveling, so that when the slice, on being raised, falls over, it laps upon the previous one, and matching closely with it, shuts down and completely covers in all that there may be to be inhumed, whether manure or grass.

In plowing green-sward, this is highly desirable, as no cultivator can be otherwise than sensible that the vegetation of grass between the furrow slices, is a nuisance of a very objectionable and perplexing nature, and one which economy and self-interest equally incline us to avoid. With a properly constructed plow, the operation of plowing on good land, unincumbered with stumps, stones or other obstacles, and with a sufficiently compact sward to insure the inversion of the furrow slice intact, there is no reason why the operation of plowing should not be performed with the most perfect precision imaginable.

The British plowman should certainly have no pre-eminence over us in the important branch of husbandry, nor will he, we are assured, when the necessity of a more thorough system is properly appreciated and understood.—*Germantown Telegraph.* x. y. z.

Progressive Agriculture.

The N. Y. *Observer* says of progressive agriculture: "Under its influence, spring up tasty and convenient dwellings, adorned with shrubs and flowers, and beautiful within with the smiles of happy wives, tidy children in the lap of thoughtful age—broad hearts, and acts as well as words of welcome. Progressive agriculture builds barns and puts gutters on them, builds stables for cattle and raises roots to feed them It grafts wild apple trees by the meadow with pippins or greenings,—it sets out new orchards and takes care of the old ones.

It drains low lands, cuts down bushes, buys a mower, houses tools and wagons, keeps good fences, and practices soiling. It makes hens lay, chickens live, and prevents swine from rooting up meadows. Progressive agriculture keeps on hand plenty of dry fuel, and brings in the oven-wood for the women. It plows deeply, sows plentifully, harrows evenly, and prays for the blessings of Heaven. Finally, it subscribes for good religious, agricultural, and family journals, and *pays for them in advance,* advocates free schools, and always takes something besides the family to the county fair.

Correspondence of the Farmer.

Slacking Lime.

MESSRS. EDITORS:—Your *Farmer* has of late contained a number of useful instructions in the building line, and while yet the public mind is in that direction, permit me to give you my experience on a subject, which no doubt admits of much improvement.

The common way of using the mortar a few hours after the lime has been slacked, I am convinced is both injurious and wasteful. It may be expeditious, when there is a great hurry, or resorted to as a necessity—but it is neither scientific, nor to the best good of all concerned. I have often heard it insisted that external plastering of brick or stone buildings cannot be made to stand in this country, ascribing as the reason, the frequent changes of the climate, or the dryness of the atmosphere, when the true cause will be simply found in the imperfect slacking of the lime. It is just the very nature and merit of the common lime to withstand every and all changes of climate and atmosphere—if it does not, the fault is sure to lie somewhere else. Lime ought never to be used for building purposes without having been slacked at least eight days previous; it ought to have lain covered with water for at least that time—in fact the longer the better, for if kept covered from the influences of the sun, it will continually improve and keep good and soft for a thousand years.

I once had occasion to examine some slacked lime, that was more than 500 years old, having been discovered in some cave in the southern part of France, and it retained all the true qualities of the best lime, being as smooth as butter, without a particle of grit, and when left exposed to the air or sun becoming hard and solid. It is at first, when all the fine globules of the lime have been fully saturated with water and burst open, that lime becomes actually fit for use in all its different purposes. This can not possibly take place in 12 or 24 hours, and if all the fine particles have not become slacked they will afterwards air-slack themselves in the walls or in the ceilings, continually absorbing moisture by capillary influence and slowly crumble away;—while it is undoubtedly by this same capillary action that the virtues of good mortar—namely to become a tough and impervious cement and to continue to grow harder, in fact to become stone again—are brought out. And here may be found the true and sole cause for a good many failures in the building line—such as ceilings breaking away from the lath and whole walls caving in, &c., a fact obvious to every true observer of to-day's buildings.

To slack lime well then, have it run off in large vats or deep holes in the ground, which may be lined with slabs or pieces of board to keep it clean and from direct contact with the earth; let the sides slant a little to keep the boards in their places. The common box and preparations for slacking will do, but fresh lime ought never to be put in the box for slacking without first containing all the water necessary for making the whole into a thin paste; when it commences to heat and swell a constant stirring is necessary to prevent all overheating, which shows itself in a continual snapping and cracking. This is a main point and it needs a careful man to attend to it. If there proves to be too little water, it may be added, but care should be taken to have an even temperature. Have the box washed out well after each operation, scraping up and removing all rocks and dirt, but let all these washings go in with the rest—lose nothing, waste nothing. If a hole say 6 by 8 feet and 8 feet deep has been run full, there will probably stand 3 or 4 feet of water on the top of the main mass, which at first will settle pretty clear; but soon all will be absorbed, the mass will grow from below, until in a few days it is becoming firm, when it may be covered with clean sand and a layer of earth to keep off the sun. If the process has been successful, the lime will now feel perfectly smooth between the fingers without any grit.

Whenever this lime must be used, remove carefully the earth, but do not uncover a larger space than necessary for taking it out, and go clear to the bottom, before more is uncovered.

There now is the building lime for all purposes, ready to be mixed up with water and sand for immediate use, and one would be astonished at the prodigious quantity it takes of each; there seems to be no end to its abundance and richness.

Men in the building line have generally a number of these vats or holes prepared, so as to have slacked lime always on hand, well knowing that age improves both its quantity and quality. In experiments I have made, I find that it will go as far again.

When it is considered that in Europe all

brick buildings are plastered outside and that the heaviest cornices are run with no other material than this kind of mortar, one will readily be convinced as to the superiority of this mode of slacking lime, which at present is only used, and imperfectly, by plasterers for the last coat or "putty" coat.

Of course all this relates only to the common lime as found all over the world with about the same properties. The water lime, sometimes Roman Cement or Hydraulic Cement requires a totally different treatment.

Respectfully, Yours,

THEODORE KNUDSON.

NOTE.—The foregoing suggestions about lime and mortar, strike us as sound and judicious, and well worth the attention of builders. P.

Business Hints for October.

"——I sit chief moderator
Between the cheek-parch'd summer, and the extremes
Of winter's tedious frost; nay, in myself
I do contain another teeming spring."

As a month between the two extreme seasons of the year—when the late fruits of summer's sunshine and human toil are ripe for the cellar and garner, and the races of men and animals are busy gathering their food and preparing their homes for the piercing cold of winter, there is none in the calendar more interesting than October. A great variety of work will urge itself upon the farmer, no department of which, we trust, will be neglected by him.

AGRICULTURAL EXHIBITIONS

come first in time, and are first in importance—not to each individual, perhaps, but to the advancement of agriculture in general. Stimulative of individual effort and highly promotive of a correct public sentiment, there is no single instrumentality more potent for the public good. Be resolved to attend all the fairs within your reach, and to make as many exhibitions and take as many premiums as possible. And you, particularly, who went to the fairs last year just to brag of the stock and crops you had left at home: "Pshaw, if I had only brought along that hoss of mine, these ere plugs would be nowhere!" Very well, bring him along this time, and if he is really the best on exhibition, the people will find it out. Bring him along, anyhow, and if he is not the best, he will increase the collection of good stock and add to the general interest, while you, yourself, will be stimulated to more vigorous efforts in the future. Again we say to everybody, come to the Fair.

THE FARM.

All except the latest fall crops have already been gathered, and we hope, properly stored—squashes, pumpkins, and other like products that suffer from early frosts. The potato crop—a portion of it, at least—is still in the ground, but may now be dug and stored in the cellar or in heaps. If in the heap, see to it that they go in dry, and have good ventillation until the extreme of cold weather set in; if in the cellar, see that they not only be dry, but that the cellar itself be clean and kept dark.

Corn for seed must be carefully selected in the field from the best ears and hung up in traces in a dry, cool place.

Wheat intended for seed should not be threshed with a machine, for the reason that so many of the kernels are materially injured in the process. Select out a sufficient number of dozens from the best of the crop—if any of it is worthy of being preserved as seed—and thresh it when convenient with a flail, storing the seed where mice and other vermin cannot get access to it. But unless your crop was good and of the best variety, economy would dictate the saving of none, but the *purchase of the best.* Canadian Club proved to be among the least valuable varieties this season, and we recommend a change for next year's sowing. The Scotch Fife escaped the rust more universally than most other varieties, so far as we can learn, and but for its flintiness would certainly rank among the best.

FARM IMPROVEMENTS.

Now is the time to make them,—particularly such as will be necessary to the comfort of the household, the stock of various kinds, and to the preservation of crops. A penny saved is worth two pennies earned; and a little labor expended upon improvements of this sort in autumn will pay you back with compound interest before spring. If you have been sqeezing along thus far without that important luxury, a wood-shed, rally your forces some bright morning and to the woods. A few days will suffice for the work, and you will be amply rewarded by the hopeful smile of wife and daughters as the timbers are hauled to their places. It seems too bad that the good housewife, who has always had enough drudgery to perform without the dragging out from the awkward heap of all lengths and all sizes, wood

wet, soggy and almost totally incombustible, even with a waste never so great of breath and kindling. Try it, and if not satisfied that a wood-house full of good wood does amply *pay*, charge us with the expense incurred, and we will settle it the first time we call.

Sheds for cattle too—build them of *some sort*, else call yourself no longer a good farmer, much less a good christian. Stakes and poles with a thatched roof, if you can provide nothing better, will answer a good purpose, and win for you many a grateful u-u-u-g-h from the brutes so cheaply made comfortable.

Grannaries, wheat-mows and hay-stacks—protect them from every invading foe, whether rats, mice, or weather.

CARE OF STOCK.

Foddering should begin as soon as the failure of grass comes to be felt by the stock. It is certainly poor policy to defer feeding until the cattle have begun to run down and starvation stares them in the face. To be easily kept, they should never be allowed to get poor.

THE ORCHARD.

Where fruit is so scarce as in Wisconsin, it would seem hardly necessary to urge people to take care of what they have. Remember this however: Fruit gathered a little before it is dead ripe will keep better than if allowed to hang on the tree until fully matured. Apples require to be dry when they go into the cellar and should be carefully assorted, so that none that are inclined to rot shall come in contact with such as are perfectly sound.

Fruit-*trees* should be prepared for the winter just as carefully as the children or the calves. If you have time you may prune out the unthrifty, half-decayed limbs, and such others as may be necessary to next year's health and good-bearing. But in no event must it be forgotten to clear away the weeds and all trash from the roots, and replace with hard earth, clean gravel or lime, so that mice will have no opportunity to nest around them. Such as are remarkably tender may be earthed and bound with straw. If convenient, cattle-sheds, hay, straw and corn-stalk ricks, &c., should be so located as to protect the orchard from cold wintry winds.

THE GARDEN.

Transfer bulbous roots to the beds or borders provided for them. Gather cucumbers, &c., for pickles, onion-pips for re-planting in the spring, and divide all herbaceous roots designed for multiplication. Cover the asparagus beds and others requiring protection, with short straw and half-decayed manure.

That portion which is annually plowed should be well manured and thoroughly plowed and subsoiled; so that the spring-working may the more perfectly intermix and pulverize the various constituents which make up the soil. H.

Storing and Uses of Mangel Wurzel.

* * Having determined this point, it is usual about the middle of October, to commence pulling and storing it. The roots are pulled up, and the leaves merely twisted off. The former are thrown at once into carts, and removed to their destination. It is advisable to commence stacking the roots upon a base not exceeding three yards in width, but from 6 to 7 feet is better. The roots should be packed with the crowds outward, in the form of a roof, diminishing upwards until they arrive at a narrow ridge at top, rising from the base from 6 to 8 feet in height. If a wider base is selected, it will be necessary to introduce a fagot upright in the middle of the heap, at about every six feet apart, so as to carry off the heat; for should fermentation set in, which in some seasons it is apt to do, unless due precaution is taken to prevent it, the result would be to spoil the roots. When the clamp or row is completed, it should be well covered over with straw, about 6 inches in thickness, and then with the soil dug up immediately around to the depth of about 8 inches, leaving an opening over each fagot secured at first partially from frost by a wisp of straw only. It is, however, thought advisable by some cultivators to defer earthing the heaps to the top for about two feet downwards, until a later period, and all hazard of fermentation is over. When it is stored in a building made secure from frost for the purpose, but little further care is necessary, as I have never known an instance of its being injured by fermentation, provided the top of the heap remain uncovered. In my storing house I frequently cart in from 400 to 500 tons in one heap of 20 feet in width. The walls are formed of the earth excavated; a roof with a thick coating of thatch covers the whole, and the carts enter by folding doors at one end. It may be safely packed to any thickness and height, if afterwards only protected with straw. For this purpose barley straw answers best, and is packed round about three feet wide, and well trodden down, and afterwards thatched over down to the surface.

In pulling the roots preparatory to removal it is necessary to take due precaution against injury arising to them by the action of frost, a very slight degree of which will, if they are exposed after being removed from the soil, cause them to rot. That portion of the root which has previously grown beneath the surface being extremely liable to injury when ex-

posed above it, the better way is to pull and carry them direct from the field to the store, and there will be no necessity to remove the soil from the roots further than it can be effected easily, as it readily parts from the roots after storing; whilst by remaining upon them it tends to keep them from fermentation, which, however, never injures them, if the heat is confined in the heap by the earth applied as a protection from frost. This root is peculiarly adapted to heavy and moory land. It will also flourish upon all loamy soils, upon which Swede turnips succeed well. In most cases it will produce from 18 to 22 tons per acre, but with extra cultivation and management about 10 tons per acre more. The quantity per acre can be easily ascertained by weighing one load carried by each cart employed; and by filling the carts alike the quantity may be obtained. Measuring a single rod, and computing the weight per acre by it, at all times is a fallacious mode. Great errors are sometimes made by it, as much as 25 per cent. less having been afterwards detected by computing by this method. A row taken and weighed from two or three average portions of the field would give a result sufficiently near. The weighing of a single rod to ascertain the comparative weights of different varieties is, however, the best mode; as the quantity in imperial stones per rod is equivalent to the like number of tons per statute acre of 160 rods. There being 160 stones in one ton, this mode is exceedingly well adapted to obtain the weight of the produce per acre. The weights per rod grown by myself in last season were as follows:

			cwt.	lb.
Red globe, strong	loam,	weighed	4	32
Long red,	do	do	3	96
Yellow globe,	do	do	3	90

Under tender loam the yellow globe produced 4 cwt. 4 lbs., the other varieties not being weighed. In every other instance of weighing in previous years, the long red variety was invariably the heaviest. It has also other advantages, being more easily pulled and stored. The quality I consider about equal. Cattle, however, will select it from the orange-colored in preference, and hares and rabbits also.—Some of my land at one time joined a game preserve, and I then found that during the early growth the orange varieties were not much bitten, but that the long red, on the contrary, were always very much injured.

Having described the mode of producing, I shall now advert to the best mode of expending this root, so far as my own observation and experience enables me; and having now used it forty years, I have no hesitation in giving it the preference to every other description of root or vegetable, not only as regards the amount of produce, but as to its general applicability. For fattening neat stock it is superior to the turnip. For breeding sheep and cows, however, I think the latter better; but as the season advances, the mangel becomes greatly superior, improving the longer it is kept in the spring, whilst turnips depreciate in about equal ratio. Where cattle have been accustomed to it early, they never become affected by it afterwards; but it frequently happens that other neat stock and sheep, upon having their fill, at once become affected. It apparently attacks the nervous system, and produces stiffness of the joints, and they refuse to eat it for a few days: but all this may be obviated by feeding them moderately upon it at first, increasing the quantity daily, and always combining it with cut chaff or other dry food. I introduced this mode on a former occasion to the notice of this Club, and have since found it has generally been adopted. The mangel root, when first drawn, contains an abundance of water, and requires dry food in admixture to counteract its effects upon the bowels of the animals. It can be also adjusted better as regards the quantity given per day: from 56 to 112 lbs. being fully sufficient.

About the middle of January the second vegetation commences, and the sugar it contains becomes fixed, and cannot be extracted. From that period, the fattening properties become greatly augmented, and continue to increase until the month of June. I use machines that pluck it into small pieces; these are mixed with a quantity of cut chaff, composed one-third part hay and two-thirds oat or wheat straw, moistened by linseed meal, that has been steeped in water forty-eight hours, at the rate of 3 lbs. to each bullock. In addition, from 3 to 4 lbs. of barley or bean meal are added at the time of feeding, each meal being prepared twelve hours previous to using. For store stock about 56 lbs. (equivalent to one bushel,) is given; for fatting stock from 80 to 112 lbs. per diem. I keep a large number of milking cows, which are fed upon it from August to June following. Whenever the leaves can be used we find an increased quantity of milk. They are invariably cut up, and mixed with the roots and chaff, and are the most valuable portion of the plant in its early stages. As a manure, when plowed in, they are also beneficial; but where much live stock is kept they can be applied to a more beneficial purpose.

In feeding sheep, as well as cows, the roots are best when combined with cabbages or turnips, but should never be given to either without some degree of caution being exercised, as a sudden change of food is apt to cause considerable relaxation of the bowels, which can be mostly avoided by proper management.—For sheep before lambing and for sows in farrow they cannot be recommended, and for very young pigs they are also not well adapted, but are even injurious. The roots produce great heat in the system, and even oxen will during the most severe frosty weather be found in a high state of perspiration in open yards, and young cattle invariably fatten upon them far better in open yards than when stalled. This

may be accepted as an established fact, having myself made several experiments to prove it. With older cattle it is otherwise. There is one point, however, quite certain, that cattle which have been longest accustomed to mangel wurzel thrive best upon it, and for young weaned calves of two or three months old it succeeds admirably; still, whenever it can be combined with swedes or common turnips, it is advisable to do so. I may appear prolix in these descriptions, and to the experienced farmer much will appear to be a repetition only of his previously acquired information; but from the number of inquiries I from time to time receive upon the mode of cultivation and application, I am induced to believe that the public in general are not acquainted with either. Indeed, in many districts it has not yet been introduced, whilst in many others only recently, and but in few has it been extensively brought into cultivation.—*Farmer's Magazine.*

Correspondence of the Farmer.

Bark-Lice.

MESSRS. EDITORS:—I should be glad to send a few lines through the *Cultivator* to a gentleman in Racine Co., who has introduced himself through the *Cultivator* as a louse killer of the apple tree. I wonder if the genileman has not invented his remedy more for speculation than for the benefit of the public. I have a few thrifty trees, and as clear from lice as any he can show, and all the remedy I use is strong ley, well rubbed on with a swab, every spring. The gentleman says save your apple trees: I would just say to the farmes, save your money and don't be caught in any such louse-trap, especially when the bait costs ten dollars. It is no wonder he requires his subjects to keep it a secret for five years, for when a man is guilty of a mean trick, or catching lice, it ought to be kept a secret.

Yours respectfully,

A GREEN CO. FARMER.

ALBANY, Green Co., Aug. 9th '58.

NOTE.—We publish the advertisement referred to at the very urgent solicitation of the gentleman concerned, although not until he obtained the certificate of several of his neighbors, recommending its merits—gentlemen with whom we are more or less acquainted. Under the circumstances we gave it an insertion without any recommendation or endorsement whatever. We think that ere this our readers must pretty well understand that our faith is usually pretty poor in all new and wonderful discoveries and patents, until thoroughly proved.—EDS.

Fireman's Convention—Arrangements for State Fair.

At a meeting of the delegates from the several Fire Departments of the State, held at the Hyatt House in the city of Janesville on the 19th day of August, 1858; Dan Schultz was appointed Chairman, and Gideon S. Strasberger was appointed Secretary of the meeting. The Chairman stated the object, and introduced a communication from D. J. Powers, Secretary of the State Agricultural Society.

It was thereupon voted that all the Fire Engines in the State, competing for the prizes offered by the State Agricultural Society at their next Fair, to be held at Madison, be subject to the rules and regulations adopted by this meeting, as hereinafter enumerated:

1st. Classification of Engines. All Engines over 9½ inch cylinders shall be classed as "First Class," and all Engines 9½ inch cylinders and under shall be "Second Class." All Engines competing for Prizes *may* be entered as *First* Class, but no machine entered as *First* Class shall be allowed to enter for the Second Class prize.

2d. Each company shall be allowed not to exceed seventy men; and each class shall play through four hundred feet of hose, open butt, into a tank. Time—three minutes. Each company shall play through the same hose into a tank—said hose to be selected by the judges. That each company competing for the prizes bring with them Four hundred feet of hose.

3d. Also, that each engine play on distance through not less than one hundred and fifty feet of hose, using their own hose, pipe and nozzle. Time—one and a half minutes. In *all* cases of bursting of hose the machine so disabled shall be allowed a second trial, if ready in fifteen minutes; and each machine shall be allowed fifteen minutes to be in readiness to play.

4th. That the prize money be divided into four prizes of equal value, that they be in gold and that they be awarded by the judges as follows: 1st class—two prizes. The machine putting the greatest quantity of water into the tank in three minutes shall be entitled to one prize, and the machine throwing the greatest distance shall be entitled to the second prize. The same distribution as above to apply to machines of the second class.

5th. That each company select two judges, and the judges so selected shall choose a chief judge. The judges shall cause a rope to be extended around the tank and each machine striving for the prize, while it is being worked by the company in charge of it.

6th. The judges shall award the prizes to the same in the classes as above provided.—They shall decide among themselves, by drawing cuts, for the order of plaving—the first class engines to play first, according to the number so drawn; and the second class to be

ascertained and determined in the same manner.

7th. All companies desiring to compete for prizes shall report themselves to the Chief Engineer of Madison Department on or before Wednesday, the 6th day of October next, and shall be under his direction until they arrive upon the ground to play: and all engines competing shall be upon the Fair Ground and ready to play, on thursday the seventh day of October at nine o'clock A. M.

Dated Janesville, Aug. 19th, 1858.

DANIEL SCHULTZ, Ch'n.

GIDEON S. STRASBERGER, Sec'y.

Correspondence of the Farmer.

The Wheat Crop.

MESSRS. EDITORS:—The light wheat crop of this year is, with the farmer, a subject of thought and conversation, and may be taken as a test experiment with him, and a lesson for Wisconsin. The wheat growing farmer is now led to ask himself the serious question, "what shall I do in the matter of wheat growing? Shall I follow in the same old beaten track of the wheat growing system of Wisconsin that has been practiced since its early settlement, which is, to hustle in the wheat, to hustle it in well if convenient, but to hustle in a large quantity at all events, without any particular reference to the quality of the seed, or to how many years in succession it may have been sown upon the same kind of soil. It seems to me that I hear the farmer answer 'No' with that promptness that carries with it a certain resolution in this matter, and that I hear him acknowledge that this year's experience has caused the scales to fall from his eyes, so that he sees clearly now, if never before, the folly of the "breeding-in-and-in system." He admits that wheat like animals has its day.

The old Hedgerow, a good kind of wheat in its time, demonstrated the fact, and the Club variety has doubly proved the practical truth. This wheat has, I believe, fairly run out by being sown eight or nine years in succession upon the same kind of soil.

Some of our farmers contend that the sole cause of the failure in the wheat crop this year was the wet and drought of the season. That these causes would have had their effect upon the wheat crop had some other kind been sown, I do not doubt; but that these are the causes of the failure is more than I can admit unless more proof than mere assertion is produced, for facts are more convincing than theories. When I find new kinds of wheat sound upon the same kind of soil, in the same field, side by side with the Club, and find the new variety to be a good crop and the other almost a total failure, and not only in one instance, but universally, as far as my acquaintance extends, the tilling of the soil and putting in of the crops being the same, I am led to the conclusion that it is neither the wet nor the drought that is the principal cause, but the want of a change in seed is *the* reason why we have so signally failed to have a good crop in Wisconsin. The Fife wheat has been sound to some extent, this season, in this vicinity, and has, as far as I know, given universal satisfaction, while a great number of acres of the club have not been harvested.

If the sole causes were wet and drought, why these results? Will some one tell? I am fully of the opinion, made up from observation and experience, that if the farmers throughout the State had, last spring, sown some new and good variety instead of that sown several years in succession, we should not have heard this general cry of failure.—Although many will contend that this is not *the* cause, still they will be among the rest that will next spring rush in for some new variety of wheat. Now is the time to become satisfied in this matter of changing seed.

PALMYRA, Wis. O. P. D.

NOTE.—If our friend Dow had told us in speaking of wheat ripening side and side, whether they ripened both at the same time, it would have afforded a still more thorough clue to the fact that the failure of the Club is on account of the seed. If we understand the subject aright, the Fife wheat ripens somewhat later than the Club; and in the opinion of many, in that way escaped a certain streak of weather that occurred just at the critical juncture, when the Club was most liable to suffer, and before the Fife had reached the blighting or shrinking point. By this unlucky conjuncture on the one hand, and lucky one upon the other, the Club almost universally suffered badly and the Fife escaped. Now if this is the true cause of difference the present season between the two varieties of wheat, perhaps we should not condemn an old and hitherto good variety (we believe in the main) too soon.

We would not however be understood to discourage a frequent change of seed wheat. But we had still as soon sow the Canada Club brought from the sandy new soils of Jefferson or Sauk counties, as any of the other varieties

we have seen, and especially late varieties, which in our opinion are usually much the most liable to injury.

We say this much at this time on this subject because we think there is too much of a disposition manifest to get up a speculative fever on Fife wheat. Perhaps those who buy it at an extra price may sow it next spring, and if the streak of destroying weather comes a little later, as is most commonly the case, the Club will come out No. 1, and the Fife prove the failure. We are glad, however, that the subject is attracting attention, and doubt not but its discussion will prove highly beneficial in the end. We would like to have the subject thoroughly discussed some evening at the State Fair. P.

The State Fair.—Items of Interest.

By the time this number is in the hands of our readers, every material arrangement for the great exhibition will have been completed, and every plan laid, not only on the part of the Society, but very likely on the part of those who propose joining in the movement, either as exhibitors or spectators.

That the officers of the Society, have taken extraordinary pains, in projecting and carrying out all their plans and arrangements, in the most adequate and ample manner for the occasion, is a fact beyond a doubt. And that as a whole they will generally meet expectations and requirements, is perhaps almost equally certain. Still in the multitudinous details involved in the conception and carrying out of such gigantic and temporary out of door operations, some things will inevitably be found slightly out of joint, in all human probability. But the good sense and good nature so proverbial at Fairs will undoubtedly overlook all trifling omissions or commissions.

Especial attention has been directed to the removal of the more commnn evils of such occasions. To-wit:

The getting to and from the Fair by Rail Roads. Also the getting to and from the Fair Grounds. All of these matters have been made as complete and perfect as possible, and will undoubtedly be found every way ample and satisfactory.

Then upon the head of accommodations for lodging, eating, and drinking, we think we may also safely ensure all that could possibly be expected. First a contract was executed in writing with all the principal hotel keepers, binding them not to charge above their ordinary prices. And further, that they should get up the widest possible range of accommodations; which they are doing by renting outside halls &c.' for lodging rooms.

Then upon the Fair Grounds, instead of one eating arrangement like last year, at least a dozen different kinds will be gotten up in *apple pie* order. The principal one will be, as stated last month, quite a hotel, not only in architecture but in keeping. Then the sleeping arrangements on the grounds will be ample to accommodate a thousand, in a primitive cheap way. Those who conveniently can will do well to bring a *blanket or big shawl with them*, as a wrapper for the night, as it may be cold or chilly. There will be a safe depository in connection with the sleeping establishment where surplus articles can be checked in and out perfectly safe.

Their are numbers of large halls in the city that will be furnished to lodgers, who will also need blankets to make them beds, to a greater or less extent. Bring the extra blankets and shawls.

Added to the whole, the citizens are all, without exception, from the palace to the cot, going to fill up as fully as possible with their friends and others. (We have thirty engaged already for our house and barn, which, as all the world knows, is not large.) *If all others do as well, and we know no reason why they will not*, there will no be trouble about every ones being both lodged and kept that comes.

In a word, we think we can safely assure all concerned, that notwithstanding it has been somewhat popular to blow Madison hospitality and morals, those who come to the Fair will find less cause to complain of small speculations and petty gouging, of immorality, or lack of hospitality, than they expect or are accustomed to in other towns of a similar size. We bespeak for our non-resident, and especially our rural friends, an agreeable surprise in this behalf, and for the reason that the newspaper press has manufactured a deal of thunder and lightning about Madison, its practices and people, that in our opinion never had any existence except in their columns. But let us await the event for the proof.

But be all these matters as they may, if the weather is reasonably favorable, (and we have the promise of it) we are led to believe from all we see and hear, that the amount of mate-

rial of one sort and another, on exhibition will be unusually large and interesting, and the company in attendance altogether larger than ever seen before in the State on any occasion. We base these conclusions not only on the general response of the press in all parts of our own State, but through northern Illinois, Iowa and Minnesota. Nearly every paper and letter we receive brings some new assurance on the subject, not only in the ordinary line, but in the extraordinary. In the way of especial features of attraction, there never has been one-half as many in prospect at any previous fair. The Military and Firemen's Reviews, and trials of skill, yachting upon the Lakes, Horse Training, Sorgho sugar marking, and scores of other things too numerous to mention; any one of them amply worth going to see on purpose, offer collectively a most attractive bill of fare, not merely for amusement, but for valuable instruction.

But all these last interesting features, attractive as they are, will in no material respect be allowed to overshadow and crowd upon the more substantial attractions and interests of the Fair. Calmly and systematically each will in its turn move on and accomplish its purpose of usefulness. All in all we verily believe it will be a great affair in its way, and long remembered as the *great Fair of the State.* Let none, then, stay away, and afterwards regret it, when they learn how much they have lost. State Fairs do not occur but once a year, and our years are rapidly passing away; let them then be improved as they fly. Money pinched and saved, nor land, will do us good in the grave; the present is our only time to learn, to enjoy, to benefit our children or neighbors; to-morrow is in the clouds of uncertainty.

ENTRIES FOR EXHIBITION AT STATE FAIR.

We are happy in being able to state that large nnmbers who intend exhibiting at the Fair are already sending in their entries of machinery, implements, horses, stock and agricultural products. Even the ladies are also sending in promptly. One in particular has made an entry of some twenty articles of art, taste and fancy. Good. This is as it should be. We hope that nine tenths of all the entries will be in before the week of the Fair, as it will save such a miserable hurly-burly of confusion and mistakes as must inevitably take place when it is put off until the last moment.

We doubt not but some slow, sleepy fellows will come around as usual even this year, notwithstanding all that has been said, and wish to make entries after Tuesday; but it will be labor lost; they "can't some in" to compete for premiums even if they bring the crown of Queeu Victoria, or the "great toe," of Mahomet as a talisman of entrance.

Hurry in your entries by mail, ladies and gentlemen, and save both yourselves and us trouble.

HORSE TAMING AT STATE FAIR.

This great novelty, second only to the Atlantic Telegraph in the curiosity it creates, it is expected will be exhibited and expounded at the State Fair. Mr. Geo. S. Rarey, one of the famous brothers, has been induced to be present and display the miracles of his art. He is said by those who have witnessed his feats, to be a perfect master of the business, and to do the most surprising things with the very wildest and most vicious horses—the worse the better, for him. We hope that those who have perfect *devils* for ugliness will bring them on and test his skill. If, as is said, he can cure horses from balking, kicking, and running away by one or two applications, it certainly is an invaluable secret for all to understand.—Their discoveries and operations seem likely to work an entire revolution in horse management, and, in all probability, vastly for the better.

They use no violence whatever in taming horses, but simply appeal to their *horse common sense;* and always find it ample to overcome all difficulties, and to reform the worst horses, usually at the first trial. We saw a remarkable instance of the kind at the St. Louis Fair, a detailed account of which will be found in another place. Every one who witnessed Rarey's operations, at once discarded all ideas of humbug and became full in the faith.

WILD VARMINT AT THE FAIR, FOR THE AMUSEMENT OF THE BOYS.

Gen. Bull, of this city, has a pair of fine young Buffaloes, fresh from the Plains, which he intends permitting to be exhibited upon the Fair Grounds for the gratification of the curious. Also a *regular live* Badger, which by the way, will be about as much of a curiosity to many as the Buffaloes.

Z. Wilson, Esq., of Palmyra, has also promised to send up a family of *regular* Bears, that he has, which, with the foregoing, and may be some *snaix,* from somewhere, will constitute quite a feature of attraction, at least for the juveniles. *Send on the Varmints.* P.

STOCK REGISTER.

Correspondence of the Farmer.

More of the Profit of Sheep-Raising.

MESSRS. EDITORS:—I noticed an invitation in your last number, under Mr. Hemenway's and Mr. Graves' descriptions of their flocks of sheep, for others to send in a statement of their flocks. I have lately sold the main part of my sheep, and some of the best, to Messrs. Moses and Henry Chase, of the town of Bristol, where I reside, for a consideration consisting in land which I consider to be equal to eight dollars per head. Twenty-nine of the number were this year's lambs.

I obtained my sheep from Jacob A. Spears' flock, Braintree, Vt., in the autumn of 1854, at which time they were lambs. They are Spanish Merino sheep. I need not say that they are full blood Spanish Merino, to any who have seen them and possess a knowledge of sheep, or to any who will take the trouble to look over the awards of premiums of the last Annual State and Dane County Fairs, and also the records of the County Fair of Sheboygan County, held in the year 1855, which are the only times they have been exhibited. The first year they averaged 5½ lbs clean wool; the second year they sheared (after having had two crops of lambs, one in November and one in the month of May, following) 7½ lbs. unwashed wool; the third year they sheared 5½ lbs. and a little over of clean marketable wool. This year my flock of 74 sheep, including three two year old bucks, averaged 6 lbs. 2 oz. They lacked ten days of a years growth of wool, and were washed thoroughly in soft water, except the bucks aforesaid. As respects "Cornwallizing," it has never in any instance been practiced upon my sheep. Their wool has always been considered "No. 1" by those who have purchased it, and I have been remunerated accordingly. The three ewes for which I received the first premium at the State Fair last fall averaged seven lbs. and seven oz. this year, and lacked 10 days of a years growth of wool. Each has raised a lamb this season, and from various causes they lost off wool which was considered by good judges examining the sheep before and after shearing, to amount to from one-half to three-fourths of a pound of wool, so that beyond cavil, their year's growth of wool per head was 7 lbs. 12 oz.

My sheep have had no other grass or pasture during the past year, (except in going to the Fairs,) but prairie and wild grass. They were kept in a yard during the winter, with sheds opening to the south and east and covered with straw; had no hay, except the lambs a little which was cut early. Their feed was straw, rutabagas, oats and corn. All the water they had was brought in pails some twenty rods. I kept them in two flocks the main part of the time. Their average feed per day through the winter, per head, was two-thirds of a quart of oats, and the same of Ruta Bagas cut up fine and fed in troughs. Just between hay and grass I fed a little corn.

The stock buck that I have bred from—in my opinion the best buck in the State—is now in the hands of Lewis Clark, of Beloit. He received first premiums at the County Fairs aforesaid, and second premium at the State Fair last fall. He was obtained from Mr. Solomon Northup's flock, Vt. His pedigree is good and his stock better. He shears from 10 to 12½ lbs. of clean washed wool per annum; weighs, in good order, 100 lbs. His two years old ewes, which I sheared this spring, averaged over 7 lbs per head. My loss in sheep from all causes during three and a half years, has been two per cent. only. Have raised 30 lambs this year from 33 ewes.

In conclusion, I will simply say in respect to my humble self (whose pen has never before written, or attempted to write for the edification of the readers of the *Farmer*) that I am not going to abandon sheep and wool growing, but that I still have remaining about me a few sheep, which, if "good luck" attends us all, may be heard from hereafter.

J. T. FLINT.

The Rarey Family.—One of them coming to Madison.

The "Rarey family" consists of four brothers, who were raised in and about Columbus, Ohio. Their father was of German decent, a farmer and raiser of stock, and all the boys were brought up on the farm, and they have followed that pursuit more or less to the present time. They are all, however, in possession of the art of "horse taming," as many a redeemed horse in Ohio and the adjoining States would testify, if they were to meet in class meeting and tell their experience. The oldest is William H., who made the first discovery of the principles in the nature of the horse that led to the perfection of the system which is now astonishing the world. The second is Charles W., who is now teaching the system in the western part of Ohio. The third is Frederick, who now lives on his farm,

about two miles from Columbus. The fourth, and youngest, is John S., who, together with his oldest brother, Wm. H., has devoted his life to the study of the mental philosophy of the horse, and is now teaching the nobility of Europe the results of life long experience.

We had the pleasure of seeing William H. Rarey at Janesville, a few days ago. Among the Madison gentlemen present at the same time were Mayor Smith, Judge Crawford, Hon. Joel C. Squires, and De Wolf, of the Capital House. In the presence of a numerous assembly, he thoroughly trained and subdued a colt that had never been handled, halter broke him, made him follow around the ring, and finally carry two or three boys tamely and safely on his back. He also, at length, took and hammered on the foot, hard and often, a mare who from her kicking propensities, they had been unable to shoe in two years.

From Janesville he was called east to attend the National Horse Show, at Springfield, Mass. He will return to the West, and, we learn, be present at Madison during the State Fair.

Every body who has an unruly horse will, we trust, take this method to learn how to subdue and break him. Mr. Rarey's charges are $10 each pupil.—*Argus & Dem.*

NOTE.—We take pleasure in assuring those who propose attending the State Fair, that Mr. Rarey has made a *certain* arrangement to be present if life and health is spared him, and exhibit and instruct the largest number possible; probably by exhibitions day times, and lectures evenings. The above $10, relates of course, only to those who take a thorough professional course of instruction. Those who simply witness the exhibitions will, probably only be charged a small admission fee.

If he can cure balky and kicking horses, and break wild colts in a half hour, without beating or rough treatment, his knowledge is certainly invaluable for all to possess, and will prove a great benefit to the world, as well as a curiosity.

It will be noticed that this is the OLD RAREY HIMSELF, the first discoverer and inventor of the art, and not some understrapper in the business. He is said to be better posted, even, than the brother in England, but not being able to leave his family so long, he sent his younger brother to Europe. We shall be both surprised and disappointed if he does not draw a crowd, and fully meet their expectations besides.—EDS.

NOTA BENE.—Since the above was written, we have had the pleasure of witnessing a display of Prof. Rarey's skill at the St. Louis Fair, and in another place our comments will be seen. P.

HORTICULTURAL.

Correspondence of the Farmer.

Different Varieties of Wisconsin Apples.

MESSRS. EDITORS:—I send you to-day, per Express, specimens of several varieties of apples which I have fruited for some years, and deem worthy the attention of those about to plant. You will find them in eating condition, and will be able to judge of the correctness of the annexed descriptions.

A. G. HANFORD.

WAUKESHA, Aug. 30, '58.

[NOTE.—The said fruit was duly received, and as friend H. remarks, was in "eating condition." We submitted it to the judgment of an entire editorial and family circle; and it was unanimously voted first rate. The Red Astrachans, good; the Summer Rose better; the Early Joe best, and the Sops of Wine best of all.—EDS.]

Red Astrachan.—A very beautiful apple of large size, uniformly fair, color deep crimson, covered with a thick white bloom like a plum, flesh white, tender, juicy, quite acid; by some it will be thought too acid for the desert. As a cooking apple it is unsurpassable. Ripe middle to last of August; when over ripe it becomes mealy. Tree a strong stocky grower.

Summer Rose.—A very beautiful and excellent desert apple of medium size, pale yellow, with deep blush on the sunny side; fruit always fair, with a smooth waxy appearance; flesh white, very tender, juicy, sprightly, rather acid; ripens gradually from middle to last August, and continues good eating for a long time; tree a moderate or slow grower in the nursery, does better when planted in the orchard, making a handsome round headed tree of rather small size; a fine tree for the garden.

Early Joe.—The perfection of early autumn apples, combining as many of the essentials of a fine desert apple as any variety we know of. It is medium, or rather, below medium size, roundish conical, sometimes flattened, smooth, regular, with stripes of deep bright red on yellow ground; flesh fine grained, very tender, juicy, with a very agreeable, rich, aromatic flavor; ripe August 20th to September 10th. Should be eaten from the tree. The Early Joe is a slow grower in the nursery, scarcely equaling at four years old the more rapid growers at two years—hence this variety will never be very popular with nurserymen.—

It, however, does better when planted in the orchard. It bears young and is exceedingly productive, inclined to overbear- Should have good culture.

Sops of Wine.—A fine apple for cooking, scarcely needing the addition of spice or sugar, hence the name *Pie Apple* under which it is grown in Western N. Y. It is of medium size, roundish ovate, yellow, striped and splashed with red, deep red in the sun; flesh white, rather firm and not very juicy, of a pleasant, mild, sud-rcid, perfumed flavor. Tree a good grower, early and abundant bearer. Ripe Aug. 20th to Sept. 20th.

Correspondence of the Farmer.

Squaw Corn.

MESSRS. EDITORS:—In compliance with your request that I would furnish you with a sample of "Squaw" corn, together with such facts and description as my experience and information have enabled me to collect, I would submit the following, with the desire that its benefits may be shared by all who desire to test its claims as an cereal, worthy and welcome to the table of the epicure:

From information gleaned from what I deem reliable sources, the squaw corn is a variety originally found among the aboriginees in this section of country, I believe, more particularly in Wisconsin. In many respects it closely resembles the white "Yankee" corn, known under that name in the latitude of New York; differing, however, in several particulars, though often called the same thing by those unacquainted with its peculiarities; viz:

1st. It is the earliest *reputable* variety for the table that my researches have enabled me to reach.

2d. I know of no other which, for hardiness, in all climates and seasons, can compete with it in independence of circumstances. For the past four or five years I have planted it early and late; in season and at times when other varieties refused to grow, and have rarely been disappointed with it; carefully preserved seed and other taken promiscuously from the crib, seem alike to defy the usual injury inflicted by the common causes of failure.

3d. *The ear.* In length it is less than the Yankee variety spoken of, usually eight rowed; the kernel, in a good sample, heavy and plump, swelling rather extravagantly on the surface of the ear; its color assimilates more to cream.

To borrow the description of a gardener who has marketed it in Madison this summer: "No sweet corn is superior to it when young and tender," and my own experience enables me to say that it is *the corn* which passes under that name in your city before the earliest sweet corn is in market.

I am informed by old settlers, that they have eaten it on the 4th of July; this is ahead of my experience, the 15th being my earliest date. In 1856 we had it on the table 37 days after planting; and some friends, to whom we furnished seed, report the same figures; the present required eight weeks growth.

The sample I send you is from the crop I planted the 17th June, when it was thought too late for corn planting; it was full large for the table for a week or more in August—much of it glazed by the 1st September; and yesterday, the 7th, I picked the seed ears which I send. This is an ordinary soil, without new manure or extra labor, simply one hoeing; most of it is now beyond the reach of frost.

There are some demerits peculiar to it, and further observations deserving notice, which I will, reserve for a future communication, if desired rather than encumber your columns, to the exclusion of other matters more important at this particular time. C. E. M.

MADISON, Sept. 8, 1858.

NOTE.—We acknowledge the receipt of several traces of the corn above described. The ears are rather small but the kernel is large, clear and beautiful. The rapidity with which it matures makes it desirable for low wet land where a later variety would be likely to suffer from frost.—EDS.

Correspondence of the Farmer.

Strictures on a Horticultural Writer.

MESSRS. EDITORS:—As your paper is published for the purpose of disseminating *real* information to its readers, those who write for it should measure (as the old saying is) twice before they cut once; so those who write for it should know a fact before they state it with positiveness. For this reason, perhaps, and *being rather modest,* I do not find my name in print as often as others. But when a gross blunder as appears in the Patent Office Report, part 2d, 1853, pages 276–77, occurs, and then such contradictions as are found in two articles published in the June and July numbers of your paper, I feel inclined to make some inquiry how the writer could be so grossly deceived. In the Patent Office Report, he

says, "I think that an orchard ought to be plowed every year, the land manured and some low hoed crop cultivated between the trees, such as beans or potatoes, so as to keep the soil clean and mellow. If the land is kept in grass which I consider unadvisable, it should be enriched and spaded once a year for 10 feet around," &c, He further says "Many farmers have set out orchards in a careless manner, digging small holes in grass land, putting their trees in and leaving them to take care of themselves," &c. Again, he says, "More than half the trees thus treated have perished," &c.—Now this to those who are favored with Patent Office Reports is high authority, coming as it does through Government patronage, and may lead some estray.

In 1853 had not Mr. DeNevue an opportunity to make closer observation than this, when in 1858 he writes for the *Farmer* that in 1851 he made purchase of trees and of course set them after his plowing, hoeing, spading plan, but all are dead, pretty much? I ask, ought he not to have observed before 1853 which did the best, those he cultivated and those he did not? Let those who wish to see how some writers for papers as well as politicians, can turn sumersets, read the June and July articles in your paper, in connection with the Patent Office Report referred to. Did not Mr. D. know the difference between the part of his orchard never plowed, and that always plowed, till now? Yes, as early as 1847 he bought trees of Bryant & Co., Buffalo. Now if Mr. De Nevue can reconcile these contradictions, it will afford much pleasure. W. B. RANSOM.

Fond du Lac, Aug. 17th, 1858.

Note.—The above strikes us as unnecessarily *nitric*, but we publish it with the view of calling attention to an important subject, and of enabling friend DeNevue to clear up the fog that seems to separate between him and his neighbor.—Eds.

The Wisconsin Fruit Grower's Association

Will exhibit in connection with the State Agricultural Society the same this year as last, at the State Fair. It is fully expected that the united exhibitions will secure a large and select show of the fruits that flourish in our climate. It was one of the most attractive features of the Fair last year; and will undoubtedly prove a rich treat in the present case. By an arrangement between the parties, members of the Fruit Grower's Association can exchange their tickets of membership for those of the State Agrtcultural Society, on application at the office of the Secretary of the latter Society either before or during the Fair.

The W. F. G. A. is an organization that all *good fruit men* in the State should become life or annual members of, as the best means through which to systematize and embody a proper knowledge of the fruit resources of our State.

One dollar is the fee of annual membership. Please forward to A. G. Hanford, Esq, President, or C. C. Olin, Treasurer, Waukesha, or Charles Gifford, Secretary, Milwaukee.

Eastern vs. Western Fruit Trees,—Adaptability of Varieties, etc.

Messrs. Editors:—The September number of your *Farmer* is now before me, in which your correspondent on "Notes on Fruit Cultivation in Wisconsin," says some very truthful things, with which, in part, I agree, and in part must agree to disagree. The idea which he advances of eastern trees being brought into competition with those at the West, is a good one, for the pole like whips which eastern nurserymen insist upon growing, are just as worthless upon our windy, sun scorching prairies as though so many dry bean poles had been planted instead. They will never do.—Our climate and soil are so unlike that at the east, that we must produce our own fruit trees, or at least seek those varieties which have been originated and grown in a very northern latitude.

That Fruit will succeed in the Northwest, men are daily and hourly proving by the fine specimens brought to light, and the best of them, too, at our County and State Fairs.

The severe winters of '56–7 were not without their lessons of instruction to the wouldbe producers of fruit. The severity of the cold brought to light some truths, which otherwise might have remained in darkness till orchard planting had become mach more extensive, and the damage much greater. Root grafting, like the pear upon the quince, is adapted to a large variety of fruit, but there are varieties which will not succed, both in the apple and quince. Others succeed well in making a fine growth, but are naturally more tender. Thus I would argue that the severe winters have proven a blessing by way of testing the varieties adapted to certain localities, and among that list, as "best," I would name the Golden Russet.—How or in what condition of soil or location it could have been grown and thus deteriorated

from its heretofore good name, I cannot conceive. Here upon the *open prairie* ina range of 15,000 Golden Russets, not a tree is scarred, blacked, or blighted from the cold or other cause. We consider them as hardy as an oak tree, and with us an early bearer. We feel confident that the variety he is growing under that name must be the English Russet which is a tender tree, though superior fruit. The Early Strawberry is also one of our best slow growers for first two or three years, but perfectly hardy, and an early bearer. Yellow Bellflower I also wish taken from the company of the "doubtful," and placed where its long good reputation has had it; viz: "best."—The fruit of these three varieties certainly is worthy, and the tree though in western orchards is not always known by its fruit; these are exceptions; and their hardiness in this latitude is proof positive that they are "some" on the open prairies.

I would add to his list of "most reliable," St. Lawrence and Pomme Grise, both of "Canadian" origin, Early Joe and Sops of Wine, and then beg pardon for troubling you so much, but knowing that

"One blast on your bugle horn
Was worth five hundred men,"

is my only excuse. Yours, &c., W.

ROCK CO. NURSERY, Sept. 6, '58.

Bleecker's Gage Plums.

We are indebted to our friends, Mr. and Mrs. Hayes, of Palmyra, for a box of the aforesaid fine fruit. They are successful growers of Plums, Grapes, and other choice fruits, and are doing their share in the way of demonstrating the practicability of their culture in our climate and soil. Downing says of the Bleecker:

"A fruit of the first quality, and the most popular plum in the northern and western portion of this state, being not only excellent, but remarkably hardy, and a good and regular bearer. It was raised by the late Mrs. Bleecker, of Albany, about 30 years ago, from a pit given her by the Rev. Mr. Dull, of Kingston, N. Y., which he received from Germany. The original tree still stands in her garden.

It ripens the last of August, from a week to two weeks later than our Yellow Gage.—Branches downy. Fruit of medium size, roundish-oval, very regular. Suture scarcely perceptible. Stalk quite long, an inch or more, straight and pretty stout, downy, slightly inserted. Skin yellow, with numerous imbeded white specks, and thin white bloom. Flesh yellow, rich, sweet, and luscious in flavor.—Separates almost entirely from the stone, which is pointed at both ends. Leaves dark green. Easily distinguished from Yellow Gage by its longer and stouter stalk.'

MECHANICAL.

From the Woman's Advocate.

Stitching Made Easy.

From the day Mother Eve performed the first needlework, in the garden of Eden, down to this enlightened nineteenth century, our sex has been doomed to toil and slave with the needle, at the expense of health and life. The invention of the sewing machine, though long delayed, has at length afforded the needed relief, and womanhood rejoices in her emancipation from the slavery of the needle.

The subject of sewing by machinery is one of great interest to our readers, as numerous letters received by us (asking our individual opinion of the various patents) attest. We have found it impossible to spare time to answer all the inquiries in detail, and hence have had prepared a series of engravings, illustrating the modes of making, and merits of the three kinds of stitches made by sewing machines. The article has been prepared with a view of presenting the merits of the various kinds of sewing, rather than the merits of machines. It should be borne in mind that the *Tambour or Chain Stitch*, the *Shuttle*, or (as some manufacturers choose to dignify it) the *'Lock Stitch,'* and the *Grover & Baker Stitch*, by whatever mechanism contrived, are the only stitches made by sewing machines.

THE TAMBOUR OR CHAIN STITCH.

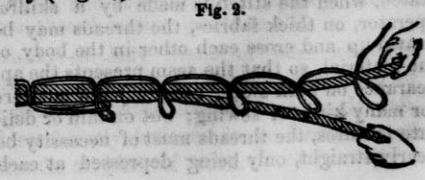
This is the stitch made by most, perhaps all of the low priced machines, and has long been in use for working figures or marking cloth; but has not been found adequate to the wants of family sewing, on account of the inherent defects of a single thread seam. Fig. 1 shows

Fig. 1.



the appearance of the seam when drawn up—the right end being represented loose, that the reader may trace the loopings of the thread.—The stitch is made by thrusting a loop through the fabric, which is held open until a second loop is thrust through, and this second loop is thrust through that again, and so on; there is a succession of loupings on the same thread until the seam is formed. It is a mere series of loopings on the under side of the fabric, in all respects identical with the knitting stitch, and if from any cause the thread breaks, and the two pieces of fabric are pulled apart, laterally (Fig. 2,) the loop must of necessity ravel

Fig. 2.

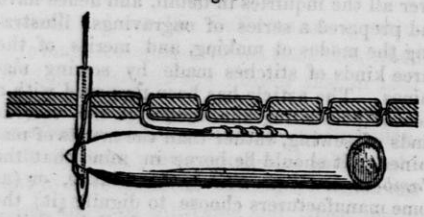


the entire length of the thread. This drawing, which shows the appearance of the loops when pulled apart, will enable the reader to judge of the merits of the seam. It is strong enough while the thread remains whole, or for mere ornamental stitching; but the end of the thread must be secured or it will ravel.

THE SHUTTLE STITCH.

The shuttle machine made and sold by the Grover & Baker S. M. Company has a reputation that equals any; is much superior to most others in use, and will serve our purpose for illustration. Whatever is true of its stitch, is true of every other shuttle stitch. It forms a seam with two threads by thrusting the upper through the fabric, where, as the needle returns, a loop is thrown out, through which the shuttle passes, (Fig. 3,) carrying the lower

Fig. 3.



thread, which is contained on a "bobbin" inside the shuttle. When sufficient care is used to have the two threads drawn equally into the body of the material, this seam will be found sufficiently strong and elastic in thick fabrics, and especially in such articles as are not subjected to the test of washing and ironing.—There are a great many obstacles, however, to the successful accomplishment of a perfect seam, and very frequently, from rough thread and other causes, the seam will present the appearance of the "mail bag stitch," (Fig. 4,)

Fig. 4.



with one thread lying flat along the under surface of the fabric. The sewing is liable, from the same causes to, run from a good to a bad tension. If the machine commences to sew perfectly, it may, after sewing a few inches, grow more and more imperfect in stitch in the manner illustrated in fig. 5. As previously

Fig. 5.



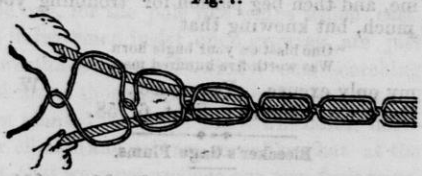
stated, when the stitch is made by a skillful operator, on thick fabrics, the threads may be drawn up and cross each other in the body of the material, so that the seam presents the appearance on both sides, (Fig. 6,) and answers for many kinds of sewing; but on thin or delicate textures, the threads must of necessity be nearly straight, only being depressed at each

Fig. 6.



stitch, allowing a departure from a straight line, equal to half the thickness of the material, and it is almost impossible to prevent it assuming the appearance represented in Fig. 4. On very thin fabrics the thickness of the threads will be equal to the thicknesses of the material, and when drawn up alike on both sides, the under thread is seen between the stitches on the upper side, and the upper thread is seen in the same manner on the under side; and, to make the face side perfect, the under thread must be permitted to lie straight on the surface of the material, as illustrated in Fig. 4. When thin fabrics are sewed with a shuttle stich seam, great care must be exercised in washing and ironing, that all unnecessary stretching or straining be avoided. When this is done the shuttle stitch may be made serviceable on thin fabrics. All seams made by any of the shuttle stitches should be fastened by hand, with a common needle, to prevent ripping. Unless this be done, the fabric may be drawn apart, (Fig. 7,) and the stitches rip

Fig. 7.



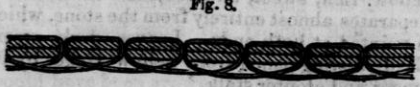
out. It is liable to this from accidental breaking of the thread, wherever there is a strain upon the seam.

In all the various shuttle machines which use either a reciprocating shuttle or a bobbin and rotating hook, the thread, of which only a small quantity can be used at a time, (and the larger the thread, of course the number of yards is still further lessened,) must be carefully rewound. This bobbin is first placed on a spooling machine, and filled with thread, and then placed inside of the shuttle, one end being passed from the side, (Fig. 3,) and through four or five holes on the outside of the shuttle, and held on the bed-plate of the machine (with the upper thread) until one or two stitches are formed.

THE BACK STITCH BY HAND.

We found, upon examining the Grover & Baker stitch, that it bore a striking resemblance to the well-known "back stitch." Every lady must be more or less familiar with the appearance and merit of this stitch; but for a better understanding of it, we beg to call attention to Fig. 8, where the thread is left loose

Fig. 8.



that the reader may trace its course, showing it to be single on the right or upper side, while it is double on the wrong or under side. It is formed by passing the needle through the fabric from the upper side, and advancing it beneath a given distance, when it is passed through the cloth upward, and carried "back" again to the point of beginning, on the upper or right side, where it is a second time passed through the first needle-hole, and then passed forward the length of two stitches, and up from beneath as before. When finished, with the thread tightly drawn, (Fig. 9,) it has

Fig. 9



greater strength and durability than any other seam sewed by hand—a fact we believe to be too well known to require further comment here.

THE GROVER & BAKER STITCH.

This stitch is patented and owned by the Grover & Baker S. M. Company, who enjoy the exclusive right to make it. A seam by this stitch is formed of two threads, sewed from two ordinary spools, as purchased from the manufacturer, the upper thread alone passing through the fabric, while (as shown in Fig. 10,

Fig. 10.



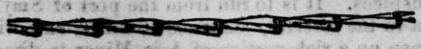
where the threads are purposely represented loose, that their windings may be traced,) the lower thread is curiously and ingeniously interwoven with the upper—passing both through and around it—forming a stitch of the greatest firmness and elasticity. Fig. 11 exhibits

Fig. 11.



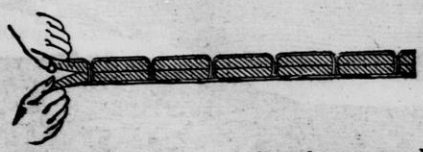
the thread somewhat closer drawn, and serves to show that each stitch, when tightly drawn, is so securely fastened and independent of its neighbors, that, if the seam be broken or cut at every quarter of an inch, its strength and firmness are wholly unimpaired. The under or binding thread is one half the size of that of the upper thread, *and being passed both through and around it,* the seam presents a most beautiful and fair stitch upon one side, and upon the other (Fig. 12) a delicately wind-

Fig. 12.



ing thread, which lies perfectly flat, and has the appearance of being inwrought in the substance of the material, and is so elastic that no amount of washing or ironing will be likely to break it. The elasticity and compensating strength of the seam are obtained by dividing the strain between the several threads, and permitting each loop to give or yield to the force which its neighbor feels, gaining thereby a double advantage—the firm closeness of the loop, and a resisting power which equalizes the force among the many stitches of a seam, instead of concentrating it upon a solitary thread. Fig. 13 shows a side view of

Fig. 13.

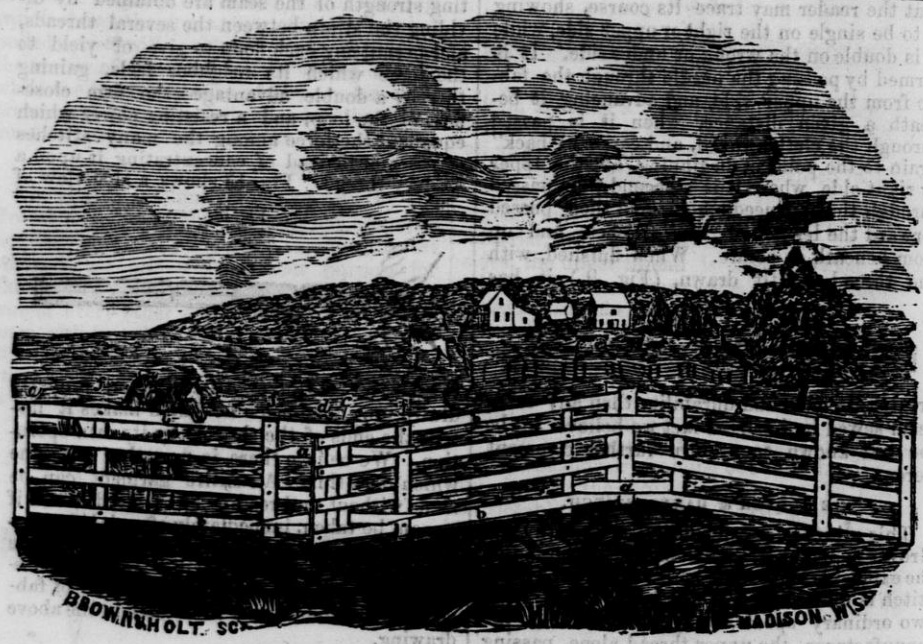


the Grover & Baker stitch, when properly drawn up. The machine which makes it fastens the ends of the threads by its own operation. We believe there is no other machine which does this. An entire garment can be made without unthreading either needle, and if a seam be taken, immediately after it has passed from the machine, and nothing more done to strengthen the ends, it will be found impossible to rip it by drawing the two pieces of fabric apart in the manner illustrated in the above drawing.

The Grover & Baker machine sews silk, linnen, or cotton thread from two ordinary spools as purchased at any store, and no rewinding of thread is necessary. The upper thread is, by a vertical needle, passed through the fabric and the loop held open until the under and finer thread, carried by a circular needle, as passed through it, add held until the vertical needle is a second time passed through the fabric and loop, and another loop from the upper thread is in its turn held open as before, and so on. The two threads are thus interlooped —the lower one passing through the upper, and the upper through the lower. The mechanism producing these results is simple, ingenious, and durable, not liable to derangement, and we think, with ordinary care, might last a life-time. Its simplicity is illustrated by the fact, that the manufacturers are daily sending machines to all parts of the United States and Europe, with no other instructions for using than are contained in a printed circular which accompanies each machine.

When sewing with silk, the Grover & Baker machine admits of the use of linnen or cotton thread on the under side, and will still make a seam that, for strength and elasticity, cannot be equalled by one formed by any shuttle stitch, and at much less expense—linnen or cotton thread costing less than silk.

NOTE.—A lady friend of ours who has used one of Grover & Baker's Machines for the last few months, likes it exceedingly well, and confidently believes it preferable to all others for all kinds of work. P.



GARLICK'S IMPROVED PORTABLE FIELD FENCE.

The above cut illustrates this new and highly useful article. It is made of common fence boards and narrow up and down strips, wholly dispensing with posts; is very simple and cheap in construction, costing from one to two shillings less than posts and boards, and is very durable as there are no posts to decay.

But its great value consists in its moveable capabilities. Some twenty to thirty rods of it can be taken upon a wagon, at a load, to any part of a farm, and set up almost as fast as ordinary lumber can be unloaded. Thus an entire field can be enclosed in a single day by a couple of hands and a team; or the fence can be taken up and packed away under a shed as soon and easily, when not needed.

There are several styles of this patent moveable Fence; but we have never met with any before this that could be used in so many shapes and ways. It can be thrown into any sized circles for fencing stacks and the like with the utmost facility. In a word, it is exceedingly handy to have a quantity of, at least for moveable purposes, upon every farm.

The enterprising gentlemen who own the patent for this State, Messrs. Crowns & Carhart, propose exhibiting it at the State Fair, where all who are present can see it; and we feel sure that its ingenuity and usefulness will be fully appreciated. The patentees are selling county, town, and individual rights for making and using it. Any farmer that can make a common fence can easily make it. We would recommend all who want moveable fences, to notice it.

New Lubricating Materials.—M. Rohrig has discovered a means of removing the acid principles of fat, enabling it to be applied as a lubricator of machinery, without danger of oxydizing the metals, besides freeing it from all disagreeable smell and taste, and rendering it to a consistency of castor oil. It is much cheaper than ordinary lubricating material.

New Textile Fabrics.—Mexican grass is now manufactured into a very beautiful fabric. It is first boiled in alkaline solutions, and afterwards washed and dried, when it is found to be strong and elastic, but not stiff enough for weaving. It is then run through a solution of glue and dried, and thus requires the requisite stiffness.

Railway in Turkey.—The first railroad in Turkey has been commenced under favorable auspices. It is to run from the port of Smyrna to the interior, distance 70 miles, and will open up a rich portion of Asia Minor to direct communication with the sea trade. The engineers are English, but the stockholders are Turks; and the government has taken a lively interest in this innovation of the rail over the camel train in the land of the Moslem.

EDUCATIONAL.

Correspondence of the Farmer.

True Mission of Agriculture.—Education of Farmers.

In too many places farmers are inadequately respected, and imposed upon by some other classes of community, because of their lack of general knowledge, or their intellectual sluggishness—for their slowness to adopt, or aim at improvements, corresponding with, and in the midst of a world full of active progress; a world of mechanical and professional operators, who constantly exert every faculty to improve and exalt their various avocations—and still, unfortunately, the farmer puts forth very little searching observation and *reasoning* efforts to increase the pleasant usefulness, and elevate the standard of *his* calling, except to increase the *number*, and not the *richness*, of his acres; hence his proverbial lack of faith for any great advancement in the sciences and attainments of Agriculture, and his too dogged disbelief when told of extraordinary products achieved by his more thinking and scientific brethren; he is slow to believe that others have succeeded, remarkably, in results beyond his father's and his own; through the happy and efficient influence of publications and societies, this state of things is slowly but surely passing away.

And they must shake off this ignoble tendency to follow in the *old ruts*, with no ambition for improvement, before they can take that honorable and pre-eminent position among intelligent beings, which the true nature of their calling entitle them to occupy, if properly appreciated and improved by themselves.—Had the same slowness of improvement and lack of thinking-invention always hampered the mechanics of our country, we should not now rejoice in our improved plows, harvesters, cultivators, and grand facilities for traversing land and ocean; to this glorious advance we are only *followers*, when from the nature of our business, we ought to be foremost and *leaders*, in improvement. Our avocation, AGRICULTURE, is the source of all sustenance, the broad basis which furnishes demand for all other legitimate callings—the fountain of all true wealth, upon whose prosperity depends the prosperity of the other pursuits.

It is the vital and natural character of Agriculture to afford employment and support to all others—it is the *true mission*, and should be the dignified *aim*, therefore, of our favored profession to encourage all to the highest improvement, by making our own as highly productive and pleasurable as the best use of *all* our faculties will enable us; this is our glorious privilege—our imperative duty. Yet, artizans and merchants are outstripping us on every hand, with the speed of steam and lightning.

This need not, should not be; with a proper and equal exercise of reason, observation and science, the farmer may pleasantly lead—at least keep pace with—the best, in life's business discipline and temporal conquests. They who subject fire, and water, and wind to toil for man, are blessings to their race; but no more blessed encomium has been pronounced on any of them than upon him who "causes two blades of grass to grow where but one grew before," for he is pronounced "a benefactor to our race;" and this is accomplished by the *mind* of man bringing *science* to work with his *hands*, upon soils and seeds, to secure their utmost product under the economy of nature.

Here is one beautiful fact in favor of agriculture, which should make every farmer ambitious for the highest possible attainment in his calling—it is that his success is promotive of the prosperity of all other proper callings—promotive of the general welfare—which is not the case with many other pursuits; in most operations one man's gains are acquired at the expense of another man's losses—the few become rich by making the many poor. The professions, for instance, and they are necessary, produce none of the elements of living, but their successes are mainly based upon the vices or afflictions of others; the merchant, however useful, really adds no new wealth to the world—he produces nothing, but simply as a factor, shares the profits on staples produced from the earth. Not so with the farmer, he does not necessarily abstract any portion of his gains from the operations of other professions—he is independent of them all for the realities of wealth—they are all dependent upon him for sustenance. But in these remarks there is no disposition to disparage any lawful pursuit—I honor and cherish them all in their usefulness—I wish, simply, to draw the rational comparison, and stimulate the farmer to a more lively and adequate appreciation of his own position, and excite a greater industry in his mind, by making him realize the importance of his mission.

ALL others depend upon him for provisions

and support—it is his privilege and mission to give business and prosperity to all others; while all of his wealth and gains are raised from the free, bountiful earth and air, which Providence supplies in munificent abundance—inviting intelligent occupation, and promising corresponding reward, *without loss to any fellow being.* The *farmer makes no improvement in procuring the products of the earth without, in some degree, extending the benefits to other classes*—increasing the products of the soil necessarily increases the substantial wealth of the world. Therefore, the true and intelligent Farmer must realize that in his glorious and eminent mission he is liable to accountabilities corresponding to his rich privileges. This consideration alone, if there were no others, should induce the farmer to exert his every power and capacity to elevate, to the highest, his position and calling. It is the central, vitalizing pursuit of life, from which flows all the chief supports of the industrial system; and as the central fountain is sound and elevated, so will the extremes, more or less, be; for, as the heart pulse beats high and healthy, a lively impulse is felt throughout the whole body; and in proportion as it is vigorous will be the frame. And so with Agriculture—as its advancement and prosperity is fostered and accelerated, so will the general welfare be promoted.

In this light, Agriculture presents the noblest field for the earnest philanthropist, as well as the ambitious producer; for there is a deep satisfaction, to a generous mind, in the pursuit of a useful calling; and it greatly rejoicing him to see rich benefits accruing under, his hands, to his fellow beings; such a cultivator is a double blessing to his race—his labors feed their bodies, and his example stimulates their minds to noble efforts.

Such a class of Farmers would be under no necessity of calling on lawyers, doctors, ministers, and others to deliver their annual addresses at the fairs, and do other thinking for them; nor of selecting most of our public officers from other ranks; nor yet of placing their sons in stores and offices to secure respectable positions in society—for none would be found higher or more respected than their own. If this article shall inspire an elevated ambition in the mind of a single one of my fellow laborers. I shall feel amply compensated for this small effort. D. S. CURTISS.

MADISON, Wis.

MISCELLANY.

OCTOBER.

BY MRS. HOYT.

Not summer now, nor winter yet;
Come walk with me awhile between.
The Year invites; almost Time waits,
As Autumn holds ajar her gates—
Her feast prepared; her welcome said;
The heavens with benedictions spread,
And all so courteous, fair and still,
The Season and the Guest who will
In cheerful leisure met.
Oh who would miss it? or forget
The suns that rise, the suns that set;
The rustle of the crimsoning leaf;
The gush and murmur of the stream;
The thoughts we think, the dreams we dream,
Those south-wind days—so bright, so brief—
Where many-hued on wood and sky,
And many-voiced to ear and eye,
October shifts the scene,—
Nay, stands apart in splendor mild,
Nature's serene, self-conscious Child.
As when the soul, furnished with deeds
That men call good, and heaven approves,
No pride puts on, and makes no boast,
But gaining ever, still gives most—
So through the months October moves;
The Moon of Harvests on her front,
The fruitage of the round year's care
Full-ripened in her generous air,
With gifts replete, as man with needs:—
Passing, 'tis true,
And softly whispering, "So are you!"
But with a retrospect that fills
With well-earned joy life's little day—
Swift gliding to the West of Time,
So fast away!
And does Time wait?
October stand at Autum's gate?
Lo! now her watch-fires on the hills
Light the far vales; the woods illume.
A sudden radiance floods the air;
The skies a sudden glory wear;
In solemn pomp the heavens attend;
A moment, and the pageant 's o'er,
Where, robed in royalty of old,
Goes down, in purple and in gold,
The month that was, and is no more.
"Is no more!" Our senses try it,
Prove it false from bloom to core;
Where the festive word is spoken,
Fruits are served, and bread is broken—
There we meet it, evermore.
Better still, our souls deny it—
Nature's sweetest lesson learning—
As our footsteps, homeward turning,
Find the rains of dim November,
Cold and drear, begin to fall:
And its beauty, we remember;
Light the fire, and shut the door;
Best of all,
Hang up October on the wall.

THE subject of the propriety of admitting ladies into the University of Michigan, is now before the Regents. The world moves!

State Fair—County Delegations.

In the September number of last year, we proposed that county societies should attend the State Fair in delegations, each with its own tent as a place of rendezvous; and, although a number of societies are making such preparations this season, yet a reiteration of what was then said may not be unavailing.—Heretofore there has been no external bond of association at all; each individual has gone to the fair on his own hook, exhibited his pigs, potatoes and cabbage, pocketed his premium, and gone home again, caring naught for his neighbor's success, nor seeking to know whether the products of his county compared favorably or unfavorably with those of other counties. The result is, individual selfishness is fostered, and such a sentiment as a laudable county pride is hardly known.

Now suppose each county society should consider itself a delegation, and so far as possible or convenient, go *en masse* to the State Fair, exhibiting its products with a view to the credit of the respective localities where they were produced as well as to the personal advantage of the producer.

Ten or a dozen handsome tents, each with its own colors flying at "mast head" would make an imposing appearance, and the emulation of the respective delegations, not only in respectability of numbers, &c., but also in the number and quality of premium articles on exhibition, would add immensely to the interest and excitement of the occasion, and, indirectlythe practical advancement of agriculture in our State.

To those societies which have no portable tents already, and lack sufficient time or means to provide them, we suggest a mere officers' tent as a place of rendezvous and head quarters for the counties which they represent.—This would give distinction and serve as an inauguration of a system to be perfected hereafter. Think of it, such societies as have neglected a preparation until this late day; and not only think, but ACT. H.

Wisconsin Institution for the Education of the Deaf and Dumb.

The improvements now going on in the main building of this Institution, will not be sufficiently completed to admit of the reception of pupils until the 30th of September.

The press throughout the State will confer a favor by inserting the above.

By order of the Board of Trustees,

J. S. OFFICER, Principal.

DELAVAN, August 20th, 1858.

The Boy whose Father would not let Him go to the Fair, and why.

"John, are you going to the State Fair?"

"No, I guess not. Father thinks *it costs too much*. He says as how he cannot afford to *pay out money* for *boys* to attend fairs; that he never had it done for him when he was a boy."

"But John, I should think you would wish to go."

"I do, indeed, but father says I must stay at home and work, and let him go; that he is older and can understand what he sees better than I can."

"But your father is able to go and to take you also; how much land has he?"

"Three hundred and twenty acres; and was offered $9,000 for it last summer, with the crops and stock."

"And cannot afford to take you to the Fair with him, at an expense of $2? Have you not worked hard all summer, John?"

"Yes, sir; have not had a leisure day, hardly Sundays."

"Pity that your father is so poor (in spirit) John."

On closing the foregoing dialogue with a faithful and hard working, sunburnt country boy, we were led to reflect, and to ask ourselves how many such fathers and sons there were to be met with in Wisconsin; farmers in easy circumstances, with families of sons and daughters growing up rapidly around them, already, perhaps, young men and women, whom they had rather keep at home hard at work, than take them to a great Agricultural and Mechanical Fair, where more can be seen and learned in three days, than in any other place in three months, and merely because it costs a few dollars. These same men, if they see a *pig* or a *steer* that they could buy at a low price, would usually find ways to get the money for it, even in hard times; but pigs and steers can be sold again *at a profit*, and boys and girls cannot, (especially at the north,) and hence the difference.

Turn out ye *tight-fisted*, and take your boys and girls to the Fairs, both County and State; you may not have many opportunities of doing it; hence, improve them as they fly. These young folks understond such things much better than we imagine; besides they have a long life to live, and profit from what they see and learn, whilst we old fellows are soon going to take what little we know to that place where "there is neither knowledge nor cunning."

P.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

OCTOBER.

A SONNET.

Aye, thou art welcome, heaven's delicious breath,
When woods begin to wear the crimson leaf,
And suns grow meek, and the meek suns grow brief,
And the year smiles as it draws near its death.
Wind of the sunny south! Oh still delay.
In the gay woods and in the golden air,
Like to a good old age released from care,
Journeying, in long serenity, away.
In such a bright, late quiet, would that I
Might wear out life like thee, mid bowers and brooks,
And, dearer yet, the sunshine of kind looks,
And music of kind voices ever nigh;
And when my last sand twinkles in the glass,
Pass silently from men, as thou dost pass.—*Bryant.*

Words.

Of itself, a word is a very little thing. A single impulse of the voice sends it forth, and it is audible only while the the air vibrates, a moment, in its arrowy path. To every human ear, it is a pulse with a single beat. And words, with which life has so much to do—they are but more of these. In quick succession, how rapidly they come as the sentence falls from our own, or other lips! Silence ensues, or a reply follows. Something thought, felt, said. And that is all. "All?" Who among us would not love to say "Yes, that is all," as we remember the time and circumstance of some brief sentence—some single word? It is all in vain that we apologize to the Past, saying of this, or that, it was said in the moment of an impulse that had no place in the bitter hour that came so soon, and was full of repentance—all in vain that those words of coldness, of anger or resentment, have been forgiven by words of affectionate entreaty that we think of them no more. Once said, we have suddenly learned that *"words are things"* —that there is nothing small, and everything immortal. Deep down in the soul lies the assurance that the memory of such words will have power to sting all the future with remorse; and is it not ever with us? And is there any bitterness like that with which we feel they are imperishable?

In holy contrast to these come back the words of which we seldom speak—so sacred, and so few. They are with us when the yet distant morning breaks in rosy light upon that rounded turf, and the little hillock by its side. Life crowds; but we still find time to think of them, when, westward gliding, as the day dawns from the east, we remember that it looked on them before it came to us.

"Uttered not, but comprehended,"

they stir us with strange power, when, in the hush of a summer noontide, our thought unconsciously goes questioning of that mysterious realm, beyond our longest gaze into the far-off, unfathomable blue. Blessed words! though full of sadness, and bringing freshly to mind the grief that will never be as old as the years that they have passed, since we

"Sat in the chamber of death,
Watching the ebb of that precious breath
That whispered the last, ere the day was night."

Yet other, and of deepest significance—the words, few and simple, that were spoken, when with clasped hands and hearts that waited not to be made one, we stood beneath the golden archway of that temple of our love and faith, upon whose threshold

"Our souls drank in the nuptial blessing."

In the language of our lips they said, *"Till death do us part;"* but in the language of our souls, they went sounding down the ages of a beautiful forever!

And words of joy that sparkle, here and there, upon the stream of human speech—how strong and sweet they are? In the cottage of the poor, or the home of the rich; by the wayside, or the hearthstone; on the land or the sea—wherever a heart has been suddenly filled with gladness, or lightened of despair, there has the voice of rejoicing been heard in words that will never die. Nor are such occasions rare; incident, rather, to the pursuits of our daily life—its dangers and its sorrows.—Through moments that lengthened into hours, and hours that seemed would never have an end, the long night of darkness, and suffering, and suspense more terrible than all, wears slowly out; and in the gray twilight of the morning that was to have been worse than the night to all our hopes, a ship heaves in sight—a friend, best beloved, is given back from the grave—or a new baby is born—and lo! a radiant face, a joy-lit eye, a brim-full word. Ah, Memory hath them, who was born for endless years!

The Mount Vernon Association Fund has now reached the considerable sum of $123,675. Of this Mr. Everett's labors collected $80,000.

The Mt. Vernon Ladies Association of the Union.

Most of our readers are, doubtless, acquainted with the fact that there is in existence an organization entitled the "Mt. Vernon Ladies Association of the Union," which has for its object the purchase and protection of the Home and Grave of Washington. Thus far, there has been no systematic co-operation with this Association by Wisconsin, and other of the Northwestern States.

An effort to that end is, however, now being made, in furtherance of which we subjoin a brief history of the Association, that the readers of the *Farmer* may have brought directly before them the great work which it is our confident expectation they will liberally and cheerfully aid.

The strong desire on the part of the people of the United States that Mt- Vernon should become a National Property, through purchase by Congress, has failed of such realization. The estate, now owned by John A. Washington was thus liable someday, to pass into the hands of speculators, who, with only mercenary motives stood ready to seize the grounds that should be kept sacred to the memory of the Father of his Country. In this emergency, an appeal was made by Miss Ann Pamela Cunningham, to the ladies of the South, urging upon them to make an effort to save Mt. Vernon, though, at that time, it was only in contemplation to secure it to the State of Virginia. This was in December of 1853. Subsequently the Association thus formed was enlarged and organized under the title we have given in May 1855, to which a charter was granted, by the General Assembly of Virginia, in March 1856.

The owner of Mt. Vernon refused, however, to approve of some of its provisions and withdrew the estate from sale. Another opportunity was given to the State of Virginia to secure the property, during the past winter; but the bill introduced to tha t effect was defeated.

It was, then, only so late as the spring of the present year that Mr. Washington was induced to dispose of the estate to, and vest the title in the Mt. V. L. A. of the Union; and on the 6th of April, last, the first installment of the stipulated purchase maney was actually paid.

That Association now exists under a Charter and with a Constitution, that provides—according to the judgment of the best legal minds of the country—against all the contingencies of an uncertain future—an Association pledged to keep the estate forever sacred to the memory of its illustrious dead.

The Mt. Vernon estate contains 200 acres of ground for which is to be paid the sum of $200,000—smaller by far than Mr. Washington could have realized had he sold to speculators, and small indeed to those who remember that it contains the Home where he lived, and the Tomb where he was buried, who was "First in war, first in peace, and first in the hearts of his countrymen."

Of this sum $18,000 was paid on the signing of the contract in April—the remainder payable in four annual installmentg falling due on the first of January of the present year, and the 22d of February of the three following.—In order to stop the accumulation of interest and to consummate the object of the Association at as early a day as possible, strong efforts are being made to secure the whole amount before the 22d of Feb. next. Large sums have been raised, for this purpose, in most of the Eastern, Southern, and Middle States; but, as yet, the West has done almost nothing—and soon, unless we arouse to immediate action, we shall have forever lost the opportunity to contribute to so sacred and glorious a cause.

One dollar paid into the Association constitutes any person a member; and an additional dollar before the 22d of Feb. of any year gives the privilege of attending and voting at the annual meeting of that year. Readers of the *Farmer!* Men and Women of Wisconsin! let us not be wanting in the patriotism that would prompt our aid in so noble a work, but with cheerful hearts and willing hands let each one furnish the much or the little that is ours to give; so blending the common interest we have in the name and memory of our beloved Washington with the common joy of this great nation when his last resting place shall have been redeemed from a dishonoring neglect and ungrateful decay.

Being an authorized agent of the Association, contributions, *accompanied by the name and residence of the donor*, sent to us will be forwarded without delay to the Regent, by whom they will be transferred to the Books of the Association and published in the Mt. Vernon Record. Address

MRS. E. O. SAMPSON HOYT,
Wisconsin Farmer Office, Madison, Wis.

FOR THE CHILDREN.

ABOUT SO HIGH.

BY MRS. HOYT.

Once there was a little boy,
Just about so high.
Now I'm not a-going to tell you
How, to know this boy, I came,
Where he lived or what his name—
If his age was five, or four,
Six whole years, or seven, or more.
Nor do I intend to tell you
If he got up late, or early—
If his hair was straight, or curly—
Black, or blue his eye.
Needn't ask, I shall not tell you,
If he wore a hat, or cap—
Liked a whistle best, or kite,
Knife to cut, or whip to snap,
Or a pocket full of marbles,
Red, and green, and blue, and white;
Only this much I will tell you:
He was just about so high,
And—*he never told a lie.*

Little boys who read this story,
Or who hear it read,
Do you know there's One who sees you,
Morning, noon, and night the same?—
Knows where you live, and what your name?—
Knows your age, and how you're dressed,
And what you like to play with best?—
One, who always is so near you,
That he hears what'er you say?—
Heard last week, and yesterday,
Every word you said?
God, the Good, who dwells above you;
God, who made the hills and trees,
Made the fields and made the flowers,
Little fishes, birds, and bees,
And the day, so warm and bright,
Where you play long happy hours—
He it is, who knows, and loves you.
If you are that little boy,
Just about so high,
Who *never told a lie.*

The Pacific—How Discovered.

On a golden Autumn day, almost three and a half centuries ago, near the summit of a mountain on the Isthmus of Darien, a company of Spanish soldiers and native Indians came to a sudden halt. They were the party of the heroic Castillian explorer, Vasco Nunez de Balboa. Thus far they had marched from the Colony on the Gulf of Darien, for many weary days through dense tropical forests, invested by venomous reptiles and fearful wild beasts—through pestiferous swamps, and black slimy streams, and over rocky heights, encountering the most dread fatigue, illness, hunger, and thirst, in the hope of discovering a new ocean, upon whose shores might lie that country, of whose marvels and riches the savages told such wonderful stories—the India of which the great hearted Columbus dreamed, when he set on the voyage which the wise men of Europe thought would be a plunge down some ocean cataract, in to a black chaos, a thousand leagues below the world.

Balboa had been assured by his Indian guide that from the summit of a certain mountain, he would behold the great sea, whose waves washed the shores of vast territories veined with gold and silver ore. Rousing their little remaining strength, the daring adventurers toiled up the rough ascent, as eager to behold the promised sea as were the Israelites of old to catch sight of the "promised land." But just before they reached the highest point, their leader commanded a halt; they all paused breathless, but reluctant. Balboa had resolved to be the first to behold the Pacific, and he proceeded alone to the summit. I do not think this was a noble act, but a selfish one, quite unworthy a true hero. Surely, those brave followers, who had shared with him all the perils and hardships of the expedition, should have had their full share in the first joy of the discovery. But he had it all to himself—the glorious sight of that placid ocean—those green and flowery shores—the beauty, the grandeur, the mystery of a new world—and it was more than he could bear unmoved. He sank on his knees and gave thanks to God. Then he called upon his followers, and they cut down a large tree and made of it a cross, which they erected on the spot in sign of conquest and civilization. They also carved the names of King Ferdinand and Queen Isabella upon several trees—thus taking possession of the land.

They then descended to the sea shore, and Balboa having in one hand his drawn sword, and in the other the Spanish standard, stood in the rising tide and shouted—"Long live King and Queen of Castile!"—thus taking possession of the sea. Perhaps they lingered on that shore till night and saw the sun descend into that calm transparent expanse of sea, turning all the waves into a vast sheet of gold, and setting all the western heavens aglow with burning splendors until they seemed like the open gates of the "golden city," or the mighty pavilions of "the King of Glory."

When the news of this discovery, of such incalculable importance to the whole world, reached Spain, it caused great wonder, rejoicing and triumph, and the name of Vasco Nunez de Balboa was associated with those of Christopher Columbus and Americus Vespucius. Yet I am sorry to add, in less than four years from the time of this glorious discovery, he was accused of disloyalty and put to death by the Spanish Governor of Darien.

So it little profited the brave adventurer that he had found a mighty ocean, on which European eyes had never before gazed, and pointed the world to regions of exhaustless riches. Yet let us hope that for him the waters of the unknown sea, which lies between us and the true "promised land" was illuminated by the "Sun of Righteousness," and that the gates of the golden city of God were not closed against him.—*Grace Greenwood.*

EDITOR'S TABLE.

THE ST. LOUIS FAIR—ITS ONDITS, INCIDENTS AND ACCIDENTS.

In accordance with previous announcement, we made our way to the aforesaid city and Fair, and for the entertainment of those who take an interest in such matters, we jot down a few of the most notable items pertaining thereto.

St. Louis, as all the world knows, is a fine *old city*, for the new West, containing, probably something over 100,000 inhabitants, pleasantly situated upon the undulating, sloping shore of the Great River. It is more substantially built than most of the cities north of it, although not generally so elegant or modern in its architecture and appearance. A wilderness of steamboats crowd its levee for miles up and down the river, and testify to the extent of territory tributary to it in a business way.

The far off waters of Itaska Lake—of the Yellow Stone, and all the other great feeders of the two great rivers of the Northwest, float every thing down to its feet. The almost unlimited plains of the West and Southwest, also, naturally start from and return all their great caravans to the self-same point; thus making it naturally the focal point of an immense radius of present and prospective business that cannot do less in the end than make it (probably) the great interior emporium of the Mississippi valley, if not of the Continent of North America. Nature has marked it as the natural capital of the United States, and it will be a strange thwarting of the ends of providence if it does not vindicate its claim to that high distinction within less than half a century. But to time in its fullness, let us leave these things, and proceed to speak of the Fair, the grounds for which are located nearly four miles out of the city; a great drawback, by the way, to their otherwise extraordinary pleasantry, and natural and artificial beauty. The grounds comprise about forty acres in extent, and are as pretty for the purposes to which they are dedicated as is the Capitol Square at Madison, for its use. Then the fittings are such as would almost seem extravagant to northern people, having cost some $15,000 to $20,000, and so contrived as to render everything as convenient and agreeable for the purposes of an exhibition as could be desired. Their amphitheatre is the crowning glory of the whole, and a magnificent thing in its way, being a circle some twenty rods in diameter, enclosed entirely around by a substantial structure of raised seats, with a wide deck for promenade about the whole; and all covered with a good roof; the deck and seats are approachable by some dozen pairs of wide easy stairs, and the whole thing as tasty and pleasant as could well be.

In the centre of the ring is a fine stand or pagoda for the judges and for music. The seats are said to be ample to accommodate from 10,000 to 15,000 *modern* ladies and gentlemen; hence their vastness may be conjectured. Within this ring is shown all the stock, horses, and driving; and here the premiums are awarded, from hour to hour, as the fair progresses, thus constituting a constant focus of attraction and novelty. As we have before remarked, a Fair Ground lacks as much of being commodious and pleasant to use, without a show ring and amphitheatre, as a kitchen lacks without a cookstove, or a farm without a barn. The various other buildings and halls are each equally good in their way, and the grounds are interspersed with ample shade and water fountains, making the whole as complete and creditable to those who designed and fitted it as possible. The grounds are owned by a private association, and are said to pay well notwithstanding they cost some $50,000 paid for and fitted. We doubt if there is a better or finer fair ground in the United States.

The exhibition of people, male and female, was immense, and from day to day. We should presume that as many as 150,000 entrance tickets must have been sold, all in all. As at all Southern Fairs, the company in attendance were of the first water; and presented an array of masculine vigor and female grace and beauty, that the Northwest can imitate but not equal. Probably more of this apparent difference arises from the tastes and habits of the people, than from any natural existing difference in fact. At the South, the first class—the real genuine aristocracy of the country—attend the fairs, and take a zealous part; while at the North and West, those who are struggling for a doubtful superior position, constitute a kind of *bogus aristocracy*, that take very little interest in Fairs, vote them ungenteel, or *unproductive in votes*, and usually stay away. Who ever saw a *live Governor* or Congressman, or their of course, very genteel ladies, at a Wisconsin State or County

Fair? and probably, mainly for the reason that it is not yet voted genteel and *tonish*; but times may change; and even *the great*, learn that Agricultural Fairs lay at the foundation of the useful, the beautiful and the good. At least a half a dozen Governors and Congressmen, including the Little Giant, were present during the St. Louis Fair, and usually visible to inspection; but enough of this.

The show of horses, of various kinds, was ample, rather than large, and, on the whole, very good; comprising thorough bred English, of the various breeds. Also Black Hawks, and Morgans, in large number, and some of them of unsurpass ed beauty and action.—One of them in particular, (Silver Heels(an Illinois Black Hawk, elicited unbounded admiration from all beholders, both for beauty of form and splendid action. He was as graceful as a French dancing master, and was cheered at every appearance.

In the way of matched horses, there were several fine span, and among them Gil. Dutcher's Bays, of Madison, Wis. So far as we heard an opinion expressed, they were considered the finest team on the ground, but for some local or other reason, they did not draw the 1st premium, and Gil would not have accepted the 2d if offered him. The show of mules was also very fine; more of them, and better than the North ever sees. Joseph Goodrich, Esq, of Milton, attended as one of the judges in that department; everybody knows he is great on mules.

In the line of cattle, there was a fair show, but nothing extraordinary; mostly Durhams, and some of them so fat as to appear disgusting. We have seldom seen the folly carried to a greater excess in the way of overfeeding for fancy show, and hope never to see it again among breeding animals. We think the show of cattle, altogether, was not any better than Wisconsin could make if she tried. In the way of sheep, we saw few or none on the ground. Then, in the way of pigs, they were almost as scarce, being altogether too meagre a show for a common county fair.

Of the few there were, the best on show were exhibited by our friend, J.A. Carpenter, of Waukesha; thorough bred Suffolks and Essex, bred by Carpenter and Hanford. They were as nearly perfect as pigs can be, and were greatly admired by all; they all drew premiums, and might have been easily disposed of at good prices if Mr. C. would have sold them.

The chicken show was also rather small; and in this Mr. C. was also a successful exhibitor. Mr. Carpenter drew five premiums altogether, on his articles exhibited, and, altogether, did the State material credit as an enterprising man, and a well posted and careful breeder.

The show of useful operative machinery was fair, and embraced several new and improved articles entitled to notice, if space permitted. But as numbers of these will be exhibited at our State Fair, we will leave them for the inspection and judgment of our readers who may see them. Most of the articles that we esteemed new, or calculated to be useful to our people, we did what we could to induce their owners to so exhibit them.

The Fruit department was rather meagre for such a fruit latitude as St. Louis. Still it embraced many fine specimens of all the leading kinds, apples, pears, peaches and grapes that were tempting to look upon. We have the promise of a box of them for exhibition at our Fair, and shall take pleasure in showing them if they come to hand.

NOVELTIES—HORSE TAMING.

In the way of novelties, Rarey the *American Horse Tamer*, was perhaps the greatest, and to say the least his feats were marvelous in the extreme—the ugliest and most unmanagable horses that could be produced, and such as no one could ride, or hardly handle, he tamed and entirely subdued in less than an hour, until they could be lead with a straw, or rode by a child five years old, without saddle or bridle, and with perfect safety, and all by the mildest means, as he never strikes a horse a blow or treats them with the least roughness. He perfectly astonished the thousands that witnessed his skill, and was constantly attended by a bevy of great men in his class-room, witgessing the performance of his miracles.—Among the number we saw Gov. Jones of Tennessee, Judge Douglass and Messrs. Barrett and Blair, the rivals for the St. Louis Congressional seat, and many others of celebrity whose names we do not now recall. Rarey was absolutely the lion of the occasion, and whenever he appeared in the amphitheatre, enchained the attention of many thousands as long as he remained. In demeanor and personal appearance, he is one of the most unassuming, modest and gentlemanly men that we

have ever met. Five minutes acquaintance with him will dispel every suspicion on the part of any one of his being a cheat or humbug. As elsewhere stated, he will attend our State Fair, and afford all who wish it an opportunity of witnessing his wonderful skill.—His art bids fair to revolutionize the whole system of horse management, and to redeem their noble race from the brutish thraldom of the past. Amen to it say we.

The weather was for the most of the time, very fine; but on Thursday evening, about the time the crowd commenced returning to the city, it began to rain sharply, and in a very few minutes filled every avenue, street and passage, with mud from three to six inches deep, and still it continued raining relentlessly. By this time, the crowd, probably not less than 20,000 and may be more, began to realize their situation—nearly four miles from the city, and all wishing to leave at once, as night was close at hand, a perfect rush for carriages and omnibusses at once arose. A hundred wanted seats where one could get them. Strong men and loafers took the lead, and the weak, including the ladies, usually took the wall. As soon as a carriage came in sight, a crowd would start for it through the mud, ladies and gentlemen, pell mell, to the utter destruction of fine foot gear, dresses and milinery; many thousand dollars of which must have gone to wreck on the occasion. Some idea of the desire of parties to get away may be drawn from the fact that as high ao $5 was charged for single seats in carriages to town. Despite of all the conveyances could do, some one or two thousand were obliged to remain on the ground all night; and many others, even ladies, to walk into town, nearly four miles, in the darkness, mud and rain. The scene, all in all, beggared description, and we presume was never surpassed in discomfort and wretchedness on any similar occasion. We understand the citizens have a horse railroad projected to the grounds, which, when completed, will fully prevent the recurrence of similar catastrophees. All in all, St. Louis is a noble city, and its fairs are well worth attending. P.

ILLINOIS STATE FAIR.

D. S. Curtiss, Esq., has gone to the Illinois State Fair at Centralia, and will be able to give us a birds-eye view of it in our next.

PLUMS.

To Jacob Ostrander, Esq, of ———, we are indebted for fine specimens of Washington, Hudson, and Green Gage Plums.

OMISSIONS IN STATE FAIR PREMIUM LIST.

STATE AGRICULTURAL ROOMS,
MADISON, Sept. 15, 1858.

On a close examination, some articles, among the great multiplicity are found to be omitted in the premium list. For example, saddle horses, and some other like instances.

But in all such cases, when articles manifestly should have been included, committes of judges are directed to award premiums, so far as 1st, 2nd, and 3d qualities are concerned, and the committees of revision will award appropriate premiums to each, the same as if they had been specified in the list.

We say this much to remove all apprehension from the minds of those who may think their articles excluded through defects in the premium list.

It will also be noticed that there is a full discretionary range for all extraordiuary and irregular articles, so that none need hold back for want of especial provision.

STATE FAIR SHOW BILL.

We have scattered a thousand of these magnificent bills about the State and country during the last month.

They were gotten up at the *Argus & Democrat* office, in this city, and as a specimen of large bill printing, we think we have never seen them excelled and seldom equalled; they reflect especial credit upon the office and artists that got them up, and in fact upon the State. We posted some of them at the St. Louis Fair, and was proud to see that they won unqualified admiration on all hands. We think they would take the first premium in their line at any Fair in the Union.

THE FINE VIGNETTE ENGRAVING

In the body of the bill, executed by Messrs. Brown & Holt, designers and engravers of this city, is also highly creditable to them, and shows their ability to do good work. P.

COMPLIMENTARY TICKETS TO STATE FAIR.

Any of the editorial Fraternity of the country who have not received complimentary tickets to the State Fair, can obtain them on their arrival by calling at the State Agricultural Rooms, or Secretary's office on the Fair Grounds.

They will also be furnished gratis to all clergymen in attendance at the fair.

D. J. POWERS, Sec.

THE FARMER OFFICE

Will be open during the Fair, and happy to see its friends and patrons, *of course.* To such as are not acquainted with the locality of

things at Madison, we would say that our office is in *Bruen's Block*, at the head of the first flight of stairs, at the right hand.

Call in and see us, one and all, old friends and new, and bring your acquaintances along with you. All, all are welcome at the *Farmer* office, at all times. It is the farmers' head quarters.

CHEAP DOMESTIC SUGAR MILLS, AND MANUFACTURE AT STATE FAIR.

Arrangements have been made with parties to *grind, boil and clarify* the Sorgho upon the Fair Grounds, with such plain simple machinery as can be gotten up in any neighborhood, and all can understand. The object is to post people up in an economical way, to manufacture their own cane, and make their own sugar and syrup. It is believed that it will prove a highly interesting and useful exhibition.—We have no doubt but *the sugar camp*, will attract its full share of attention. It will be a neat and good establishment of its kind, and kept running during the whole time of the Fair.

A PATTERN WOODEN SUGAR MILL.

C. A. Johnson, Esq., residing near this city, on the banks of second lake, has a neat, substantial and cheap sugar mill of his own manufacture, all made of wood, and mostly hewn out of the surrounding oaks. It is a first rate pattern in its way for any who wish to get them up; we saw it in operation, and were well pleased with its working; could not see why it did not do as good work as an iron one, costing three times as much. It will be in operation at the State Fair, also one or two other wooden mills of good and efficient quality. P.

DEVON CATTLE.

Col. Capron's fine herd of Devons, of McHenry Co., Ill., are expected to be exhibited at the State Fair.

Those who saw them at Milwaukee at the Fair of 1856, will recollect their very superior quality; probably they are not surpassed by any other Devon herd in the West, and may be, not in the Union. P.

A MINIATURE WATCH FOR EXHIBITION.

Nathan J. Moody, of Cook & Belden, Madison, is manufacturing a miniature clock for exhibition at the State Fair, which bids fair to be a great novelty in its way—not much larger than a quarter of a dollar. It operates beautifully, and indicates fine mechanical skill on the part of its manufacturer. The smallest clock in America, perhaps, and certainly the first manufactured in Wisconsin.

THE STATE UNIVERSITY

Commenced the new scholastic year on the 22d of Sept., with the usual hopeful indications. It is stated on good authority that Henry Barnard, LL. D., who was elected Chancellor, *vice* Chancellor Lathrop, resigned, expects to accept the appointment, and will probably remove to Wisconsin in time to commence the duties of his office with the opening of the second term. As an educationist he has a national reputation, and will doubtless prove a valuable acquisition to the Institution and the State. We are not sure whether he belongs to the Progressives or the Conservatives, but incline to regard his life-long devotion to the cause of popular education as evidence of a good degree of liberality. He has been Superintendent of Public Instruction in Connecticut, is the author of a valuable work on "Education in Europe," and is the conductor of the "United States Journal of Education," From the Secretary of the State Agricultural Society, we learn that the Dr. has accepted an invitation to deliver an address during the State Fair, and we trust that the friends of education will gladly avail themselves of that opportunity to hear him.

The new building is not yet finished, but progresses rapidly, and promises to add important *material* attractions to the Institution.

IRON SUGAR MILLS.

MESSRS. POWERS & HOYT:—We are now ready to furnish Sugar Cane Mills of the following sizes; viz.: Three roller machines, rigged either for band pulley, or with sweep for horse power like a brick machine, 4½, 6 and 8 inch rollers 12 inches long, mounted in heavy cast iron head pieces, with sett screws to regulate the rollers, and a tip top article, at $40, $50, and $65 cash, delivered free on board the cars.

Yours truly,

VOSE, MITCHELL & CO.

MILWAUKEE, Sept. 15, '58.

SPECIMENS OF CORN, &c., for State Agricultural Rooms and Farmer Office.

Those having especially fine specimens of corn or other grain, that they would like to *advertise cheaply*, can do so by bringing specimens to be hung in the State Agricultural Rooms, and *Farmer* Office, where thousands of the best farmers and first men in the State will see them during the year. Bring them along, gentlemen; we have a nail for every nice trace to hang on. P.

ARREARAGES DUE THE FARMER OFFICE.

We hope that all in arrears to us will avail themselves of the opportunity of the Fair to bring or send in to us as fully as possible all such balances. The year is rapidly drawing to a close, besides we much need every dollar due us. A little extra effort on the part of individuals, and agents, will do a great deal for us, and be exceedingly acceptable, rest assured.

NORTHERN MUSCADINE GRAPES.

This variety of Grape is being extensively propagated by certain parties, both in this State and the State of New York. We obtained several fine large roots of it from the Shakers, New Lebanon, N. Y., last spring, which have grown well during the season, and will be likely to fruit next year. They assure us that they excel all other varieties with them, and are coming into great favor with good cultivators.

THE STATE EDITORIAL CONVENTION,

Will be held at the Capitol Oct. 6. R. R. passes have been furnished to all the papers of which the Cor. Sec. had knowledge, and arrangements will be made by the Local Committee for the best entertainment possible under the circumstances of the immense crowd which will then fill every nook and corner in the city. Should any paper have been omitted, the oversight will be promptly corrected on notification.

J. W. HOYT, Cor. Secretary.

ACKNOWLEDGMENTS.

We are indebted to the Secretaries of many of the State Societies, and of the County Societies of our own State, for complimentary tickets to their respective fairs; and our great and chief regret is, that we cannot attend more of them, especially in our own State; but the thousand duties devolving upon us in the hurry of getting up our own State Fair, keeps us closely at home for most of the time. We mean to be good ready for the main drive when it comes. P.

LUMBER TO BE SOLD AT THE CLOSE OF THE FAIR.

Some hundred and fifty thousand feet of good common pine lumber, consisting of boards, scantling, &c., will be offered for sale at the conclusion of the Fair, and persons wishing to buy will do well to be present at the sale.

AGRICULTURAL MACHINES.

We defer noticing a number of new and valuable machines for drill and broadcast sowing and other purposes, for the reason that they will be on exhibition at the Fair, at and after which we will talk more about them.

NEW ADVERTISEMENTS.

Isaac Atwood advertises a fine list of the popular grapes, including the *Northern Muscadine*, a variety that is much prized by many. Also, Lawton Blackberries in quantities large or small.

Lawton, himself also advertises this far famed fruit. It is one of the new things that seem to be finding favor on all hands. In a recent letter he says:

"I have fruit in perfection still—commenced ripening July 20.

"Please to notice that the berries turn black for a number of days before they attain their full size and fine flavor; when ripe they drop from the buds with a slight touch. A little practice is required to select the ripe fruit."

Madison Mutual Insurance Co. Persons wishing to insure are invited to examine the statement of this company. It will be found to be sound as a rock.

The Scientific American, is a beautiful and invaluable work. See Prospectus—every word of which we endorse.

LITERARY NOTICES.

Fruit Culture: or a guide to the Cultivation and Management of Fruit Trees, with descriptions of Fruits, &c.; illustrated. By Thomas Gregg. New York: Fowler & Wells, publishers. Price, by mail paper, 30 cents; cloth, 50 cents.

To be successful in fruit culture, as in any thing else, you must learn how to do it; and this book gives much information one can not well do without. The price is so small that any one can afford it. There is do doubt but in all sections some fruits can be made profitable if judiciously cultivated.

The Religious Aspects of the Age, with a glance at the Church of the Present, and the Church of the Future, being addresses delivered at the Anniversary of the Young Men's Christian Union of New York on the 13th and 14th days of May, 1858, by Samuel Osgood, D. D.; T. J. Sawyer, D. D., Rev. O. B. Frothingham, Rev. Henry Blanchard; Rev. C. Miel, Rev. B. F. Barrett, E. H. Chapin, D. D., Henry W. Bellows, D. D., Rev. A. D. Mayo, Rev. J. W. Higginson, Rev. B. Peters, Richard Warren, Esq., and Hon. Horace Greeley. Published by Thatcher & Hutchinson, 523 Broadway, New York. Price, 25 cents.

The above array of names of authors whose addresses are embodied in this work is a sufficient guarranty that it is richly worth one hundred times the cost, to any one who will read and reflect upon its contents. Here, in the space of 179 pages octavo, are contained the honest sentiments of more than a half score of the truly great men of our country on questions of the most vital importance. We have read its pages with profound satisfaction, and would heartily endorse it as an invaluable book. Let everybody buy it.

HON. CASSIUS M. CLAY

Will deliver the Annual Address at the State Fair. His wide National reputation as a Practical Farmer, Statesman and Philanthropist, will ensure him a large and interested auditory.

WHITMAN OR WEBSTER CORN.

Hayward P. Hall, Esq., near this city, and adjoining our 76 farm, has raised a field of the above new variety of corn the present season, and from a partial examination of it, we are inclined to believe it a very superior article for Wisconsin cultivation; it is of a dull white color, ears large and kerneled to the very tip; ripens early, and to all appearance yields extraordinary.

It has been taking the premiums in Massachusetts for the last year or two, over all else, and is very popular there. Mr. H. thinks he will get nearly or quite a hundred bushels per acre. He is saving it all carefully for seed, and will have specimens on exhibition at State Fair. We would commend it to the attention of all good corn growers.

LATE DISCOVERIES IN PATHOLOGY show that very many of the diseases which afflict mankind arise from impurity of the blood.—This has long been suspected but is only lately known. In consumption, tubercles are found to be a sedimentary deposite from the blood. Dropsy, Gout, Cancer, Ulcers and Eruptions, all arise in disordered deposites from the blood. Billious diseases and fevers are caused solely by its deranged unhealthy state, and even the decline of life follows a want of vitality in the blood. In view of these facts DR. AYERS designed his *Cathartic Pill* especially to purify and invigorate the blood, and hence we believe to arise its unparalelled success in controlling and curing disease.—*Medical Journal.*

Von Vleck's Mu-cat-Catawba Grape.

PRICE $2,00 EACH.

Perfectly Hardy, makes Wine equal to Rudesheimer, is very delicate for the dessert.

IT is with great pride I offer this New Grape to the American people It is one of several hundred seedlings produced by a cross of the famous MUSCAT OF ALEXANDRIA with the CATAWBA. It partakes of the superior qualities of both parents. In habit it resembles the Catawba, being vigorous and productive. The fruit is very large, and compactly inserted in the bunch. The skin is a delicate rose color, overspread with a white bloom. It has a tender pulp, and abounds in a sugary juice, emitting the most delightful perfume. To wine it gives a rich, fruity flavor, and a delicious boquet. In the vicinity of New York it ripens earlier than the Isabella, and matures perfectly in the open air, with ordinary cultivation.

TERMS.—Cash with the order. Bills of good banks will be taken without regard to their distant location.

xx FREDERICK VON VLECK, New York.

Grape Vines.

NOW READY FOR THE TRADE, a large list of the best selected native varieties from one year to bearing size, which have been tested and can be fully recommended, consisting in part of the following:

Northern Muscadine, Concord, Diana, Delaware, Rebecca, Hartford Prolific, Madeira, McNeil, Sherman, Burgundy, Burton's Early August, Sage's Mammoth, Lowell's Imperial, Massachusetts Early, Connecticut Blue, Isabella, Catawba, Clinton, Vermont. &c., &c.

The undersigned is giving special attention to this branch of Horticulture. and will be able to furnish the trade with all the varieties of native grapes that are worthy of cultivation.

A correspondent (Prof. J. P. Kirtland, M. D., Cleveland Medical College,) of the Ohio Farmer, of Cleveland, Ohio, Nov 7, 1857, makes the following remarks:

"During the last three weeks we have amused ourselves in treating perhaps a hundred individuals to specimens of the Northern Muscadine, Catawba, Diana, Clinton, Isabella and Winslow's seedling. Four out of five of these persons have decided the Nortnern Muscadine to be the best grape in that list."

Price and descriptive catalogue sent on application.

Vines securely packed and sent to any part of the State.

New Rochelle or Lawton Blackberry—fine strong plants, bearing size

Apple trees from one to five years from graft, in large varieties.

All of the small fruits in varieties. Orders filled in rotation as received.

Rock Lake Vineyard and Nurseries, Lake Mills, Jefferson Co., Wis.

xxtf ISAAC ATWOOD.

Scientific American Prospectus.

VOL. XIV. BEGINS SEPTEMBER 11, 1858.

Mechanics, Inventors, Manufactureas, and Farmers.

THE SCIENTIFIC AMERICAN has now reached its FOURTEENTH YEAR, and will enter upon a New Volume on the 11th of September. It is the only weekly publication of the kind now issued in the country, and it has a very extensive circulation in all the States of the Union. It is not, as some might suppose from its title, a dry, abstruse work on technical science; on the contrary, it so deals with the great events going on in the scientific, mechanical and industrial worlds, as to please and instruct every one. If the Mechanic or Artizan wishes to know the best machine in use, or how to make any substance employed in his business—if the Housewife withes to get a recipe for making a good color, &c.—if the Inventor wishes to know what is going on in the way of improvements—if the Manufacturer wishes to keep posted with the times, and to employ the best facilities in his business—if the Man of Leisure and Study wishes to keep himself familiar with the progress made in the chemical laboratory, or in the construction of telegraphs, steamships, railroads, reapers, mowers, and a thousand other machines and appliances, both of peace and war—all these desiderata can be found in the Scientific American, and not elsewhere. They are here presented in a reliable and interesting form, adapted to the comprehension of minds unlearned in the higher branches of science and art.

TERMS:

One Copy, One Year, $2; One Copy, Six Months, $1; Five Copies, Six Months, $4; Ten Copies, Six Months, $8; Ten Copies, Twelve Months, $15; Fifteen Copies, Twelve Months, $22; Twenty Copies, Twelve Months, $28, in advance.

Specimen copies sent gratuitously for inspection. Southern and Western money, or Postage Stamps, taken for subscriptions.

☞ Letters should be directed to MUNN & CO., 128 Fulton Street, N. Y.

☞ Messrs. Munn & Co. are extensively engaged in procuring patents for new inventions, and will advise inventors, without charge, in regard to the novelty of their improvements.

Statement

OF THE

Madison Mutual Fire Insurance Co., OF MADISON, WISCONSIN.

Made to the Governor of the State of Wisconsin, as required by the provisions of Chapter 103 of the General Laws of 1858.

Total amount of accumulations..... $25,673 28

ASSETS.

Premium notes of Stockholders...	$23,118 94	
Cash on hand.....	414 18	
Due from Agents on demand.....	1,940 21	
Office furniture and fixtures.....	200 00	25,673 28
Whole number of Policies issued to July 1, '58		8,570
Amount of outstanding risks thereon.....		$1,918,844 98
Whole amount of cash received on Premiums and assessments, to July 1st, 1858.		25,422 10
Total amount. paid losses and expenses to July 1, 1858.....		15,528 53
Total amount paid Commissions to Agents, July 1st 1858.....		7,589 23
Amount of adjusted losses, unpaid.....		None.
Amount claimed on losses not adjusted		805 00
Number of Policies issued in the year 1857.		746
Amount of risks thereon.....		516,544 32
" Prem. Notes rec'd in the year 1857.....		8,652 72
Amount of Cash Prem. do do do		4,248 69
" Commission paid Agents in do		1,865 00
" Losses paid from Jan. 1, 1857 to July 1st, 1858.....		4,367 56
Amount of salaries of officers, printing, advertising, rent, postage, and all other expenses of office from Jan. 1, 1857, to July 1st, 1858.....		1,785 28

This Company confines its risks exclusively to Farm Houses, Barns, Live Stock and Farm property generally, and isolated Dwelling Houses in villages and cities.

STATE OF WISCONSIN, } ss.
Dane County. }

We, the undersigned, being the President, and a majority of the Directors of the "Madison Mutual Fire Insurance Company," do solemnly swear, and each for himself saith, that the foregoing is a true and correct statement of the affairs of said company, in the particulars therein named, as appears by the books of said company, according to the best of their knowledge and belief

N. W. DEAN, President.
D. J. POWERS, Vice President.
DAVID ATWOOD, Secretary.
W. A. MEARS,
H. H. GILES.
WILLIAM DUDLEY.
L. W. HOYT.

Subscribed and sworn to before me this 16th day of August, A. D., 1858. FRANK H. FIRMIN,
Notary Public, Dane Co., Wis.

aug18

Important to Families.

A SUBSTITUTE FOR POTASH!

CONCENTRATED LYE, FOR MAKING Soap without lime, with little or no trouble and trifling expense. The cheapest and most convenient article ever discovered for the purpose. One pound box will make nine pounds of

ELEGANT HARD SOAP,

and several gallons of Soft, or one barrel of the latter. Every family can make all the soap, both hard and soft, they use, from their ordinary kitchen grease and this Lye; nothing else is required.

Printers and all others using a STRONG LYE, will find the concentrated by far the Cheapest and most Effective Article they can possibly use.

A single trial will convince any one of its great utility and value.

For sale by all Druggists and Grocers in the country.

Beware of imitations. Manufactured by the Pennsylvania Salt Manufacturing Company of Pittsburgh, Pa., who manufacture the EXTRA SUPERFINE, SNOW WHITE

Table Dairy and Pork Packer's Salt,

warranted perfectly pure, and the only really PURE SALT in the United States. Also

Caustic Soda for soap makers,	Soda Ash,
Refined Soda Ash,	Sal Soda,
Bleaching Powder,	Bleaching Liquor,
Manganese,	Nitric Acid,
Muriatic Acid,	Aqua Fortis,
Chloroform,	Soda Saleratus.

xxtf

The Lawton Blackberry



IS unique, and not, as some have been led to believe, the common

"NEW ROCHELLE BLACKBERRY,"

improved by cultivation. It differs in shape, size and quality from all others. Is perfectly hardy, enduring the severest winters without protection. The fruit is delicious, having small seeds in proportion to its size: is a prodigious bearer, and in any good farming soil the stalk, leaf, flower, and fruit, will grow of mammoth proportions.

For the convenience of Clubs, and those who take orders for plants, they will be safely packed in boxes, put up in clusters of one dozen, without charge for package, at the following rates:—

A box of 1 dozen, $2; a box of 3 dozen, $5; a box of 8 dozen, $10.

To prevent imposition, which has been most extensively practiced, every package will be marked and branded, and purchasers from the undersigned will thus secure the genuine variety, without admixture, and may enjoy this delicious fruit the second summer in perfection. The money should accompany the order, with name and address distinctly written. N. B.—No itinerant plant sellers or traveling agents are employed to sell the plants from my grounds.

Address—

WILLIAM LAWTON,
No. 54 Wall street, New York,
Or, New Rochelle, N. Y.

xx2

Fruit Culture for the Million.

JUST PUBLISHED.

A HAND-BOOK OF FRUIT-CULTURE; being a Guide to the Culture and Management of Fruit-Trees, with Condensed Descriptions of many of the Best and most Popular varieties in the United States. Illustrated with nearly a hundred Engravings. By Thomas Gregg.

Part first contains:

INTRODUCTORY REMARKS,	TRANSPLANTING,
PRELIMINARIES TO PLANTING,	AFTER-CULTURE.

Part Second.

THE DIFFERENT KINDS OF FRUIT.

ALMONDS,	APRICOTS,	APPLES,
BLACKBERRIES,	CHERRIES,	CURRANTS,
GOOSEBERRIES,	GRAPES,	NECTARINES,
PEACHES,	PEARS,	PLUMS,
Quinces,	RASPBERRIES,	STRAWBERRIES.

The Appendix

Contains a vast amount of miscellaneous matter relative to propagating and raising Fruit, preserving Fruit, and other things of interest to housekeepers.

Sent prepaid by first mail, in paper, for 30 cents; in muslin, 50 cents. Address

xx2 FOWLER & WELLS, 308 Broadway, N. Y.

CAHOON'S
Patent Broadcast Seed Sower.

FOR SOWING WHEAT, OATS, BARLEY, GRASS-SEED, &c., &c.

THE HORSE POWER MACHINE,

At the walking gate of a horse, sows from TEN to SIXTEEN acres per hour. Price $85, half Cash and half in seven months, adding interest.

THE HAND MACHINE,

At the walking gait of a man, sows from FOUR to EIGHT acres per hour. Price $10 cash, or $12 seven months, adding interest.

☞ These machines are subetantially built, and do the work in a very superior manner, as numerous certificates from farmers who have used them, fully prove.

Agents, wherever established, will exhibit the machines in operation to farmers who may desire to purchase, and will show purchasers how to use them.

CHARLES W. CAHOON, Corresponding Agent.
D. H. FURBISH, Proprietor.

OFFICE, York Street, opposite Portland Sugar House, Portland, Me.

☞ These Machines will be exhibited in full operation at the State Fair to be held in Madison.

TESTIMONIALS:

From a large number of Certificates, the following are selected as expressing the ideas of those who have tested the Machines.

PENN, Stark Co., Ill., Aug. 8, 1858.

D. H. FURBISH, ESQ.—*Dear Sir*:—I used one of Cahoon's Broadcast Sowing Machines last spring, and sowed two hundred and fifty acres, and the result is perfectly satisfactory. I think that the grain was sown better than I have ever seen it before, and that the machine is the best in use, and can recommend it to every farmer as a great labor saving machine. BENJAMIN BUNNELL.

PORT BYRON, Ill., June 24, 1858.

D. H. FURBISH, ESQ.—*Dear Sir*:—This spring we purchased of your agent, Levi Hunford, one of Cahoon's Broadcast Sowers, and find it to be a very great labor saving machine, and just the thing that every farmer wants. We have sowed with it nearly four hundred acres of wheat, barley and oats, and the work is done to our entire satisfaction.

Yours, &c., MARSHALL & ASHDOWN.

YOUNG AMERICA, Ill., July 22, 1858.

D. H. FURBISH, ESQ.—*Dear Sir*:—This certifies that I bought one of Cahoon's Broadcast Sowers last spring, and sowed with it one hundred acres of wheat and oats, and have to say that it did its work admirably, and to my entire satisfaction, and I would not be without it on any consideration. A. BELL.

ARLINGTON, Columbia Co, Wis, Aug. 5, 1858.

D. H. FURBUSH, ESQ.—I have thoroughly tested one of Cahoon's Broadcast Sowers on my farm the present year, and am well satisfied that work can be done with it much better and easier than by hand sowing. I sowed eighty acres in a day with the machine, and its simplicity, utility and cheapness combined, render it a most valuable implement for all farmers. Yours, &c., PHINEAS WATSON.

TOULON, Ill., July 26, 1858.

I sowed 85 acres of wheat and a number of acres of oats with Cahoon's Patent Broadcast Sower last spring, and think it is the best sower in use. It sows rough or smooth ground equally well, and sows any quantity to the acre desired. I sowed with it 12½ acres per hour. I sowed in a high wind, and see no difference in the grain from that sown when there was no wind. HUGH RHODES.

STARK Co., Ill., Aug. 8, 1858.

D. H. FURBISH, ESQ.:—I used one of Cahoon's Broadcast Sower on my farm, and sowed one hundred and fifty acres with it. It gave the most perfect satisfaction to me and to many others who saw it work. My grain came up more perfectly than ever before, and I think it would have yielded more bushels per acre than in any previous year if it had not been for the universal failure throughout the land. I consider yours the most durable and labor saving machine I have ever seen. Yours, &c., SAMUEL G. AVERY.

CONCORD, Bureau Co., Ill.

This certifies that we have used one of Charles W. Cahoon's Patent Broadcast Sowers this season and have found it to be the most perfect machine for sowing grain we have ever seen. JOHN STUBBS,
JOHN S. HALL.

ARLINGTON, Columbia Co., Wis., Aug. 5, 1858.

D. H. FURBISH, ESQ.—*Dear Sir*:—I have used this season one of Cahoon's Broadcast Sowers in sowing my grain, and find as a result that the grain was sown far more evenly than in any previous year; I consider it an invaluable machine for all farmers to possess, and cheerfully recommend it to public favor. Yours Truly, C. C. KNAPPEN.

ARLINGTON, Wis., Aug. 9, 1858.

D. H. FURBISH, ESQ.—*Dear Sir*:—I have thoroughly tried one of Cahoon's Broadcast Sowers the past season in seeding my farm, and am perfectly satisfied with its practical working; I think it a great labor saving machine, and it is far superior to all other machines for sowing grain; none that I have seen will compare with it for cheapness, durability and value. I am safe in recommending it to farmers as a valuable improvement over every other.

Yours, J. H. FOSTER.

Grain Drills.

New and Improved Grain Drill and Seeding Machine Combined.

Patented Dec. 1, 1857.

THE subscriber having just purchased the sole right to manufacture and sell these machines in 18 counties in this State, would respectfully ask the attention of those persons already interested in the matter of

DRILLING IN THEIR WHEAT,

and those who should for their own benefit become interested, to this new machine. By it we accomplish all that ever has been, and as we suppose all that ever can be accomplished by any GRAIN DRILL. The advantages of this machine over all others with which we are acquainted, is the superiority and simplicity of its machinery, by which it deposites the wheat in an accurate, uniform and beautiful manner in the ground. Besides which we have another and independent

BROAD-CAST SOWING MACHINE,

for seeds of all kinds, mounted on the same wheels and operated separately or simultaneously with the Drill. There is also a

PERPETUAL REGISTER,

which indicates the number of acres sown and by which the quantity of wheat per acre is regulated.

We will not speak too much or too highly of this machine, as we are determined that it shall stand or fall according to its own merits, and that it shall be its own recommendation when properly brought before an intelligent and generous public.

All communications addressed to the undersigned, will be promptly attended to

All persons who wish to secure one of these Drills for the fall sowing, will do well to send their orders early.

Price of Drill not yet known, but guaranteed to be from $20 to $30 less than any other machine we know of.

All persons are invited to call on the proprietor, where one of the machines may be seen and examined.

A. STONER,
x VII 8 No. 2, Spring Street, Milwaukee, Wis.

Mendota Foundry & Machine Shop.

THE Subscriber has recently established an extensive Foundry and Machine Shop in the city of Madison, (on Fourth or Mendota Lake, between the Capitol and the University,) where he is prepared to make all kinds of Castings, as well as finished Machine Work, in the way of

Steam Engines, Agricultural Machinery, Artesian Well Drilling Apparatus, Sugar Cane Mills, &c., &c., &c.,

and anything else in the line of Casting, Forging, or Finishing in the best manner and on short notice.

All parties wanting anything in our line are solicited to call at our works, or communicate by mail, with the undersigned proprietor.

I. E. BROWN.
Madison, June 20, 1858. x VII tf

WISCONSIN FARMER,

AND

NORTH-WESTERN CULTIVATOR.

Vol. X. MADISON, NOVEMBER, 1858. No. 11.

D. J. POWERS AND PROF. J. W. HOYT, Editors.

PREPARATION OF THE SOIL FOR THE SEED.

NUMBER I.

IT will hardly be questioned on the one hand that some soils are, in their natural state, possessed of the general conditions essential to the higbest possible development of the plant; nor on the other, that very many of the soils annually levied upon for contributions to the garner, are totally incapable of meeting the unreasonable expectations of the husbandman, until first improved by either mechanical or chemical means. Indeed there is nothing in the whole range of Agricultural Science of more importance to the farmer, than a correct knowledge of what the soil requires, and the best methods of supplying its demands.

Such being our view of the matter, we shall make no apology for treating the subject thoroughly, and at considerable length, observing that order which appears most natural. And, inasmuch as proper moisture, proper warmth and frequent aeration are primary and indispensable in their importance—pre-requisites, without which no addition of fertilizers, and no amount of extra cultivation can more than fail, we shall first ask your attention to the much neglected though highly interesting and important subject of

DRAINAGE.

The object of drainage will appear from the enumeration of *advantages.*

The necessity is demonstrable by a reference to the vast tracts of swamp and overflowed lands in this country—many of them easily and cheaply redeemable under the direction of scientific skill—and by showing that the natural results of drainage are conditions absolutely essential to the proper germination of the seed, and healthy growth of the plant.

Even in Wisconsin there are between two and three millions of acres of swamp and marshy lands; of which at least three-fourths may be converted into good productive fields by thorough drainage. Some of these are already in process of improvement, and will, ere many years, wave their luxuriant cultivated crops, and be dotted with the beautiful homes of thrifty husbandmen; but the great bulk of them are yet either submerged or so wet as to be unavailable for farming purposes, their deep soils—made rich by a decay of centuries—patiently awaiting the more pressing needs of coming generations.

It is not to the draining of these large bodies of swamp-lands, however, that we have asked the attention of our readers: their need of improvement is obvious, and will eventually be undertaken on a liberal, and we trust, scientific plan; and the good derivable therefrom will not be confined to the large increase of our cultivable domain, but will be largely included in the improved healthfulness of districts contiguous. For it can hardly be denied by the most pertinacious stickler for the superior salubrity of our Wisconsin climate, that the health of low, marshy localities must inevitably be affected by the annual decomposition of so large quantities of vegetable matter, as de-

cay in our stagnant swamps and marshes. We say, the time will come, in the further settlement and development of our great and noble State, when this matter will force itself upon the attention of our people, and when public enterprise will accomplish what cannot be done by the individual; and we cannot but regret, that a portion of the proceeds of the sales of these lands is not to be reserved for great public improvements of this sort, instead of being refunded to individual purchasers, some of whom will thus employ it, but most of them will not. But this mention of the subject of the drainage of swamp land can hardly be amiss so long as many of our farmers neglect it in important special cases to their great individual loss. Every scientific man of observation must have been acquainted with cases, in which the nuisance of a stagnant pond was allowed for years in close proximity to the dwelling of some neighbor, simply because nobody had enterprise enough to discover the fact, that by boring through the clayey stratum upon which the water rested, it might have been easily and quickly discharged upon the deep bed of sand and gravel beneath.

In conclusion upon this branch of the subject, therefore, we would merely say, let every man whose farm includes these noxious beds of stagnant water, invoke the aid of science and common sense and drain them off as early as possible.

But it is not alone those swampy lands whose waters lie upon the surface, that require drainage. Some, which are never thus covered, except at the season of protracted rains, are practically quite as unavailable for purposes of cultivation, because of the presence during a considerable portion, or at particular seasons of the year, of stagnant water in the soil below, and yet so near the surface as to prevent a natural development of the roots of plants. It is to the drainage of this class of lands—the usually called "dry lands"—that this article is chiefly devoted.

1. In giving a more detailed account of the advantages of drainage, those may be mentioned first, *which depend exclusively upon the due proportion of water in the soil.*

Some plants, it is true, require a great abundance of water and can hardly have too much. In illustration of this we might mention the remarkable instance of a certain willow, which growing near a well in our neighborhood could not satisfy itself from the drippings near the surface, but penetrated the open spaces in the stone wall, and sending its thirsty roots down a distance of twenty feet to the water at the bottom, there luxuriated until its net-work of roots and rootlets became a perfect clump, so filling the shaft that no more water could be drawn until the proprietor went down with pruning hook and removed them. Most cultivated plants, however, require only a moderate supply of even pure water such as was this, and are absolutely destroyed by any considerable quantity of stagnant water; probably not more because of any positive poisonous quality of such water—saturated as it often is by noxious minerals and the products of the imperfect decomposition of vegetable substances—than because of the absence therefrom of sufficient warmth, of vital oxygen, and of those fertilizing gases which descend in the water of rains and would otherwise make its way in the threadlike streams which percolate through earthy pores unoccupied, to the strata below.

If the roots of trees grown in low lands, with standing water near the surface, be examined, it will be found that they have either penetrated the impervious stratum which supports that water, to dryer soils below, or—which is more likely—that they have only descended to the level of standing water and then extended themselves laterally, forming perhaps, a perfect mat by their branches woven together.

a. In the cultivated field it is a matter of vital importance, that this superfluity of cold stagnant water be removed, so that the roots may penetrate as deeply as they are wont, feeding upon the needed minerals below and getting their normal development. A large proportion of the failure of crops, so almost universally attributed to the weather, are really attributable to either a superabundance or deficiency of water at some particular time, or the season through: the late rains of spring prevent seed-sowing or planting at the appropriate time, and ere the natural drainage together with the evaporative process can remove the surplus, the hot weather of summer has come, and the baked earth is totally unfit to receive the seed; and, if it were, the season is too short to perfect the development of the plant. So also, it frequently happens, after the seed has germinated and vegetation commenced its growth, a protracted rain comes

on and the tender plants are literally drowned by the inundation.

It is the office of drainage to prevent all such disasters and failures by speedily drawing off the superfluous water to a depth below the ordinary feeding ground of the roots.

b. Again, crops which were timely and properly put in and have flourished well during the early part of the season, are often ruined by drouth. Drainage tends to correct this evil also, strange as it may seem, by practically deepening the soil, so that the roots of plants descend to lower depths and are thus less dependent upon the condition of the surface; and by allowing that deeper working and more thorough pulverization essential to a retention, by absorption, of rain waters which flow through it downward, to the elevation of water from the depths below by capillary attraction, (in like manner as it rises into a sponge when the lower edge, only, is immersed) and to the absorption of moisture from the atmosphere. Such are the results which might reasonably be expected, and numberless experiments have proven the validity of the reasoning.

2. *The second class of advantages derivable from drainage, are chemical in their nature, as follows:*

a. In the first place, by removing the stagnant water from the soil, that which afterwards falls from the clouds, will be enabled to percolate through its pores, bearing to the roots of the plant its rich treasures of ammonia, nitric acid, &c., thus furnishing the starving plant with appropriate and necessary food.

b. Secondly, this water will also convey fresh oxygen into the soil below for the requisite decomposition of minerals and those organic acids such as humic and geic, which in that state are not simply useless, but positively noxious to all vegetation; thereby converting certain poisons into food and washing others from the soil.

3. *The third class of advantages, relate to temperature.*

a. It is well known that evaporation is a cooling process, and that this is why we sprinkle our floors in the heat of summer: the water in becoming vapor must receive a considerable influx of heat, and this heat is abstracted from what remains or from the earth with which it is in contact. It must be apparent, therefore, that a wet soil cannot be other than cold, inasmuch as the abstraction of heat must be constant. Early frosts are more likely to destroy autumn crops on a wet than on a dry soil, as must be admitted by every farmer who has remarked that the corn on the low moist lands, usually suffers first, while the dry lands of the hill tops, though more exposed to cold winds, maintain their greenness longest.—Drainage obviates this by removing the surplus water, which would otherwise wait for the evaporative process.

b. But drainage also acts in a *positive* manner to warm the earth, increasing the conducting power of the soil—for so long as it is saturated with water it cannot conduct the heat of the sun downward, any more than a vessel of water can be heated by applying heat to the surface—so that the rays of the sun may not only penetrate the open pores, but also be communicated downward from one particle to another. Moreover it operates to improve the temperature of cold soils by allowing the occasional downward flow of rains made warm by the heated atmosphere and the warmer surface of the earth.

c. It is further evident from the foregoing considerations, that drainage must prolong the season of vegetable growth—a very important desideratum in the cold climates and short seasons of the north—for the reason that it enables the husbandman to plow and plant earlier, cultivate more thoroughly, and harvest later; and that the crop must consequently be less succulent, and better developed and matured.

4. Finally, there are *mechanical* arguments in favor of drainage too important to be overlooked, such as the prevention, to a great extent, of waste by washing, and the increased capacity of the soil for thorough mechanical working: a soil properly drained will rapidly imbibe the rain as it falls—instead of compelling it to flow off on the surface, carrying the rich elements of the soil along with it,—and need never be hard and lumpy, as is unavoidably the case with a soil worked while wet.

H.

"The man that misses sunrise loses the sweetest part of his existence. I love to watch the first tear that glistens in the eye of morning—the silent song the flowers breathe—the thrilling choir of the woodland minstrels to which the modest brook trickles applause—these swelling out the sweetest chord of sweet creation's matins, seem to pour some soft and merry tale into the daylight's ear, as if the world had dreamed a happy thing, and now smiled o'er the telling of it!"—*Grace Harkaway.*

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER XI.

PREPARATIONS FOR WINTER—SECURING AND MARKETING OF CROPS.

November is the stepping-stone from autumn to winter, and its fitful and changing weather affords the last opportunity for making the needful preparations for withstanding our long and tedious winters. To be well prepared for them, abates their severity, in seeming, at least one-half, and not to be well prepared is almost inexcusable on the part of those who are above the line of poverty.

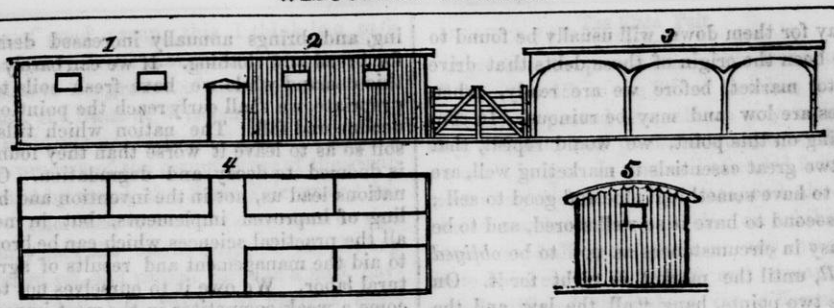
Those who are in comfortable circumstances ought of course to build snug barns and sheds for housing, not only all their animals, but also their harvested crops, (after threshing) tools and implements, of whatever nature. Of this fact, probably there is no doubt, but that there will be many who will read this, who will doubt their ability to so rig up, in these hard times, we are equally sure.

The want of means, is the constantly felt want, of the thousands of farmers who are spread all over the West; and in the first few years of their beginnings in a new country, however good and inviting that new country may be, the new beginner upon its soil needs everything, before he is in proper trim for doing business, in an economical and comfortable manner. And upon his tact and ingenuity in rigging up at a small expense and with scanty means, a vast deal depends as to his progress and success.

We have seen plenty of emigrants come to the West, with little or no means, who from their natural thrift and tact, prospered and progressed right away, and in a little while were pleasantly situated; every animal, pig and chick had a house and snug shelter for both summer and winter. On the other hand we have seen plenty of others, who with equal and may be superior means, have festered upon the soil for years and years, and with the shabbiest kind of improvements around them on every side. A sprauling, *goney* looking house, without an out-building, except perhaps a shabby lean-to of rough boards, in the middle of some lot, with no tidy enclosings, yards or garden around it. Instead of a cistern or well, a half-hooped barrel at one corner of the house with a slanting loose board serving as eave spout into it, completes the picture of desolation and shiftlessness. About such establishments; the barn arrangements are usually even worse, being probably but rough straw shanties, and not half sufficient may be at that, to accommodate the neglected and starveling creatures around them.

How many such farm establishments there are in the West, and by far the greater majority of them growing out of the inefficiency and want of tact on the part of their owners. Perhaps many will be ready to say to us, dear sir, you do not know what you are talking about; you gentlemen farmers can very glibly tell us what to do and how to do it, but were you placed in our situation, with everything to do and little or nothing to do it with, you would soon sing a different song. But too all such we will reply, that these matters are not new nor unfamiliar to us; that twenty years ago we commenced our experience among the brush and trees in Old Rock County, before it had two hundred inhabitants. An axe, augur, and yoke of oxen, constituted our almost entire worldly wealth, except that we had the resolution of a locomotive and an untiring activity that never slept late in the morning. These last qualities were our best fortune, and new as everything was around us, soon secured every ordinary comfort for all around us. A continued experience from then until the present, has given us the opportunity to be something more than a writing theorist. We assume to know from experience, something about what men even in humble circumstances, can do towards making themselves and creatures comfortable around them, if they will but make the effort and use the best means they have. Material of some sort is alwsys attainable by every one. Those who are not forehanded enough to put up substantial barns and sheds in the first instance, can with common boards and scantling, and a good *jack knife* carpenter to aid them, put up cheap but neat cattle and tool sheds, granaries, &c., at a small expense; and the lumber of these can be worked into better buildings when desired.

We have just been erecting some of these cheap sheds and granaries, that we would refer people to as models in their way; roomy enough for storing all our farm implements, wagons, buggies, and reapers, 3,000 bushels ears of corn and half as much more wheat, oats and other grain, with hog pen and chicken house included, and all at an expense not exceeding $125,00, though done up neat in all respects,



CHEAP FARM OUT BUILDINGS.

with good doors and locks, with ornamental drapery around the roofs, and the whole whitewashed with a patent indestructible wash, of water lime and skimmed milk, (which by the way, is a great improvement on the common kinds of lime and water, for out buildings.)

The foregoing cut illustrates our buildings referred to, and they may be described as follows: The granary marked No. 1 and 2 is 15 feet wide, 36 feet long and 10 feet high. Fig. 4 shows the ground plan of it; with a centre cross alley through each way, and bins on each side—No. 1 for wheat, and 2 for corn,—being boarded open and up and down. No. 3 is a wagon and reaper shed.

The buildings are in the front line of our stack yard fence, and constitute a portion of it; the gate between is the entrance to said yard. No. 5 shows an end view, with the curve of the roof, being made of 16 foot sound boards sprung on cross ways with about 10 to 12 inch curve from a straight line; the boards grooved on the upper side near the edges with a half inch plough, and then battened with siding. A roof made in this way and well made, will be found perfectly tight and good for many years.

MARKETING CROPS.

The farm crops well harvested and secured, the next thing is to market them to the best advantage. There is an old saying among merchants, "that goods well bought are already half sold," and the same with a little variation may be said of crops properly grown, harvested and secured. The very fact, that all your articles are of the best quality and in good shape and condition, soon becomes well known among buyers, either for local use or shipment. Let a farmer or gardener once get his reputation established in this way, and ten to one he will be solicited at his very door for all he has to sell and at the very best market prices that the times will justify, thus making his marketing easy and profitable.

Instead of the foregoing course, let us suppose a farmer pursuing the other, and by far too common one, of raising smutty, foul and oat-mixed wheat—half ripened corn—nondescript, wormy and worthless potatoes, and taking them to market in the worst condition, and at the worst time, (when everybody is crowding) and what may we expect as the result? Reader, do you believe there is ten of the latter kind of farmers in the State, to one of the former? We venture no opinion on the subject ourselves, but simply ask the question.

Farmers who would market their crops profitably, should never get into a pinch, so as to have to sell too soon. Perhaps some will consider this advice easier given than followed; but to all such we would say, that it is easier followed than is generally supposed, if duly thought of, and guarded against in season.—About three-fourths of the people are from six to eighteen months behind constantly in their floating indebtedness, we are well aware; but we are also equally aware, that it is wholly needless, and not only so, but downright foolishness in the majority of cases. In proof of this opinion, we would simply ask each and every of our readers, who doubts it, to take up the record of their own indebtedness, and carefully examine it, item by item, and thus to learn from what it grew; and after such careful and thorough examination, to determine how much of it might have been omitted altogether, or deferred until the means were in hand for payment. We will venture that in the great majority of cases, it will be found that our indebtedness might and should have been mainly if not wholly avoided. Useless lands, useless teams, machinery, clothes or trinkets, all of which could and should have been waited for until the money was in hand

to pay for them down, will usually be found to have been the origin of those debts that drive us to market before we are ready, when prices are low and may be ruinous. In concluding on this point, we would repeat, that the two great essentials in marketing well, are first to have something nice and good to sell; and second to have it so well stored, and to be so easy in circumstances as not to be *obliged to sell*, until the market is right for it. On these two points, hang "all the law and the prophets" of profitable farming. Who will heed and profit from a knowledge of the facts. He who does is a wise man, and he who does not is a f—l.

Thus have we cursorily run over this subject, amid a multitude of cares and labors; and give our suggestions, plans and opinions, for what they are worth, and no more; and leave to those for whom they are written, to judge and determine for themselves. It is a subject to which we shall again revert in subsequent numbers, as we have skipped some material points on which we wish to enlarge. P.

Agricultural Inferiority of the United States.

In confirmation of what we have been iterating and re-iterating, not only in the *Farmer*, but also in all our lectures and addresses, throughout the State, we extract the following from the Congressional speech of Mr. Morrell, on behalf of his bill granting lands for the endowment of Agricultural Colleges. Let the farmers of Wisconsin reflect upon the important facts and truths therein set forth and awake to the necessity of a more rational and creditable practice:

"Many foreign States support a population vastly larger per square mile than we maintain, and hold their annual increase; but, by the system of husbandry generally pursued here, the land is held only until it is robbed of its virtue, skimmed of its cream, and then the owner, selling his wasted fields to some skinflint neighbor, flies to fresh fields with the foul purpose to repeat the same spoilation. This annual exodus which prevails over all the older States, and even begins upon the first settlements of the new States before their remoter borders have lost sight of the savage, painfully indicates that we have reached the maximum of population our land will support in the present state of our agricultural economy. Our skill must be further developed or here is our limit. * * * Shall we not prove unworthy of our patrimony, if we run over the whole before we can learn how to manage a part? * * * Our population is rapidly increasing, and brings annually increased demands for bread and clothing. If we can barely meet this demand while we have fresh soils to appropriate, we shall early reach the point of our decline and fall. The nation which tills the soil so as to leave it worse than they found it, is doomed to decay and degradation. Other nations lead us, not in the invention and handling of improved implements, but in nearly all the practical sciences which can be brought to aid the management and results of agricultural labor. We owe it to ourselves not to become a weak competitor in the most important field where we are to meet the world as rivals. It touches us in tenderest points—our national honor, as well as our private pockets. * * * Able to be independent, in a broader sense than any other people, having an area ninety-five times as large as England—yet over one hundred millions of our imports of the last fiscal year, were products of the soil."

Correspondence of the Farmer.

Chinese Sugar Cane Syrup.

Messrs. Editors:—Having been at the State Fair, and there exhibited some Syrup made from the Chinese Sugar Cane, and being there requested to give my process of manufacture by such members, I said that I would do so through the Wisconsin *Farmer*, at my earliest convenience, although many others have had much, while I have had but little experience in the manufacture of Syrup from Cane. The fact that others have had more experience than I, will not deter me from giving my mite for the benefit of those who may be aided thereby. I will here state that before this year I knew nothing of raising Sugar Cane, or of its manufacture into Sugar or Syrup, excepting that I saw some last year while growing, and the little that I read upon the process of its manufacture. This year I have raised some of the *Sorgho Sucre*, and experimented a little in Syrup making.

I will here state that the planting and cultivation of the Cane was about the same as though it had been Indian corn; the ground was ridged four feet apart, and planted so as to be about four feet each way. It was planted from the fifteenth to the twentieth of May, cultivated and hoed twice. From the calculation that I have made upon its yield of Syrup per acre, and I have had no other means of knowing than by calculating and comparing the number of hills it required for one gallon, with the number of hills upon an acre—the cane used for the gallon being about an average of the acre. In this way I calculate that one acre of good cane will yield about 200

gallons of good syrup; this I think is a *safe* calculation. If our seasons hereafter prove as favorable to the growth of the Sugar Cane as this has, the State of Wisconsin need not be wanting in the production of her own sweets.

The process of the manufacture of the syrup exhibited by me at the State Fair was as follows: The Cane was cut, (such as was ripe or nearly so,) the leaves stripped off, the top also taken off, and passed through a mill, having three cast iron rollers, an upright shaft and sweep power, the rollers standing in a horizontal position in the machine. This machine we had made by Winchester & DeWolf, Whitewater. In expressing juice it will do a business of from 30 to 40 gallons per hour.

After straining the juice, which was done through a linen cloth, I take a gill of the milk of lime and the white of two eggs to each five gallons of the juice. After beating the eggs well, I mix with the milk of lime, and put the mixture into the strained juice. I then place the boiler over the fire, or the fire under the boiler, as the case may require, and bring the contents to a boil, when a thick green scum will have arisen, which I immediately take off, taking care not to let it boil in, after which I let it boil until one-half its quantity has been evaporated, then strain through a thick flannel strainer while hot, and then place over the fire and boil down to the consistency of Syrup, taking off the scum as it arises, throughout the process of evaporation. I find that it takes about seven gallons of the sap to make one of good Syrup.

O. P. DOW.

PALMYRA, Wis.

Correspondence of the Farmer.

Sorgho Sugar.

MESSRS. EDITORS:—The enterprise of producing granulated sugar from the juice of the Sorgho grown in Wisconsin, has, so far as experiments have progressed this season, proved an eminent success. The little parcels of seed, with bright sparkling eyes, distributed gratuitously by the editors of the Wisconsin *Farmer* to their thousands of subscribers throughout the State, have mostly fallen into good ground, and are now bringing forth fruit, "some a hundred-fold, some sixty fold, some thirty-fold."

Who knows but this little black shining seed, that looks so much like the African, may contain, hidden somewhere beneath its coat of mail, the germ of a *great moral lever*, that in the hands of humanity will silently develop itself, and untimately unyoke and liberate the oppressed and downtrodden of our race.

C. A. J.

The State Fair.

Agreeable to programme, this event came off from the 4th to the 8th of October, and as anticipated, proved altogether a very satisfactory, pleasant, and profitable season, so far as we could judge. It was well attended from almost every section of the State, and also embraced a wide range of articles on exhibition, nearly one-half more than at any previous State Fair, rising of $2,000, and remarkably equally diffused throughout the different departments. So far as we could discover, no one was eclipsed by another.

ANIMALS.

We have not sufficient space to enumerate any of the different animals at present, but publish the awards of premiums in another place, and in which all the first class animals are enumerated. Good judges from out of the State expressed their surprise at the fine quality of our horses and cattle, and well they might, for the show in both departments is not very much beaten in quality, in any of the older and crack stock States of the country.—Much to our gratification, the animals were not generally *over fed*, but in good condition to show their real qualities. Numbers of the best of horses, cattle and swine, and may be sheep, will be drawn and engraved for publication in the forthcoming annual volume of Agricultural Society Transactions, after which they will be copied into the *Farmer*, for the study and inspection of the curious, together with such facts and comments in relation to them as may be pertinent and useful.

THE SHOW OF AGRICULTURAL AND OTHER MACHINERY,

was large for the times, and much of it evinced a marked improvement over the past. The Plows of Winchester & DeWolf, of Whitewater, were as fine as we ever have seen, and embraced everything desirable of the kind.—Next in order of use, the Seed Drills were well represented—Kuhen's & Haines', Seymour's and Stoner's, and may be others were on the ground. Stoner's patent is a new model and well gotten up machine, manufactured by the patentee at Milwaukee. It seems to be a very simple and good machine for the purpose intended, and costs about $20 less than those usually brought on from the east.

Among the Broadcast Sowers, Cahoon's, exhibited by H. I. Sill, Esq., of Arlington, Columbia Co., as agent for the manufacturer,

struck us as a good thing decidedly. Those who have used it, certify to having sowed eighty acres in a day with it, and in the best possible manner. Both of the foregoing machines are advertised in the *Farmer*.

The Reaper Family, as usual, was represented by many fine specimens of Hand and Self-Rakers, and Reapers and Mowers combined. Their respective merits are becoming so well known to our readers, that they need little comment from us. Among the Threshers and Separators, we did not notice any except Case's of Racine, and one from the Novelty Works, Janesville. Both excellent machines; the latter especially was the nicest specimen of work for the purpose that we have ever seen, not only in design but in execution. The shafts were all of cast steel, and fitted to perfection in self-adjusting composition boxes, with turned cylinders and pulleys completely balanced, all so neatly done that it moved as easy and still comparatively as a watch. Altogether it was the neatest movement for an agricultural machine that we have ever seen. It had also a very ingenious apparatus attached to it for registering the number of bushels threshed, the grain being delivered at once into the bag instead of on the ground, or into a half bushel amid chaff and dirt. The cleaning works were also very perfect. N. A. Wiard, Esq., the designer and builder of the machine, claimed high perfection for it in a working point of view, and we can see no reason why it is not entitled to it. We should liked much to have seen it perform. It must be rather an expensive machine, but might not be the dearest to one able to have it, in the long run.

Several new styles of corn shellers were exhibited; among others one capable of being transformed into a cider mill. Fanning mills also abounded, and some of them very neat. Cahoon and Moulton, two different establishments from Rochester, Racine Co., took the lead in apparent excellence. Nothing new in the way of feed grinders.

FARM ENGINES.

The machinery was operated by a neat Farm Locomotive Engine, from the Eagle Foundry, Milwaukee. It did good service and was a credit to its makers, Messrs. Turton & Sercomb. We understand that it has been operating a threshing machine most of the fall upon the prairies, and with entire satisfaction to all parties.

WIND MILLS.

Major May, of Janesville, had two of his mills in operation on the grounds; a small size especially for pumping, and a larger one for operating machinery. This last was rather late in getting into operation, but when moving, demonstrated to the minds of all, the great economy and value of wind power for various farm and mechanical purposes. My neighbor, J. V. Robbins, Esq., has purchased the large mill and is having it put up for various uses upon his farm, so that its utilities will be practically demonstrated and proved under our own eye, thereby enabling us to report further thereon.

We have omitted for a month or two to state the fact that J. Burnham, Esq., agent of the Western Wind Engine Co., Chicago, had put up one of the Halliday Mills for us upon our farm, and that it works to admiration in pumping water, stopping itself every time when the tub is full, and starting again as soon as the water is dipped or drank out. It certainly is a great institution, and we would like to have all who need anything of the kind call at 76 and examine its working.

W. D. Bacon, of Waukesha, had on exhibition one of Wheeler, Melick & Co.'s latest improved Tread Horse Power Threshers and Separators, and with his accustomed energy, he mustered some wheat onto the ground and threshed it for the edification of the lookers on. It is the most perfect and snug farmer's machine, for one's own use, that is made. Mr. B. warrants them to give perfect satisfaction to all buyers. See his advertisement.

Stephen Burrows, of Whitewater, had a new and ingenious Horse Double Rowed Corn Planter, of his own invention, on exhibition. It seems to be a first rate article for the purpose, and capable of planting a large amount per day. Next planting season will test its merits.

Many other machines and implements of greater or lesser note were also on the grounds, and may be adverted to hereafter. There were several specimens of moveable fence, and among the rest was Garlick's Patent, which took the first premium. It is the same that was illustrated by a cut in our October number, and is beyond all dispute a good thing.—Further illustrations of its good qualities will be seen in this and subsequent numbers.

MANUFACTURER'S HALL.

The exhibition in the Manufacturer's Hall

was not extraordinarily large but pretty good. The most notable feature was the display of Fairbanks & Co.'s Scales, embracing everything, as usual, in the highest degree of perfection, from a small counter up to a six ton hay scale. D. Clark and O. C. Buck & Co., of Madison, both made fine displays of furniture; the latter of home manufacture. There were also extra good displays of carriages and sleighs from Bird Brothers, of this city, and from Milwaukee and Janesville. Among other articles of manufacture were neat views of the Fair Grounds, lithographed upon the spot, by Messrs. Lipman & Riddle, of Milwaukee. The process was highly interesting to thousands who had never before witnessed it, and never may again. Atwood & Rublee had a model card press operating beside the lithographers, under the charge of Mr. Wilkes, the enterprising foreman of that office. It run constantly on orders received for cards and circulars, and did a "land office business."—But we must pass on.

AGRICULTURAL HALL

made a good show of ordinary Farm Products, especially in the line of corn; better has never been grown in the State. Mr. Hall's Webster corn attracted especial attention, and was admired and approved by all.

ST. CROIX COUNTY AGRICULTURAL SOCIETY.

But the most attractive show in this tent was that of the St. Croix County Agricultural Society, under the charge of its worthy President and Secretary, Messrs. ———— and Salmon. It consisted of all the various farm products peculiar to our State, and to the surprise of many, of a high degree of excellence both in size and quality. They were not exceeded by those on exhibition from any other portion of the State. They had no fruit, and for the obvious reason that they have not been long enough in that section of the State, for the trees to come into bearing. St. Croix set a good example for other Counties to follow, and we hope to see a spirited competition between the various Counties of the State at no distant day. A large tent or hall devoted to such a competing show would elicit a healthy rivalry and arouse the different localities to more earnest action.

THE FRUIT AND FLORAL HALL

was one of the finest features of attraction on the grounds, not only from the large display of fruit, but from the good quality shown.—The Apples, Pears and Grapes were abundant and fine, as good perhaps as have ever been shown in the Northwest. Other fruits were not abundant or extraordinary. Flowers were usually rather out of season, although the centre of the Hall was most tastefully decorated with them. Certain kind and tasty Madison ladies and gentlemen, in connection with the no less tasty Superintendents (Mr. and Mrs. Starin) had dressed it up in a pyramidal wreath of graceful beauty. We wish that space permitted us to particularize the number of varieties and different articles on exhibition, but we are already spinning out this article, and have hardly glanced over half the ground.

THE HALL OF FINE ARTS,

As usual at our Western Fairs, made a showy and even fine appearance, in many points of view. Large numbers of choice pictures and specimens of art and ingenuity decorated its walls, and being somewhat contracted in size and highly attractive, it was as a matter of course, constantly and densely thronged. The premium awards will show something of the extent and variety of this department of the Fair.

THE SUGAR CAMP,

Among other matters, attracted its due share of attention. Several parties essayed its manufacture, but for one reason or another, none attained to much success except Mr. C. A. Johnson, resident near this city. He had his kettles properly set on brick arches and made a business of it for several days; and the result of his experiments was, that what was not tasted up by the lookers on, grained into pretty good brown sugar. H. H. Wilds, Esq., of Fort Atkinson, had some very good specimens on exhibition, of his own manufacture. O. P. Dow, Esq., of Palmyra, showed a very fine specimen of syrup, so that altogether we think the sugar demonstration, such as it was, was highly instructive and useful, and amply sufficient to remove all remaining doubts as to the utility and economy of making our own sugar and syrup at home in future. Plenty of the cane seed is ripening the present season, so that there will be no impediment in the way of extensive planting next year. The number and variety of sugar mills on show also establishes the fact that there is no lack of them either, for grinding it.

The special attractions of the Fair, went off generally very well; the military in particular made a fine and attractive display. The Ladies Equestrian Display was a good thing of

the kind, conducted, so far as we observed, with eminent propriety and good taste, and generally to the satisfaction of all. The Fireman's Display, in appearance, was not behind the military, being a large turn out of well uniformed companies with excellent machines and apparatus. Their trials of skill rather fell through for some reason, but on the whole we understand that everything went off pleasantly and amicably.

All in all, so far as we hear, it is voted a very good Fair; and people generally seemed to go away in good feeling and disposed to consider themselves well paid for their trouble and expense in attending. Still there were many things visible to the practiced hand in such matters, that can and doubtless will with time be improved. The great crowds that so hastily come together on such occasions, require for their accommodation and convenience more permanent and substantial fixtures and arrangements, than can ordinarily be gotten up upon temporary grounds with scanty means. The time has nearly or quite come, when Wisconsin, with its million people, should invest, say one cent apiece (amounting to $10,000,) in a well fitted and permanent common Fair and Show Ground, where, when the great masses meet for a week, for a general Jubilee and State Holliday of business and pleasure, they can be snugly and comfortably accommodated with ample grounds, permanent, roomy and tight buildings, for both man and beast, instead of fluttering tents, ready at every gust of wind to blow over, or open, bleak and leaky sheds for horses, cattle and sheep.

That such will be the future of these matters we make no doubt. These Agricultural shows, instead of declining as some have prophesied, are in our opinion bound to grow both in magnitude, popularity and usefulness, until they attain to an importance among our people not yet dreamed of, except by the far-seeing and sanguine. They combine profit, speculation and pleasure, in that eminent degree that is bound to make them supercede all other American hollidays.

The fine turn out this fall, both at most of our County and State Fairs, is only an earnest and foreshadowing of what will soon be, with proper labor and effort on the part of the active and stiring portion of community. Some of our first class counties, ought to hold as large and attractive Fairs within five years, as was the last State Fair, and we confidently expect to see it. Who doubts it?

But we must wind off, and only regret that we have not more space for comment, as ten pages would not suffice to give utterance to all our views, emotions and recollections of the event. Yet we cannot close without offering an apology to many of our friends of whom we had a glimpse on that occasion, and only a glimpse. Our time was so pre-occupied with duties that could not be deferred, often, even for a moment, that we had from absolute necessity, to turn the shortest possible corners, and often answer people so abruptly, as to appear anything but cordial or agreeable; but we beg leave to assure all such as got abrupt and hasty attentions and answers, that they were much more regretted by us than them; and the result of stubborn circumstances, instead of any malevolence of heart or feeling. In a word our greatest regret arises from the fact, that we found so little time to greet and pass a pleasant word with our many and valued friends from all parts of the State. But our position was one of ceaseless and inexorable labor, from the first to the last, that left no leisure or choice. We hope another year to be permitted to *go to a Fair*, instead of having one come to us, and in that case, we can find time to enjoy it. P.

County Fairs attended on Invitation—Great Gatherings—Enlarged Views of Wisconsin Enterprise and Physical Resources.

Through interference in time, we have been able this year to visit but three of the seven counties which honored us with invitations to deliver addresses at their respective Fairs: these were Grant, Winnebago and Walworth —quite remote from each other and representatives of three important classes of Wisconsin soil and scenery. A few words of each of the Fairs, in the order of their occurrence:

GRANT COUNTY

was to hold its Fair on the 22d and 23d Sept., and accordingly, in company with Mrs. H., we left Madison on the morning of the 23d, arriving at Lancaster about noon, after a most delightful ride over the varied and beautiful country between that place and Boscobel.—Sometime before we entered the precincts of the village, the white tent and "star spangled banner" of the Society greeted us from the summit of one of those handsome prairie waves peculiar to Wisconsin, and a nearer approach showed that the sterling people of old Grant were already astir. The grounds—

which we regret are not permanent—were upon the farm of our much esteemed friend J. C. Holloway, whose favored guests we became, and were well suited to the purpose. The 23d was of course the great day, and notwithstanding the forbidding appearance of the sky in the morning, before 10 o'clock the people could only be numbered *by the acre*. We had thought our estimate of Grant Co. enterprise and public spirit very high before; but really we were not prepared for such a demonstration. There seemed to be no end to the coming of the people. Oh, it was a glad spectacle—those advancing clouds of dust which marked the leading highways to the centre of attraction—that gathering host of ingenious artizans and sturdy yeomanry, bearing with them the useful and beautiful products of their own industry and skill, and mingling their happy voices with the bleating of sheep, the lowing of kine and the neighing of horses,—a spectacle which enlarges the soul and fills it with new hope for the yet more glorious future.

Finally the thousands (some said 5 others 8) were gathered together upon the field of exhibition, and the labor and pleasure of the occasion fairly commenced.

Among the prominent exhibitors, we were glad to recognize many of the good people whose acquaintance we formed during our tour through the County last winter. There were the Harrelsons with their fine specimens of grain and stock, the Welches with their splendid Durhams, the Dodges with their fine-wooled Merinos, and Morgans, the Barbers with their blooded colts, our esteemed brethren of the *Herald* with their nice preserved fruits and ——wines if we remember, and a host of good ladies, with whom we were not fortunate enough to become acquainted, displaying their superior articles of domestic manufacture—blankets, carpets, quilts, comforts, table covers, stockings, &c.—and a large variety of the products of artistic skill. But space will not allow of further enumeration; suffice it, that the Fair was an eminent success and an honor to the Society as its third exibition.

Grant is among the oldest settled western counties and there is no reason why it Agricultural Society should not take a front rank in the interest and profit of its annual festivals. As we have repeatedly said, it is particularly adapted to the raising of stock, and we hope ere many years to see its rich pastures alive with cattle, and its hills white with flocks of the best blooded sheep. Fruit can be grown there also, and we are glad to see new interest manifested in this department.

We were sorry not to remain until the awards had been declared, but were obliged in order to meet our next appointment, in good time, to leave for Boscobel immediately after the address and to drive the 30 miles in 3¼ hours; and so bidding adieu to our very hospitable host and his excellent lady, whom we shall gratefully remember through all coming years, we gave ourselves into the care of Mr. Lewis and his span of fleet horses, and at the appointed hour took the eastward train. At 6 o'clock in the morning waked up in that palatial hotel, the Newhall House, Milwaukee, and after a pleasant five hours' ride through scenery mostly new to us both, found ourselves at 12 M. in the city of Oshkosh, the locale of

THE WINNEBAGO COUNTY FAIR.

The afternoon was spent in witnessing the Plowing Match, and in the evening we were cordially received at the house of the energetic and efficient President, Hon. Eli Stilson, whose splendid farm of five hundred rich acres, magnificent barns, thrifty young orchard, large dairy and herds of young cattle, justly entitle him to rank among the first farmers in Wisconsin. But more of these anon. *This* Fair was also a success. The weather was fine, the turn out of people large and the display of articles in most of the departments highly respectable.

The grounds are just within the corporation, in a beautiful oak grove and are neatly enclosed with a substantial board fence. The Floral Tent is "bran new" and the handsomest one we have seen in the State,—will probably take the premium at the State Fair next year, should the Society think best to offer one.

The exhibition of stock was very creditable. Among other animals worthy of honorable mention, we noticed a premium cow and calf of fine blood, entered by our friend and editorial brother, Harrison Reed, Esq., late of the Neenah *Conservator*.

The Mechanical department was fairly represented.

Show of fruits respectable, particularly of apples and grapes, of which last our friend ———— exhibited some as handsome specimens as were ever clustered upon the vine-clad slopes of Guerin, Longworth, or Buchanan.

In the dairy department, our host was alone represented.

Of flowers there was likewise a deficiency, and we took occasion to scold our fair friends not a little because of this neglect. Hope the time will come, when the farmers' wife will take more pains to produce these beautiful poems of nature and less in patching up out of whole cloth fancy quilts, so gaudy that a person of good taste could hardly escape the cholera morbus or hydrophobia, should he sleep under them for a single night.

The music of two brass bands added not a little to the liveliness of the occasion, and the Fair, all in all, made an impression upon our minds which we shall cherish with pleasure.

The closing day of the Fair being Saturday, we were obliged to remain over Sabbath—a necessity for which we feel half thankful, in view of the pleasure and profit derived from a longer stay and more thorough acquaintance with the estimable family whose hospitality we had already so richly enjoyed.

Friend Stilson is a regular down-easter, and one of those who taking time by the fore-lock, drives his work and does it well. His fields are regularly laid out, well fenced and drained, and his crops are scientifically rotated. A dairy of some sixty to eighty cows constitutes a leading feature of his business, and his splendid barn, built in the form of an ell and three hundred feet long and two stories high, is admirably adapted to the business. Space will not allow of a description of its internal arrangement, but we have a daguerreotype of it in our head, and intend to refer to it hereafter. Appreciating the importance of restoring to the soil he not only takes pains to preserve and annually distribute the accumulating manures, but also buys back the phosphates lost in the milk and cheese, in the form of wheat bran for his cows. Placing a high estimate upon the value of carrots and other roots as feed, he raises premium crops of them for his cattles' use. Mr. S. likewise gives attention to fruit-raising and has illustrated the advantage of under-draining, by proving that even the prairie soil is not unadapted to orcharding if properly prepared. "Home-made" apples were abundant and luscious, their fine flavor still remaining in the memory of the palate. Ah, and Mrs. S.'s inspiring wines and delightful honey,—Mrs. H. will bear us witness to their superior quality. In such a place the hours could not pass other than swiftly and pleasantly, and before we felt quite ready to take our departure, the morning of Monday came and we were compelled to yield to the drawing of important duties at home.

Oshkosh, though a little monotonous in the evenness of the ground upon which it is built, is really a handsome growing city, and gives good evidence of energy and enterprise on the part of its business men. Located at the inlet of the Fox River and upon the shore of the beautiful Lake Winnebago, with a good country around it, and the trade of a large area of country, extending even further back than the Fox is navigable, it cannot fail to be a city of magnitude and wealth. We shall visit it again—perhaps the coming winter, if the people will.

THE WALWORTH COUNTY FAIR, AT ELKHORN,

Likewise fell upon as pleasant days as it is in the power of sunshine and a charming locality to produce. The last day particularly, Oct. 1st, was the fairest of the fair. We had intended to be present on Thursday, but failed to make R. R. counections at Clinton, and were compelled to remain over night, making our stay decidedly pleasant, however, at the home of our cordial and hospitable friends, Dr. Tinker and lady.

A somewhat intimate acquaintance with the enterprising officers of the Society, together with assurances that Walworth was to be the *banner* county on Fairs, had prepared us for a fine display, and the crowded trains from Beloit and Racine gave evidence that everybody was going to see whether the hopes of friends were not too sanguine. The village when we arrived was literally full of people. Brass bands, of which there were five in competition for premiums, were discoursing excellent music in different quarters, and several Fire and Military companies were parading up and down the streets to and from the depot, with beautiful banners, keeping alive their own excitement, and kindling the enthusiasm of every man, woman and child within the corporation.

We were immediately conducted to the grounds, which we found ample, splendidly fitted up, and filled to overflowing. The area of some twelve acres was bordered with stalls and pens full of some as fine stock as we have seen in the State; implements of all sorts strewed the lawn, and a very large hall near the centre of the grounds was absolutely stuffed with fruits of the earth, products of the dairy and household, and works of art. Next year

we hope this hall will be elongated about a hundred feet, so that articles may be better displayed and visitors may get about with more satisfaction.

Among numerous articles worthy of mention, did space permit, we noticed fine premium specimens of wheat raised by our friends E. & F. Perkins, of Spring Prairie, excellent premium cheeses from the dairy of Messrs. S. A. & A. H. Thurston, and beautiful bread and cake made by Miss Louisa Preston, daughter of the efficient President.

The speaker's stand, a large square, covered platform, erected in the centre of the enclosure, was ornamented with flags and appropriate mottoes, and surrounded with comfortable seats for the multitude, which, during the address and declaring of awards thronged about to the number of five to ten thousand.

The riding and trotting came off in the afternoon and were witnessed by at least 8,000 delighted spectators. In the trotting match, David Hill, the same that afterwards took the first premium at the State Fair, won the prize.

Among the new features of this mammoth Fair, there are several with which we are particularly pleased. First, the grounds were fitted in particularly *attractive* style. Secondly, premiums were offered for many things not absolutely agricultural, but well calculated by their essentiality to a true social life to exert a refining influence upon the too rigid and stoical farmer. We would not have the substantial products of the farm and workshops superceded by works of art, nor would we have the useful encouraged to the exclusion of the beautiful. The more the people of the town can be brought into contact with the real producers of the country, and the people of the rural districts with the refinements of city life, without either forsaking their proper sphere, the better for both: the pale-faced aristocratic dweller in the city will learn to respect and foster that noble, primal art upon which his own existence and the life and business of the world depend, and the sturdy, hard-fisted old farmer will more fully appreciate the truth, that it is not all of life—even the farmers' life—to produce fat calves and big potatoes, and plod like an ox from the cradle to the grave. Our advice, then, to all Agricultural Societies would be to make Agriculture pre-eminent, but to avail themselves of those refining influences which, while they highten the immediate interest of public exhibitions, also promote the amenities of the farming life.

In addition to the five bands of music already referred to, there was vocal music of a high order, as any of our readers who heard the "Farmers' Home" by the Badger Club, at the State Fair, will be prepared to believe.

Thirdly, the premiums were chiefly preservable as mementoes, consisting of silver tableware and agricultural books. Among the latter the Wisconsin *Farmer* appears to have been popular, inasmuch as 212 copies of the bound volumes for '56 and '57 were awarded.

The fourth novel feature was the delivery of the silver-ware and book premiums at the time of declaring the awards. When a prize is announced it affords us pleasure to see the victor, and we think it a capital idea to call them upon the stand and let the people enjoy their modest blushes. On the occasion referred to, one young lady of 13 years, Miss L. Mary Gardner, by a strange good fortune, was called to the platform three successive times to receive prizes on best wheat bread, biscuit, and worsted embroidery, each time modestly retiring amid the shouts of the multitude.

But we are protracting our notice too far; other opportunities will occur in which to do the subject justice. The Fair was a glorious one, well worthy the noble county of Walworth!

Our host was the honorable President, Otis Preston, of Elkhorn—as fine a specimen of the American gentleman as we have seen in the West, and as efficient and successful an officer as any Society could wish to have.—Through the efficiency of his excellent wife and accomplished daughter his home is a model of taste and neatness, and we were entertained with the good things of life to our hearts' content.

Next year let every body go to the Walworth Co. Fair. H.

Correspondence of the Farmer.

Jefferson County Fair.

Messrs. Editors:—To-day has been a proud one for Fort Atkinson and the friends of Agriculture. Our County Fair has just closed its session, and, as expected under the management of Milo Jones, Esq., has been a perfect success. Over $200 was received at the office and gates, at 10 cents admission and 50 cents for membership tickets, and 3000 people were on the ground. There was a large share of blooded stock, and "Floral Hall" was filled with beauty and taste. The "Sorghum

Sugar Mill" invented and manufactured by Thomas Crane of this place was pronounced by all to be perfect in its work. All of the products of the farm were largely represented, and all of the vast multitude were satisfied with this, the Sixth Annual Fair of Jefferson County.

At 2 o'clock Hon. L. P. Harvey was introduced, and he delivered the finest Agricultural Address I ever listened to. It was full of point, power and eloquence. He received perfect attention until the close of the hour. I will give you the closing sentence, in substance,

"Social vices and social miseries result from a defective and incomplete civilization, as noxious weeds and unsightly brambles thrive through imperfect and inadequate culture.—When human intelligence shall have solved every operation of nature now mysterious and inscrutable, evolved every latent force of nature and assigned to it its appropriate task in the work of human improvement, earth producing, as at creation's dawn, only everything 'pleasant to the sight and good for food,' feeding, clothing and delighting its compact myriads of population—when too the weeds of vice and selfishness shall have been eradicated from the human heart, and reason shall have subdued to the rule of conscience the animal appetites and corrupt propensities of our nature—then it will appear that christian civilization is *means*, and enlightened cultivation *earth's true state of nature*; since the highest capabilities and most perfect beauties and excellencies of earth will be then alike developed. There is in the hopes of Industry, as in the promises of Religion, a millenial future

'Bright with the Deity's smile.'"

T. W. Brown, Esq., of the *Wisconsin Chief* was called out and made a few brief and eloquent remarks, alluding touchingly to the influence of *woman* in advancing science and agriculture.

I must not forget to notice the Whitewater Band, and will say that their music to-day charmed all who heard them.

Hon. L. S. Dixon of Portage City, D. W. Ballou, of the Watertown *Democrat*, and Dist. Att'y Johnson, of Madison, I noticed on the grounds.

Let me close by saying that we have had a "gala time." Truly,

JEFFERSON.

Correspondence of the Farmer.

Illinois State Fair.

Messrs. Editors:—Leaving Madison, on Tuesday afternoon, just after one o'clock, after a pleasant ride with gentlemanly conductors, we reached Chicago a little before eight o'clock. At quarter past nine we left, on the Illinois Central R. R. for Centralia; arriving there on Wednesday morning about 10 o'clock, after as comfortable a ride as could be in very crowded cars. The conductors were all accommodating, and seemed disposed to do nothing unnecessarily to annoy the passengers; and I remember the name of one, whose conduct the passengers generally remarked for his disposition to promote their comfort—Mr. C. A. Worthy, whose course corresponds well with his name. He seemed to take such care and notice of his passengers, as to know them, without crying out at every station, "ticket, sir," to wake them every time they could catch a little sleep; and it would be well, for the character of all conductors, if they would patern after his worthy example, in this matter, and allow of some sleep.

As we reached Urbana, about half way, between 3 and 4 in the morning, we looked over the broad prairie, by starlight, to the northeast, and enjoyed a splendid view of the *comet*, when it looked much larger and brighter than when we view it across Fourth Lake; but, in no light, does it wear that frightening aspect, of which we read in Charles V.'s time.

The Central Road is a good one, and passes through a large amount of very superior lands, which the company have for sale, on very reasonable terms, where large, handsome farms can be made at moderate cost. Centralia and Central City, their chief towns, occupy favorable positions for future growth and prosperity, and are being rapidly filled up, as is Urbana.

Among the crowd, everywhere, much earnest discussion and interest is manifested in political matters, pending the approaching Senatorial contest, in Illinois. Lincoln and Douglas, both, have brave and zealous friends, full of boasts and cheerings.

The immediate location of the Fair Grounds is at Central City, some one and a half miles north of Centralia.

The enclosure is an irregular parallelogram, containing about 25 acres, part of which is a small grove; the buildings are ample, comfortable, and exhibiting very primitive taste. The

cooking, feeding and lodging arrangements are sufficient and wholesome. The crowd of people is large, and are favored with most delightful weather—being cool and clear, with plenty of dust.

The Grounds are only a few rods from the railroad depot, which is an advantage highly appreciated by those who have enjoyed it; and here is eminently proved the wisdom of the Ex. Com. in choosing the grounds for our own State Fair, so near the railroad track and depot, at Madison, as but little time is lost, and trouble suffered by exhibitors, after leaving the railroad.

An *Editorial Room* is fitted up, and seems to be occupied by a jolly company, from different sections.

Upwards of 350 stalls, for all kinds of stock, have been erected, and are nearly all full.—There is a larger show of Horn Cattle and Hogs than last year, at Peoria.

Among the short horns, one bull, "Admirable," imported and owned by S. Dunlap, of Morgan Co., cost $2,500, took the first premium. Another fine bull, "Defender," owned by A. G. Cash, of Champaign Co., took first premium last year, and is said to be one of the best animals in the Northwest. These are a few among many of superior excellence.

I am informed there are some 70 or 80 entries in the line of Horses, many of them superior animals, and among them seven thorough-bred stallions. "Young Barnton," an English race horse, imported at a cost of $7,000, by Mr. Sanga, of Sangamon Co., took the first premium. There is a good show of Mules and Jacks. Also of Sheep and Swine.

There are some good specimens of Wheat and Corn, and barrels of excellent Flour.

The show of fruits, flowers, and garden vegetables was fair, but not equal to the general expectation.

On the whole, in looking about the Fair, we found it very respectable, though not equal to expectation in some things. The exhibition of Durham and other horned cattle was admirable, and equal to anything I ever beheld; also, the hogs, mules and vegetables. The show of fruit and machinery is not equal to that presented two years ago, at the Chicago Fair. In horses, sheep and flowers, our Wisconsin Fair, will, very probably, excel them; also in wheat and oats our State will bear off the palm, as well in quantity as quality; but in the show of corn, the "Suckers" must surely take us down. But in the matter of flowers, the show of the "Madison Horticultural Association," at its last exhibition, certainly surpassed the exhibition at the Illinois State Fair. Our show of dahlias, excelled theirs, as did some other varieties, while Mr. Sommers' roses were much better than anything I saw here.

The trotting sports were generally interesting, and creditable to the contestants. Good music was listened to from the stand. We did not learn of a single accident, and saw no fighting within the grounds.

Machinery and implements, of many kinds, make a good show, but inferior to the exhibition at Chicago, two years ago, or at Janesville last year.

J. A. Carpenter, of Waukesha, Wisconsin, had an attractive show of swine and poultry, which were admired by many.

Mr. Peverill, of Rockford, exhibited a new article which attracted attention. It was some beautiful, clear rock candy, made from Sorghum, or Chinese Sugar Cane.

STEAM PLOWING ENGINE.

There is one thing of which I wish to speak particularly; it is Fawke's Steam Plowing Machine, which worked admirably; it is about the size of a small portable engine for sawing logs; with a helm-wheel which guides and turns it short round, handy as a buggy; it will draw a gang of plows, and break 10 to 15 acres per day, with one man's labor. This "Steam Plow Engine" is the invention of J. W. Fawkes, of Lancaster, Pa., and, in the opinion of those who saw it, is all that could be desired, and will work wonders on our immense prairies.—This machine, together with the great harvesting machine, recently invented in New York—which simply gathers the *heads* of grain, threshing, cleaning and bagging it, as the machine moves through the field, leaving the chaff and straw scattered evenly over the field, with the aid of two men and a span of horses, are calculated to mark the present era for splendid useful inventions—in fact, in my opinion, they are calculated to work more good for the industrial and producing classes, than half a dozen Valentia-Trinity Bay Cables will.

As we were leaving for home, about half past eleven, the train from the south arrived with Judge Douglass on board, and as he got out, a round shout went up from the crowd for him. At the same time, also, a shout of cheers went up for Lincoln, who was getting into the

cars to come north; as he had been most of the day at Centralia and the Fair.

We reached Chicago to-day (Friday) about noon, after a tolerably comfortable ride of some thirteen hours—the distance being 253 miles from Centralia—the train was very crowded, and had to make many stops, so that it was delayed.

CHICAGO, Sept. 17.

We passed an hour, this P. M., very pleasantly, in the fair of the Mechanics' Institute, of this city; and the display in machinery, mechanism and the fine arts—the floral department and fancy goods—was extensive and various; and highly creditable to the Institute, and the Horticulturists of the city, who take much interest in these shows. Among others, the Printers had a great variety of most beautiful specimens on exhibition. Several of the best styles of Bee Hives, richly filled, occupied considerable space on the tables. I will not particularize further, where all was so admirable. This institute has been in existence several years, and has constantly been pushed forward with vigor; yet, the most attractive feature of the show was the department of the Horticultural Society, which has also been in existence since 1846, from a small beginning, like our own.

Many fine specimens from different branches of the fine arts, added much attraction to this exhibiti n. Yours, &c.,

D. S. CURTISS.

SAUK CO. IRON WORKS.—Mr. Philarmon Pratt, who has just erected a large addition to his saw-mill, has procured the necessary castings and machinery from Mr. Tower's Iron Foundry, at Ironton, Sauk Co., and expresses himself highly pleased with their performance. The quality of the iron, for the purposes of machinery, is literally unsurpassed, as disinterested and competent judges have already testified, and Mr. Jonas Tower, the proprietor, has laid the foundation for a large business, and a well-earned and extensive reputation.—We hope to see our mechanics and others who need such machinery look to their own home foundries for their supply; they may go further and fare worse.—*Baraboo Rep.*

PROFIT OF THE FAIR.—The late Fair of the St. Louis Agricultural and Mechanical Associations was a more profitable one to the stockholders than either two preceding ones. The rent of the booths, under the Amphitheatre, to begin with, amounted to $6,800. The entrance fees, we understand, were something like $10,000. The receipts at the gates, from the sale of tickets and fees for the admission of carriages, we estimate at $3,700 per day. This would make the receipts $39,000. What the expenses were, we have not the means for learning; but it is stated the proceeds exceeded the expenses $16,000.—*St. Louis Evening News.*

AGRICULTURAL ADDRESS.

Remarks of HON. J. F. WILLARD, *President of the Wisconsin State Agricultural Society, on the opening of the State Fair, Oct.* 6, 1858.

GENTLEMEN OF THE WISCONSIN STATE AGRICULTURAL SOCIETY, AND FELLOW CITIZENS:

We are not here to-day to celebrate victories obtained in war, nor yet those of a successful political campaign; but one more *glorious* than either—the achievements of Agriculture and the Mechanic Arts! The victory of mind over matter—of intelligence over ignorance—of industry over idleness.—But a few short years have elapsed since the territory now comprised within the limits of the State of Wisconsin, was the abode of the savage and wild beast. These broad prairies and wood-lands were the grand hunting grounds of the red man.

Within the period of a quarter of a century this wilderness has become "a fruitful field." The wand of Agriculture has passed over it, and by its magic, these wastes are transformed into a goodly heritage;—instead of the tall grass of the prairies, fields of wheat and corn undulate to the passing breeze;—where once the wild flower bloomed to "waste its sweetness on the desert air," now is seen its more "cultivated" sister, cherished and appreciated.

The site of the Indian wigwam is now occupied by the stately mansion and substantial farm-house. Where but recently a few wild men were scattered here and there over this broad expanse, now a dense population of hundreds of thousands of civilized and intelligent freemen occupy the country. Civilization and intelligence have taken possession of this wide domain. Here are the evidences, all around us. These are *our* jewels.

Upon yonder eminence, where but late stood the Indian hut, whose smoke curled lazily towards the clouds, fit emblem of his own character—*now* that eminence is crowned with a temple dedicated to the Fine Arts. But late, the bloody Sioux, encamped on these veritable grounds, seeking the life of his brother Indian, but now a "tented field" to be sure, but we celebrate the arts of peace. More late, nought but the whoop of the savage and the howl of the wild beast broke the silence—now the lowing of herds, the bleating of flocks, and the merry and joyous voices of thousands of an intelligent population make the welkin ring with gladness. Late might have been seen here, the rude scaffold erected to dry the flesh and skins of the chase, and perchance a few scalps from human heads might have adorned these bushes and saplings, trophies of savage valor.

What do we see to-day? Look abroad over these grounds, and be proud, and thank

God for the change. Let us thank our Maker that we belong to a civilized, and not a savage race—that we are christian and not heathen men. What has wrought this change? Why, sirs, the Agricultural army is marching towards the setting sun—"Westward the Star of Empire makes its way."—Agriculture has taken possession of these fair lands, and tamed its wild surface, and rendered it subservient to the wants of man—of civilized man. The Mechanic Arts have followed in its train, and the Fine Arts, by an unerring law of nature, find their *level here.* What heart can remain unmoved? What bosom refrain from emotions of honest pride while we contemplate the scene before us? We meet here to celebrate the conquests of Agriculture and the Mechanic Arts. We come to greet and encourage each other in our various pursuits and make notes and suggestions for our future improvement.

We have before us fitting evidences of the energy, intelligence, skill and refinement of the industrial classes of our young and vigorous State.

A large majority of the people of Wisconsin are tillers of the soil. Ours is, emphatically, an *Agricultural* State, and we glory in our noble calling. Wisconsin farmers and *mechanics* are not numbered among those who feel themselves degraded by a *practical* demonstration of the text "that by the sweat of the brow man shall eat his bread." We construe it to mean EARN his bread. Not unlike republican Rome, shall Wisconsin honor her toiling sons, and bring them, Cincinnatus like, from their plow, and make them *toiling men* of state.

Labor is honorable—it is ennobling. The surest indications of national prosperity are found in the fact, that the laborer is elevated and the idle discarded,—and we are here today to personify labor—to eulogize it, to set it on high—to bow in *reverence* before it, and proclaim to all the world that Wisconsin delights to honor the man, who labors with his own hands, to procure for himself and family, an *honest* maintenance and support.

Farmers, Mechanics, and all Working Men and Women generally: The Managers of the State Agricultural Society have made arrangements, as you here see, for a holliday for *all.* These arrangements are for you—the idle and lazy will not be here, (and we are glad to know that our State furnishes as few, to say the least, as any other of the Confederation.) And now permit me, fellow laborers, in behalf of the Society, to welcome you to these grounds, and to the privileges and immunities of this Annual Festival. And on our part only ask the privilege of joining with you in celebrating the achievements of labor and industry. Here union and sympathy pervade all ranks, professions, and callings—here we have the most opposite extremes, apparently, brought into harmonious juxtaposition—the man of peace—the man of war—the politician—the plowman—the artizan—the miner—the sailor—the high and low, the rich and poor—all occupy but one platform. One idea possesses all—that is, we are a common brotherhood, and that for a brief season, at least, all else shall be forgotten, and we will give ourselves up to the enjoyment of the *ultima thule* of human conception—*millenial harmony and equality.*

To the officers and managers permit me to say, that to make this Fair successful, and what it ought, and must be, a credit to Agriculture and an honor to the State, every one must be at his post, and no sacrifice must be deemed too great in order to perform well the duties assigned to each. We know you—we know your zeal and fidelity, and believe you feel with us that no pains shall be spared to make this Fair the best ever held in the Northwest.

And to those gentlemen and ladies appointed judges at this Fair: Great responsibility rests with you in order to its final success. To you will be committed the examination of all animals and articles on exhibition, and your individual attention will be required to do justice to all parties, and satisfy the expectations of the public.

We wish full and definite reports from each committee, and though you cannot award to each exhibitor a premium, you will *notice* in your report, all articles or animals which you consider meritorious, and give your opinion concerning them. Your reports will be one of the most interesting features of the Fair, and nothing will be *listened* to with so much interest as the reading of them. We believe you appreciate this, and we have the utmost confidence, that your part of the programme will be performed with discrimination, ability and faithfulness, and that whatever conclusions you arrive at, they will be the honest convictions of your judgment.

Without further remark, we now declare the Fair of the Wisconsin State Agricultural Society of 1858, duly opened. Officers will repair to their several duties, and the people to the enjoyment of the occasion.

KEEP BUSY.—There is nothing like keeping busy, if you would avoid that most terrible of all fiends, Ennui. The Count de Caylus, a French nobleman, who might have been wholly idle, took to engraving gems, and when asked his reason, answered, "I engrave, that I may not hang myself."

IF there is a man who can eat his bread in peace with God and man, it is he who has brought that bread out of the earth. It is cankered by no fraud, it is wet by no tears, it is stained by no blood.

AWARDS OF PREMIUMS,

AT THE

EIGHTH ANNUAL FAIR

OF THE

Wis. State Agricultural Society,

HELD AT MADISON, OCT. 4th TO 8th, 1858

CLASS A.

No. 1.—SHORT HORNS.

Best Bull, 3 yrs old, C. H. Williams, Excelsior, Sauk co, Engraving or.. ..... $15
2d do. John Wentworth & Son. Ft. Atkinson,..... 10
3d do, A. A. Redford, Menomonee, Waukesha co,... 5
Best Bull, 2 yrs old, Douglas & Scofield, Janesville, 10
2d do, J. & W Zuill Johnstown,..... 7
3d do, E. C Sage, Wauwatosa..... 5
Best Bull, 1 yr old, J. Welch, Mount Clemons,..... 7
2d do, S. W Williams, Emerald Grove,..... 5
3d do, James Clements, Windsor 3
Best Bull Calf, W. H Talman, Janesville..... 5
2d do, John Fernley, Lagrange, Walworth co..... 3
Best Cow, 3 yrs and over, John Fernley, Lagrange, Walworth county..... 15
2d do, J. Welch, Dane co..... 10
3d do, A. M. Perry, Troy, Walworth co..... 5
Best Heifer, 2 yrs old, John Fernley, Lagrange,..... 10
2d do, Charles H. Williams, Excelsior, Sauk co..... 7
3d do, Thos. Marshall, Oak Grove, Dodge co 5
Best yearling Heifer, Charles H. Williams, Excelsior, 7
2d do, do do do .. 5
3d do, Thomas Marshall, Oak Grove, Dodge co..... 3
Best Heifer Calf, John Fernley, Lagrange..... 5
2d do, Chas. H. Williams, Excelsior, Sauk co..... 3

No. 2.—CATTLE FROM OTHER STATES.

Best Durham Bull J. K. Wing, Trumbull Co Ohio, 1st premium..... Dip. and $10.

No. 3.—DEVONS.

Best Bull, 6 yrs old, Thos. Reynolds, Madison, Engraving or..... $15
2d do 4 years old, O. A. Gifford, Janesville..... 10
3d do 6 " " J. B Crawford, Baraboo..... 7
Best Bull 2 years old and over, L. Land n Waupun 10
2d do do do Milo Jones, Ft. Atkinson 7
Best Bull one yr old, Geo. Baker, Hustisford, Dodge 7
2d do do G. Goodrich, Whitesville,.... 5
Best Bull Calf, L. Rawson, Oak Creek,..... 5
2d do do do 3
Best cow, 3 yrs and over, Luther Rawson, Oak Creek,..... 15
2d do do Geo. Baker, Hustisford,..... 10
3d do do C. O'Brien, Oregon,..... 7

No. 6.—ALDERNEYS.

Best Bull, 1 year old, J. V. Robbins, Burke, Dane co. 5
do Cow, 6 years old, do do do do 15
2d do do do do do do 10
3d do do do do do do 5
Best yearling Heifer, do do do 7
2d do do do do do 5

No. 7.—CROSSES OF BLOOD CATTLE.

Best Bull 3 years and over, Wm. Patterson, Richmond, Walworth co, engraving or 15
2d do do J. S. Newton, Verona, Dane co.. 10
3d do do Wm. Warren, Madison,..... 5
Best Bull, 2 years old, C. H Williams, Excelsior,.... 10
Best Bull Calf, J. R. Dye, Hebron, Jefferson co..... 5
2d do Van Kelike, do 3
Best Cow, 3 years and over, N. Root, Verona,..... 15
2d do do W. B Knapp, Burke,..... 10

No. 8.—GRADE CATTLE AND WORKING OXEN.

Best Grade Cow, J. S. Newton, Verona,..... 10
2d do Joshua Thayer, Palmyra,..... 7
3d do G. N. Willis,..... 5
Best 2 year old Heifer, C. W. Stewart, Fitchburg.... 5
2d do O. A. Albee, Madison,..... 3
Best Yoke Oxen 4 yrs old, Joshua Thayer Palmyra, $10
2d do do L. Rawson, Oak Creek... 7
3d do do J. H. Slavan, Madison,... 5
Best Yoke 3 yr old Steers, L. Rawson, Oak Creek... 7
2d do do C. W. Stewart, Fitchburg, 5
Best Milch Cow, John Tinker, Clinton, Rock co. ... 15
Best Yoke Fat Cattle, C. H. Adsit, Deerfield, Dane.. 7
Best 5 Yoke Working Oxen, Amos Beecher, Cottage Grove..... 10
Best fat Steer, E. W. Edgerton, Summit..... 7
Best fat cow, C. H. Adsit, Deerfield..... 3

No. 10.—BLOOD HORSES.

Best blood Stallion, 5 years and over, Simon Ruble, Beloit, ... 30
2d do do Geo. Mathers, Willow Springs, first premium last year..... Dip
Princeton, not kept for stock, S. Ruble, Beloit, discretionary ..... Dip

No. 11.—MORGAN HORSES.

Best Stallion, 4 years and over, A. G. Williams, Manston, ... 20
2d do do Wm. Short, Albion,..... 15
Best stallion 2 years old, S. L. Sheldon, Madison,.... 10
Best Stallion, 1 year and over, S. M. Havens, Harmony..... 3

BLACK HAWKS.

Best stallion, 4 years and over—D. E. Brasted, Fond du Lac,..... 20
2d do do Thos Marshall, Oak Grove,..... 15
Best stallion 3 years and over—E. M. Danforth, Summit..... 10
2d do do W. P. Benson, Fort Atkinson, Jefferson Co.,..... 5

No. 12.—CARRIAGE HORSES.

Best pair carriage horses—J. V. Robbins, Burke,.... 20
2d do H. P. Fales, Janesville.. 15
Best single do —G. W. Montanye, Ore on Dane Co.,..... 10
2d do J A. Ellis, Madison.... 5
Long Island Black Hawk—W. P. Bentley, Dane Co., discretionary,..... dip.

No. 13.—HORSES FOR ALL WORK.

Best Stallion, 4 years and over—C. H. Phillips, Lake Mills,..... 20
2d do do Wm. Berry, Honey Creek,..... 15
Best mare, 4 years and over—A. A. Meredith, Madison,..... 10
Best pair matched horses—J. C. Chandler, Madison, 13
2nd do Sylvester Williams, Fitchburgh,..... 10
Best pair draft horses—N. Sheldon, Decatur,.. 15
Best single draft mare—Lewis Brown, Emmett,... 10
Best brood mare and colt—J. B. Hart, Lake View, 5
2d do do Lyman Town, Fond du Lac Co..... 5
Best mare 3 years old—J. V. Robbins, Burke, ... 10
2d do do A. C. Douglass, Janesville,. 5
Best horse colt, 2 year old—Geo. McDonald, Mackford,..... 7
2d do do A. N. Howard, Belleville, Dane Co..... 5
Best horse colt, 1 year—W. W. McLaughlin, Brooklyn, Green Co..... 5
2d do do C. H. Phillips, Lake Mills, 3
Best mare colt, 2 years—Ph. Baldwin, Oregon,.... 7
2d do do L. B. Vilas, Madison,..... 5
Best jenny—James McCloud, Lodi, Columbia Co... 10
Best 7 colts, projeny of one horse, "Green Mountain Boy,"—Moses Chase, Inn Prairie, Dane Co. .. 20
Best pair working mules—J. V. Robbins, Burke,... 10
2d do do L. D. Pritchard, Centre, Rock Co 5
Best single mule—P. M. Pritchard, Dane Co... ... 5

SHEEP.

No. 15.—SPANISH MERINOS.

Best Buck over 2 years, H. Hemenway, Whitewater, Walworth Co.,..... ..... Engraving or 10
2d do over 2 years old, R. F. Graves, Randolph, Col. co..... 7
3d do do R. H. Walker, East Randolph, Col. co..... 5
Best Buck 1 yr old, H. Hemenway, Whitewater,.... 7
2d do do do do 5
3d do do R. F. Graves, Randolph, Col. co.. 3
Best 3 buck lambs, H. Hemenway, Whitewater,.. .. 5
2d do do H. B. Clark, Whitewater, Walworth co.... 3
3d do do R. F. Graves, Randolph, ... 2
Best 3 ewes over 3 yrs, H. Hemenway, Whitewater,. 10
2d do do R. F. Graves, Randolph, Col. co... 7
3d do do J. T. Flint, Bristol, Dane co..... 5
Best 3 ewes, 1 yr old, H. Hemenway, Whitewater,... 7
2d do do H. B. Clark, Whitewater,..... 5
3d do do R. F. Graves, Randolph, Col. co..... 3
Best pen lambs, H. B. Clark, Whitewater,..... 5
2d do do H. Hemingway, do 3
3d do do H. B. Clark, do 2

No. 17.—FRENCH MERINOS.

Best buck over 2 yrs, J. E. Culver, Milton,...Eng. or 10
2d do do C. C. Olin, Waukesha..... 7
3d do do W. E. Sandford, do 5
Best buck 1 yr and over, W. E. Sandford, Waukesha..... 7
2d do do Giles Kinney, Whitewater,..... 5
Best pen ewes, 2 yrs old, Pliny Clark, Montrose,.... 10
2d do do H. E. Coon, Palmyra, Jeff. co..... 7
2d best pen ewes 1 yr old, Giles Kinney, Whitewater, Walworth co..... 5
3d do do H. E. Coon, Palmyra,..... 3
Best pen lambs, Giles Kinney, Whitewater,..... 5

No. 20.—LEICESTERS.

Best buck 2 years old, Gilbert Worthley, Lagrange, Engraving or 10
2d do do E. J French. Decorah, Col. co..... 7
3d best buck 3 yrs old, L. Rawson, Oak Creek..... 5
Best ewes 2 yrs old, O G. Ewing, Lagrange,..... 10
2d do do E. J. French, Decorah, Col. co,.. 7
Best pen ewes 1 yr old, O. G. Ewing, Lagrange,..... 7
Best pe ewe lambs, do do . 5
2d do do E. J. French, Decorah. Col. co..... 3
Best pen buck lambs, O. G. Ewing. Lagrange,..... 5

SOUTH-DOWNS.

Best buck 2 yrs old, A. G. Hanford, Waukesha..... Engrav ng or 10
2d do do Wm. Woodward, Westport, Dane co... ... 7
3d do do Simon Ruble, Beloit, Rock co.... 5
Best pen ewe lambs, Simon Ruble, Beloit, Rock co.. 5
2d do do C. A. Johnson, Blooming Grove, Dane co,.. 3
Best buck 1 yr old Luther Rawson, Oak Creek,..... 7

SWINE.

No. 21.—ESSEX.

Best Boar, over 2 yrs, A. G. Hanford, Waukesha,. 10
2d do Thomas Conner, Rutland,.. 5

SUFFOLKS.

Best Boar, 1 yr old, Simon Ruble, Beloit, Rock co.. 7
2d do. 6 mos old, J. A. Carpenter, Waukesha,... 3
Best Sow and pigs, Thomas Conner, Rutland,..... 10
2d do J. A. Carpenter, Waukesha,..... 5
3d Pre. cross Boar, 2 yrs old, Jno. W Morse, Dane county,..... 5
J. K. Wing of Ohio, Dip for Suffolk Boar and Sow.
M. A. Brown, Trumbull co., Ohio, for Sows and Pigs,.....Trans., Certif. and 5
Breeding Sow and Pigs, D. Richardson, Oregon, Dis.....Trans.
1 pair Suffolk boars, J. V. Robbins, Burke, Dane co., Dis. prem.....Dip.
Mackey boar, J. V. Robbins, Burke, Dane co., dis. Trans.
1 pr pigs, 4 months old, J. A. Carpenter, Waukesha, dis. .....Dip.
1 pr Suffolk sows, J. V. Robbins, Dane co., dis.....Dip.
1st prem. improved Leicester breeding sow, H. E. Coon, Palmyra,..... 10

No. 22.—POULTRY.

Best lot Shanghai or China fowls, Chas. Blackwell, Waukesha,..... $2
Best lot dorkings, J. A. Carpenter, Waukesha..... 2
Best lot Java, Simon Ruble, Beloit, Rock co..... 2
Best Poland spangled Hamburg, D. Fitch, Madison 2
Best lot turkeys, J. B. Britton do... 2
Best lot ducks Daniel Palmer, Fitchburg, Dane co.. 2
Best lot pea fowls, E. L. Bovee, Eagle..... 2
Best lot game fowls, Chas. Oswin, Middleton,..... 2

CLASS B.

No. 23.—PLOWING MATCH.

Eight teams entered into the contest—6 two-horse teams and one man each; 1 two-horse team, and boy 14 years old; and 1 ox team and man. Premiums awarded as follows:

To James Osmond, Rock co., horses, and with Winchester & De Wolf's plow, ...1st prem, $ 6
To W. W. Waldron, Madison, horses, with Grand de Tour plow,... .....2d prem 4
To W. H. Porter, (for Hall,) Burke, horses, with Billings & Carman's plow. ....3d prem 2
To O. M Palmer, (14 years old,) Oregon, horses, with Grand de Tour plow,.....1st pr. for boys 5
To O. M. Palmer, Oregon, oxen, with Grand de Tour plow..... 6
O. B. Hoyt's Rotary plow was exhibited, and did good work.

No. 24.—FARM IMPLEMENTS.

Best Sod Plow, heavy soil, Winchester & DeWolf, Whitewater, Walworth co.....Cert
Best do do Light Soil, H. Mitchell, Racine.....Cert
Best Crossing Plow, Winchester & DeWolf, Whitewater, Walworth co .....Cert
Best deep tiller and sub-soil do, Winchester & DeWolf.....Cert
Best assortment of plows, with prices, do do..... Dip
Best corn cultivator, J F. Benton. Beloit..... $3
2d do do cultivator, Wright & Cash, Whitewater.... 2
Best horse hoe, O Holden, Chicago ..... Dip
Best potato digger, Wright & Cash, Whitewater,... 2
Best wheel cultivator, S. R. Tracy, Newark, New York.....Dis. Dip
Best roller for general uses, J. P. W. Hill, Burke,... 5
Best farm Wagon, L. Morse, Fond du Lac. Dip or 5
2d do do F. Pulse, do..... 3
Best fanning mill, H. F. Cahoon, Rochester, Racine co ..... Dip
2d best do do S. Moulton, do do..... 3
Best churn. W. H. Tambling, Berlin..... 3
2d best do G. N. Willis. Oregon..... 2
Best washing machine, Wm. McClure, Janesville..... 2
2d best do do W. H. Tambling, Berlin, Marquette co., discretionary.....Trans
Best horse rake, E. W. Skinner. Madison..... 3
2d best do do L. C. Halstead, Wauwatosa,..... 2
Best corn and cob crusher, D. F. Vanlieu, Aurora, Ill. discretionary..... Dip
2d do do W. D. Bacon, Waukesha..... 5
Best fire proof safe, Schumacher & Johnson, Milwaukee.....Cert
Best bank lock do do do.....Cert
Best ox yoke, T. T Proctor, Fort Atkinson..... 2
Best single harness, Thos. Cheynoweth, Madison.....Dip and 8
2d best do do Robert McDowell, Union Grove..... 2
Best dozen brooms, F. C. Curtis, Rocky Run..... 2
Best dos pails, Daggett & Rice, Milwaukee..... $2
" " half bushels, do do 2
" " tubs do do 2
" wheel barrows, J. Stewart, Verona, dis. ...Trans.
" clothes hanger and dryer, and eaves trough supporter, W. R. Dana, Plattsburg, N. Y..... certificate of excellence.

No. 25.—OPERATIVE MACHINERY.

Best drill and seeding machine, A. Stoner, Milwaukee..... $5
" family sewing machine, F. L. Raynor, Janesville.....dip and 5
" sewing machine, shop work, O. B. King, agent, Milwaukee,. ..... dip
" self-raking reaper and mower combined, E. W. Skinner, Madison. Palmer & Williams' pat.... dip
" four horse self-raking reaper and mower combined, Seymour & Morgan's patent, S. L. Sheldon, Madison,..... dip
" self-raking reaper, W. P. Flagg, Bloomington, Ill,..... dip
" Manny's reaper and mower, A. C. Davis, Madison, ...dip and 8
2d best reaper and mower, G. T Roberts, Racine... 5
do do S. L. Sheldon, Madison, dis.. 5
" Iron reaper and mower, Janesville Reaper Co., Janesville,..... .....Cert
" Ohio mowing machine, A, C. Davis, Madison.. 5
Separator, H A. Pitts, Chicago, 1st premium..... 5
do Wheeler & Ludlow, Janesville, 2d prem. 2
do J. I. Case, Racine,..... Dip
Best horse power and sweep, J. I. Case, Racine,.. Dip and 5
2d horse power, (climax,) Wheeler & Ludlow, Janesville,..... 5
Best sugar mill, (wooden,) Joseph Powers, Hebron, 5
2d sugar mill and press, (wooden,) C. A. Johnson, Blooming Grove,..... 3
Best iron sugar mill, I. E. Brown, Madison, ... 5
2d do do Dean & Smith, Portage,..... 3
Best corn planter, Thos. Crane, Fort Atkinson.....Dip
2d index corn planter, horse power, Steph. Burrows, Whitewater, ...Trans
Broadcast seed sower, J. Atwood, Briggsville,.....Dip
2d horse power, broad cast seed sower, H. J. Sills, Arlington,..... 3
Best grain drill, Kuhn's, A. C. Davis, Madison..... dip
2d grain drill, S. R. Tracy, Newark, N. Y.....Trans
Patent clothes dryer, Chas. Stephens, Palmyra,.....Dip
2d clothes dryer, L. B. Waterman, Chicago.....Trans
Best portable feed mill, Wis. Wind Mill Co., Janesville,..... .....Dip and 10
2d best portable grist mill, no bolt, W. D. Bacon, Waukesha 5
Best Huron mounted grind stone, Tibbits & Gordon, Madison.....Trans

" chain pump, Mott & Able, Brodhead..... 5
" seeding machine and harrow combined, Fowler & Bacon, Fond du Lac.....Trans
" portable steam engine, Turton & Sercomb, Milwaukee.....Dip. and 20
Best lightning rods, James Pratt, Milwaukee.....Dip
Best variable steam engine exhaust.er, Jones Patrick, Chicago.....Gold Medal.
" force pump, (Boyes' patent) D. W. Lewis, Janesville.....Dip.
" siding mill, W. H. Doane. Chicago..... 5
" show of scales, Fairbanks & Greenleaf, Chicago.....Dip. and 10
Best iron castings, dry mould, Wheeler & Ludlow, Janesville..... 5
Best iron castings, green sand, Wheeler & Ludlow, Janesville..... 5
Case Horse Shoes, David Carter.....Dip
Hanes' Illinois harvester, J. J. Van Bracken, Janesville.....Trans
Best corn sheller, (Badger State,) L. S. Blake, Racine, Dip
2d corn sheller and separator, Tibbits & Gordon, Madison..... 2
Band cutter and self-feeder, S. D. Reynolds, Ogle co., Ill..... 3
Best knitting machine, James Dawson & Son, Madison.....Dip and 5
do corn, hay, and straw cutter, by steam, G. B. Griffin, Madison.....Dip and 10
Best tread horse power, W. D. Bacon, Waukesha, Dip and 5
Case finished brass work, Walton & Son, Milwaukee, 5
Saw Mandrel, do do do 3
Cultivator teeth, O. W. May, Madison,.....Trans
Best re-cut files, Phelps Schley, Milwaukee,.....Dip
do wind mill, Wis. Wind Mill Co., J. M. May, agt, Janesville.....Dip and 15
2d do wind mill, J. M. May, Agent, Janesville,..... 10
do cider mill, C. N. Stephens, Jonesville, Mich.. Dip
do unfinished brass castings, Wheeler & Ludlow, Rock co..... 5
Model improved horse power, Bird, Wright & Co....Dip
Rotary Harrow, Osman Carr, Port Washington .. . 3
Best pump for drilled wells, Walter Peck, Rockford, Illinoi,..... 3
Best rotary card press, Atwood & Eublee, Madison,.Dip

CLASS C.

No. 26.—FARM PRODUCE.

Best sample white winter wheat, R. Boyce, Oregon 3
2d do do do D. Vernon, Middleton,..... 2
Best sample spring wheat, G. B. Salmon, Sec'y St. Croix and Pierce co. Agricultural Society..... 3
2d do do do Benjamin Piper, Madison..... 2
Best sample rye, G. B. Salmon, Sec'y St. Croix and Pierce co. Agricultural Society..... 2
2d do do L. S. Palmer, Baraboo..... 1
Best sample Oats, A. J. Niles, Madison..... 2
2d do do John Rutherford, Verona..... 1
Best sample buckwheat, S. Hook, Oregon..... 2
2d do do A. J. Niles, Madison..... 1
Best sample timothy seed, Charles Chipman, Springfield..... 3
2d do do Edwin Spooner, Fitchburg..... 2
Best pumpkins, H. E. Hardy, Burke, dis.....Trans
Best cabbage, A. J. Mitchell, Burke..... 1
2d do do John Lewis, Madison..... 50c
Best carter potatoes, John Rutherford Verona Corners..... 2
2d do do John Tinker, Clinton..... 1
Best Mercer potatoes, Nicholas Haight, Blooming Grove..... 2
2d do do James Terwilliger, Fitchburg..... 1
Best tomatoes, A. S. Wood, Madison..... 1
2d do H. R. Leach, Eagle..... 50c
Best carrots, John Rutherford, Verona..... 2
2d do H. R. Leach, Eagle..... 1
Best pink eye potatoes, John Rutherford, Verona.. 2
2d do do W. E. Knapp, Burke discretionary..... 1
Best onions, H. P. Hall, Burke..... 2
2d do G. B. Salmon, Sec'y St. Croix and Pierce co. Agricultural Society..... 1
Best parsnips, John Rutherford, Verona..... 1
2d do H. P. Hall, Burke..... 50c
Best white beans, R. S. Carter, Ripon..... 2
2d do do H. P. Hall, Burke..... 1
Best sample barley, A. B. Devoe, Pleasant Spring.... 2
2d do do John Rutherford, Verona..... 1
Best squashes, Levi B. Vilas, Madison, dis.....Trans
Best early potatoes, A. G. Hanford, Waukesha..... 2
Best show of beets, John Rutherford, Verona..... 1
Best sample seed corn, James Terwilliger, Fitchburg 2
2d do do A. F. Spooner, do..... 1
Best egg plant, E. C. Spink, Madison..... 1
2d do do M. Hallis..... 50c
Best earth almonds, (chuffas) C. E. Chipman, Springfield, discretionary.....Trans
Best varieties potatoes, W. B Knapp, Burke, dis...Trans
Best show garden seeds, A. J. Mitchell, Burke..... 5
2d do do do C. Chipman, Springfield..... 3
Best show citrons, John Myers, Verona dis.....Trans
Best do turnips, G. B. Salmon, Sec'y St. Croix and Pierce co Agricultural Society..... 2
2d do do C. Chipman, Springfield..... 1
Best winter radishes, Benjamin Piper, Madison.... 1
Best summer radishes, J. R. Hiestand, Blooming Grove..... 1
Best show hungarian grass seed, J. L. Marsh, Muscoda discretionary.....Trans
Best peas, Charles Chipman, Springfield..... 2

No. 28.—DAIRY AND HOUSEHOLD PRODUCTS.

Best butter made in June, H. J. Benson, Westport.. Book and set spoons or $10
2d do do John Jaquish, Ithica, Richland co..... 7
3d do do A. D. Adsit, Deerfield,..... 5
Best butter made at any time, John Porter, Masomanie, Dane co.....Book and set spoons or 7
2d do do Wm. A. Pierce..... 5
Best 8 cheeses, H. B. Trowbridge, Burlington..... 10
2d do do Milo Jones, Fort Atkinson..... 7
3d do do Orin Rusk, Mazo Manie..... 5
Best single cheese, O. Rusk, Mazo Manie..... 3
2d do do Milo Jones, Fort Atkinson..... 2
Best cheese small dairy, P. R. Waterman, dis..... 3
2d do do A. D Adsit, Deerfield, dis.....Vol. Trans 1
Best bread, yeast rising, Mrs. J.B. Hart, Lake View, 2
do do salt do Mrs. J. E. Mann, Fitchburg... 2
do Graham bread Mrs. O. P. Dow, Palmyra... 2
do corn do Mrs. C. A. Johnson, Blooming Grove,... 2
do sponge cake, Mrs. H. A. Tenney, Madison..... 2
do fruit do do do 2
Greatest variety bread and cake, Mrs. G. P. Peffer, Pewaukee..... 5
Best specimen plain cake, Mrs. D. S. Curtiss, Madison..... 2
do crackers, Mrs. O. P. Dowe, Palmyra..... 2
do cookies, do do 2
do cake, made with Sorghum molasses, Mrs. O. P. Dowe, Pamyra..... 2
Specimens Bakery (professional) S. H. Cowles, Madison, dis.....Dip
Assortment of cakes, &c., Mrs. L. Bird, Madison, adjudged very fine by the com.....Cert. of Excellence

JUVENILE LIST.

Best graham bread, Miss Niles, Madison..... $3
do white bread, S. E. Highman, Fitchburg..... 2
do sponge cake Miss Ann E. Tenney, Madison..... 2
do ginger bread, Miss L. J. Peffer, Pewaukee..... 2
do gold and silver cake, Miss F. A. Maine, Madison, dis..... 1
Cakes called "Nothings," Miss Peffer, Pewaukie (8 yrs old,) dis..... 1

CLASS D.

No. 30.—DOMESTIC MANUFACTURES.

30 yds wool carpet, A. L. Mann, Fitchburg,..... $4
1 pr Blankets, D. Palmer, Fitchburg,..... 2
2 pr Socks, do do dis.....Trans
Linen cloth, A. E. Adsit, Deerfield..... 2
Linen diaper, do do 1
Rag carpet, Riley Swan, Cottage Grove..... 3
Stockings, Chester Sutherland, Fitchburg..... 1
10 yds flannel, Mrs S. J. Miles, Verona..... 3
Knit woolen shawls, Mrs. D. S Curtis, Madison, dis.....Trans and 1
Pair gloves, knit on hook, Mrs. M. A. Chipman, Sun dis..... 1
Wool overcoat, Mrs. R. D. Thompson, Oakland, dis.....Trans. and 1
Wool cloak, do do 1
Gents' Shirts, Mrs. D. H. Wright, Madison..... 2
Gents' Shirt, made by hand, Miss Mary B. Atwood, Madison, dis..... 2
Best case of Gents' Linen, Mrs. H. D. Fikins, Madison .....Dip and 2
Rag hearth rug, Miss Martha Archibald, Waukesha. 1
Wool mittens, Mrs. C. S. Lacy, Janesville,..... 1
Hearth rug, Mrs. Mayer Friend, Madison..... 1
Carpet hearth rug, Augusta Fiddler, Madison dis. . 1
Pair Socks, Miss Mary B. Atwood, Madison, dis..... 2

JUVENILE LIST.

Best patch work quilt, Miss. C. C. Cunningham, Oregon..... 3
2d do do Miss Belinda Spencer, Springville,..... 2
1 piece Satinet, Miss S. Britts, Primrose, dis..... 3

No. 31.—MANUFACTURES OTHER THAN DOMESTIC.

Best piece narrow cloth, P. M. Perkins, Burlington, Racine co.,.....Dip. and 3
do do Blanketing, Jas. Dawson & Son, Madison.. 5
do do Cashmere flannel, P. M. Perkins, Racine co. 5
2d do do do James Dawson & Son. Madison..... 3
Best ladies' blanket shawl, James Dawson & Son, Madison,..... 5
Best knit drawers and shirts, James Dawson & Son, Madison, dis .....Dip
Best men's and boy's clothing, Friend & Crawford, Madison,.....Dip
Best men's and children's hats and caps, Geo. B. McGie, Madison.....Dip
Best exhibition of furs, G. B. McGie & Co., Madison,..Dip

No. 33.—PRINTING AND BOOK BINDING.

Best specimen book printing, Atwood & Rublee, Madison..... 5
do do pamphlet printing, E. & H. A. Starr Milwaukee..... 3
2d do do Atwood & Rublee, Madison..... 2
Best specimen handbill printing, Atwood & Rublee, Madison..... 3
2d do do Charles Holt, Janesville,..... 2
Best spec. circulars and bill heads, E. & H. A. Starr, Milwaukee..... 3
2d do do Atwood & Rublee, Madison..... 2
Best spec. card printing, E. & H. A. Starr, Milwaukee 3
2d do do Atwood & Rublee, Madison..... 2
A full and well executed assortment large cards, Atwood & Rublee, Madison, dis.....Dip
Best spec. book work, all in all, Atwood & Rublee, Madison..... 7
Best spec. velvet card printing, Atwood & Rublee, Madison, dis.....Dip
Best spec. blank book binding, H. Niedecken, Milwaukee,..... 3
2d do blank book binding, Strickland & Co., Milwaukee..... 2
Best spec. library book binding, Bliss, Eberhard & Co., Madison..... 3
Best spec. fancy book-binding, do do 3
2d do do H. Niedecken, Milwaukee, ... 2

No. 34.—CARRIAGES—STOVES—FURNACES.

Best double carriage. Bird Brothers, Madison,.....Dip.
do single top buggy, do do .....Dip.
do single open buggy, do do .....Dip.
do pleasure wagon, P. L. Smith & Co., Janesville, Dip.
do double sleigh. Bird Brothers, Madison,.....Dip.
do single sleigh. P. L. Smith & Co., Janesville,...Dip.
Best heating and ventillating stove and furnace, H. S. G. Williams, Milwaukee,.....Dip.
Best cooking stove, for wood, C. D. Adams, Madison, 3
do parlor stove, do do 2
do hall stove, do do 2

No. 35.—VARIOUS MANUFACTURES.

Best assortment of cabinet ware, D. Clark, Madison Dip
do set rose wood chairs, do do 3
do rose wood sofa, do do..... 3
do bedstead, do do..... 3
do show cabinet ware, manufactured in the state, O. C. Buck & Co., Madison..... Dip
do marble top centre table. do do discretionary..... 3
do mahogany sofa. do do..... 3
do extension table, with other purposes combined, very ingeniously, M. Quigley, Watertown, discretionary..... Dip and 3
do mosaic centre table, very beautiful, Peter Glass, Scot., discretionary..... Dip and 3
do show india rubber goods, Bliss, Eberhard & Festner, Madison.....Dip and 2
do the greatest variety of Wisconsin tanned leather, C. L. Robison, Waukesha.....Dip and 2
do calf skin do do do 2
2d do do J. S. Whitney, Fort Atkinson, dis..... 1
Best upper leather, W. S. Vescelus, Kenosha...Dip and 2
2d do do J. S. Whitney, Fort Atkinson, dis..... 1
Fine lot morocco. W. S. Vescelus, Kenosha...Dip and 2

No. 37.—SILVER WARE, MATHEMATICAL INSTRUMENTS.

Miniature, Horizontal clock, beautiful fabric, N. J. Moody (at Beldens) Madison,.....Dip
Surveying Instruments (Troy Manufacture) W. M. Hough, Madison.....Dip

No. 38—ORNAMENTAL NEEDLE AND SHELL WORK. &c.

Best ottoman cover, Miss M. F. Main, Oregon..... $2
2d do do Miss C. C. Cunningham, Oregon..... 1
Fancy table cloth, M. Doerence, Watertown, dis... 1
Best embroidered handkerchief, Mrs. D. S. Curtiss, Madison..... 2
2d do do Miss J. E. Millard, Kingston..... 1
Best muslin embroidery, Mrs. D S. Curtiss, Madison 2
Toilet cushion, Mrs. Chas. Abbott, Madison. dis ... 1
Best embroidered slippers, Miss Leslie (juvenile) Mineral Point..... 2
2d do do Miss F. A. Main, Madison..... 1
Embroidered handkerchief, L. H. Main, Oregon, dis.. 1
Worsted embroidery on canvass, Miss L. M. Gardner, Burlington..... 2
do crochet tidy, Miss Aletha Church, Madison..... 2
2d do do Miss Elizabeth Corlie, Sun Prairie..... 1
Best embroidered cloak shawl, Mary C. Bassett, Evansville..... 3
2d do do Miss Jane Freeman, Milwaukee..... 2
Best chair cover, Mrs. Grundy, Madison..... 2
Silk embroidery, Mrs. J. Depuy, Shelbyville, K. T. dis... 1
Best embroidered scarf, Miss Sarah Munger, Madison..... 3
do do skirt, Mrs. B. R. Hinckley, Summit..... 2
2d do do Miss Eleanor Bonnewell, Milwaukee..... 1
Best ornamental shell work, Mrs. J. W. Liek, Madison..... 2
do worsted embroidery (Washington) Mrs. Ann E. Shepard, La Crosse..... 2
do hair wreath, Miss Caroline Whitmore, Whitewater..... 2
2d hair work flowers. Otto Michaelis, Baraboo..... 1
Worsted work, C. Delorme, Milwaukee, dis 1
Best specimen darning, Miss Eva Johnson (juvenile) Blooming Grove..... 2
Specimen hair work (juvenile) Miss E. R. Melendy, Waukesha..... 2
do leather picture frame, Mrs. C. S. Mears, Madison..... Dip and 2
Specimens leather work, Mrs. M. Downer, Watertown..... 1
Best card basket, Mrs. S. Klauber, do 2
do fruit wreath, Mrs. C. S. Mears, do 1

No. 39.—MILLINERY.

Silk bonnets, head dresses and flowers, Mrs. M. S. Parker, Berlin.....Dip and 3

No. 40.—FINE ARTS.

Carving in wood and stone, C. Pedricks, Ripon.... Dip
Crayon landscape, Mrs. Chas. Abbott, Madison.....Dip
Photograph in oil, J. S. Clow, Madison..... ....Dip & 5
do water colors, do do .....Dip
Melanlotype, A. S Wood, do .....Dip
Hallatype do do .....Dip
Oriental painting, Mrs. E Smith, do 3
Grecian painting, Mrs Waldo Skinner, Madison..... 3
Jack knife engraving, S. D Carpenter, do dis.... 3
Daguerreotypes, J. S. Fuller, Madison. .....Dip & 5
Photographs, do do .....Dip
Ambrotypes, do do .....Dip & 5
Largest and best exhibition of oil paintings, J. W. Hunt, Madison.....Dip & 5
Work in plaster, J. W. Hunt. Madison..... ...Dip
10 specimens French lithographs, August Pergoli, Milwaukee..... 5
Best painting in water colors, E. F. Brooks. Madison 3
Carving on stone, H. C. Hoffman, Milwaukee.....Dip
Life size alabaster statue, "Sabina," Jos. Nicoletti, Milwaukee .....Dip
Oil portrait, Mrs. S. Crawford, Madison.....Dip
Best oil paintings of old masters, Rev. G. T, Riordon, Madison,..... 5
do specimen penmanship, Bryant & Stratton.....Dip
Fruit painting, Jas. Johnson, Milwaukee .....Dip
Best monochromatic, S. H. Donnel, Madison..... 3
Pencil drawings, Mrs. C. E. Lewis do .....Dip

No. 41.—FRUITS—WICONSIN APPLES.

Best and greatest variety apples, J. C. Plumb, Lake Mills..... 10
2d do do do J. French, Madison 5
3d do do do W. A. Pierce, Pierceville, Dane co..... 3
Best ten varieties, W. M. Bartholomew, Lodi..... 5
2d do do John McWilliams, Fitchburg, Dane co... 3
3d do do Thos. P. Turner, Melendy's Grove..... 2
Best five varieties, J. B. Walbridge, Baraboo..... 3
2d do do James Knight, Markesan..... 2

FALL AND WINTER APPLES.

Best show autumn apples, A. G. Hanford, Waukesha..... 5
2d do do G. P. Peffer, Pewaukee..... 3
3d do do Oliver Gibbs, Wheatland..... 5

Best show winter apples, O. Ellsworth, Lake..... 10
2d do do G. DeNeveu, Fond du Lac 5
3d do do A. B. Smith, Lake Mills..... 3

GRAPES.

Best and greatest variety (20) Isaac Atwood, Lake Mills..... 5
2d do do Charles Hanford, Emerald Grove..... 3
3d do Colby & Willey, Janesville..... 2

PEARS.

Best and largest variety, John G. Kanouse, Cottage Grove, Dane co... 7
2d do do Chas. Gifford, Milwaukee,. 5
3d do do J C. Gilbert, Pleas't Prairie 3
Best 2 varieties, Colby & Willey, Janesville.... ... 5
2d do Geo. P. Peffer, Pewaukee..... 3
3d do Thos. Howland, do 2

PLUMS.

Best show plums, Giles Kinney, Whitewater..... 5
2d do G. P. Peffer, Pewaukee..... 3

PEACHES.

Best show peaches, Luther Rawson, Oak Creek..... 5
2d do G. P. Peffer, Pewaukee..... 3

MELONS.

Best ice cream water melon, J. R. Hiestand, Blooming Grove Dane co..... 2
Best black Spanish do do do 2
do Long Island do do do 2
do musk melon, do do Dip
do show of melons, do do 3
do mountain sprout do Geo. T. Brown, do 2
2d ice cream water melon, J. C. Plumb, Lake Mills.. 1
Best and greatest variety of fruits, of all kinds, raised by exhibitor, G. P. Peffer.....Dip. and 10

No. 42.—DELICACIES—PRESERVES AND JELLIES.

Greatest and best variety of not less then 10 sorts, Mrs. J. G. Knapp, Madison..... 5
Best apple preserves, Mrs. J. Tinker, Clinton..... 1
do peach do do do 1
do strawberry do do do 1
do goosberry do Mrs. H. J. Starrin, Whitewater 1
do currant do do do 1
do cherry do do do 1
do plum do Miss F. A. Main, Madison, ... 1
do tomato preserves, Mrs. J. Tinker, Clinton... . 1
do pear do Miss F. A. Main, Madison.... 1

JELLIES.

Best and greatest variety, A. S. Wood, Madison,.... 5
Best apple jelly, Mrs. N. Haight, Blooming Grove.. 1
do peach do do H. J. Starin, Whitewater,.... 1
do apple butter, do G. P. Peffer, Pewaukee..... 1
do tomato do do do do 1

PICKLES.

Best and greatest variety, Mrs. E. M. Williamson, Madison..... 5
do cucumber, Mrs. C. C. Olin, Waukesha..... 1
do apple, Mrs. H. J. Starin, Whitewater..... 1

No. 43.—FLOWERS.

PROFESSIONAL.

Best variety dahlias, Colby & Willey, Janesville.... 3
Second best variety dahlias, A. G. Handford, Waukesha..... 1
Best collection verbenas, Chas. Gifford, Milwaukee.. 3
do 12 varieties do do do .. 2
2d best verbenas, A. G. Hanford, Waukesha, dis.... 1
Best pansies, do do..... 1
" round bouquet, Chas. Gifford, Milwaukee,... . 1
2d best round bouquet, A. G. Handford, Waukesha,.. 50c
Best flat bouquet, do do..... 1
" pyramid bouquet, Colby & Willey, Janesville, 1
" quality and variety roses, do do. . 3
Best and greatest varieties of all sorts of flowers, raised by exhibitor, do do..Dip and 5
" variety cut flowers, do do..... 3

AMATEUR.

Greatest variety green house plants, J. G. Knapp, Madison..... 3
Seedling dahlias, from seed of 1867, do do..... 3
Best display cut flowers, Mrs. H. J. Starin, Whitewater..... 2
do basket flowers. do do do..... 2
do variety wild flowers, do do do..... 3
do do verbenas, do do do..... 2
do do pansies, do do do..... 2
do seedling pansies, Dr. John Favil, Madison, dis... 1
do pyramid bouquet, Mrs. H. J. Starin, Whitewater, 5
2d best pyramid bouquet, Mrs. W. P. Towers, Madison..... 2
do vase flowers, Mrs. H. J. Starin, Whitewater,..... 2
2d best vase flowers, Mrs. H. K. Lawrence, Madison dis..... 1
Best flat bouquet, Mrs. W. P. Tower, do... 3
2d best flat boquet, Mrs. H. J. Starin, Whitewater, dis... ..... 50c
Best boquet, crested amaranths, Mrs. S. M. Van Bergen, Madison, dis..... 1
Best display, qual, & var. roses, C. James, Mil. } 3
do 12 named sorts roses do do }
Spec. of dahliag, Miss Lizzie McDonnel, Madison, dis 1
Herbarium, T. J. Hale..... Dip
Best floral design, Mrs. W. P. Towers, Madison, beautiful in design and execution, and highly artistic..... 3

No. 44.—MISCELLANEOUS & DISCRETIONARY.

Refrigerator, Thos. George & Co., Chicago, dis.....Dip
Pat. knife cleaner, do do .....Dip
Old dominion coffee pot do do 1
Bestslate roofing, J. L. Patch, Madison.....Dip
2d do do R. E. Davis, Milwaukee..... 2
Best pure grape wine, Chas. Hanford, Emerald Grove 3
Samples pure juice, Catawba & Isabella, Peter Kehll, Roxbury, Dane co .....Dip
Pure strawberry wine, Chas. Hanford, Emerald Grove 2
Samples red, white, & black currant and other wines, A. S. Wood, Madison... 5
do rhubarb, goosberry and raspberry wines, A. S. Wood, Madison.....Dip
Sample currant wine, H. W. Hayes, Palmyra..... 1
do do do Mrs. H. J. Starin, Whitewater.Dip
do black currant wine, Mrs. E. M. Williamson, Madison. 1
Portable picket fence, Peter Taylor and son., Decorah..... 2
Best improved patent fence, Crowns & Carhart, Fox Lake.....Dip
2d portable fence, G. B. Peabody, Kilbourn City,.... 2
Portable field fence, Bruen's patent, D. F. Brown, Delaware Co., N. Y... ..... Dip
Best extra winter wheat flour, Jackman, Alden & Co., Janesville..... } Dip
do Spring do do } & 5
Second best extra spring wheat flour, Thos. Bussey, Edgerton..... 3
Case minerals, E. Trestrail, Secretary LaFayette co. Agricultural Society, Shullsburg.... .....Dip
do minerals and other articles, N. W. Agricultural Society. G. B. Salmon, Sec'y..... Dip
Specimens stencil plates, seals, presses, &c., Childs & Co., Chicago.....Dip
Set chess men, Julius Vogel, Madison..... 1
Coffins, Green & McKay, Madison.....Dip
Case shrouds do do 2
Car wheels and railroad castings, Blanchard & Arnold, Milwaukee.... .....Dip
Marble monuments and tablets, A Abbott, Madison .Dip
Case sample of oils, A. E. Goodrich, Chicago, Gold Medal
Kedzie's water Filterers, Jas. Terry & Co., Rochester, N. Y..... ... .Certificate of Excell
Gilt mouldings and gold frames, A. B. Becker, Milwaukee,.....Dip
Willow ornamental fruit stand, and ozier willow, Geo. P. Peffer, Pewaukee,..... 2
Flour sacks, 100 lbs. and 50 lbs., S. Farwell, Chicago, Dip
Best sample cigars and tobacco, J. R. Hiestand, Blooming Grove.....Trans
2d do do G. P. Peffer, Pewaukee.....Trans
African Imphee, do do .....Cert
Best case dental work, J. C. & T. B. Howells, Madison. .....Dip
Best sample honey, J. M. Case, Cold Spring..... 3
2d do do R. Babbitt, Oregon. 2
Samples honey, Samuel Prince, Whitewater.....Trans
do fluid, gas lamps, Oils, &c., T. P. Shaw, Milwaukee 2
Ornamental floral sign, W. P Towers, Madison..... Dip
Best specimen lithographic printing, Lipman & Riddle, Milwaukee..... .....Dip
Model school seat and desk, R. S. Carter, Ripon...Trans
Carved double headed lion, R. L. Read, Mineral Pt. 1
Carpet sweeper, O. Holden, Chicago,..Certificate of Ex
Patent gas generator, Mace's patent, Hopkins & Snow, Waupun .....Trans
Models of steamer and yacht, L. H. Boole, Milwaukee..... } Dip
Mechanical chart & lumberman's ass't do do }
Specimens tin ware, Adams & Davenport, Monroe, Trans
Specimen head light and machine oils, A. E. Goodrich & Co., Chicago..... .....Dip

Pat. Saw Gummer, Stone & Ward, Athens, Ill..... Dip
Best quality lumber, C. H Luce, Madison..... Dip
Best sample map drawing, O Gurnsey, Janesville.. Dip
2d do do W. M. Hough, Madison..... 3
Brown's pat. money drawer, Noah Dalton, Janesville..... Dip
Improved bran duster, Z. P. Cogswell..... Trans
Best tire upsetting machine, Gates' patent, J H. Humes, Racine..... Dip
do do do Wm. Morse La Crosse..... 3
Lot strengthening plaster, Wm. Euen & Co., Waupun..... Trans
Specimens apple trees, J C Plumb, Lake Mills..... 3
do gas fixtures, Edmund Gibbs, Madison..... Dip
do Compound mastic roofing (C. R. Milks' pat.) N. Hoyt, Madison..... Dip
Specimen building stone, (Prairie du Chien) A. A. McDonnel, Madison..... Dip
Hop Machine, and clothes swinger, L M. Vinton, Medna..... Dip
Gilmore's system of bee keeping, A. A Copeland, Madison..... Trans
Sample sugar cane seed, S. Horsley, Lake Mills 2
Specimens concentrated lye, and purified salt, Penn. Manufacturing Co., Pittsburg, Pa,..... Dip

Very superior articles by the way, and highly creditable to their enterprising manufacturers.

Samples of evergreens, J C. Plumb, Lake Mills..Trans
Sample seedling chestnuts, Jacob Lowe, Loweville.. 3
do sugar cane, S. Horsley, Lake Mills..... 3
do stained, ground and cut glass, Wm. Gething, Milwaukee..... Dip
Patent chemical soap, J. C. Crondale, Prairie du Chien.....

No. 45.—SPECIAL PREMIUMS.

SUGAR CANE SUGAR.

Best sample Sugar, C. A. Johnson, Blooming Grov , Dane Co..... $25
2d do do H. H. Wilds, Fort Atkinson, Jeff. co..... 10
3d do do R. P. Main, Oregon, Dane co..... 5

CANE SYRUP.

Best sample syrup, O. P. Dow, Palmyra, Jeff. co.... $15
2d do do E. F. Weld, do do ... 10
3d do do C. A. Johnson Blooming Grove, Dane co.. 5

DRIED PEAT.

Best specimen peat, ½ cubic yard F, C. Curtis, Rocky Run..... $10
2d do do do P. M. Perkins, Racine co..... 5

SWEET POTATOES.

Best sample, A. Bovee, Eagle, Wauk. co..... one barrel seed potatoes.
2d do W. H. Hayes, Palmyra, Jeff. co..½ do do
3d do Henry Turvell, Madison .....½ do do

No. 46—LADIES EQUESTRIAN DISPLAY.

1st premium, Miss Louisa Button. Milwaukee, gold watch worth..... $25
2d do Miss Ann Cronk, Janesville, set of silver ware worth 20
3d do Miss Martha T. Smith, Columbus, side saddle, bridle &c , worth..... 15
4th do Miss Mary Hall, Janesville, silver flower vase, worth..... 10
5th do Mrs. Almira Maynard, Whitewater, gold pencil, worth 5

No. 47.—TROTTING AND ROAD HORSES.

STALLIONS, 5 *years old and over.*

"David Hill," David Hill,..... 1 mile, 2:55 . 30
"Black Weasel," S. W Cutler,..... do 2:56.. 20
"Green Mountain Boy," M. & N. Chase, do 3:05.. 10

STALLIONS, *under 5 years old.*

"Henry Clay," Smith & Butolph.....1 mile, 3:12½ 25
"Little Thunder," M. McKenzie,..... do 3:29.. 15

GELDINGS AND MARES, *Single.*

Gelding Telegraph, H. Conley,. . 1 mile, 3:06.... 15
Bay Gelding, J. A. Ellis, ... do 3:15.... 10
Sorrel Mare, J. M. Learned,..... do 3:19.... 5

MATCHED TROTTING TEAMS.

Bay Mares, J. V. Robbins, ...1 mile, 3:15 20
Grey Mares, Mr. Bradley,..... do 3:45.... 15
Grey Gelding, G. P. Delaplaine,..... do 3:47.... 10

NOTE.—All notes and remarks by committees omitted for want of room.

STOCK REGISTER.

Correspondence of the Farmer.

Morgan, Black Hawk, and Blood Horses.

MESSRS. EDITORS:—You may think it rather an unprofitable use of your columns to publish much that might be considered of not very general interest; but we are all of us liable to be called upon occasionally to accommodate a friend, even at a little inconvenience and sacrifice of self-interest; however in this case we will endeaver not to trespass too far upon your good nature while asking your indulgence to some extent, as it devolves upon me to reply (which shall be done in as few words as possible) to an article in the September No. of the *Farmer*, entitled—"A few remarks about Breeding Horses," which seems to be mainly addressed to me by one of your Madison correspondents, who by the by has the advantage of knowing more about me than I do respecting him; and it may not be amiss to suggest here, that for courtesy's sake your unknown correspondent should remain no longer incognitio; if he is not ashamed of anything he has said or means to say, and is ready to substantiate assertions as he pretends, it is to be hoped that his true name will appear in full appended to the next communication with which the readers of the *Farmer* are favored from his pen. This firing in ambush is too much like the border warfare some of our U. S. troops have been subjected to of late—which troops your unknown correspondent would fain have mounted upon the progeny of the English racer—see his article in the February No. of the *Farmer*.

But not to be prosy, we will take up the strictures he puts upon my article in the July No. of the *Farmer*—"A little talk about Stock." I am taken to task for "setting up a man of straw just to knock him down again." I certainly had no intention of thus fooling away my time; and as to the knocking down, methinks I should feel meanly even to perpetrate such an impropriety upon a "man of straw." Your *unknown* denies having any personal piqne, or using the columns of the *Farmer* for personal ends, and hence thinks that I erred in alluding to anything of the kind; but to go no further back than the opening of his last article, we have his own *direct* and *positive* testimony that he was piqued, and did reply in the June No. of the *Farmer*, to

repel "personal insults," which he thought conveyed in the communication of L. M. J., and there is no doubt but that L. M. J. thought the reply no less calculated to irritate, and his quiet endurance of it certainly indicates a modest and peaceable man, not desirous of making disturbance in the family.

I don't set myself up as a critic, but intended in a friendly way, to drop a hint for the profitable continuance of discussion, not only upon the subject immediately in hand, but to apply equally to all questions upon which men may differ. likely to be talked of through the columns of the *Farmer*; and, Messrs. Editors, I feel assured that your good sense prevented you from supposing that I even intimated any incompetency upon your part to judge of the propriety or impropriety of any or all communications sent to you for publication.

As to the "facts" *unknown* asks me to disprove if I can; it is sufficient at this time to say that owing to the contiguity of our County and State Fairs, it will be best to *show* some facts first, and tell of more afterwards, (which we are prepared to do by-and-by.) Again as to the "prize" we proposed in lieu of a wager; why don't he accept the challenge already made *if he dare*, before talking about another proposition of his own, not at all relavant to the matter in hand? He was advocating the supremacy of the English blood horse; with that we desire to compete, but lo! he proposes to "pick up promiscuously" a lot of the common stock of the country, (which is not bad by any means,) instead thereof. Why does he forsake his favorites? Can't they draw? We are prepared to show how much "blood will tell;" meet us with your blood horses and we will soon arrange a trial. We can "pick up promiscuously" as many and as good common teams as you can, but that is not the thing.

As to the error of the proposition that "improved breeds of animals are started by the use of individuals," this article will be quite too lengthy without touching upon that now; but we are ready to maintain the proposition, and if called upon, can do so in some future communications. We still claim that the Black Hawks and Morgans, have improved upon the original stock in an equal ratio with the improvement of the blood horse upon his original stock. A whole article, or may be several, would be requisite for presenting this case clearly, but it *can be done!*

Reference is made to sheep-breeding as an illustration; well, I do understand some of its principles (though they may not always have been carried out in practice) and in answer to the question in regard to the improvement of wool, it would depend upon what purpose the wool was wanted for, and many other attending circumstances. As to the breeding of Durham cattle used as another illustration, we will say that if we were exactly suited with the pure bred Durham it would be policy to keep the breed pure, but if they did *not* suit, and some grade animal of the 16th or 32d part Durham possessed more of the qualities we desired than the pure breed, it would be wise to use such animal in order to perpetuate so far as might be those qualities. In accordance with such principles all new breeds have been started. So in relation to the blood horse, if he answered our purpose we would use him as a sire, *but he don't*, hence comparatively few farmers breed from him. A descendant of the blood horse was found to combine some improvements upon the old stock, and by judicious breeding for a few years past, those improvements have become characteristic of the Black Hawk and Morgan horses, and are surely transmitted by them to their progeny. This is why the breed has become so popular, and *unknown* has heard so much respecting them, (which he calls *gassing*,) and notwithstanding the *paid* writers of the *Tribune* and some other papers whose contributors have for a year or so past prostituted talent and time to the disparagement of the *best* horses in America, for the sake of increasing the waning reputation of the English blood horse as the farmer's horse; yet "the cry is still they come," and old Vermont cannot breed them fast enough to supply the demand from the various States and the Canadas; and they have hosts of friends who are speaking their praises from *love* and not for *bribes!*

Unknown then goes on to speak in doubting terms of an article written to present facts in regard to the weight of some colts shown at Oconomowoc last spring. So far as the appeal to myself is concerned, permit me to state as a fact, that my colt which was exhibited at Oconomowoc was sired by Gales' Black Hawk "Bucephalus;" his dam is a Durock mare, weighing in fair condition, 836 lbs.; this I know, having just put her upon the scales.—The colt weighed last spring (as per weigher's certificate) 960 lbs.; he was then three years

old; where did he get his size? I am asked to "remember that size is the measure of power, all other things being equal." Aye, aye! but the stick is, that all things are not equal in this matter of breeding animals, and by the constitution of things cannot be; and your correspondent will see by referring to the very last few lines of his address to my humble self that he there asserts the same things in speaking of the superior quality of the bone and muscle of the blood horse as compared with those of coarse bred horses.

And now my unknown friend, why should you wish to "pick up promiscuously" a lot of "common" bred horses to do your drawing instead of the favorite blood horse whose bone and muscle are of such superior quality.

Awaiting a reply to these few queries, (intended to be respectfully put,) I remain,

Your friend and serv't,

EDW. M. DANFORTH.

SUMMIT, Sept. 2, 1858.

Raising Turkeys.

As your paper is specially devoted to the interests and wants of rural readers, I propose giving my mode of raising turkeys. It is my opinion that farmers can raise a pound of fowl easier and cheaper than a pound of pork.—Heretofore I have been unfortunate in raising turkeys, but this season I adopted a different mode—a plan of my own invention—by which I have been very successful. Others may have adopted the same course, but not to my knowledge.

Young turkeys are apt to die before they attain the age of three weeks. I came to the conclusion that the fatality among them was caused by vermin, heavy feed, and cold, damp weather. My method, this season, has been this: Take the eggs of the first laying and set under hens; the second laying let the turkeys hatch. Two or three days before hatching, sprinkle the nest and the fowls themselves with sulphur. When the young were hatched, I took a little sulphur, gunpowder and lard, mixed, and greased their heads and necks, to keep off the vermin while the young brooded. If it does not remain on, in eight or ten days put on another coat.

MODE OF FEEDING.—I took equal quantities of wheat bran and Indian meal, and wet with sour milk, or loppered milk, with a good lot of fine cut chives, once in two or three days in it, and feed them until a month or six weeks old, then lessen the bran. Feed early in the morning to keep them from rambling in the dew.

Such has been my method of feeding and management, and I have lost only two out of forty hatched.—*J. Lutron, in Prairie Farmer.*

HORTICULTURAL.

Correspondence of the Farmer.

MESSRS. EDITORS:—I was more amused than surprised at finding Wm. B. Ransom's unprovoked attack upon me in your last issue. The Reverend gentleman must have been in a mood very becoming a preacher of a gospel of brotherly love, when he penned it. "*Tantœne animis cœlestibus iræ?*"

I think a few drops of that *Granville honey*, judiciously used, would have corrected its bitterness. But I feel sorry that my appearing in print disturbs his dreams. What shall I do? I do not design to retort offensive expressions nor even describe the Reverend's amiability or boasted modesty; those qualities in him are best appreciated where best known.

Therefore as Buzfuz says of Pickwick, as the subject presents but few attractions, I dismiss it and proceed to the gross deceptions and contradictions of my past articles.

The Rev'd has evidently discovered a very large mare's nest, seeing how lustily he cackles over it. He has found out that I was disseminating information which was not *real;* that there were great discrepancies between my ideas upon the treatment of fruit trees in 1853 and in 1858.

Had not Mr. Ransom's modesty stood in the way of his speaking to me instead of making a public attack, I would have explained that observation had led me to modify former opinions, and that as those opinions had been published, I felt it my duty to publish my subsequent views. I think that it is now proven to me that high manuring and cultivation induce a rapid growth and tender habit in trees, —that rapid growers do not mature their wood so perfectly, and that growth continues later in them than in trees of slower growth, and that consequently the former are more liable to injury from our severe winters than the latter. I deemed it my duty to so state to you; no harm done. If the gentleman knows better, I dare say your columns are open to him. I shall be happy myself to find the true doctrine. But he offers nothing but abuse.

Let me observe that Mr. R. seems to misunderstand the case in his last paragraph. I stated that the trees might have been frozen at Sheboygan, and adduced examples to illustrate my belief that it was safer and better policy for us to procure our trees at home than from abroad, irrespective of after treatment.

During the years 1851–53, my seedling trees did very well, whereas imported trees mostly perished. I am sure I can perceive no gross deception in laying the fact before the reading public.

Mr. R. having failed to prove the somersets either political or agricultural, I would advise him to try again. I am at his service at any time.

I wish it distinctly understood that I am not a very modest man, *like him*, and that I never have been directly or indirectly engaged in the sale of imported or other fruit trees.

Truly yours, &c.,

GUSTAVUS DE NEVEU.

NOTE.—The foregoing, though rather caustic, is published as a matter of justice to the author, and will doubtless be the end of unprofitable personalities.—EDS.

Seedling Pears.

MINERAL POINT, Oct. 2, 1858.

D. J. POWERS, ESQ., *Sec'y of Wis. State Agricultural Society:*—I send four varieties of seedling pears for exhibition at the State Fair. I have about fifty very flourishing trees, sixteen years old, all from seed planted by my wife. None of them have ever been grafted, and with a few exceptions, they are superior to most of the grafted fruit. The climate of this region is highly favorable to the growth of the pear, and the soil of the mining region is better adapted to it than to any other fruit, or than that of any other country with which we are acquainted.

Very respectfully,

Your ob't serv't,

MOSES M. STRONG.

NOTE.—The before mentioned pears were fine specimens for any country; and are a credit mark to the lady that planted the seed. Should the mineral country prove as well adapted to pear growing as stated by Mr. Strong, it will be an important source of wealth and luxury, not only to its immediate inhabitants, but to the whole State.—EDS.

Correspondence of the Farmer.

Inquiry about Apples.

MESSRS. EDITORS:—Can you or some of your numerous contributors inform me through the columns of the *Farmer*, the best kinds of apples for summer, fall and winter, for this climate. I want to ascertain, if possible, what kinds will bear the severity of our winters. I have a young nursery, mostly seedlings, and am anxious to obtain the above information as soon as may be, in order to cultivate such and only such as will be likely to succeed and do well. Respectfully yours,

WM. A. WEBSTER.

HOWARD CENTRE, Iowa, Sept. 28, 1858.

Wisconsin Pears.

Col. Crocker, of Milwaukee, showed some dozen varieties of Pears of his own growing, at the State Fair, and they were much admired for their size and fine quality. We heard several experienced fruit growers say that they had seldom if ever seen finer specimens in any country. The Col. did not enter them for competition, but only for exhibition, hence they do not appear in the premium awards. Under the circumstances we deemed a word of praise their due. The names of his principal varieties were as follows:

Duchess of Angouleme.
Flemish Beauty.
Sekel.
Louise Bonne de Jersey. (All very large.)
Oswego Beure.
Swans Orange.
Vicar of Winkfield.
Belle Leucrative.
Grey Doyenne.

There were many other good specimens of Pears shown. J. G. Kanouse, Esq., of our county, it will be seen, took the first premium. We had not time to examine his specimens.

Correspondence of the Farmer.

Can Grapes be Grafted or Budded?

MESSRS. EDITORS:—Can any of your many readers, through your invaluable paper, inform me whether grape vines can be grafted or nocculated—if so, what is the process? I wish to *make* a wild vine *bear* genuine Isabellas.

I would further inquire if any one can tell me how to kill out horse radish, especially when it grows around fruit trees.

Yours respectfully,

WILLIAM RIPLEY, JR.

MADISON, Oct. 24, 1858.

EXTRAORDINARY PRECOCITY.—A friend informs us that he planted strawberry seeds on the 10th of last May, and that plants grew from them and bore and ripened fruit the 10th of Oct. ensuing, five months from the seed.—Who or what country can beat this?

Correspondence of the Farmer.

Seasonable Hints.

Newly planted trees should be protected by a mound of earth about the body, eighteen inches high, and an inch or two of rotted manure spread as far as the roots extend. This mound, besides serving to support the tree and prevent the winds loosening the newly established roots, is also a sure protection from mice.

Raspberries of all the *fine* sorts, should be protected. This is readily done by bending down and covering lightly with earth.

New Rochelle and other cultivated *Blackberries*, even though considered hardy, will fruit much better if protected. Lay the canes on the ground and cover with buckwheat straw, corn stalks, leaves, brush, or the like. If a moist day is chosen to do this work, the canes will be less likely to break—a little earth removed from about the collar will facilitate the operation. When the growth is too strong to admit of bending down, gather the canes together and bind straw loosely around them.

Grape vines of even the *hardy* sorts, will fruit better if protected, which may be done as recommended for blackberries. It will be well to prune the vines before laying down.

Perpetual and half hardy *Roses* may be protected in the same manner. Even the hardy June roses will bloom more freely if thus protected.

Cover *Hyacinth* and *Tulip* beds with a few inches of dry leaves, to be removed very early in the spring.

A. G. HANFORD.

Waukesha, Wis.

Mounds for Strawberries.—An advantage can be gained by those having only a small piece of ground, to raise mounds three or four feet high for strawberries, and plant the vines upon it, and cover the spaces between the plants with thin flat stones, bricks, or something similar, to prevent washing and serve as mulching for the plants. Covered smoothly and evenly it would present a handsome surface, similar to pavement; it would keep the soil moist about the roots of the plants, preserve the fruit clean from dirt, facilitate the ripening of the fruit upon the south side, and retard it upon the north, thus extending the strawberry season to a longer time.—The picking would be more convenient than upon a level surface: the roots of the plants would have a deeper and more mellow soil to extend in, and thus combine many advantages ornamental and useful, over the level culture. Mounds well paved over the surface would be likely to last many years.—*Baraboo Republic.*

EDUCATIONAL.

Agricultural Schools endorsed by the most distinguished Educationists and Practical Farmers in the Country.

It is certainly a fact worthy of note by those farmers who sneer at *book larnin'*, that both of the distinguished gentlemen who addressed the people during the State Fair, most heartily and forcibly endorsed the value and importance of Agricultural Schools.

Dr. Barnard, Chancellor elect of the State University, who has several times visited all the noted Agricultural Schools of Europe, and witnessed their practical working and is therefore eminently qualified to express an opinion upon the subject, earnestly recommends the establishment of such a school in every Agricultural State, and will use his efforts, should he become a resident of our State, in behalf of the endowment of one for Wisconsin.

Mr. Clay, practical farmer and Statesman, in his valuable and eloquent address on the Grounds, not only urged the importance of such a school for the proper education of our farming youth, but devoted himself thoroughly and entirely to a demonstration of its necessity by numerous practical illustrations which must have convinced every man of the thousands who heard him.

But there ought to be, really, no necessity for an elaborate argument to prove that the farmer should be an educated man, knowing the science involved in his business and skill in its application. There is n't a child of common sense in christendom incapable of appreciating a truth so plain and palpable, at its first presentation. Nevertheless there are two great difficulties lying in the way: the first is to induce the farmer to reason at all upon the subject—the second to stimulate him when once convinced of his needs, to stand up like a man and demand his rights. He is tamer and more submissive under the domination and contemptuous using of social and political demagogues than any other animal is susceptible of being made even under the all-conquering art of Prof. Rarey. Shrewd aristocrats who are glad to have him do their work, compliment him with being the *bone and sinew* of the country and accord to him the title of *sovereign*, and he becomes so light-headed with vanity, as not to remember that an ox or an ass has got more "bone and sinew," and fails to see that the sham title of sovereign covers

so little intelligence and independence that he is easily led by the nose into any drudgery that may be for the aggrandizement of those, who, while they hypocritically style themselves his "humble servants," are really his uncompromising masters. These are hard sayings and we trust are applicable to few of those who read the *Farmer;* and yet they are too true and too important to be suppressed. Let the farmers of Wisconsin forget as soon as they please that we said them, but seriously ponder the truths themselves. H.

The Farmers' High School.

The Trustees of the Farmers' High School of Pennsylvania, have published an address, describing the object, condition, and the wants of the institution. A farm has been secured of four hundred acres, three hundred and sixty of which have been cleared. The soil is fresh and is susceptible of the very highest degree of culture. The appropriate buildings are erected, a carefully selected nursery has been prepared, an orchard and a vineyard have been planted, and garden ground has been arranged. College buildings sufficiently large for four hundred students, professors and their families, are under contract. The first class of seventy-five can be admitted during the coming winter. Boys of sixteen years old and upwards qualified by a good common school education, are received from every county in proportion to its taxable inhabitants. The charges for tuition, boarding, fuel, light, washing and books, have been fixed for the first year at one hundred dollars, and the Trustees hope that the time is not far distant when they will be able to lessen even this moderate charge. The entire course will be four years. One-fourth the number this institution is designed to accommodate, will be received the first year and a similar number every succeeding year. It is of course understood that none but sons of citizens of Pensylvania, can avail themselves of the advantages offered by this Institution.

The branches proposed to be taught here, are Mathematics, Natural Philosophy, Agricultural Chemistry, and Agricultural History, Veterinary practice, Geology, Botany, Entomology, Civil Polity, Ethics, and all branches necessary to a thorough practical and scientific English education.

At a meeting of the Board of Trustees, held on the 16th of June, the Address of which the foregoing is an abstract, was authorized, and the following policy determined upon:

1. No boy shall be admitted under the age of sixteen years.

2. That $100, paid in advance, shall be the charge for tuition, boarding, washing, fuel, lights and books, for each session commencing on the 15th of December, of every year.

3. That the number of pupils to be received for the first year shall be 100, and they shall be apportioned amongst the different counties of the State, according to the number of taxable inhabitants, and they may be admitted upon the recommendation of the constitutional officers of the respective County Societies where such Societies exist. And where no such Societies exists, the Board of Trustees, or a committee thereof, will determine who shall be admitted. Provided, however, that no pupil will be admitted into the Institution, unless he be of good moral character, and qualified by a knowledge of the elementary branches taught in the public schools of the State.

This school promises to be of immense advantage in many points of view, and we sincerely trust that it will be carried into successful operation.—*Rural Intelligencer.*

The Perfect Farmer.

We have been greatly interested in the address of Hon. Joseph R. Williams, President of the Agricultural College of Michigan, delivered on the occasion of receiving the charge of that Institution. It abounds in arguments for the proper education of youth in reference to the pursuit of agriculture. The following extract furnishes an illustration of what is necessary to constitute "the most accomplished farmer:"—"The idea that perfect farming consists only in aptness at labor and strength of muscle, is at war with true philosophy. The sailor before the mast splices a rope, steers the ship, or rows a boat with perfect skill. Hurled into the ocean, he rides the waves with composure, and is saved in countless exigencies, where a landsman would surely have perished. Tossed fearfully on the yard arm, amid the play of the lightnings, and sleet, and the tempest, he reefs the sail with imperturable coolness. Is he a perfect sailor? Oh no! Silent, thoughtful students are at work in the National Observatories at Londen and Washington, preparing the Nautical Almanac.—Maps and Charts indicating the shoals and reefs and coasts, are prepared for him at great expense and care. Prof. Maury has published his Directions for taking advantage of the winds and currents. By all the aids and appliances which science has furnished, the mariner can indicate upon the trackless ocean, almost the precise spot he occupies, and sleep with composure and confidence. But is it the profound scholar, from whose deductions the ship is worked, the perfect sailor? Oh no!—But the man who unites the highest practical aptness and skill in working the ship, with the scientific comprehension that enables him to use all the deductions of Nautical Science, he is the most perfect sailor. He may be found among the officers of the ship. The most perfect union of principles and practice constitute the sailor. What is the moral? Why, that in Agriculture, the most abundant knowledge of all known natural laws, and all applicable scientific principles, must conspire with the most perfect skill, aided by energy, industry, economy, temperance and health, to make the most accomplished farmer."

MISCELLANY.

Reports of County Agricultural Societies requisite to draw their Annual Appropriation of $100.

Appended hereto will be found that Section of the law of last session relating to Co. Agricultural Society reports, and to the prerequisites therefor.

The Secretaries of all County Societies will do well to *read and heed it forthwith*, as the time for getting these reports is close at hand. The duty is simple and easy if attended to, but neglected, and the chance for the appropriation will be poor at best. Read the law, and attend to it at once:

SECTION 4. That all properly organized County Agricultural Societies as aforesaid, shall be entitled to an annual appropriation of one hundred dollars each, from the State Treasury; *Provided*, They have complied with the following conditions;—1st. That they have held an annual fair or exhibition during the year in question. 2d. That an amount of not less than one hundred dollars has been received by said society during the year by the sale of memberships and admission tickets, subscriptions, &c., and bona fidely paid into their treasury in cash. 3d. That they have, through their executive committee or secretary, made up and published in some newspaper in the county, or county adjacent, a condensed report of their principal acts and doings for the year, setting forth their official organization, their principal meetings, a report of their fair, showing the number of entries, the amount of money received, and from what source, together with the amount paid out for premiums and for other purposes. Also a full statement of the entire receipts and disbursements of the society for the year, showing from whence all sums were received, and to whom paid, and the correctness of the same verified by the oath of the secretary, two certified copies of which report to be deposited, the one with the Secretary of State, and the other with the Secretary of the State Agricultural Society, by the first day of November in each year.

Correspondence of the Farmer.

Inverted Posts Decay Soonest.

MESSRS. EDITORS:—I wish to give you my experience in setting posts, with others, that have been writing on this subject. There is a difference in timber, the time of cutting it, and the condition of the post at the time of setting. White oak posts that I cut in the winter, did not last as long as those I cut in June. Those that I inverted of the first cutting, lasted longer than those I did not invert, but those I inverted of the last cutting, rotted sooner than those I did not invert, also those that I let season before setting did not last as long as those I set green. Bottom oak I found would last longer than white oak, and those of the second cutting that was set with the buts down, lasted longer than those with the tops down, in every case. We might say more on this subject, but we believe there are abler pens than ours, to write upon it, therefore we shall close, hoping that we shall hear from you, or some of your able correspondents in the matter, will tell us why these things are so.

GLEN HAVEN, Grant Co., Wis. A. M. R.

POPULATION OF THE NORTHWEST.—From the general census of 1850, as well as from several subsequently taken, we arrive at the followiug facts: that one-third of the entire population of the United States is now contained in the six northwestern States, comprised of Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, and the Territories of Kansas and Nebraska. Four-fifths of this population has settled in these States within the past thirty years—a truly wonderful growth. The old Southern States have increased since 1820 in pepulation 67 per cent; the South-western States 315 per cent; the old Northern States and the Northwestern States, 800 per cent. The following table shows the increase in the various sections:—

	1820	1850
New England and New York	3,085,624	5,600,000
The original South	3 028,037	5,080,000
The Northwest,	792,719	7'200,000
The Southwest,	1,424,665	5,947,000

The Northwest not only excels the other sections in the increase of its population, but in farm products, miles of railroad, and in the wealth and enterprise of its inhabitantants. Its immense resources have as yet only begun to be brought into requisition; when fully developed by emigration and settlement which is constant, we can hardly place limits to that stupendous growth, which already astonishes the world.

NEVER DESPAIR.—True hope is based on energy of character. A strong mind always hopes, because it knows the mutability of human affairs, and how slight a circumstance may change the whole course of events. Such a spirit, too, rests upon itself; and is not confined to partial views, or to one particular object. And if at last all should be lost, it has saved itself—its own integrity and worth. Hope awakens courage, while despondency is the last of all evils; it is the abandonment of good—the giving up the battle of life with dead nothingness. He who can implant courage in the human soul is its best physician.

THE Bostonians are raising a fund of $50,000 to build a female medical college.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

CHILDREN.

BY H. W. LONGFELLOW.

Come to me, O ye children!
For I hear you at your play,
And the questions that perplexed me
Have vanished quite away.

Ye open the eastern windows
That looked towards the sun,
Where thoughts are singing swallows,
And the brooks of morning run.

In your hearts are the birds and the sunshine,
In your thoughts the brooklet's flow;
But in mine is the wind of Autumn,
And the first fall of the snow.

Ah! what would the world be to us
If the children were no more?
We should dread the desert behind us
Worse than the dark before.

What the leaves are to the forest
With light and air for food,
Ere their sweet and tender juices
Have been hardened into wood,—

That to the world are children:
Through them it feels the glow
Of a brighter and sunnier climate
Than reaches the trunk below.

Come to me, O ye children!
And whisper in my ear
What the birds and the winds are singing
In your sunny atmosphere.

For what are all our contrivings,
And the wisdom of our books,
When compared with your caresses,
And the gladness of your looks?

Ye are better than all the ballads
That were ever sung or said;
For ye are living poems
And all the rest are dead.

Thanksgiving Day.

For a number of years our public Thanksgivings have been, mostly, in this month, and in many of the States, on the same day. This is well—only it would be still more representative of the democracy of even our religious character, and the sympathy of sister States, if it could be *the same day for the entire Union.* These annual occasions of rejoicing should be nothing less than the recurrence of a great National Festival, in which the whole people united in one anthem of Thanksgiving for the common blessings of heaven upon our common country. How appropriate and beautiful it would be! becoming another of those spiritual bonds of union between our widely separated people—stronger than any political compact—because entering into their social life, and only through the Family a State institution.

That Thanksgiving Day is, most appropriately, coming to be observed in November, is apparent for several reasons.

The season of fruitage and the gathering in of the harvest is then over. Those who have labored in patience through the long months that have passed since the precious seed was committed to the earth, or who watched, with trembling hope, the unfolding of the tender fruit-bud amid the lingering frosts of Spring, are then contemplating the results in well-filled granary and storehouse.

The annual State and County Fairs, too, are just passed, and these, very generally, display a bounty and richness quite surpassing the expectations of the most sanguine. But this is not all. In the masses they tend to bring together, acquaintances have met each other in unexpected circumstances, to renew, briefly, the old-time fellowship. Friends and relatives have exchanged the visits, that among those of the rural districts are oftenest made in the Fall, and during Fair time, the leisure attendant upon which has been largely filled with reminisences of the past, as contrasted with the present. Not Agriculture and the state of the market alone:—the condition of the government, schools, churches, and all those institutions whose larger scope and better policy mark the advancement of the age, have been discussed by the people, who are thus prepared to enter with heartiness upon Thanksgivng festivities, not for creature comforts alone, but also for those inestimable blessings in which we are truly great and happy.

Much that we would love to say, and our own especial reason for "believing in" the last of November as the time for Thanksgiving, is necessarily left out.

A word for that of this particular year. Let us keep it in the true spirit, in that we have so much for which to be thankful; and, *in the deed,* all the more, because the harvest of this year is not so bountiful as usual. On that day let us each one remember—not in sympathy alone—but with the cheer of our *good gifts* those around us who are less prosperous and comfortable than ourselves. By a little timely conference among those who are fully able to be thus generous, every neighborhood in the State may be made glad with a benevolence that Angels would rejoice to behold—a benevolence, we trust, that will make the Thanksgiving of 1858 long to be remembered by many who learned, for the first time, how much more blessed it is to give, than to receive.

An Appeal for Mount Vernon.

In the October number of the *Farmer* we gave a brief history of the Association, by the Ladies of the Union, for the purchase of Mount Vernon. Since then we have had reason to believe there is a growing interest in this subject, throughout our entire State. We cannot, however, let the month pass without an additional word in its behalf.

The scheme, simple, effective and complete, is now before our people:

Mt. Vernon is to become a National Property, not through purchase by Congress to be, peradventure, "a bone of contention" in the exigencies of our uncertain future—not as a gift from the sovereign State honored by the birth and ashes of the Hero of the Revolution—but by voluntary individual contributions, through an Association of earnest-hearted, devoted women.

Almost two generations of unparalleled growth in wealth and power have passed, since the First President of our Republic rested from his labors and was laid, amid a nation's grief, in that humble grave on the banks of the Potomac—a grave yet, to this day, unhonored by national mausoleum or care.

And now that the women of America have undertaken to wipe out the ingratitude and neglect of the past, by rescuing from decay, that they may protect and beautify, and keep forever sacred to his memory, the Home and Grave of Washington, they call upon all who are enjoying the blessings for which he labored to aid them in the work. Once secured to the people of this Republic, by their own united contributions and efforts, that Home and Grave must become a rallying point for the patriotism of coming ages—a bright, green spot around which will cluster the glorious memories of that time, when our heroic ancestors pledged life, fortune, and sacred honor, to a cause that was to "give them liberty, or give them death!"

Who does not want an interest in that beautiful home where his great soul was strengthened, by communion with nature, for public toils, and where, in the decline of years, he left the lustre of a life undimmed by a single personal ambition? Who would not rather esteem it a blessed privilege to become co-partner in the ownership and protection of that hallowed spot where come the great and good of every clime that they may—if but once—tread the soil he trod, and do reverence to the sublime virtues of his life? The groves of Mount Vernon, though sacred to the freedom, not of America only, but of the world, must yet be ever dearest to the American heart, for *Washington was our own!*

Men and women of Wisconsin! Ye whose homes are on the broad prairies, and beside the beautiful lakes, under the shade of that Tree of Liberty whose roots were nourished by the blood of the Revolution, we call upon you—upon each father and mother of the thousands who teach your little ones to lisp with reverence the name of Washington, and to understand the meaning of our "Great July"—and surely no one of you will fail to give your name and contribution to the noble record upon which your children may go and look with pride in after years. And ye sons and daughters of Freedom—young men and maidens—ye who are to be the Marys and Washingtons of our country's future—come lay your offerings upon this sacred altar, and give your names to a triumph for all time!

Patriots of the Northwest! Orators and Legislators—the great brotherhood of Masons, Odd-Fellows, and Good Templars—we want your aid—the patriotic word the generous hand. And ye, brethren of the Press—guardians of Liberty, and leaders of this great people—lend us your influence in earnest, helpful words. So shall we not only have an individual interest, but a noble State pride in doing our part in this glorious work.

Mrs. E. O. Sampson Hoyt,
Manager Mt. Vernon Ladies Association of the Union,
Madison, Wis.

Contribution Books.

We have still a number of Mt. Vernon contribution books which we want to send to neighborhoods yet unsupplied. Who will send us their names and show that they love to work in such a cause?

Miss A. P. M.—Your communication on "Dahlias from Seed" is laid by for future use.

THE FUTURE.

God's ways seem dark, but, soon or late,
They touch the shining hills of day;
The evil cannot brook delay;
The good can well afford to wait.
Give ermined knave their hour of crime;
Ye have the future grand and great,
The safe appeal of Truth to Time!

Whittier.

FOR THE CHILDREN.

THE LITTLE BIG MAN.

BY MRS. HOYT.

Little Tommy had a mind
To be a Little Man,
Before he'd learned to spell such words
As If, and But, and Can.

He did not like to go to school,
And stand up in his class,
But rather play beside the brook,
Or lie upon the grass.

He did not like to run about
In little brown, bare feet,
And while Papa had roasted beef,
His bread and milk to eat.

He did not like his little sack,
With apron, bib and blue;
No little thing to eat or drink,
Or little thing to do.

Once, when Mama and Pa were gone
To spend the summer day,
Our little Tommy took the freak,
The "Little Man" to play!

He got into his father's boots;
Put on his father's hat;
With spectacles before his eyes,
In father's arm-chair sat.

But soon the spectacles fell off
Young Master's chubby nose;
And when he tried to walk, the boots
Quite mashed his little toes.

At dinner time he clambered up
Into his father's place,
And tried to carve the roasted Goose!
And tried to say the Grace!

But Goose, instead, his little hand
He cut, so sadly sore,
That, far from saying Grace, he fell
A-screaming to the floor.

A great cigar he lighted next,
With many a little puff;
'Till, lit, at last, our "Little Man"
Had smoke and fire enough—

For, finding soon the bitter thing
Was very bad to taste,
He threw it straight into the fire
With such an angry haste,

That headlong after it he fell,
Hat, spectacles and boots!
While furious cries for "help, and haste,"
The nursery-maid salute.

"Why, little Master," said the maid,
"Just be a Little Man,
And help yourself from out that plight,
As quickly as you can!"

But Master Tommy kicked and screamed,
And made a great ado,
As would 'most any little boy,
About as big as you!

Then, picking up the silly child,
Good Betty washed him clean,
And laid him in his little bed,
With quilt of red and green.

And there he lay for many a day,
So sick he could not run,
While all the children, round-a-bout,
Were at their play and fun.

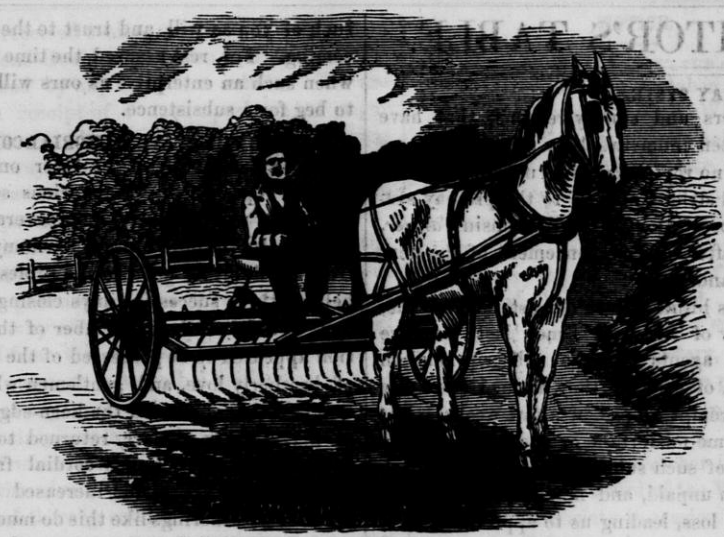
Then Tommy thought he would not try,
Again, to be a Man,
Until he'd learned to spell such words,
As If, and But, and Can.

So, putting on his little sack,
With apron, bib and blue,
He went to school with little folks,
To see what he could do.

And very soon he learned to spell
Much longer words than Can,
And while a very little boy,
Was quite a Little Man.

Something for Children to think of.

While we are yet small children there comes up to us a youthful angel, holding in his right hand cubes like dice, and in his left, spheres like marbles. The cubes are of stainless ivory, and on each is written in letters of gold TRUTH. The spheres are veined and streaked and spotted beneath, with a dark crimson flush above, when the light falls on them, and in a certain aspect you can make out upon every one of them the three letters L, I, E. The child to whom they are offered very probably clutches at both. The spheres are the most convenient things in the world; they roll with the least possible impulse just where the child would have them. The cubes will not roll at all; they have a great talent for standing still, and always keep right side up. But very soon the young philosopher finds that things which roll so easily are very apt to roll into the wrong corner, and to get out of his way when he most wants them, while he always knows where to find the others, which stay where they are left. Thus the child learns—thus we learn—to drop the streaked and speckled *globes* of *falsehood*, and to hold fast the white angular *cubes* of *truth*. But then comes Timidity, and after her Good-Nature, and last of all Polite-behavior, all insisting that truth must *roll*, or nobody can do anything with it; and so the first with her coarse rasp, and the second with her broad file, and the third with her silken sleeve, do so round off and smooth and polish the snow-white cubes of truth, that, when they have got a little dingy by use, it becomes hard to tell them from the rolling spheres of falsehood.—*Atlantic Monthly.*



ALLEN'S PATENT REVOLVING HORSE HAY RAKE.

The above cut represents a new and valuable machine invented and patented by a Wisconsin farmer, Mr. N. E. Allen, of Fox Lake, Dodge Co. It was exhibited at our State Fair, and has been at several of the Fairs of other States, and invariably takes the first premium over all competitors. It seems to be what the farmer has been waiting for, in the general march of events, for raking his hay and gleaning his fields. A man, or any boy who can guide a horse, rides along at his ease, with both hands free to drive, and when he comes to the place for a windrow, places for an instant, his foot on a lever which throws the clutch into gear, the rake revolves clear over; leaves the windrow in good shape, and the raker passes on. The machine is compact, substantial, cheap, and efficient. It can easily, with one horse and a driver, do as much work in a day as fifteen or twenty hands with the old fashioned rake. Among all the different rakes we have seen at the different Fairs we have attended, this strikes us, on the whole, as decidedly the best one, all things considered.

We understand that parties are going largely into the manufacture of this rake for another year's use and see no reason why they may not supersede, to a considerable extent, not only the hand, but also all other horse rakes.

Explanation.—By pressing down the lever under the foot, a combination of joints is straightened which throws the clutch on the rag-wheel into gear with those on the right hand drive wheel, at the same time a dog or catch on the other end of the lever is raised out of a notch in a ratchet wheel on the rake shaft: and by means of a cogging chain, or belt, running on the rag-wheel and a pully wheel on the end of the rake-shaft, a rotary backward motion is obtained. By means of raising the dog on to the face of the ratchet-wheel, the lever is kept down, the clutch held in gear until the rake makes an entire revolution and the dog settles into the catch as the rake comes around into the proper place to gather hay; the joints shortened up, the clutch thrown out of gear, and the rake held firm by means of the dog in the catch, until again freed by a pressure on the lever.

Novelties in Mechanical Science.—M. Garvina, a French machinist, has, it is said, perfected his ærial ship, at a cost of 300,000 francs, and made a voyage to Algiers, Africa, and back with it—a distance of fifteen hundred miles from the starting point. The average speed was almost one hundred miles per hour. M. Garvina is to make the attempt from Havre to the city of New York as soon as he has further tested the character of his ship by a few short trips over the Mediterranean and its neighboring provinces.

Some beautiful photographs of the moon have lately been taken in Europe, through a large telescope, and on them the mountains, hills, and valleys of our satellite are perfectly portrayed.

EDITOR'S TABLE.

THE PRE-PAY SYSTEM.

For divers and sundry reasons, that have been so often enumerated by other publishers as to need no repetition from us, we shall uniformly and strictly adhere to the pre-pay system on subscriptions to the Wisconsin *Farmer*, from and after the commencement of the next volume, January 1st.

Such has hitherto been our established rule, but in view of the hard times 'last year we authorized agents to take subscriptions on short time, of such as they deemed perfectly safe and prompt to pay in a few weeks. But through some misfortune or another, considerable sums of such subscriptions still lay back and remain unpaid, and much to our inconvenience and loss, leading us to apprehend anew the truth of the old adage of "giving an inch and taking an ell."

Furthermore such a system makes an amount of accounts and book keeping, aside from the loss, that we cannot afford to pay for or be troubled with. Hence, as before said, on and after the first of January we shall throw it up *totally without exception or reserve, and only send the Farmer to those who send us the cash in advance.* This will save all misapprehension and accounting on the subject, and furthermore save all from receiving the *Farmer* who may not want it.

Whether the 100,000 *farmers and business men of our reputed enterprising State,* feel interest enough in *one* such journal as the *Farmer,* to give it patronage and support sufficient to sustain it, is the practical question under solution. We ask nothing more than bare payment of expenses, from those most concerned, and in return propose to continue the *Farmer* in the same independent and wide awake channel as heretofore—just to all and partial to none—the exponent of progress and not of humbug. And despite of the close and hard times, we confidently expect a good sustaining support, and are bound to have it.

To our old and true friends who have long and zealously labored for the circulation of the *Farm r,* we return our sincere and heartfelt thanks, and confidently hope they will not flag in the race, but will continue to labor, not *to enrich us,* but to promote the circulation of at least one substantial journal in the State, that toils constantly and truly to promote the public good. Labor on gentlemen and friends, such of you as will, and trust to the good time coming. For, rest assured, the time will come, when such an enterprise as ours will not have to beg for a subsistence.

THE WISCONSIN STATE EDITORIAL CONVENTION

Was a perfect success. Over one hundred editors, representing the various sections of the State were present, and several sessions marked by uninterrupted harmony, and we trust resultant of good to the profession, were held on three successive days closing with Friday, Oct. 8th. Every member of the Convention appeared to be possessed of the true spirit of brotherly love, and gentlemen who had an hundred times crossed the keen-edged swords of fierce party warfare, returned to their respective homes not only cordial friends, but with enlarged hearts and increased confidence in man. Gatherings like this do much to break down and annihilate those groundless animosities which too often exist between men who ought to be friends, and if they accomplish more, are a thousand times worth the effort necessary to sustain them.

The Address by Hon. C. D. Robinson, of the "Green Bay Advocate" was a valuable and sparkling production, and the Poem by Horace Rublee, of the "State Journal" worthy its author.

The officers for the next year are as follows:

President.—C. D. Robinson.

Vice Presidents.—Morris Schoeffler, A. P. Blakesler, and J. W. Hoyt.

Corresponding Secretary.—George Hyer.

Recording Secretary.—Horace Rublee.

Treasurer.—Alanson Holley.

The next Convention will be held at Milwaukee on the third Wednesday of June.

SUGAR FROM THE CHINESE CANE

Seems to be being made in considerable quantities by different parties, all around us.

C. A. Johnson Esq., of Blooming Grove, in this county, is working up two acres of the cane of his own raising, and having complete success, both in sugar and syrup. He is the gentleman who run the main manufactory at the *Sugar Camp,* at the State Fair. We have a specimen of his sugar made at the Fair, that is as fine as any maple.

We are just getting our own manufactory in motion. Have a little less than an acre of cane to work up, and expect to make all our ordinary sweets, and more for the year to come. Will report success if anything worth while, in next number.

We received a nice specimen of syrup from our friend Gould of Palmyra. It could not be surpassed by any Southern article. We are also in receipt of a good specimen of sugar from Deacon Gorum of this city—a gentleman by the way, who has taken a lively interest in this new manufacture from the first, and made good specimens of syrup last year.

Luckily a plenty of the seed is ripening the present year, so that no obstacle will prevent a large planting of it next year. We see no reason why all that we have ever hoped or expected from this new and much-talked-of article, is not now sure to be realized, and that right along, by the whole mass of the people. It certainly bids fair to give us sugar and syrup at half what it has hitherto cost us at most, besides the advantages of being a home production, and thereby saving our money.

THE FIRST NATIONAL CONVENTION OF AGRICULTURAL EDITORS

Ever held in the U. S. met pursuant to call, at New York on the 14th September. Owing to detention at home by Agricultural Exhibitions, the number in attendance was not large, some eighteen or twenty only of the fifty journals, more or less, being represented. Matters of importance were discussed, however, and an organization was effected by the appointment of a President and Secretary, and a General Committee of five, whose duty it was made to determine the most suitable time and place for the next meeting, and issue a call for a general Convention of the entire Agricultural and Horticultural Press of the country.

The following is a list of the officers for the ensuing year:

President.—H. P. Byram, editor *Valley Farmer*, Louisville, Ky.

Secretary.—Orange Judd, editor *American Agriculturalist*, New York city.

General Committee.—Simon Brown, editor *N. E. Farmer*, Boston; M. C. Wells, editor *Homestead*, Hartford, Conn.; Joseph Harris, editor *Genesee Farmer*, Rochester, N. Y.; J. W. Hoyt, editor *Wisconsin Farmer*, Madison, Wisconsin.

OLD VIRGINIA.

About the time this number will reach our readers, we expect to be among the sons of the "Old Dominion" in attendance at the United States Fair at Richmond; also at the Virginia State Fair at Petersburg, the ensuing week. We are curious to see how these things are done in that semi-Southern old State; and will report whatever will be likely to interest our readers. P.

NOTICE.

STATE AGRICULTURAL ROOMS,
Madison, October 25, 1858.

The annual meeting of the Wisconsin State Agricultural Society, will be held at the State Agricultural rooms in this city, on Wednesday the 8th of December, at 3 P. M., for the transaction of any business that may properly come before it.

And also for the election of the officers of said Society, annually elected.

D. J. POWERS,
Secretary, W. S. A. S.

☞ Friends of Agriculture please copy.

GOLD MEDAL TO PROF. W. H. RAREY.

STATE AGRICULTURAL ROOMS,
Madison, October 10, 1858.

The Executive Board of the Wisconsin State Agricultural Society in session at the close of the State Fair, unanimously adopted the following resolutions, complimentary to Prof. W. H. Rarey. Numbers of them had been present at his exhibitions, and were uniformly favorably impressed with the extraordinary and invaluable power he had acquired over the horse, the most noble of the animal kingdom. Their action was as follows:

Resolved, That Prof. W. H. Rarey, of Ohio, in his exhibitions of horse taming, as given at the State Fair, in Wisconsin, was eminently successful; and that the Executive Committee of the Wisconsin State Agricultural Society, would commend the system, as taught by Prof. Rarey, to the favorable consideration of all persons interested in that noble animal, the Horse.

Resolved, That in consideration of our high appreciation of the great value to the world, of Prof. W. H. Rarey's system of educating the horse, and of our high esteem of him as a man, the Wisconsin State Agricultural Society presents to him a gold medal of the value of fifty dollars, with appropriate devices.

Resolved, That the President and Secretary be, and they are hereby directed to procure said medal, and transmit the same with a copy of these resolutions to Prof. Rarey, with all convenient despatch.

D. J. POWERS, Sec. W. S. A. S.

STATE FAIR PREMIUMS.

STATE AGRICULTURAL ROOMS,
Madison, October 20, 1858.

All communications or personal applications in relation to State Fair Premiums, should be made to Gen. David Atwood of Madison, Treasurer of the Society, as it is his business to pay the same.

D. J. POWERS, Secretary.

THE AWARDS OF PREMIUMS AT THE STATE FAIR,

Published in this number, has been prepared with a great deal of care, and are believed to be mainly correct. All the notes and observations of committees are necessarily omitted, for want of room, but will be published as far as they are deemed useful, in the Transactions of the Society. P.

THE MOUNT VERNON RECORD.

This handsome little sheet—a quarto of eight pages—still comes to us in eloquent advocacy of the cause it has undertaken.

Those who would be kept posted up in the progress of the Ladies' Mt. Vernon Association, and all who wish success to the noble work in which they are engaged, should read the "Record"—rich in its memories of the past, and earnest in its call to the present.

Terms.—$1,00 per annum. Address S. F. Watson, editor and publisher, Phila.—the same, who by mistake, was published in our September number No. as Vice Regent of the Ladies' Mt. V. A. of the Union.

RASPBERRIES THAT RIPEN IN AUTUMN.

We are indebted to B. P. Cahoon, Esq., of Kenosha, for a number of small raspberry bushes covered with blossoms, green and ripe fruit. He reports them as growing thriftily and ripening their fruit even under the snow. Mr. C. is a successful gardener, and we shall be pleased to advertise his stock, taking our pay in articles for our young nursery.

ENGRAVING.

We would call particular attention to the card of F. S. Hickok, on the second page of the cover. Having had many years experience with the first engravers of New York, he is capable of executing all kinds of engraving, in the best style of the art. We hope the people of Wisconsin will appreciate him sufficiently to keep him amongst us, by sending him their orders. Views of buildings; portraits of prize cattle, sheep, and horses, autographs, machinery, &c., executed in the finest style.

EXCHANGE OF HORSES FOR SHEEP.

Mr. Richard Goldworthy of Union Grove, Racine Co., wishes to exchange some good horses and colts for about 200 good sheep. Who will accommodate him?

ACKNOWLEDGEMENT.

Hon. Charles Durkee has our thanks for valuable Public Documents lately received from him, embracing copies of the Pacific Railroad, and Coast surveys, Patent Office reports, &c.

A MEETING OF THE WISCONSIN FRUIT GROWERS ASSOCIATION

Will be held in Milwaukee on the 16th of November, for discussion and free interchange of views on the culture of fruits, and kindred subjects, to continue two or three days. Fruit growers throughout the State are earnestly desired to unite with the Association in carrying out its object and are especially invited to be with them on this occasion.

Further particulars will be noted in the Milwaukee and county papers.

LITTLE GEORGE AND HIS HATCHET.

We would call the attention of parents, teachers, and book sellers, to this publication at the head of "Book Notices."

LITERARY NOTICES.

LITTLE GEORGE AND HIS HATCHET; A LESSON OF TRUTH, By Mrs. Hoyt, Atwood & Rublee, Madison. Price 10 cents.

This is a beautiful primmer poem of twelve pages, with a handsome picture cover, the whole gotten up in a neat, substantial style. The proceeds of the sale of this little book are to go to the Mount Vernon Fund, in aid of the purchase of the Home and Grave of Washington. Besides doing *something* towards so worthy an object, the book itself cannot fail to interest its little readers, and is worth many times its cost to any child, as an illustration of the beauty of Truth. Mrs. Hoyt would especially ask the attention of teachers, as she hopes to dispose of it, mainly, through their agency. Packages sent without delay to any part of the State on reception of the address of the teacher, with the number desired. Single copies, post paid, to any one who sends us a dime, or the amount in stamps.

Address Mrs. Hoyt, Wisconsin Farmer Office, Madison, Wisconsin.

A MANUAL OF THE BARN YARD; OR, DOMESTIC ANIMALS,

Is another of the neat pocket series published by Fowler & Wells, and embracing in a brief way, all that the farmer needs to know for daily use, among his animals.

Price, paper bound, 30 cents; muslin 50 cts. Fowarded like all their other books by mail, on receipt of the price. We will warrant it to please all who order it.

YOUNG'S SPIRIT OF THE SOUTH—

A chronicle of the Turf, Field-Sports, Literature and the Stage. By Young & Adams, Louisville, Ky. Terms $5 per annum. This really valuable acquisition to the sporting man's library is received, and shall receive a more extended notice in future.

AN OMISSION.

A Diploma was awarded to W. D. Bacon of Waukesha, for the Separator he exhibited at the State Fair, which was so much admired by all spectators, but by mistake was omitted in the published list.

NEW ADVERTISEMENTS.

American Stock Journal.—See notice of D. C. Linsley's Stock Journal. This valuable Stock Grower's guide commences a new volume the first of January, with liberal discounts to clubs. The reputation of Linsley is so extensive that he needs no recommendation from us.

Emery's Journal of Agriculture and Prairie Farmer.—The enterprising publishers of Emery's Journal have purchased the subscription list of the Prairie Farmer, and united the two journals under the above name, and intend making this weekly second to none in the Union. The increased list of subscribers and contributors which the combination gives the Journal, greatly increases the facility and ability for so doing.

The Horticulturist.—See advertisement of this old and popular work. Its new publisher, C. M. Saxton, is giving a life and beauty to its pages which it has not possessed since its lamented founder, A. J. Downing, resigned the control of it to other hands.

Waukegan Nursery.—Mr. Douglas again appears before the farmers of Wisconsin with a large catalogue of trees, shrubs, roots, cuttings, &c., with low prices. Mr. D. is fast gaining an enviable reputation as a reliable nurseryman and fair dealer.

Elgin Nurseries.—A very large stock of apple trees of different ages, also, evergreen and shade trees of many varieties is offered by S. K. Scofield & Co., of these Nurseries. See their advertisement.

May's Patent Self-Regulating Wind Mill.—This mill, it will be seen by reference, took the first premium at the State Fair. In this No. are large numbers of certificates from the Farmers of Wisconsin who have used his mills, and speak highly in their favor. Read his advertisement, ye farmers who have no running streams on your farms, and be benefitted by the happy thought that with these mills none of us need be above a "water level."

Milch Cows and Dairy Farming—Is another work from the reliable and prolific pen of C. L. Flint, Sec'y of the Mass. Board of Agriculture. We have not yet seen the new work, but, knowing the author, we have no hesitancy in recommending it to the class of readers to whom it is addressed, as well worthy of an extensive sale. An advertisement for the book will be found in this number. We shall give extracts from it and such a notice as the work deserves on receipt of it, which we expect soon.

THE POETRY OF PHYSIC.—Doses have always been associated in our minds with wry faces, and medicine has seemed from the days of childhood, another word for nausea and disgust. Its remedies were the worst part of sickness, and pain was not so hard to bear as the revolting portions we are compelled to swallow for its relief. Dr. Ayer's preparations herald another era. His *Cherry Pectoral* is like honey on the tongue, and healing balm on the stomach. His Pills! Try them—they are sweet morsals to the taste, and glide sugar-shod over the palate, but their energy although wrapped up, is there and strikes with telling force to the very foundations of disease.—*Cincinnati Citizen.*

American Stock Journal for 1859.

A MONTHLY PAPER, of 32 large octavo pages, devoted exclusively to the subject of Stock-Growing. It is the only paper of the kind published in the United States, and the topics treated of are deeply interesting to every owner of a domestic animal, whether living in the town or country.

The Volume will commence with the first of January, 1859, and the numbers will be issued promptly on the first of each month. It will be printed on fine, clear paper, with entirely new type, and each number will be illustrated with Cuts of Animals, in the best style of art. Our motto is—A good paper, a large circulation, and a small price, invariably in advance.

TERMS:

Single Copies, one year,.....$1 00
Six Copies, one year,..... 5 00
Clubs of 10 Copies, one year,.....80 cts. each
Clubs of 25 or more Copies, one year,.....75 " "

☞ An extra copy to the person sending us 15 or more names at 80 cents each.

Specimen Copies, Prospectuses, and Posters sent gratis to all who wish to examine them or get up clubs of subscribers.

☞ All orders should be addressed to the "American Stock Journal," No. 140 Fulton Street, New York City.

D. C. LINSLEY.

A. O. MOORE, Agent, Agricultural Book Publisher, No. 140 Fulton Street, New York. xxi2

Emery's Journal of Agriculture,
AND PRAIRIE FARMER.

THIS is now the only weekly Agricultural and Horticultural Journal published in the West. It is made up with especial reference to the wants of the West, its soil and mode of culture. Its list of practical contributors and correspondents is not surpassed by any journal of the kind in America in numbers or talent, and with the united influence, "The Journal and Farmer" will be of the highest class.

TERMS, IN ADVANCE—$2 per year; three copies for $5; six for $10; ten for $15.

We will send "The Journal and Farmer" from now till January 1st for 25 cents per subscriber, in clubs of four or more. Send for a copy and examine for yourself.

xxi1 EMERY & CO., 204 Lake street, Chicago.

MAY'S PATENT

SELF-REGULATING

WIND-MILL OR WIND-ENGINE.

PATENTED 1857. IMPROVED 1858.

Invented and Manufactured in Wisconsin.

THESE MILLS are self-Governed by balls attached to iorn arms which extend from the stems of the sails and act automatically, without the intervention of any machinery whatever, and also are perfectly controlable by touching a lever, independent of its Self-Regulating properties.

We select the following extracts from the numerous testimonials of those using them.

OFFICE OF THE JANESVILLE GAS LIGHT CO., JANESVILLE, Wis., April 5th, 1858.

To all whom it may concern:

The Janesville Gas Light Co. have been using one of May's Self-Regulating Wind Mill Powers, since Dec., 1856. (an experiment mill) and it does the work formerly done by a man at $1 per day. It is yet in good order, and gives us entire satisfaction. We can cheerfully recommend these mills to those wanting cheap stationary power.

W. W. HOLDEN, Sec. and Superintendent.
JAMES H. LOCKWOOD, Engineer of Gas Works.

To the Wis. Wind Mill Pump and Engine Co.:

Gentlemen:—I am well pleased with my Wind Mill Power and Pump. My well is over 100 feet deep, and to supply a large stock the mill needs to run but a small portion of the time. The pump, now some five months in use, needs no repair; works easily by hand or wind power; and can be detached and attached to the mill by a single pin in a moment The contrivance to prevent freezing is cheap and effectual. GIDEON CHAPIN.

To the Wis. Wind Mill Co.:

The Wind Mill has done excellent business with very little or no wear of machinery, and has encountered the heavy gales without harm, regulating itself admirably. It supplies forty head of cattle by running a short time each day, and saves the interest on at least $500 per annum in hired help. I deem it of great value to those wanting cheap stationary power. J. P. WHEELER.

To the Wis. Wind Mill Co.:

To pump water about 50 feet for a stock of 75 head of cattle and horses requires but a few hours daily. The Pump and Wind Mill make a labor-saving apparatus that will be deemed almost indispensable in a prairie country when its merits are understood—the free winds doing what now requires a vast deal of manual labor.

Lapratrie, May 15, 1858. GUY WHEELER.

To the Wis. Wind Mill Co.:

With May's Patent Wind Mill I am well satisfied, and think it a valuable acquisition (and almost an indispensable one) to the farm, that will soon pay its cost.

Very Resp't, &c., RALPH W. SCHENCK.

To whom it may concern:

I have been using one of May's Patent Self-Regulating Wind Mill Powers for pumping from my well, which is sixty-five feet deep, since Aug. 1857. I am well pleased with it, and think it a valuable labor saving machine, and one that will come into general use when its merits are known.

WILLIAM SCHENCK.

The Supplementray Report of the Rock Co. Agricultural Society and Mechanics' Institute closes as follows:

As a mechanical structure, its self-regulating qualities, and its perfect controllability by merely touching a lever, together with its simplicity of construction, are its chief features. A cheap, useful and meritorious machine, and deserving the highest premium the Society and Institute can award.

ORRIN GUERNSEY, A. C. RES-EGUIE, J. B. MARSHAL. } Com.

It has been exhibited at two State Fairs, at both of which it took the first premium.

Prices reduced to Suit the Times.

No. 1. Self-Regulating and controllable for 50 feet well.. $ 50
No. 2. For 50 to 75 feet..... 75
No. 3. For 75 to 100 feet..... 100

ALSO

Geared Engines for driving various kinds of machinery, $150 to $500.

Non-regulating and non-controllable Wind Mills, each $25. For some purposes these are useful.

Power and Pumps expressly for R. R. Pumping.

Superior Corn Shellers, Straw Cutters, Grinding Mills for corn, &c., for Farm use, to be driven by the Geared Mills, also furnished.

Also Superior Pumps for Drilled Wells.

ALL WORK WARRANTED.

Manufactory—At the Rock River Iron Works. Office—Corner Main and Milwaukee streets, Janesville, between Rock Co. Bank and P. O. For circulars, &c., address

xxi2 J. M. MAY,
Ag't Wis. Wind Mill, Pump & Engine Co, Janesville, Wis.

Vol. XIV of the Horticulturist

WILL COMMENCE WITH JANUARY, 1859.

THIS Popular Journal, established by A. J. Dowling in 1846, and now Edited by J. Jay Smith, embraces within its scope the description and cultivation of Fruit and Fruit Trees, of Flowers, Flowering Plants and Shrubs, and of all Edible plants; Gardening as an Art of taste, with Designs for Ornamental or Landscape Gardening; Rural Architecture, with Designs for Rural Cottages and Villas, Farm Houses, Lodges, Gates, Vineries, Ice-Houses, &c., and the Planting and Culture of Forest and Ornamental Trees.

The correspondence of the Horticulturist presents the experience of the most intelligent cultivators in America; its superior illustrations and instructive and agreeable articles make it eagerly sought after by the general reader interested in country life. To all persons alive to the improvement of their gardens, orchards, or country seats; to scientific and practical cultivators of the soil; to nurserymen and commercial gardeners, this journal, giving the latest discoveries and improvements, experiments and acquisitions in Horticulture and those branches of knowledge connected with it, is invaluable.

The work is issued on the first of each month, in the best style of the periodical press, each number containing forty-eight pages, embellished with original engravings. At the end of the year it will make a volume of six hundred pages, beautifully illustrated with over one hundred engravings, many of them drawings of fruit and flowers from nature.

TERMS:

One copy, one year, in advance,	$ 2 00
" " two years, "	3 00
Four copies to one address, one year,	6 00
THE EDITION WITH COLORED PLATES.	
One copy, one year, in advance,	5 00
" " two years, "	8 00
Four copies to one address, one year,	15 00

Fifty cents will be invariably added to all subscriptions upon which payment is delayed over three months.

Specimen numbers mailed upon receipt of their price. Plain edition, 13 cents, colored edition, 42 cents.

The postage on the Horticulturist is only eighteen cents a year, if paid quarterly, in advance, at the office of the subscriber.

Volumes commence with the January number, are indexed accordingly, and we send from that number, unless otherwise ordered, but subscriptions may commence with any number at the option of the subscriber.

Bound Volumes, in cloth, for 1852 $3,50. Volumes for 1854, '5, '6, '7, '8, $2,50 each.

The publisher would invite the introduction of the Horticulturist, in neighborhoods, by the formation of Clubs, as a most desirable means of information to all lovers of Rural Art, Gardening, and Architecture.

We hope that every subscriber and friend will consider himself duly authorized to act as an Agent.

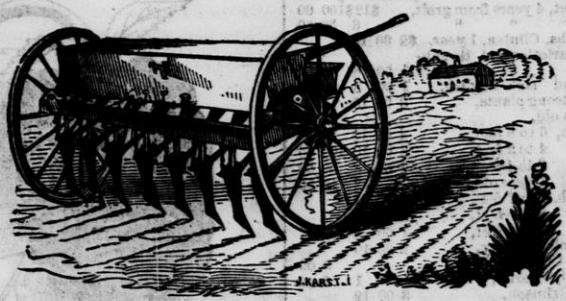
Subscriptions should be addressed to

C. M. SAXTON, Publisher,
xxi2 **25 Park Row, N. Y.**

Milch Cows and Dairy Farming.

THE new work on this subject, by C. L. Flint, Secretary of the Mass. State Board of Agriculture, contains the latest information on all matters connected with the dairy, including a full explanation of Guenon's method, the Dutch dairy system, the diseases of dairy stock, the modes of making the celebrated varieties of English, Dutch and Italian Cheese, &c. 12mo. 416 pp. Fully illustrated. Price $1,25. Published by Rickey, Mallory & Co., Cincinnati; A. O. Moore, New York; Lippincott & Co. Philadelphia, and for sale by booksellers and periodical agents generally. xxi8

GRAIN DRILLS.



NEW AND IMPROVED GRAIN DRILL AND SEEDING MACHINE COMBINED.

Patented Dec. 1, 1857, by Paige & Clary.

THE subscriber having purchased the sole right to manufacture and sell these machines in 18 counties in this State, would respectfully ask the attention of those persons already interested in the matter of

DRILLING IN THEIR WHEAT,

and those not yet interested, to this new machine. By it we accomplish all that has been, and as we think, all that ever can be accomplished by any GRAIN DRILL. The advantages of this new machine over all others with which we are acquainted, is the superiority and simplicity of its machinery, by which it deposits the wheat in an accurate, uniform and beautiful manner in the ground. Besides which we have another and independent

Broadcast Sowing Machine,

for seeds of all kinds and mounted on the same wheels, operated separately or simultaneously with the Drill. There is also a *PERPETUAL REGISTER*, which indicates the number of acres sown and by which the quantity of wheat per acre is regulated.

We will not speak too much or too highly of this machine, as we are determined that *talking* shall not be the principal quality of the Drill or the main part of the business, but that it shall stand or fall according to its own merits, and that it shall be its own recommendation when properly brought before an intelligent and generous public.

Reasons why Farmers should use Drills for putting in their Wheat.

1st. Their wheat is put *into* the ground instead of thrown at random over the surface. It is deposited at a uniform depth *under* the surface instead of irregular depths, varying from one-half inch to three inches as it is left by the harrow in the broadcast system. If one half inch is deep enough, then is three inches too deep, and if three inches is not too deep, then is a half inch not deep enough, saying nothing of a large quantity left on the surface to be destroyed by frost and vermin. Who will say that it is not necessary to put seed a proper depth *under* the surface to protect it against winds, frosts, and vermin from without, and to furnish it with life and warmth from within? Who will say that seed improperly "put home" in either the vegetable or animal kingdom, will be properly reproduced.

2d. Wheat sown in drills is never brought to the surface by winds or frosts, but is continually being covered deeper as the furrows close; therefore, by the same process that seeds are thrown to the surface in the broadcast system, they are covered deeper in the drilling system.

3d. When wheat has grown up it stands in rows with their roots firmly knit together, and upon the principle that "in union there is strength," it is prevented from being lodged by the winds, and admits of healthy ventilation while growing and ripening.

Has it ever entered the mind of the farmer that the diseases of wheat is partly hereditary and partly the result of improper exposure to the elements in the seed, and that with proper clothing and protection in the ground it will all be healthy when grown up. Therefore is the Drill not only the means of preserving but of reclaiming the wheat.

All communications addressed to the undersigned, will be promptly attended to. All persons who wish to secure one of these Drills for the fall sowing, should send their orders early.

Price of Drill not yet ascertained, but will be given in the next issue. All persons are invited to call on the proprietor, where they are now being manufactured.

A. STONER,
No. 2, Spring Street, Milwaukee, Wis.

x xi tf

Important to Families.

A SUBSTITUTE FOR POTASH!

CONCENTRATED LYE, FOR MAKING Soap without lime, with little or no trouble and trifling expense. The cheapest and most convenient article ever discovered for the purpose. One pound box will make nine pounds of

ELEGANT HARD SOAP,

and several gallons of Soft, or one barrel of the latter. Every family can make all the soap, both hard and soft, they use, from the ordinary kitchen grease and this Lye; nothing else is required.

Printers and all others using a STRONG LYE, will find the concentrated by far the Cheapest and most Effective Article they can possibly use. A single trial will convince any one of its great utility and value.

For sale by all Druggists and Grocers in the country.

Beware of imitations. Manufactured by the Pennsylvania Salt Manufacturing Company of Pittsburgh, Pa., who manufacture the EXTRA SUPERFINE, SNOW WHITE

Table, Dairy and Pork Packer's Salt,

warranted perfectly pure, and the only really PURE SALT in the United States. Also

Caustic Soda for soap makers,	Soda Ash,
Refined Soda Ash,	Sal Soda,
Bleaching Powder,	Bleaching Liquor,
Manganese,	Nitric Acid,
Muriatic Acid,	Aqua Fortis,
Chloroform,	Soda Saleratus.

x x tf

Waukegan Nursery.

		$ doz	100	$ 1000
Apple Trees, 5 to 7½ feet, 4 years from graft,			$12	$100 00
" " 3 to 4½ " " "			6	50 00
Grapes, Isabella, Catawba, Clinton, 1 year,		$2 00	10	
Gooseberries, English varieties and Houghton Seedlings,		1 50	8	60 00
Currants, Red Dutch and Black English,		1 00	5	30 00
Blackberries, Lawton, strong plants,		3 00	15	
Apple Seedlings, 2 years old,				4 50
European Mountain Ash, 6 to 8 feet,		4 00	18	
" " " 4 to 5 feet,		3 00	10	100 00
" " " 3 to 4 feet,		2 00	8	60 00
" " " 1 year old,			2	15 00
Large Red Siberian Crab, 5 to 7 feet,		3 00	18	
Lombardy poplar, 6 to 8 feet,		3 00	15	
Yellow Lucust, 4 to 6 feet,		1 00	8	
Arbor Vitæ, 12 to 15 inches, bushy,		2 00	10	
Osier or Basket Willow Cuttings,				3 00
Strawberries, Large Early Scarlet,			1	5 00
Peonies, Large Double Crimson,		3 00	12	
" Chinese Double White,		4 00	18	
Asparagus,			1	5 00

Also a general assortment of Fruit and Ornamental Trees, Shrubs, Roses, Dahlias, &c.

ROBERT DOUGLAS.

Waukegan, Ill.

This Nursery is on the Chicago and Milwaukee Railroad, 35 miles north of Chicago.

x xi6

Elgin Nursery.

1,200,000 Apple Seedlings, two years old, fine and strong, having had open and careful culture.
300,000 one year old and strong.
40,000 grafted apple trees of best hardy varieties, large and suitable for orchard planting or setting.
25,000 European Evergreens and Tyrolese Larch, embracing Norway Spruce, Scotch, Weymouth, and Austrian Pines, from 1 to 6 feet high.
8,000 black walnut 3 to 4 feet high.
5,000 horse chestnut seedlings, one year old.
5,000 silver maples, 4 to 6 feet high, stocky and fine heads.
100,000 sugar maple one year seedlings.
30,000 white ash one year seedlings, 12 inches long.
All for sale at Elgin Nurseries, Ill., at wholesale or retail.

Sept. 1858. [x xi 4] L. K. SCOFIELD & CO.

Mil. and Miss. Railroad.

1858 SUMMER ARRANGEMENT. 1858

ON and after Monday, June 18, 1858, and until further notice, Passenger Trains will run as follows DAILY [except Sundays.]

GOING WESTWARD.

LEAVE MILWAUKEE AT—
11.30 A. M.—Mail and Day Express.
10.30 P. M.—Night Express.
5.20 P. M.—Janesville accommodation.

LEAVE MADISON AT—
4.31 P. M. and 4 40 A. M.

GOING EASTWARD.

Leave Prairie du Chien	11 00 A. M.	5.30 P. M.	
" Madison	3.10 P. M.	10.06 "	
" Janesville	5.00 "	11.59 "	3.30 P. M.
Arrive at Milwaukee	7.50 P. M.	4.45 A. M.	8.50 "

These Trains carry the

GREAT NORTH-WESTERN UNITED STATES MAIL,

and connects at Prairie du Chien with

DAILY LINE OF STEAMERS FOR St. PAUL

And intermediate points.

x 1 tf WM. JERVIS, Superintendent.

Mendota Foundry & Machine Shop.

THE Subscriber has recently established an extensive Foundry and Machine Shop in the city of Madison, (on Fourth or Mendota Lake, between the Capitol and the University,) where he is prepared to make all kinds of Castings, as well as finished Machine Work, in the way of

Steam Engines, Agricultural Machinery, Artesian Well Drilling Apparatus, Sugar Cane Mills, &c., &c., &c.,

and anything else in the line of Casting, Forging, or Finishing in the best manner and on short notice.

All parties wanting anything in our line are solicited to call at our works, or communicate by mail, with the undersigned proprietor.

I. E. BROWN.

Madison, June 30, 1858. x vii tf

The Lawton Blackberry



IS unique, and not, as some have been led to believe, the common

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AND

NORTH-WESTERN CULTIVATOR.

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D. J. POWERS AND PROF. J. W. HOYT, Editors.

PREPARATION OF THE SOIL FOR THE SEED.

NUMBER II.

Principles of Drainage.

THE physical laws involved in the successful practice of drainage are few and simple, and are naturally divisible into two classes—those which govern fluids, and those which pertain to the soil.

The properties of water which require especial consideration in the discussion of drainage, are its expansibility under the influence of heat, and the easy mobility of its particles.

To the first of these properties is due that vaporization of water which not only purifies it by the separation of minerals which it may hold in solution, but also effects its needed transfer from the lower level of ocean beds to various elevations upon the dry continents.—For if water were always and necessarily liquid—if it had no power to assume the light wings of vapor, and thus make its way to the higher plains and mountain tops, then would the law of gravitation, which labors without rest, to bring all bodies, whether fluid or solid, to the lowest possible level, force all the water of our planet into the deep hollow places of the sea, and leave the land to parch under a drouth without end.

To the second property named—the mobility and minuteness of the particles of water—the influence of gravitation, of course, being implied—is attributable its ceaseless flow through the larger channels and streams infinitessimally small, from the inland heights to the bosom of the ocean again—as also certain contiguent minor laws which govern water, and all fluids, at rest; viz:

1. *Water at rest presses equally in all directions, and when exposed to an equal atmospheric pressure, always maintains a uniform level, without regard to shape or volume.*

It is to this law that fountain jets or springs are due: The water accumulates within a cavernous opening or large fissure in the earth, unable to escape through the impervious walls thereof, until at last it makes its exit through a small orifice at a much lower level, and spouts up with a force measured by the height from the outlet to the source, or in proportion to the weight of the superincumbent column. Its practical recognition renders drainage easy, by facilitating a determination of the depth to which it may be necessary to go, in order to sufficiently drain a given tract of land for the most successful cultivation of a given crop; its only practical limitation is the variety in the perviousness of the different soils through which the water may be required to pass.

2. *The pressure of a column or body of water depends upon the area of its base and its height, not upon its diameter.*

For example, suppose the vessel, Fig. 1, to

to be filled with water and rested first upon its larger and then upon its smaller end. The pressure in either case will be measured by the height of the vessel and the base upon which it rests, the difference being equal to the disparity between their respective areas. So, also, in the vessel represented by Fig. 2, the pressure in the spout exactly balances that in the body, because only that much of the water in *a* as is measured, in its area, by the area of the spout, presses against the column *b*: the result is, they both stand at the same level—a thing which not unfrequently happens in nature, a small fissure-full on one side of a valley balancing a large resorvoir on the other.

Fig. 1.



Fig. 2.



But the nature of the soil must also be considered in our investigation of the principles of drainage; for so far from being of one kind the world over, it often differs greatly, as we have before remarked, for even a single locality—a loose sandy, a gravelly, and a clayey soil alternating, both vertically and horizontally, several times within the area of a single acre. It is important, therefore, that such varieties, be properly understood in their relation to the subject under discussion.

Usually the different soils lie in proper strata, or layers one above the other—a loose mould, for instance, lying upon the surface, a clay or sandy stratum next, itself resting upon a deeper gravelly bed, the solid rock underlying all. Sometimes, again, this order is inverted, or otherwise variously modified, the several layers being more or less distinctly characterized by a predominance of one or the other material, as appears in the subjoined cuts:

Thus, Fig. 3 shows a very thin coating of vegetable mould over the entire surface, with

Fig. 3.



clay underlying at *a* and *d*; while between *b* and *c* rests a deep bed of sand directly upon the clayey stratum, which afterwards alternates with sand until the rock is met below. Now, it would appear to the casual examiner of the porous bed, that the land in that vicinity would require no drainage, whereas, the soil between *a* and *b* might be almost springy with superabundance of water flowing from the slope above; showing that it will not answer to rely upon the appearance of any given locality, without a careful investigation of the surrounding district.

Again, at Fig. 4 we have an illustration of an occasional arrangement of soils in nature,

Fig. 4.



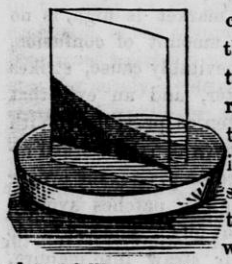
giving occasion to what are known as artesian wells. The clay stratum upon the hill between *a* and *b* extends across the valley to *c* on the opposite side, where it is displaced by sand, which, receiving the falling rain, descends between the said clay stratum and the rocky bed beneath until it fills up the space even to the hill tops on either side. To have an artesian well, therefore, it is only necessary to bore through the layer of clay in the valley, and the water at *e* gushes up through the orifice in a fountain jet, whose height will, of course, be proportionate to the height of the hill *d*, the size of the column which presses, and the diameter of the orifice.

We are acquainted with wells of this sort whose depth is eighteen hundred feet; the jet being produced by a superincumbent column of water which slopes away to a hill or range of hills several miles distant. At Fond du Lac, in this State, there are several of these artesian wells, whose waters depend for the necessary pressure upon hills quite remote.

From the foregoing illustrations, and from others of like character which will suggest themselves to the reader, it must be apparent that economical, scientific drainage requires not only a recognition of certain general principles embraced in the sciences of hydrostatics and hydraulics, but likewise a careful geological survey of the locality to be improved, and of the region immediately surrounding—nothing, however, which the plainest farmer may not acquire in a very short time if he will but make the requisite effort.

There is also a difference in soils as to their power of capillary attraction. That is, certain soils not only resist the passage of water through their pores, downward, but also hold on to the water, when once absorbed, with greater tenacity than others. Of these clay is a specimen, being more tenacious of water, as well as less pervious than most other soils.—The reason is obvious when it is known that the capillary force is proportionate to the size of the tubes or pores through which the water is caused to flow—a principle very simply illustrated by resting the edges of two window panes in a pan containing water, and then bringing them into close proximity, as represented in Fig. 5—two sides almost touching, while the opposite sides are further separated: the surface of the water will be an inclined plane, falling rapidly as the panes diverge.

Fig. 5.



Thus it is with soils: In a sandy soil the particles are so far apart that the water, though it may rise sufficiently from below to wet the whole mass, is, nevertheless, not so firmly retained. Take, for instance, two bricks, one made of clay, the other by the pressure of sandy loam, and immerse them respectively in water: the sandy brick may be saturated first, because the pressure of the water more readily secures entrance into the large spaces; but if one end only of each be immersed, then the clay brick will be first wetted throughout, and will longest retain its moisture, its stronger capillary force more successfully counterbalancing the force of gravity which would draw it down, and the warmth of the atmosphere, which would cause it to expand into vapor.

It is by this power of capillary attraction that even the surface of favorable soils, is kept moist though the weather be dry and the water line or level some distance below.

Having thus glanced at the general principles embraced by every system of scientific drainage, we are now prepared to discuss the

VARIOUS SYSTEMS IN USE.

Surface draining has been practiced to some extent from time immemorial: indeed, until within the last century, none other had been used for the improvement of soils intended to bear crops. Open ditches of various depths and widths, and at intervals great or less, according to the amount of water to be removed and the requirements of the crop to be grown, serve a good purpose, and might be opened with profit through many farms, whose proprietors are vainly struggling against the injurious effects of an excess of moisture.

But this system is liable to serious objections, as compared with others, and is rapidly falling into disrepute, even where it has long been practiced with advantage. Always impassible and constantly liable to obstructions by the washing down of the sides, it is really less economical, and less efficient for well improved farms than that of *underdraining*, which we shall presently discuss. Nevertheless, where the cultivation is not intended to be very thorough, particularly, when grain is not to be grown, we advise our farmers to try them.—Hundreds of broad meadows in Wisconsin would yield enough larger and better crops to pay for the expense of cutting the ditches the first two years; after which the gain would be a clean nett profit, added to the incidental advantage of a gradual preparation of the soil for cultivated crops.

Underdraining is of two kinds, *deep*, and *frequent*, or *thorough*. The former is well adapted to certain special localities where deep beds of water or permanent springs are the occasion of damage to land lying lower than their sources, but is inapplicable to the improvement of lands in general.

THOROUGH DRAINAGE,

Technically so called, consists in the opening of numerous drains in close proximity to each other, at depths varying from two to four feet, placing pipes or stones at the bottom, and then filling up again to the surface. Already this system is becoming deservedly popular, and many who were but recently opposed to it on various grounds, are its warmest advocates, having been satisfied by practical demonstration of its great utility and economy.

In future numbers we shall treat of the methods of doing the work, the best materials for the aqueducts, the cost and profits; employing such illustrations as will render the whole subject intelligible and interesting.

H.

THE wheat crop of the United States proves to be about half the usual yield, and loudly calls for a bitter knowledge of the conditions of its successful growth.

PRACTICAL ESSAYS ON EVERY DAY AFFAIRS.

NUMBER XII.

THE PROPER EMPLOYMENTS OF WINTER AND THE TRUE MODES OF PURSUING THEM.

Winter, as well as the other seasons, has for the farmer, its proper employments and uses, and if duly arranged and attended to, ' 'utilities and enjoyments. The specific and pr.. 'r employments for each farmer to pursue, depends of course upon many circumstances.—For instance, the beginner upon a new farm, has large provision to make for fencing and not unfrequently for building; and if the materials for it are to be drawn from the surrounding forests, the winter months are usually by far the most convenient season to attend to it. First because heavy materials can be handled much easier and better on sleds and sleighs, than on wheels, and secondly, because there is little else pressing in the way of employments for men or teams. Then again, in erecting either fences or houses, in the short and hurrying spring season, the burthen is vastly diminished, if everything in the way of materials is absolutely on the ground before hand.—This is a great and important truth that no one can understand too well. How many men have we seen, undertaking large jobs, with their help all on the ground, and standing idle may be for days, before things were really ready to make a proper beginning. Such men invariably make a job cost much more than it is worth, and strange to say, are uniformly the most conceited persons alive, as to their ability to manage. Let all then who purpose building at the opening spring, get *good ready* during winter as far as possible.

Those upon older and more improved farms, of course, find plenty to do in the way of threshing and marketing their crops, together with the incidental work of taking care of stock, and of providing the requisite fuel. And for those who have the proper barns and conveniences for so doing, there can be little doubt but what the true mode of threshing is, to have a snug tread horse power and thresher, that can be manned with a little help, and run at pleasure without extraordinary effort, during the winter months; requiring little or no extra outlay for help, making little or no waste, and only making straw in such amounts as can be conveniently and economically disposed of.—Such is our theory for ordinary farm threshing, where parties are able to own the necessary machinery for the purpose, and the arrangement may not be a bad one for two or even three, to own a machine together, and use it alternately. But all such company ownerships are objectionable at best, and wholly unwarrantable, except between parties of liberal, conceding and sensible character. Neighboring as a general rule, in anything, is by no means advisable if it can well be avoided.

The ordinary mode of threshing with a *big* machine, and an army of men, has to be sure, some advantages to recommend it, especially the fact that the work can be done quick; and this at times when the market is high, is no small object. But the amount of confusion, hurry and waste they inevitably cause, strikes us as a very grave matter, and an evil that should be avoided as often as possible. With winter threshing, the straw can be worked effectually into the manure heap, (its only proper place) and all its unsightly patches avoided about the field and out-lots. Those who do not properly work their straw into manure, and carefully apply it upon their grass lands and fields, will not be long in finding out, that they are poor and wasteful farmers, and that "the business does not pay."

The preparation of fire wood, is a matter so common to every household, and so well understood that a word of comment from us will perhaps almost seem supererogation. Still it is a matter that is exceedingly apt to be neglected, from the very fact that it is considered so common place. Many are the men who deem themselves good managers, who not only cut their wood pretty much as they want it, but also cut and draw much of it from the forest, as they need it. It is of course needless to say, that this is terrible economy, and a downright loss in *dollars and cents*, of a much larger amount than is usually supposed, aside from all the annoyance, bad temper and bad bread arising from using green wood.

A shed well filled with good cut and split wood, is one of the best evidences in the world, of a good farmer and good husband; while a few scattering and uncut sticks and logs, sprawling about the door-yard, being hacked from hand to mouth as needed, and occasionally, may be, by the woman of the house, is one of the surest evidences in the world, of a thriftless, worthless and miserable manager and man. These are evidences of human character, that seldom if ever fail. Hence we al-

ways think we can read the character of each farmer, as we pass his homestead, even though at considerable speed. Equally readily can we read the character of each house-keeper, by certain simple unmistakable signs about her household, making due allowance *always of course*, for ill health, or a specially large family.

The taking care of stock in winter, is another matter so frequently treated on, that we shall not dwell upon it, except in the way of a few general remarks, and those of the humanitary and economic order. And first, there is no question but what humanity as well as economy dictates a liberal policy in all things in the way of wintering animals. But the economic, is the argument that we expect will bear most weightily with the mass of our readers; for surely we do not give mankind in general, much credit for any specially large stock of real humanity towards the inferior animals. Either from a naturally cruel nature, or a vicious bringing up, the most of people contemplate not only brute but human suffering after a little use, with wonderful indifference. Hence they reason that if their creatures "come through the winter," as the saying is, without absolute starvation, that it is all they need to care about them; they seldom weigh the amount of cold or hunger they have suffered, in the tender scales of humanity. The main question usually seems to be, which way is cheapest? not in the long run, but just for the present. Now this system and course is all wrong and cannot be sustained for a moment, by any just and rational system of reasoning. All the valuable domestic animals, are raised for profit mainly, and not from fancy; hence the true theory must certainly be, to produce them for the least cost. And how can this be done so well as by a judicious system of breeding and feeding, that keeps a creature constantly advancing at every stage, as rapidly as nature and health will permit. What is the benefit or profit, of a day or a week, that they do not improve and grow? What they eat while thus standing still, is certainly wholly lost and more to, because it takes especial effort to start an animal from a stand still point, just as surely as it does to start a log or a wagon from a standing position.

How many more than half our common farmers compel their hogs and pigs to starve through our long cold winters, with less than half enough may be to eat, and about a corresponding shelter? Who of them can tell us the humanity or policy of this course? We would like to know. On the other hand, who does not know, that it is not only inhuman and mean, but exceedingly wasteful, to winter them in this scandalous manner. We know it well, and never see such creatures shivering and starving about any one's premises, without wishing from our hearts, that their owners had to take their places for a week, about the time of the *cold snap in January*. We think one or two such *doses* would learn them lessons of humanity and mercy, that would be profitable to them, or just, at any rate. Fix up all your out enclosures, gentlemen, and make everything about you comfortable and happy if possible, for that is the sure road to wealth, as well as to the better country.

When all the aforesaid enumerated work is well attended to, and a thousand other things not mentioned, then devote an occasional day to the visiting of the winter school; don't take John or Sally's *story for it*, but go personally and make the acquaintance of the teacher and his management, for yourself; you will find it not only profitable but pleasant, and just in the line of duty. Look sharp when about the school premises, and see if everything is in as comfortable shape as it should be, to enable the children to study and learn pleasantly and well. Remember that there in the school room, is probably the *Alpha* and *Omega*, the beginning and end of all your hopes, labors and attainments—the children that will soon be your nurses, heirs and mourners. See well to their interests educationally, that nothing pertaining thereto be neglected.

Finally and lastly, when the labors of the day are done, and the last dependent creature comfortably stowed away, then pile on the *big* logs upon the evening fire (plague on all new fangled unsocial black stoves) and comfortably and cheerfully draw the table and easy chair around it, for the quiet chat and reading of the books and papers. Then by your own fireside, your day's work done, you can ramble over all the regions of the earth, either by steam or telegraph, and know more in a single hour, of what is going on in the world around than Old Solomon "in all his glory" ever knew or heard in all his life. What of all the modern achievements is a greater luxury, than such a pleasant fireside evening in a *log cot*, amid one's own family and the current literature and news of the day? We know not.

To sum up the whole matter, let us advise

all who would do up their winter's business in proper season and shape, to begin in season if possible, in all cases and on all undertakings, and to push them up to time. Getting behind hand is the stepping-stone to many subsequent misfortunes, and promptitude is the key stone to all success.

"Early to bed and early to rise,
Makes a man (or woman) healthy, wealthy and wise,"

Is as true now as in the days of Ben Franklin; and by the way, the little matter of getting up in the morning (especially in short winter days,) is one of vast importance in every subsequent operation. Neglect it not unless you would fail to accomplish your undertakings.

NOTE.—This article completes our series, written consecutively each month during the current year, as promised in the December number of 1857. Whether they have attracted sufficient attention to secure a reading ordinarily we know not. But one thing we are quite sure of, and that is that it has been something of a task to write them, during the scanty intervals of other and more pressing matters.

Just what we shall employ our pen about in a leading way, during the coming year, is yet a little uncertain; but thus much we will assure, that it will not be either idle or bashful, in glancing at the short-comings or follies of our day and generation. P.

Chinese Agriculture.

Mr. C. A. Ely, of Ohio, a gentleman with whom we are personally acquainted, writing from Hong Kong to the Elyria *Democrat*, says, in reference to the Agriculture of China:

"I also availed myself of every opportunity of seeing and becoming acquainted with their agricultural processes and productions. Of the first, although they have the experience of several thousand years recorded, I think there is little we can learn from them, except to be contented with our own. Most travelers have remarked that their customs are diametrically opposed to ours, as is the situation of their land upon the globe; it did not the more appear strange to find their agriculture "go by contraries.;" for example, during the very first walk I took in the country after arriving in Hong Kong, I saw men *ditching with hoes*; one held a mat with handles at each end, while the other hoed the dirt into it; he then stood by while the first leisurely threw it out and replaced the mat. They also use a sort of hoe instead of a plow for turning over the ground; it is about ten inches wide by fifteen long, and very heavy. It is raised high over the head, and allowed to descend by its own weight into the ground, when, by a skillful jerk, the workman turns it and its contents bottom upwards. It is a slow process, but in the soft ground of the poddy fields seems to do very well. The plow is only used to stir the soil; the imperfection of the instrument making it impossible to turn a furrow. Williams in his "Middle Kingdom," says: "One would think the inventor of it a laborer, who, tired of the toil of spading, called the ox to his aid, and tied his shovel to a rail." In the use of it, too, their opposition continues, for, while we attach two animals, and manage it with two handles, they have but one handle, and it is drawn by a single ox.—We usually make our beasts serve us, when practicable, to convey us home after the labor of the day, but they are so little accustomed to any but manual labor that they will actually turn the ox loose, and draw the cart home themselves, with their implements in it.

But the most singular contrast is presented by one of their modes of threshing,—which is by making the grain active instead of passive in the operation; whipping it out as they cut it, into a box containing eight or ten bushels, which they carry along with them by handles attached to the sides, leaving the straw to be collected afterwards. They perform the operation, also, by beating it out as we do, upon floors made of gravel and lime, which they call *chunam;* these are generally situated in the open air in the field, and when well constructed are said to last several years. They use a rake for a harrow, and their fingers for a rake; a hoe for a plow and a basket for a shovel.—But notwithstanding the rudeness of their implements, their want of invention, and their aversion to adopt any improvements from others, they exhibit a great deal of patient industry and considerable ingenuity in the employment of the means they possess.

The only application of machinery to agricultural processes I have seen, is the chain pump and the winnowing machine. The former is on nearly the same principle as that in use among us, but the buckets are much larger, and it works on an inclined plane, being driven sometimes by oxen, after the manner of our horizontal horse power, and sometimes by men or women on a sort of tread-mill. The winnowing mill is almost precisely like that in common use with us, and has been employed without alteration for more than a thousand years; the only difference that I could perceive being that it was only about half as wide, and was furnished with but a single screen. In construction, although it was rude and clumsy, it was nevertheless lighter and better adapted to its end than most of their tools."

We have long known the Chinese were great mechanical bunglers; but it cannot be denied that in the careful husbanding of fertilizers, and in the thorough cultivation of the soil, they greatly surpass the Americans. H.

Correspondence of the Farmer.

Government Surveys, &c.

MESSRS. EDITORS:—Some of your readers, particularly among those who have lately become land owners and residents at the West, may feel an interest in the following facts concerning various matters connected with the surveys of what are or once were, Government lands. The amount of ignorance on this subject seems to be great enough to justify the compilation of a much more extended article than the one given below.

TOWNSHIPS.

A township is a body of land 6 miles square. The State line between Illinois and Wisconsin forms what is called the base line of the surveys in Wisconsin. All the townships in the first tier north of this line are numbered one, all in the second two, and so on.

A RANGE

is a tier of townships extending north and south. In Wisconsin the ranges are numbered from the north and south line called the 4th Principal Meridian, which, beginning at the southern boundary of the State, runs north between Lafayette and Iowa counties on the east and Grant on the west, passes through the centre of Richland, and, cutting off the most eastern tier of townships in Bad Ax, Monroe, Jackson, Clark, Chippewa and La Pointe counties, reaches, at township 47, the southern shore of Lake Superior, near the most western extremity of the State of Michigan. All the townships in the tier east of this line are said to be in Range 1 East, all those in the second tier, in Range 2 East, and so on; and in like manner we have Ranges 1, 2, 3, &c., West. The city of Madison is situated in the 7th township from the base line, and the 9th range east of the 4th Principal Meridian, or, as it is generally written, in T. 7 N., R. 9 E. It seems, however, unnecessary to indicate that the townships in this State lie north of the base line, since those in Illinois are not numbered from the base line south.

The different States and Territories have different base lines and principal meridians.

SECTIONS.

The townships are divided into 36 squares each, called *sections*, and these are numbered from 1 to 36 inclusive, the numbering beginning at the northeast corner of the township, and running west and then east, and so on, back and forth, to the southeast corner of the township.

In surveying a new country the north and south lines between the townships are first run from the base line. These are six miles apart at the base line, but in running towards the north, they approach each other owing to the convexity of the earth. Hence it is necessary to measure other lines on which to start the meridian six miles apart anew. These are called *standard parallels* or *correction lines*. After the meridians are established, the east and west lines between the townships are surveyed, and thus the country is divided into townships.

The subdividing of the townships is begun at the southwest corner of section 36, that is, one mile west of the southeast corner of the township. The first line is run one mile north. The second is run to the east on the north side of section 36; the third line begins at the north end of the first and runs north one mile, and so the work is continued to the north side of the township, thus running out the east tier of sections in the township. The second tier is "run up" in the same manner, beginning *two* miles west of the southeast corner of the township. Corners are set every half mile in running these lines. Those at the corners of the section are called *section corners*; those in the middle of the sides of the sections are called *quarter section corners*, or *quarter corners*.

In surveying a tier of sections, unless the north and south lines across the township measure just six miles, the last section will be greater or less than a square mile, and thus fractional lots are formed on the north side of the township. And since the townships between any two correction lines become narrower east and west in going towards the north, it is necessary to form fractional lots on the east or west side of the township. The sections are so surveyed as to form them upon the west side.

This simple and beautiful method of surveying the public lands was first adopted in 1802, by Col. Jared Mansfield, Surveyor General of the Northwest Territory.

CENTER OF THE SECTION.

The section, theoretically, is bounded by straight lines, each one mile in length, and running due north and south, or east and west as the case may be. But owing to inequalities in the surface of the ground, marshes and other obstacles, and to the usual lack of perfection in the works of men's hands, section

lines, as actually traced in the field, are seldom found to coincide with the theory in either length, direction, or straightness. Hence it is generally true that if the quarter lines (lines extending through the middle of the section east and west and north and south) were made straight, the quarters thus formed would not be equal to each other. A more just method, therefore, and that required by the laws of Wisconsin, Illinois, Iowa, and Minnesota, is, to place the center of the section midway between the opposite quarter corners, except where allowance is to be made for fractional lots. It has been a very common practice to divide the section by straight quarter lines, but almost every division made in this manner is incorrect, and may at any time be changed.

CAN THE GOVERNMENT CORNERS BE ALTERED?

Many, if not all good surveyors think not, and it seems to be becoming the general rule that they cannot. The land is deeded from the Government according to the Government surveys, and were the buyers of any particular piece afterwards obliged to take it according to some other survey, he might lose a spring or grove which had induced him to make the purchase. Besides, were corrections to commence and to be justly made, they would amount in the end to a re-survey of the whole country, which would certainly be of more disadvantage than the inaccuracies of the original surveys.

FRACTIONAL LOTS.

Whatever the fractional lines of a section fall short of or overrun the Government measure, must be distributed proportionally between the fraction and the full lots, and not all be given to, or taken from, the fractional part of the line, as is sometimes done.

LOST CORNERS.

When there cannot be found sufficient evidence to determine the place where a quarter corner originally stood, it is to be established in the middle of a straight line drawn between the two corners at the ends of the side in which it belongs, except where allowance is to be made for fractional lines. A section corner is established by setting it proportionally distant from the nearest corners in the section lines which pass through it.

FENCES BUILT ON THE LAND OF ANOTHER THROUGH MISTAKE.

In the absence of any positive enactments in Wisconsin, Iow and Minnesota, and of any decisions by the courts of Wisconsin on this point, which I have been able to find, the following is given from the Illinois Statutes of 1845, Chap. 51, Sec. 19:

"When any person or persons may, by mistake, erect and make a fence or inclosure on the land of another person, then, and in that case, when the line or lines are legally run by the proper authority, and the fence and enclosure are known to be on the land of such other person, the person or persons making such fence or fences as aforesaid, through mistake, shall be empowered and authorized to enter into the said land of another, doing as little damage as possible, and take away the rails, posts, wood and stones of which said fence or fences are made and erected, within one year from the time said line or lines may be legally run."

Some rule or law similar to the above seems to be needed in Wisconsin. C.

STATE UNIVERSITY, Nov. 1, 1858.

The Lake Superior Country.

We learn from James S. Ritchie, Esq., author of the work on Wisconsin and Lake Superior, that the Agricultural productions of the City of Superior and Bayfield were very promising. He is on his way with specimens of the various productions to the National Fair at Richmond, Va. It has been generally supposed that the Lake Superior region was too far north for the culture of Indian corn, wheat, tobacco, etc. But Mr. R. has five varieties of corn, tobacco leaves measuring two and a half feet; plump winter wheat, far superior to that of any other part of the West; barley, buckwheat, peas, beans, Hungarian grass, oats, timothy, and sundry varieties of potatoes, weighing from one to two pounds, which were grown on Government lands. Mr. R. procured three pecks of Irish potatoes last April in Philadelphia, just landed from Londonderry, and sent them to the City of Superior; they were planted May 20th, and the product when dug, on the 19th of October, was fifty bushels. The sample exhibited weighs one pound two ounces. A sample turnip weighs fourteen pounds. A cabbage on the steamer North Star, on which he came passenger, weighed twenty-seven pounds, and measured four feet across the leaves. Mr. Ritchie represents the City of Superior and Douglas and La Pointe counties, Wisconsin, and St. Louis and Lake counties, Minnesota,—in fact, the west end of Lake Superior. The trip to the head of Lake Superior he represents to be the finest in this country. It is expected that stages will run the coming summer from Superior and Bayfield to St. Paul, thus giving travelers an opportunity of seeing both the Lakes and the Mississippi river. Lake Superior possesses as fine harbors as any other lake,

and is the most picturesque of the entire chain. The steamer North Star, the favorite boat, is 274 feet long, and fitted up like a floating palace. Capt. Sweet is one of the most experienced navigators on the lake. Already he has made nineteen round trips, about two thousand miles, from Cleveland, Ohio, to the City of Superior and return, equal to thirty-eight thousand miles, which will surpass, from the opening to the close of navigation, the time made by any ocean steamer. The Star averages from fifteen to twenty miles per hour. Mr. Ritchie believes that "hard times" have done more for the Lake Superior country than ten years of prosperity; causing men to fall back on first "principles," that is to say, the cultivation of the soil.—*Nat. Int.*

NOTE.—We can bear testimony to the truth of the foregoing statements, as we saw the *vegetables*, at the U. S. Fair. The turnip was of the variety commonly called the cow horn, and was decidedly the largest, as well as the finest specimen of a turnip we have seen, the present season. In fact we never saw better. We rode with Mr. Ritchie from Pittsburgh to Richmond, and hence had an opportunity of seeing the extraordinary curiosity his various article, and particularly the big turnip, created, especially as he usually displayed them on a vacant car seat before him for the inspection and queries of the curious. Every passer by was struck with their extraordinary size and beauty, and more particularly when they learned that they grew on the shores of Lake Superior, the present short season. In fact it has become so common for all of us to glide into the opinion that nothing but a few potatoes and may be oats, and moss, will grow in that supposed inhospitable climate, that the seeing the absolute evidences to the contrary, naturally surprises us and staggers our preconceived opinions. We well remember when even northern Illinois, and most especially Wisconsin, was considered altogether too cold for profitable or even comfortable settlement. But time and experience dispels those ideas and notions, and it may also be, that the same operation of time and experience will reveal to us the important fact, that all our northern territory, to Lake Superior even, is eligible and inviting for mixed farming purposes. Such we presume will prove the fact, and we care not how soon. Let the wild haunt of the savage since the morn of creation, become the happy abode of civilization, with its virtues and extra elements of happiness. *Whoorah*, say we for the new State of Superior, if time and the parties most interested should so decide. P.

Is our National Agriculture Deteriorating?

The prosperity and happiness of a large and populous nation depends—

1st, Upon the division of the land into small parcels.

2d, Upon the education of the proprietors of the soil.

Our agriculturists, as a whole, instead of seeking a higher cultivation, are extending their boundaries; and their education, on the contrary, is limited to the metes and bounds of their forefathers.

If it be true that the common mode of cultivating the soil in all parts of our country is so defective as to make the soil poorer year by year, it is a most deplorable fact, and a fact of national concern. If we are steadily impairing the natural productiveness of the soil, it is a national waste, compensated only by private robbery.

In New England, the pasture-fed stock is not on the increase, and sheep-husbandry is gradually growing of less importance, excepting, perhaps, in Vermont and New Hampshire. The wheat crop, once abundant, is now inconsiderable. The following table will exhibit something of the depreciation of the crops in ten years.

WHEAT.	BUSHELS.	
	1840	1850
Connecticut	87,000	41,000
Massachusetts	157,922	81,211
Rhode Island	3,098	49
New Hampshire	422,124	185,658
Maine	848,166	296,259
Vermont	485,800	535,955
	2 014,111	1,090,182

POTATOES.	BUSHELS.	
	1840	1850
Connecticut	3,414,238	2,689,805
Massachusetts	5 895,652	3,385,888
Rhode Island	911,873	651,029
New Hampshire	6 206,606	4,305,919
Maine	10,892,280	3,436,040
Vermont	8,869,751	4,951,014
	35,180,500	19,418,191

In many of the Southern States the decreasing production is equally marked.

WHEAT.	BUSHELS.	
	1840	1850
Tennessee	4 569,692	1,619 886
Kentucky	4,808,153	2.142,822
Georgia	4,801,830	1,088,584
Alabama	888,052	294,044
	12,012,726	5,144,796

These facts, after all proper allowances for errors and a short crop, establish, conclusively, that in all parts of our country important elements in the soil have been exhausted; and its fertility, in spite of all improvements, is steadily sinking. The number of acres of land in use in the State of New York, in 1825, was 7,160,867; in 1855 the number had increased to 26,758,182 acres; but the number of sheep had decreased so that there were nearly three hundred thousand less than there was thirty years ago; and within a period of five years the decrease has been nearly 50 per cent., while the decrease in the number of horses, cows,

and swine, is above 15 per cent. In 1845 the product of wheat was 13,391,779 bushels. It has steadily declined since, until the product of the past year did not exceed 6,000,000 bushels. The average yield of corn per acre in 1844 was 24.75 bushels; but in 1854 it was only 21.02 bushels.

The planting lands of Southern States have also greatly deteriorated, and some new fertilizer, beyond rotation of crops, is anxiously sought. The average crop of wheat in Virginia, Tennessee and North Carolina for 1850, was only seven bushels per acre. In Alabama and Georgia but five bushels per acre; and even the largest of any State of the Union, that of Massachusetts, was but sixteen bushels per acre; and this, with the leanest soil, proves her agricultural science far in advance of her sister States. While the crop of cotton in the new lands of Texas and Arkansas was seven hundred to seven hundred and fifty pounds per acre, it was but three hundred and twenty pounds per acre in the older cultivated fields of South Carolina.

In a Southern journal I find the following statement:

"An Alabama planter says that cotton has destroyed more than earthquakes or volcanic eruptions. Witness the red hills of Georgia and South Carolina, which have produced cotton till the last dying gasp of the soil forbade any further attempt at cultivation; and the land, turned out to nature, reminds the traveler, as he views the dilapidated condition of the country, of the ruins of ancient Greece."

In Virginia, the crop of tobacco in 1850 was less than that of 1840, by over eighteen million pounds. No crop has proved more destructive to the fertility of the soil than the tobacco crop, and this staple commodity, unless a cheap and effective remedy can be found, must be either banished or it will banish the cultivators. In this State, where tobacco, corn and wheat have been continued for a century, many districts are no longer cultivated. Liebig says that "from every acre of this land, there were removed in the space of one hundred years, twelve hundred pounds of alkalies, in leaves, grain and straw." In a letter of General Washington, dated Aug. 6, 1786, to a friend (Arthur Young) in England, he writes:

"The system of agriculture, if the epithet system can be applied to it, which is in use in this part of the United States, is as unproductive to the practitioners as it is ruinous to the landholders."

Writing to the same person, at a subsequent date, (Dec. 5, 1791,) he says:

"The English farmer must entertain a contemptible opinion of our husbandry, or a horrid idea of our land, when he is to be informed that no more than eight or ten bushels of wheat is the yield of an acre."

Since these words have been written, little has been done to elevate the character of Virginia farming, and Mount Vernon itself, losing the eye of its master, has lapsed into the general degeneracy. While the yield of wheat has increased in England to thirty bushels per acre, it has sunk to seven in Virginia. The opinion of the "English farmer" may be imagined.

In an address of the late Hon. A. Stevenson, in 1850, to the Agricultural Society of Albermarle, in Virginia, he said:

"It can hardly be necessary to attempt to impress upon you the depressed and wretched condition of the farming interests throughout the State at large, with the exception of a few portions of it, which constitute honorable and praiseworthy exceptions."

Even in Ohio the wheat crop is already less remunerative than formerly, and fields long cultivated are given up to pasturage. In Indiana, Kentucky and Illinois, where so large an amount of grain is sold and carried off, instead of being fed out to stock, they are selling their lands by the bushel in the shape of wheat and corn, and that for a price utterly ruinous.—Commerce, founded upon such agricultural economy as this, must come to an end, although the folly will continue to be avenged on posterity even to the third and fourth generation.

In the agricultural survey of Mississippi, recently published, Mr. Harper, speaking of the system pursued in the State, says:

"This agriculture has hitherto been a very exhausting one. Mississippi is a new State; it dates its existence only from the year 1818; and notwithstanding all its fertility, a large part of the land is already exhausted; the State is full of old deserted fields."

A recent address issued by the agricultural convention of South Carolina, declares:

"Our stock of hogs, horses, mules and cattle are diminishing in size and decreasing in number, and our purses are being strained for the last cent to supply their places from the Northwestern States."

In the late message of the Governor of Georgia, he eloquently descants upon the "educational wants" of his State, and among many other facts, he notices "the exhaustion of the soil under a system of agriculture that glories in excluding the application of scientific principles."

My time will not permit a greater accumulation of evidence on this point, although I have a cloud of witnesses in reserve, nor is pointing out the nakedness of the land an agreeable duty. The leading fact, however, of a wide-spread deterioration of the soil, stands out too boldly to be denied. The great irreversible law of American agriculture appears in the constant and increasing diminution of agricultural products, without any advance in prices. It follows, just in proportion, that capital is disappearing, and that labor receives a diminishing reward. Our country is growing debilitated, and we propagate the consumptive disease with all the energy of private enterprise and public patronage.

There is little doubt but that three-fourths of the arable land of our whole country is more or less subjected to this process of exhaustion. It has been estimated by Dr. Lee, of Georgia, that the annual income of the soil of not less than one hundred million of acres of land in the United States is diminishing at the rate of ten cents an acre. This would amount to $10,000,000, and involve the loss of a capital of $166,666,666 annually. A sum greater than all our national and State taxation!

Men waste hundreds of acres of land on the theory that it is inexhaustible, whose entire wealth might not purchase the raw material—the magnesia, lime, soda, potash, phosphorus, sulphur, carbon, nitrogen, &c., necessary to make a single acre possessing primitive fertility. Thus the accumulated store of ages passes away in a single generation.

And this waste of soil is not the only thing wasted. For want of the knowledge and skill which the institutions aimed at can alone impart, Colonel Wilder, a gentleman of well earned fame, estimates the annual loss of the single State of Massachusetts, in the one product of her cereal grains, at $2,000,000. Another gentleman, in the same State, of great experience in the line of stock, dairy, &c., reports the loss from the same ignorance and unskillfulness in these interests, at $15,000,000 for that State alone. The loss of New York, upon her four hundred and forty-seven thousand and fourteen horses, (and Ohio, by the census of 1850, had more) through the universal incompetency in the veterinary art, has been reckoned at no less than $2,000,000.—*DeBow's Review.*

Pipes for Water Rams, &c.

In a former number we gave some cuts and a description of the "Improved Hydraulic Ram." To enable a person to make a more accurate estimate of the expense in putting them in, we annex a table of prices and sizes of wrought iron and lead pipes. The wrought iron pipes are used only for the supply pipe and are fitted with screw couplings.

WROUGHT IRON GAS PIPE.

1	inch bore,	17½c	per foot.
1¼	"	26	"
1½	"	32	"
2	"	50	"
2½	"	95	"
3	"	$1 35	"

Including couplings.

LEAD PIPE.

¾	inch medium,	1 lb.	4 oz.	1½	inch strong	6 lbs.	8 oz.
	" strong,	1 "	8 "		" ex strong,	8 "	
¾	" medium,	2 "	2 "	1¾	" medium,	5 "	12 "
	" strong,	2 "	7 "		" strong	6 "	10 "
¾	" medium,	2 "	9 "	2	" medium,	6 "	7 "
	" strong.	3 "	2 "		" strong	7 "	7 "
1	" medium,	3 "	6 "		" ex strong	9 "	
	" strong,	3 "	15 "	2½	" medium,	11 "	
1¼	" medium,	3 "	10 "		" strong	13 "	8 "
	" strong,	3 "	14 "		" ex strong	16 "	12 "
1½	" medium,	5 "	8 "				

Costing at the present time from 9 to 10 cents at retail in Chicago. This table will be found useful to remember for other purposes.—*Emery's Journal.*

The Wonder of the Age.

The most wonderful phenomenon of the age, is the age itself. It is not only the new and latest generation, but new and at times almost incomprehensible to its generation. So shifting, so varied, so progressive and startlingly quick with vital thoughts and actions, that its thinkers and actors continually confound one another. There was a time, even within the memory of those who have not grown gray, when a new idea, invention, or enterprise lived its day, enjoyed a reputation, and was not heedlessly jogged to oblivion. That time is essentially gone by. The day of plodding, and resting upon what one has accomplished is over. There is no repose upon laurels now; the world has abused all fixed notions and rules; has changed its pace from a walk to a gallop, and he who would be leader, whether in arts, inventions or arms, must ride faster than his fellows, or be trampled down, lost sight of and forgotten.

Lightning and steam have not only superceded horse power and wind, but with as astonishing a revolution have whipped up and quickened the human brain until the ideas of the age are equally more rapid than those of half a generation ago, as are the means of transmitting them from brain to brain the world over. In the day of wooden plows (not long since) the great danger was thought to be in going too fast and knowing too much—now the difficulty is to go fast enough and to know enough. The fear, so groundless with our good old fathers, that new ideas, new inventions and enterprises were dangerous to the welfare, virtue and peace of society, is completely extinguished. Men have found the essential secret of prosperity and greatness—that all progress is the work of experiment; and the result of a few experiments, in spite of the old stand-still philosophy, has spurred them to experimenting more and everywhere, in all fields and professions. They have thus curbed and saddled steam, tamed lightning, cast by wooden plows, and in a thousand ways advanced and exalted themselves, physically and mentally, as individuals and nations.

The religions, the politics, the society and commerce of the world, are all transformed by this splendid conceit, this lightning-like-go-ahead-ative-ness of the age. Amelioration is written by it all over the surface of the globe. It rides upon revolutions that overthrow all old abominations—thrones, casts, creeds and prejudices—scattering the light of higher prosperity upon all temporal conditions, and higher intelligence into all souls. On, on, it sweeps, stimulating itself by astonishing conceptions and deeds, to dare every height and depth that can reveal a new element for the good or glory of mankind. It outstrips the church in beneficence, philosophy in reflection, and in enterprise almost surpasses itself. The press, the lecture-room, the common school, the tele-

graph, the steamer and the locomotive, all guided and garrisoned by busy brains and ready hands, are the springs and sinews, the vital power of the age. On, on, it sweeps, making its path upon old endeavors, forever seeking for things nobler and better in the untried and new.

Correspondence of the Farmer.

Strictures on the Condemnation of Club Wheat.

MESSRS. EDITORS:—I noticed in the October No. of the *Farmer* an article on the subject of wheat growing, which evinced quite a disposition to condemn a good variety, because it had proved nearly or quite a failure, in many parts, this year. Now as a practical farmer, I could not see that he gave the first good reason for condemning it, (the Club wheat,) only because, like all kinds of grain and animals, it had had its time, and therefore is run out. I should consider his reason for condemning the club wheat, just no reason at all. The farmers of Wisconsin may condemn the club wheat, but it is my opinion that the club wheat condemns the farmer more than they it. I for one think it is high time for the wheat growers and farmers of Wisconsin to turn over a new leaf in their farming. If they do not they will be as badly off as the old Mohawk Dutchman, who had to sell his farm for the means of subsistence. I will now give my opinion as to the cause of the failure of the wheat crop in Wisconsin this year, and my remedy for it, which, in every instance, as far as I can ascertain, as yet, holds good.

The usual way the land is tilled in this country, is, to get over it in the quickest possible time; it matters not how long the land has been tilled, if one year or ten. It is not plowed, but *plowed at*, or rather, as Pat said, they "give it a gentle touch" as they come around and call it plowed. The seed is then drizzled on in all conceivable shapes, and it matters not whether the seed is good, bad or indifferent, or whether it has been sown on the same ground, or on the same kind of soil, one year or ten; and then they go on with a drag, and give it "a lick and a promise," and with all the rest, it is sowed any time from March till May, just as it happens to suit best; and then, in eight cases out of ten, is not harvested till it begins to degenerate. They then condemn the land and the country because they do not get good and large crops. My candid opinion as an experienced farmer is, that the above named evils, namely, bad plowing, spring plowing, poor seed, late sowing, and unseasonable harvesting, are the grand causes of the sad failure in the wheat and other crops.

My remedy for these evils is, that no farmer should till so much land but that it can be plowed in the fall. If the land is new it does not require to be plowed very deep, but deeper and deeper every year as it grows older, till it is as deep as it can be plowed with a common plow, which is from twelve to fourteen inches, and as much deeper as possible. The same seed should not be sown on the same ground more than two years, nor on the same kind of soil more than three or four years. I change seed from prairie to openings every three years. I then wash it in strong brine, and put in plenty of lime, and as soon as the ground is thawed deep enough, and dry enough to admit of harrowing, the wheat should be sown and dragged in in the best possible style. Then it will add twenty-five per cent. to the crop and to the facility for gathering to roll it; and when harvest time comes, it should be cut just as soon as the berry is passing from the milky to the doughy stage. I know of hundreds of acres of wheat, lost this year, for no other reason, than that it was not cut in time. In this part of the country, I cannot see that the Fife wheat has much to boast over the Club; for I know of numerous pieces of both kinds that was not harvested at all. I have seen both kinds sown at the same time, side by side, the Club out-yielding, both in quantity and quality. I had a piece which was sown March 24th, and some of it harvested July 17th, as nice wheat as you can find. The remainder of it was cut July 22d, and yielded from 22 to 25 bushels per acre.

I would not condemn the introduction of new kinds of grain, for I believe it to be the life of our country; neither would I advise farmers to dismiss the Club as yet. Nor do I pretend to say that the rust and bugs have not injured the wheat crop this year, more or less. But where the bugs did not come in till the berry was pretty well formed, neither they nor the rust hurt the wheat, if it was cut when it ought to have been.

Some of my wheat was very rusty, but it is all No. 1. Now if farmers do not believe my theory, of cutting wheat green, to be true, let them try a few sheaves next year for their satisfaction. Cut it when the berry will mash up in your hand in shelling out. Yours truly,

A PRACTICAL FARMER.

LOWVILLE, Wis.

Hints for December.

The harvest is past, the autumn is ended, and wintry winds with gently sifting snows are ushering in the reign of winter, whose pleasures and duties, though different, are neither less in the enjoyments they bring, nor the obligations they impose. The blazing fire, with friends all gathered to the feast of food and flow of soul, suggests a thousand delights within, while the elemental storms without force upon the farmer's mind the programme of labors to be performed. The pleasures last, the duties first.

HAS THE CORN ALL BEEN HUSKED?

If not, let no time be lost. It is poor economy to let the fair days of this last month in the year pass without gathering every ear into the crib. The best way to insure a failure of the next year's seed is to let the crop of this year lie out exposed to the weather.

SHELTER FOR CATTLE

Is next in importance, and will have the attention of every humane and economical farmer. *The furnishing of shelter is the saving of feed.* Moreover, the brutes are at your mercy, and have a just claim upon your care. Do all in your power to make them comfortable or else not hope for large profits or undisturbed consciences.

FEED FOR STOCK.

Feed liberally but not wastefully, and remember that *variety* is just as essential to their health as to your own. If you were confined strictly to brown bread or johnny-cake the season through, you would most likely come to loathe it before spring; think of this when you restrict the horses to hay and the horned cattle to corn-stalks for six months of the year. An occasional alternation of hay, corn-fodder, carrots, turnips, beets, and cut straw with corn meal, shorts, or wheat bran, will reward you ten fold for the extra trouble. Try it.

Watering and *salting*, too, should not be neglected. We have known farmers who watered their horses, during winter, once a day—if they did not forget it—their cattle twice a week, and their sheep not at all!—who withheld salt from them so long that when once supplied they ate so much as to produce a serious derangement of health,—so have you.—If possible, all stock should have free access to both; if not, they should be helped as often as desired, and with as much regularity as you would take your own meals.

If you are not quite sure that your supply of feed will suffice for the longest winter, and there is not an *absolute certainty* of your being able to purchase of others, by all means sell off a portion—taking good care to *reserve the best* for wintering. It is an unpardonable sin to keep a lot of starving creatures from autumn to spring, and it is certainly stupid to sacrifice the best of the herd or flock upon the altar of the butcher.

GATHER UP THE TOOLS—

The reapers, the plows and harrows, the cultivators &c., now lying out in the weather, and put them under some sort of cover; it is a shame to let them rot down in two or three years, when they might just as well last a dozen. Last winter we saw numbers of valuable implements and machines lying out in the snow, when empty barns and sheds were within twenty rods; and we now give fair warning of an awful scolding if we find a like state of things in our travels this winter!

THE WOODSHED—

Of course you have one of some sort by this time—will afford a good field of labor during the stormy days, and should be well filled with a nicely prepared stock for next summer's use.

INTELECTUAL LABORS.

Winter is the special time for these. Let the farmer and the farmer's family devote themselves earnestly to the improvement of their minds. The bustling business of the spring and summer season affords but little opportunity for intellectual exercises either public or private—for lecture-going or home reading.—Therefore we would urge upon the attention of all whom it may concern, not only the husbanding of every leisure moment that may be thus appropriated, but also the making of a vigorous effort to procure the requisite facilities.

Agricultural periodicals and books will be secured and read, of course; but this is not all that ought to be done—the farmer should be a man of general intelligence. He should have a general acquaintance with the sciences, and with literature. At all events he should have a knowledge of the conditions of his own healthful being and that of his country. Let him resolve to be an *active force* in society, not a mere plodding drudge, the passive *tool* of more intelligent but designing men. Let him make an effort for the establishment of circulating libraries, through which by small means every member of the association may

have access to the most valuable works of the day. Let him also establish town clubs and debating societies for the general improvement of the community. The district school—that noblest of all instrumentalities for the elevation of the masses to a higher plane of intellectual being—let him cherish it as the best boon of society, the palladium of our liberties.

SOCIAL PLEASURES

Must not be ignored. The farmer is too much inclined to isolation. The chimney corner is an admirable place as a general rule, but the farmer should not so much exclude his brethren as is common. Occasional social gatherings, when properly conducted, have the effect not only to improve the stock of individual knowledge, but also to enlarge the views and liberalize the sentiments of those who enjoy them. This is really a subject of great importance and might be enlarged upon with profit. But *hints* are all that we proposed, and so we leave it just here, trusting that the winter of '58 and '59 may be prolific of large and blessed social results. H.

St. Croix County Agricultural Society.

HUDSON, Oct. 27, 1858.

St. Croix County has organized an independent "Agricultural Society," and elected officers for the ensuing year—men who are interested in Agriculture, and who are interested in the welfare of the County. The following is the report of the proceedings of an adjourned meeting for the formation of the Society:

Pursuant to adjournment, several citizens of St. Croix County assembled at the City Hotel, in this city, on Monday, the 25th Oct.

C. L. Hall, from the committee appointed to present a plan of organization, reported a Constitution for the "St. Croix Agricultural Society," which, after discussion and amendment, was adopted.

The following officers were then elected for the year ending Dec. 31st, 1859:

President—Otis Hoyt, Hudson.

Vice Presidents—Warren Wicks, Star Prairie; John Thayer, Hammond; Luke Pomeroy, Greenwood.

Secretary—G. B. Salmon, Hudson.

Treasurer—Alfred Goss, Hudson.

Executive Committee—Sterling Jones, Roswell Holmes, and James Keefe.

The meeting then adjourned to the first Saturday in December, to hear the further report of the Committee on organization, and to transact such other business as may be deemed proper.

JAMES WALSTOW, Chairman.

C. L. HALL, Secretary.

Notes of Travel East and South—National Horse Show—Maryland State Fair—Mechanics' Institute—U. S. Fair, &c., &c.

We have long known that recreation and rest were great institutions, albeit, for the last five years we have been rather parsimonious patrons of both. All work and no play is the Anglo-American motto,—at least it is the rule of life in this country, and we have unconsciously joined in the general rush. Nevertheless be it recorded, that on the 18th of Oct., 1858, fearing lest the success of our Wisconsin Fairs should unduly inflate our State pride, we resolved to compare them with those of other and older States; and so "taking the rail," *via* Chicago, Fort Wayne and Pittsburg, found ourself on the 20th in the city of Brotherly Love; where we crowded rather more sight-seeing into the space of one day than is usually thought possible. Visited the rooms of the Philadelphia Agricultural Society—organized in 1785, and the oldest in America—the Franklin Library, the Mercantile Library, the Historical Rooms, the Academy of Sciences, the University of Pennsylvania, Jefferson Medical College, the House of Refuge, the Prison, Girard College, several Public Schools, the U. S. Mint, the famous Water Works, Franklin Institute Exhibition, and "National" Horse Show.

Of the last two a word; the other institutions and objects of interest will receive special attention at some future time—perhaps.

THE HORSE SHOW

Just about met our expectations. Springfield, Mass., had the start, and of course, came out ahead. One national exhibition annually may possibly do very well, but the attempt on the part of a half-dozen cities and towns to each succeed must inevitably result in *one horse* demonstrations. Still the Show at Philadelphia was rather creditable, all things considered. The Grounds are handsomely located, in West Philadelphia, between the R. R. and suspension bridges, and well fitted up for the purpose. On the day of our visit, the number of persons in attendance was small. The best trotting time, 2 minutes 37 seconds, by Mountain Boy. We understand that several very fast horses were held in reserve for the succeeding days, but were unable to remain.

THE MECHANICS' EXHIBITION

Of the Franklin Institute, at Armory Hall, was well worthy a visit. The building in which the display was made, was very large,

—some 150 feet square,—and crowded to overflowing with all sorts of manufactured articles, implements and machinery. Anything, and almost everything in the mechanical line, from a steam engine down to a clothes pin was there on exhibition. The Institute, as we were informed by the efficient Actuary, Wm. Hamilton, Esq., has a valuable library of seven or eight thousand volumes, embracing all the works on science which bear upon the Mechanic Arts, and every winter, through special teaching and popular lectures, furnishes instruction, in the mechanic and fine arts, for the mere trifle of one or two dollars, to all the youth in the city who choose to avail themselves of the opportunity thus generously afforded. Already the enlightening and elevating influence of the Institute is clearly perceptible in the improved condition of the artizans of Philadelphia, and we hope it will not be long ere similar institutions will be established in every city in our country.

Our next point was Baltimore, where we arrived late in the afternoon of the 21st. The first evening was spent at the

EXHIBITION OF THE MARYLAND INSTITUTE—

the plan of whose organization is quite identical with that of the Franklin Institute already referred to.

Of the display of machinery, manufactured articles and works of fine art, we have only space to say, it was the finest we ever saw.—The Hall, three hundred feet long and thirty feet high, with a handsome gallery all round and two-storied rooms at the respective ends for machinery and works of art, is itself an object of admiration. But the exhibition—of novel steam engines, reapers, plows, and cultivators, sewing machines and knitting machines, all mingling their ceaseless clank with the ring of happy voices; of automaton steam bakeries, capable of consuming four hundred barrels of flour per diem; of cabinet ware, silver ware, and every other kind of ware; of beautiful fabrics without number, and of every possible character; of beautiful statuary and splendid original paintings, many of them executed by the pupils of the Institute; and, better than all, bevies of those brilliant ladies, whose beauty has made Baltimore more famous than have even its monuments! the sparkle of their jewels dazzling the eye, and the music of their voices charming the soul;—we say, the array of all these so far exceeded our expectations, and so left its gorgeous imprint upon the memory, that our night-dreams ever since have been of the storied splendors of the Orient!

THE MARYLAND STATE FAIR

had already been in progress two days and was winding to a close. Handsomly located just outside the corporation, on Charles street, and well provided with all the paraphanalia of well-fitted grounds, the impression first made was decidedly favorable, nor did a closer inspection materially change our estimate.—The show of horses was excellent, and that of cattle the best that we have seen at any State Fair this season. Devons without number and of surpassing beauty; splendid Durhams; two or three fine herds of Ayreshires, Alderneys, and Herefords, together with one family of Holsteins (imported,) presented an array of which any State in the Union might be proud. The sheep were also fine, though confined to two breeds—Cotswalds and South Downs.—Swine principally Chesters and Chinas. Among the curiosities in the Stock Department was a pen of Angola or Cashmere Goats, beautiful for their long, white, silky wool, gently waved.

The mechanical department was well filled. Plows, cultivators, harrows, planters, straw-cutters—among which friend Griffin's, of Wisconsin, was manifestly superior to every other and triumphantly bore off the palm—portable steam engines, hay-stackers and bee-hives covered the ground. Products of the dairy and household were not numerous, and fruits and flowers we were unable to find.

The Society, until the last year, is said to have been in bad hands, but cannot fail under the efficient management of such men as Messrs. Merryman, Worthington, Rogers and Sands, to rise to a higher position of prosperity and usefulness.

In the afternoon, in company with Hon. C. L. Flint, Sec. Mass. Board of Ag., and Maj. Gen. Sutton and son, of Salem, Mass.—gentlemen whom we here had the pleasure of meeting for the first time, and of initiating that acquaintance which has ripened into the warmest regard and most genuine friendship—we were kindly shown the monuments and other *institutions* of interest; among which we have pleasure in making honorable mention of the *American Farmer*, the oldest and at the same time one of the *livest*, most reliable and most valuable farming magazines published in America. The editors and proprietors, Messrs.

Worthington & Rogers, are both men admirably fitted for the leading position they occupy, and are doing a noble work for the Agriculture of Maryland. We assure them of a warm place in our heart of hearts, and guarantee a cordial welcome, should they ever find their way to "Woody Wisconsin."

Next we stopped at Washington—

"THE CITY OF MAGNIFICENT DISTANCES"—

where we spent the succeeding Saturday and Sabbath in company with the Mass. friends above-mentioned. Of course we visited the Patent Office, the Capitol, and the Smithsonian Institute.

THE PATENT OFFICE

is really one of the greatest institutions of our country, and is rapidly elevating the Department of the Interior to the highest rank among the several branches of the General Government. The Agricultural Bureau is doing an important work for the progress of our noble art, and its influence is already being felt throughout the country. Hon. D. J. Brown, head of the Bureau, is a man of large attainments, genuine enthusiasm and irrepressible energy, and, despite the howling of malcontents, is going forward in the discharge of his duties to the satisfaction of a large majority of the reasonable agriculturists of the U. S. When he became *charge d' affairs*, the office was confined to a small, dark, unfinished room in the basement, and he was obliged to conduct its business without a single clerk, and with an appropriation of less than $5,000 per annum. Under his administration it has so far enlarged its scope as to require a large number of assistants, and its recognized importance has been so far enhanced that an annual appropriation is now made of sixty to seventy-five thousand dollars for the publication of reports, the importation of and experiments with seeds and animals likely to add to the wealth of the country. The Chinese Sugar Cane, the Tea Plant, the Cork-tree, European Turnips, Kohl-rabis, &c., are some of these importations, and are likely to prove invaluable acquisitions to the agriculture of America. The next Annual Report promises to be one of the best published, and will speak for itself in due time. We have been kindly furnished with advance sheets of the leading article—"The Progress of Agriculture," from which we shall make some interesting extracts in our next No.

THE SMITHSONIAN INSTITUTE,

"Established for the promotion of science and the diffusion of knowledge among men," is steadily growing in popularity, and will ere long be the pride of our country. Its agents are at work in every part of the world and in every department of science, gathering up what is known and exploring for the undiscovered, and the halls of the quaint, imposing edifice at Washington, already contain rich fruits of this immense aggregate of scientific labor. Nearly all the languages of the babling earth have their printed or written representatives in its Library, and the forests, lakes and rivers, swamps and prairies of every clime, have generously contributed of their beasts, birds, fishes, reptiles, and insects. Indeed the extent of collections in Natural History is truly surprising. Of reptiles alone we were shown full jars in sufficient number to extend more than a mile if arranged close together in a right line!

We found Prof. Henry, the learned and indefatigable Secretary of the Institute, hard at work on his Report—which will appear in a short time—and his accomplished assistant, Prof. Baird, in the midst of snakes, lizzards, and tadpoles, classifying and arranging them in preservable form. For both we crave a lengthened life of usefulness, and for the Institute a full realization of the most sanguine hopes of its noble and beneficent founder.

THE NEW CAPITOL

had grown so much since our last previous visit, that we could hardly credit our eyes. Seven hundred feet long and built of white marble, with its slowly progressing dome, climbing heavenward—the whole crowning an eminence which overlooks the city, the country and the Noble River, it reminds one, at a distance, of the "New Jerusalem" as sometimes pictured in the clouds! The new halls for the Senate and House, though oft abused, have never yet received their just deserts. Nor shall we attempt to do them full justice. But if there is any Dutch saloon on this or the old continent that can equal them in tawdry gingerbread finish, we would have Gov. Meigs, captain general of this department of the work, confined within its walls during the period of his natural life. Thousands of dollars of the people's money have been worse than squandered in this unpardonable manner, and still the work goes on. The frescoe work of the Agricultural committee room (not larger than the *Farmer* office,) alone cost six thousand dollars! all that a "fitting place" may be provided for the narrow

demagogues, who are to report all measures inexpedient and unconstitutional which look to the improvement of our national agriculture and the educational advantage of American farmers. But enough. The Capitol will answer very well if the people will only learn to send to its halls none but honest, wise, and independent representatives.

RICHMOND, CAPITAL OF THE OLD DOMINION is among the handsomest cities of the Union. Built upon the northern bank of the James river—the land beautifully undulating—it commands a wide range of delightful scenery and embraces several objects of considerable interest; eg, the famous bronze statue of Washington, by Crawford, the great flouring mills of the world, and the most noted slave markets of the northern South.

The first of these do not so properly come within the purview of our report, but the mills assuredly do; moreover they are probably less familiar to a majority of our readers. We have styled them "the flouring mills of the *world*"—and so they will be acknowledged when it is learned that one of them, (and there are several almost equally large,) is, in its several parts some seven hundred feet long by one hundred to one hundred and fifty feet wide, and nine to twelve stories high, with—when all complete—forty-two run of the largest size of stone, and a daily yield of four thousand barrels of flour! The power is water and is surpassed by none in America except it be that of Niagara. The flour is sold in South America at a higher price than any other brand and a nett profit of five to six dollars per barrel!

THE U. S. FAIR

hardly equalled our expectations, but is thought by the chief managers to have been a success. The Grounds were conveniently located and well-fitted. The show of horses and cattle was very good; of other stock, fair; of machinery, good; of dairy and household products, inferior; of works of art and of domestic manufacture respectable for a young county society! Fruits and flowers were wofully deficient—so few in number, indeed, and so inferior in quality, that but for the extraordinary display by Mr. Ritchie, of Superior City, referred to in another place, they would have been *invisible to the naked eye.*

The most notable features of the exhibition were the cavalcades, the taming of horses, and the several addresses.

THE ANNUAL ORATION BY HON. CALEB CUSHING was certainly the most absurd that we ever listened to at an Agricultural Fair—or any where else. All about everything else in the wide universe—especially the sublime prerogative of the South to manage its own peculiar institution without interference, and the moral obligation resting upon the General Government to spread the wing of its tender mercies over Cuba and Central America!—but not one syllable, no, not even the shadow of an allusion to the subject of Agriculture. Even the fire-eaters were disgusted.

The valedictory by Hon. Mr. Rives, of Va., was a noble production—appropriate, concise, comprehensive, eloquent and statesman-like—appreciative of the paramount importance of Agriculture as the American profession and stimulative of increased efforts for its improvement.

The horse-taming, so highly interesting and entirely satisfactory as practiced by Mr. Rarey, was made doubly so, on this occasion, by an attempted competition on the part of a Mr. Offutt, who claims to be the "originator" of the system. The demonstration proved however, that he knew but little of Mr. R.'s method, inasmuch as he made no effort to *educate* the horse but rather to charm him; which he succeeded in doing, to some extent, through means unknown—probably by overpowering the senses, instead of instructing the intellect after the philosophical method of Mr. Rarey.

The closing exercise of the Fair was a

GRAND AGRICULTURAL BANQUET,

on the evening of Friday, at which addresses were made by Messrs. Tighlman, President U. S. Ag. Soc., Lyons, Pres. Va. Central Ag. Soc., Cushing, Johnson, Sec. N. Y. Ag. Soc., Lord Napier, DeBow of New Orleans, and others.

All things considered, the Fair would have been quite creditable had it been the exhibition of the Va. Central Society, merely, but was hardly equal, in any other respect, than in the show of horses, cattle and *great men*, to our own Wisconsin State Fair—to which we have concluded, therefore, after mature deliberation, to award the FIRST PREMIUM!

A National Agricultural Show, if held once in four or five years and properly managed, might possible succeed. But, while we would by no means say anything which would reflect upon the accomplished and efficient President, Gen. Tighlman, nor upon those active men-

bers of the several committees who helped him to save the Society from total failure and loss, we feel bound to say that, so long as *annual* fairs are attempted, and the interests of the Society and its more immediate official duties are entrusted to men who know nothing of what is requisite to success, and whose efficiency is less than would be that of nine-tenths of our western market women—so long as the really intelligent, energetic, working agricultural men are pushed aside for dullard quacks, whose chief practical relation to the agriculture of our country lies in the fact that they are large consumers of beef and beer,—*so* long it can only prove an abortion at best.

Let the U. S. Agricultural Society confine itself to a careful supervision of the general interests of agriculture, publish a valuable Quarterly Journal, corresponding to the Journal of the Royal Ag. Society of England, hold annual conventions for the discussion of important questions involving the interests of the profession, and, perhaps, once in several years, hold a grand National Exhibition, and it will become largely promotive of the development of our material resources and of our progress in the attainment of that high position to which we are by nature entitled—first among the nations of the earth.

From Richmond, we returned by way of Washington, that we might reverently spend the Sabbath at the tomb of the Father of his Country—an account of which visit, as published in the *State Journal*, we have promised Mrs. H. for the page temporarily devoted by her to the aid of the Ladies' Association.

On Monday we paused a few hours at the beautiful Capital of the old Keystone State—where we were politely entertained by the Hon. Hiester, Secretary of State—and spent the succeeding Tuesday, Wednesday and Thursday at the dear old home in Ohio, where we were born, and where still live the father and brother of our love, and cluster the associations of happy childhood,—aye, and where sleeps the dust of our blessed mother and our first and only born, for three long years, now, embalmed in the hallowed memories of the soul. And this Monday morning, Nov. 8th, finds us again in our *sanctum*, reenforced and invigorated for another winter's campaign—more strongly than ever attached to the home of our adoption, and more thoroughly satisfied that Wisconsin is, after all, the most beautiful and most prosperous of the THIRTY-THREE STATES. H.

STOCK REGISTER.

Correspondence of the Farmer.

"Blood and Black Hawk Horses Again."

OFFICE OF THE VERMONT STOCK JOURNAL,
WINDSOR, Vt., Oct. 22d, 1858.

MESSRS. EDITORS:—I have this day noticed in your paper of June last, (p. 213) an article entitled "Blood and Black Hawk Horses Again." The temper and style in which the article is written are such, that I should take no notice of the personal allusions it contains, were it not that the writer makes two statements which are utterly and entirely false, and which, persons who have purchased my book, may think it proper I should reply to.

The statements to which I refer are, that I wrote my History of Morgan Horses previous to my visiting the West, and that I took nine stallions West for sale. Both of these statements are, as before said, utterly and entirely false.

What could induce the *individual* (I will not so misuse the word gentleman as to apply it to him) who penned that article, to make assertions so devoid of every shadow of truth, I am at a loss to imagine.

Yours, &c., D. C. LINSLEY.

Rarey on "Blinkers."

Mr. Rarey sends to the London *Times* his opinion of the use of "blinkers" on horses, as follows:

"All my experience with and observation of horses proves clearly to me that blinkers should not be used, and that the sight of the horse, for many reasons, should not be interfered with in any way. Horses are only fearful of objects which they do not understand or are not familiar with, and the eye is one of the principal mediums by which this understanding and this familiarity are brought about.

The horse, on account of his very amiable nature, can be made in the course of time to bear almost anything in any shape, but there is a quicker process of reaching his intelligence than that of wearing it into him through the skin and bones: and he, however wild or nervous, can be taught in a very short time to understand and not to fear any object, however frightful in appearance. Horses can be broken in less time and better without blinkers; but horses that have always worn them will notice the sudden change, and must be treated carefully the first drive. After that they will drive better without the blinkers than with.

I have proved by my own experiments that a horse broken without blinkers can be driven past any omnibus, cab or carriage, on a paral-

lel line, as close as it is possible for him to go, without ever wavering or showing any disposition to dodge. I have not, in the last eight or ten years, constantly handling horses both wild and nervous, ever put blinkers on any of them, and in no case have I ever had one that was afraid of the carriage he drew behind him or of those he passed in the streets.

The horse's eye is the life and beauty of the animal as well as the index of all his emotions. It tells the driver, in the most impressive characters, what the horse's feelings are. By it he can tell the first approach of fear in time to meet any difficulty; he can tell if he is happy or sad, hungry or weary. The horse, too, when permitted to see, uses his eyes with great judgment. He sees better than we do. He can measure distance with his eye better than we can, and, if allowed free use of them, would often save himself by the quickness of his sight from collisions when the driver would fail to do so by a timely pull of the reins. It would also save many accidents to pedestrians in the streets, as no horse will run on to any person that he can see."

National Exhibition of Horses at Springfield, Mass.

The third National Exhibition of Horses, at Springfield, Mass., closed on Saturday, the 18th inst., and proved a great success.

The show of horses was the largest and best we have ever seen. There were 361 horses entered for premiums. Of these, 112 were raised in Vermont; 86 in Massachusetts; 56 in New York; 17 in Maine; 15 in Connecticut: 13 in New Hampshire; 13 in Canada; 4 in Kentucky; 1 in Maryland; 1 in Ohio; 1 in New Jersey; 1 in Michigan; 1 in Pennsylvania; and 4 imported. It is not stated where the remaining 36 were bred.

159 were described as Morgan; 53 as Messenger; 30 as Morgan and Messenger; 5 as thorough-bred; 20 as Morgan and thorough-bred; 1 as Morgan and Arabian; and one Arabian.

The crowd of visitors was not only great, but it was the most orderly and civil of any large collection of people we have ever seen. Much of this is due to the completeness of the police arrangements, but much more to the good character of the visitors. It is a rare and pleasant sight to see so large a crowd, composed almost entirely of persons of sterling character and courteous manners.

We have not even room to give even a passing notice of the various celebrated horses there,—and to notice our special favorites might seem unjust, especially as our own opinion did not always coincide with that of the awarding committees. Vermont received one State prize banner, and New York the other. Considering that the annual Fair of the Vermont State Agricultural Society was held at the same time, at Burlington, this is certainly very high evidence of the character of our horses, and of the spirit and enterprise of our breeders.

Some gentlemen from New York expressed to us their surprise at the number of horses on exhibition from Vermont, and gave us informal notice that if another similar fair be held at Springfield next year, New York was coming in for the banner sure. We accepted service of the notice in behalf of Vermont, and assured the gentlemen that they would find the Green Mountain Boys *there.*—*Vermont Stock Journal.*

CATTLE IN HUNGARY.—The Prince de Joinville, on the occasion of his visit to the estate of the Duke of Coburg, at Puzta of Vacs, in Hungary, had an opportunity of convincing himself of the immense scale on which the breeding of cattle is carried on in that country. The Duke had assembled before his visitor all the cattle on his estate. They found a procession of 300 oxen yoked to cars, and ornamented with ribbons and flowers, 10,000 sheep, and all the horses of the breeding stud. The grooms and the shepherds were all dressed in their national costume, which gave to the procession, (which took three hours in marching past) a most picturesque appearance.—Many other land-owners in Hungary, however, could marshal a procession which would reduce the foregoing to insignificance.—*London Times.*

THE CAMELS.—Forty-nine of the camels belonging to the United States are now at Camp Verde, sixty miles from San Antonio. Only one of those imported has died, while ten have been added by birth. These young American born camels thrive well, and promise to grow up equal in all respects to those imported. Notwithstanding the successful trial lately made by Captain Beale, in his explorations across the continent, there are some officers of the army who doubt whether anything is to be gained by the use of camels. This, however, might be expected. There are always persons opposed to all sorts of changes and innovations. We hope, however, that experiments in their use will not long be confined to the army officers, but that as the number increase they will pass into the hands of private owners.—*Ohio Farmer.*

CARROTS FOR HORSES.—These become under many circumstances a medicine, as well as an article of diet. Even for the latter purpose they are not sufficientlo known; for they fatten without heating, but on the contrary, they keep the body cool by keeping it open, and greatly promote a healthy coat. As a medicine they often remove cough, cure incipient grease, are good in farcy, and are beneficial in surfeits or mange; but in these latter cases, they must be wholly substituted for corn. —*Blaine.*

GARLICK'S IMPROVED PORTABLE FIELD FENCE.

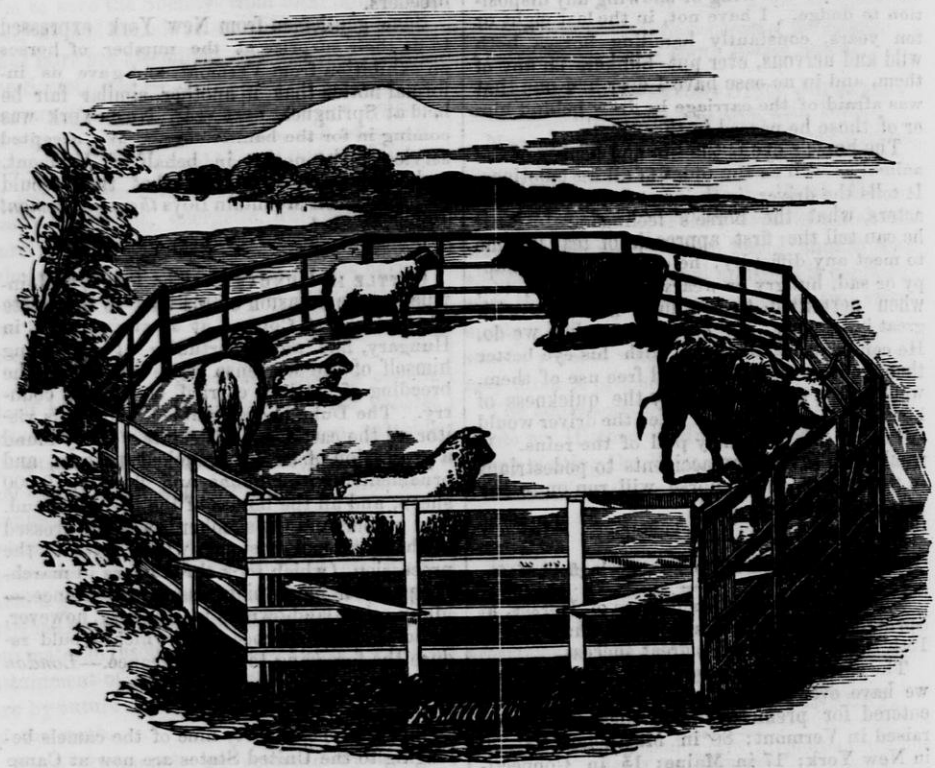


Fig. 1.—As set up for Small Yard or Stack Enclosure.

The accompanying engravings represent this new and popular improvement on all the many ingenious contrivances for portable fences, and seems so compact, cheap and perfect in all its parts, that we confess we see little or no chance for any further improvement.

A good portable fence, as we have before said, is a highly valuable, nay, an almost indispensible feature on every farm; especially in a country like the West, made up of large and but partially divided fields. How often do our farmers have a field of newly seeded clover or grass, or one on which a deal of grain has been shelled and scattered in harvesting, and into which they wish to turn their cattle, sheep, or pigs, but cannot because of the proximity of adjoining fields of unharvested crops. But with this fence, in a half a day, a couple of hands can enclose any ordinary sized lot in good snug shape for use; and can change to some other lot as readily when the first is sufficiently fed or used. Thus one or two hundred rods of this fence is made to answer the purpose of four or five times as much that is stationary and unmovable.

Then again, for temporary enclosures about stacks or yards, nothing could be handier or better, as is illustrated by cut No. 1. An enclosure of any size can be made with it in a few minutes, and what is still better, it can be opened at any place for a gate-way, by simply taking out the wedge or key that holds it together, and as readily closed again. This capability for enclosing stacks and the like, will prove of great convenience and value in the West, where so much grain and hay is stacked out. In a word, as before said, this fence cannot fail of having great value and convenience about every farm, and of becoming very common in a little time. It took the first premium over all other competitors at the State Fair, and the patentees claim that it has done so invariably whenever and wherever exhibited. We bought of them the small amount they exhibited upon the Fair Ground, together with the right of making and using the

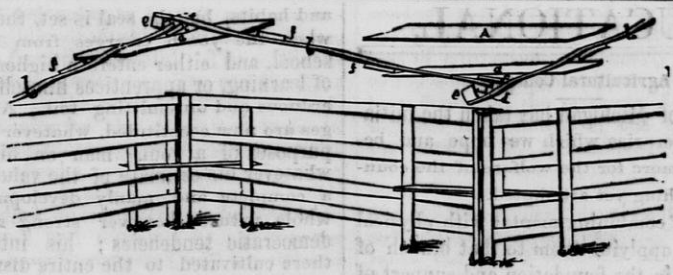


FIG. 2.—AS SET UP FOR LINE OR DIVISION FENCES, WITH VERTICAL SECTION ABOVE.

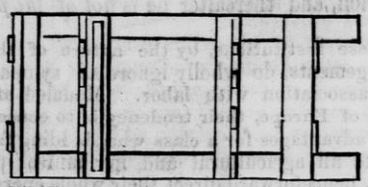


FIG. 3.—REPRESENTATION OF THE FRAME OR PATTERN USED IN MAKING THE FENCE.

fence in Dane County, and intend to have us a string of it during the winter, for next season's use. It is very simple and easily made, and will cost at the present prices of lumber, about six shillings per rod.

Fig. 2 shows a straight sectional view of the fence, both standing up and side ways; the latter illustrating the form of the wedge and the manner in which it locks against the standard.

It might perhaps be well to explain to those who have not seen the fence, that it is made entirely of narrow boards, uprights or posts and all, and stands entirely upon the top of the ground, when set up. In making it, it is first necessary to rig a bench as illustrated by Fig. 3, with pins or stops upon it, against which to place the boards and standards previous to nailing, so as to bring each one in its proper place, after which they are simply nailed together and the ends sawed off the proper length, and the pannel or length is done. With such a bench the panels can be made with great rapidity and accuracy, so that they will all come together just right when set up. We would especially commend this fence to the attention of all who feel the need of additional division fences, as the cheapest and best thing probably in its way.

A specimen of it may for the present be seen set up, between our office and the Dane County store; all who feel an interest in the matter will do well to examine it; also see advertisement of Patentees. P.

Cummings' Patent Horse and Hand Power Hay, Straw and Corn Stalk Cutter.

This excellent machine seems to be sweeping every thing before it in the way of feed cutting, as well as in the way of premiums. Mr. G. B. Griffin, the proprietor of the Patent in the United States, has had it on trial and exhibition at almost every principal Fair the past fall, and has invariably swept every first premium offered. At the U. S. Fair at Richmond, at the Virginia State Fair, at the Virginia and North Carolina Union Fair at Norfolk, at the Maryland, St. Louis, and Wisconsin State Fairs, and numbers of others, it left everything else in the line out of sight, taking as many as three gold and silver medals at each of the principal Fairs.

It runs remarkably easy and cuts remarkably fast, doing a ton of corn stalks easily in an hour; and no matter if the corn is not husked out, the machine is so geared that it will cut it along with the stalks very fine and eatable, and without winking.

Wherever we saw it running, at the Fairs, it attracted a crowd around it constantly, and surprised every one with its efficiency. It certainly perfectly eclipses everything that has gone before it, not excepting Daniels' hitherto famous machine. The Cummings machine can do twice the amount of work of the Daniels' with the same power, and costs considerably less—two decidedly valuable qualities by the way. Furthermore it is so constructed mechanically, that it not only cuts, but crushes the corn stalks and corn, so as to render them much more palatable and digestible. This machine is being extensively manufactured in the best eastern shops, (one of them we visited at Harrisburgh, Pa.) and will rapidly supercede all others through the northwest, and we feel quite sure that it will give the highest satisfaction to all who try it, and that it will be some time before it will be excelled, even in this progressive age. P.

EDUCATIONAL.

Agricultural Colleges.

The State of Michigan has taken the initiative in an enterprise which we hope and believe will do more for the welfare of the country than anything yet attempted.

The idea of combining mental with physical training, and applying them to that branch of labor which is the foundation and support of all others, is worthy of the progressive age in which we live, and cannot fail to produce results of incalculable benefit to the world. Add the blessings of education to the other advantages of agricultural life, and thousands of our youth who daily fall victims to a fruitless struggle for riches and distinction, will be spared to the enjoyment of a well spent life.

The Agricultural College of Michigan has commenced the good work, which ought to be imitated by every State of the Union. We take the following in relation to that valuable institution from the Detroit *Daily Advertiser:*

In in every age and under every form of government, the undistinguished many have been subject to the oppression of the aristocratic few, to whose interests they have been made to minister, rather than to their own. The progress of ideas, has in this country dispelled the charm of hereditary rank and power, and paved the way for the more easy elevation of talent, enterprise and industry, yet the distinctions of class still remain, and though the people are no longer under the dominion of irresponsible power, they are, because of the unnatural divorce between labor and intelligence, rendered subservient to an aristocracy of wealth, learning, and astute management.

It is much to be deplored, that the distinguishing advantages of civilization are reserved for the few, and that there exists such an inequality of intellectual development, culture and refinement of taste and manners as harmonizes ill with the Divine Government and the pressing needs of humanity. One of the great problems of the age is: Does mental culture consist with the prosecution of those pursuits, in which success depends upon the vigorous use of man's physical energies? In other words: Can labor be united to literature, science and refinement? The question cannot be solved by any form of government, but is a social one, underlying the very idea of democracy; for unless the people be elevated—unless knowledge can be generally diffused, the majority must remain under domination of some sort, and be swayed by those who have attained to a higher degree of intelligence.

The infancy and childhood of man, have much to do in the formation of his sentiments and habits, but the seal is set, the die is cast, when the youth emerges from the common school, and either enters a higher institution of learning, or apprentices himself to a life of arduous and unremitting toil. As our colleges are now constituted, whatever may be the purposes of a young man on his entrance; whatever his estimate of the value of labor to a complete and manly development of his whole nature—however strong may be his democratic tendencies; his intellect being there cultivated to the entire disregard of all muscular training, habits of physical incapacity are formed, which generally settles the question, and thereafter he is *not of the people.*

These institutions, by the nature of their arrangements, do wholly ignore all sympathy and association with labor. Modeled after those of Europe, their tendency is to conserve their advantages for a class who, bidding farewell to all agricultural and mechanical pursuits, henceforward direct their whole energies to the acquirement of a standing among a literary and professional aristocracy. Allied by interest to a class which despises labor, they cease to sympathize with the people from whom they have emerged, and despising the utilitarian mass, treat every effort to realize the harmonious development of mankind as a utopian dream, and class the endeavors of patriot and philanthropist with the schemes of the visionary and the isms of the fanatic.

Private munificence and general and State governments, have liberally endowed these aristocratic institutions all over the face of our country. So liberal have been these endowments in our State, that the cost of a University course scarcely equals that of the common school for the same period; but such is the ascendancy of the interested class, and so great the apathy and indifference of the industrial interest, that the smallest appropriations by the legislatures for the endowments of agricultural colleges have been persistently opposed, and private munificence has scarce been reached. Thus, while the "learned professions" have been fostered and every facility for culture afforded those desiring to enter them, the productive interest, taunted with ignorance, has been denied the means to test the practicability of emancipation from the vassalage which a dwarfed and crippled manhood has entailed upon it.

Protracted and arduous has been the struggle of the friends of this cause, to engage public attention, and gain a lodgement for their idea of a democratic system of education suited to the genius of this new world, but the serried front of old conservatism has at length been broken, and we see the dawn of a brighter day. Armed with a constitutional provision, the friends of agriculture in Michigan have successfully urged its claims, and the legislature have responded by endowing the State Agricultural College at Lansing.

The land belonging to it, 600 acres in extent, is eligibly situated on the Cedar River, three miles from the Capitol. The soil is diversified and of excellent quality, and the river running through the grounds, affords an excellent opportunity for the display of taste in laying out and adorning the domain; springs abound and afford a never-failing supply of excellent water. A commodious college building, a boarding house, accommodating a hundred students, and dwelling houses for the Professors, have been erected, and are situated about midway between the river and the Depot road.

The farm being entirely new, many difficulties had to be overcome in applying the labor of the students to the nature of the work—in clearing the tangled marsh in front of the buildings, in stumping, ditching, fencing and making roads, so that the convenience of cultivation might be obtained, and an opportunity afforded for engaging in experiments at as early a period as possible.

Many obstacles inherent to the nature of the enterprise are still encountered, where every advance is yet an experiment, and no well ascsrtained landmarks define the path which leads to ultimate success; and the President, with all the energy and firmness for which he is distinguished, needs the active co-operation and cordial sympathy of the friends of the cause throughout the State, in rendering the farm a model in the department of agriculture and horticulture—and in carrying out the great design and primary intent of the institutioon—that of uniting labor with Science and Literature, and harmonizing their claims hitherto considered incompatible.

The Literary and Scientific course is thorough and practical, and conducted by men of ability and experience. The faculty with one accord express their conviction that the students accomplish more in their intellectual pursuits than if they had no labor to perfrm —this from men hitherto connected with purely literary institutions, is highly valuable, as it unites the testimony of experience with the clearest deductions of reason.

The Department of Labor very properly engages the special regard of the President, who is assisted by a practical farmer, and unremitting attention is given to all its operations. The students are called out in three divisions, each division working three hours, and thus completing nine hours labor in the day, for which they are compensated according to their ability, and all the operations in every department of agriculture and horticulture are cheerfully performed. They fell the forest, log and burn, stump, grub and grade—they make the roads, build the bridges, lay the fences, and cut the drains—they survey the land, break the soil, manure, sow, plant, and cultivate—they cradle, thresh, and secure the crops—they attend the stock, prepare fuel, and, in short, do everything necessary to successfully conduct the business of the farm. Already nearly 200 acres of the primal forest is in process of cultivation, and nearly 100 have been sowed and planted this year. Had the season been favorable, the products of their labor, altogether independent of the enhancement of the value of the real estate, would have gone far towards sustaining the boarding establishment; and so soon as the farm is improved, and the horticultural department brought into successful operation, experience thus far warrants the belief that the labor of the students will supply the wants of the table, and provide the means necessary to the progressive cultivation of the farm.

The students are a fine set of young men, and their general deportment highly creditable —they have two literary societies which are sustained with spirit. The apparatus in the philosophical department is excellent, and the course in chemistry very thorough. The Library, though presenting a fair show of agricultural books, very much needs liberal donations of works of history, science and general literature, and it is to be hoped the generosity of individuals will be directed to this object.

On Sunday, religious exercises are conducted by Professors Tracy, Fish and Abbott, in succession.

The boarding establishment is better than those generally connected with institutions of learning, and everything is served up with neatness and taste.

Thus far the Agricultuaal College is a decided success, and determines the mooted question of the compatibility of labor and learning. Nothing is wanting but a continuance of the kindly and fostering influence of the people and government, to render it a blessing not only to our own State, but to the entire Union, and to humanity everywhere. Michigan has placed herself in the front rank, as the pioneer of this radical movement, and should she falter, the foes of genuine democracy would say, "Ah, ha! so we prophesied!" Dismay would be carried to the hearts of those now rallying at the call of Patriot and Philanthropist throughout the State, and lead to *conservative compromises with false systems*, which would prove fatal to the cause, and terminate in failure and disappointment. Only a bold and determined stand can insure the success of the grand idea, that *self-sustaining labor can go hand in hand with mental culture and refinement of taste.* Let this principle be once established, and a new era will have dawned upon the world, more potent and benign than all the revolutions which have hallowed the names of heroes.

Let, then, the "Amæna Peninsula" go forward to perfect the work so nobly begun, and let no son of hers be found to stay with impious hand the progress of the ark bearing the insignias of LABOR and LEARNING. Let the stout hearts and strong arms which have lifted it, bear it aloft till it is safely moored in the

hearts of the people. Our country is a generous mother, and combines with the grandeur of her mountain ranges, the scope and breadth of her plains and ocean lakes, an unexampled fertility of soil and variety of productions, and it only remains for her children to emulate this munificence in the development and culture of all manly and womanly excellencies, to render this nation the crowning glory of the age in a far higher sense than any mere form of government can do. To this aim, let heart and hand be given till a universal culture shall annihilate caste,

"And man to man the world o'er
Shall brothers be, and a' that."

The Education of Woman.

We rejoice that the better education of woman is beginning to receive the attention it deserves. All over our country there seems to be a waking up to the importance of the subject, and a growing recognition of the fact that hitherto the policy of society has been not only grossly unjust to her but also suicidal —that the race can hope for but a tardy progress towards that high estate of physical, intellectual and moral excellence for which it appears to have been designed, so long as woman is degraded by ignorance.

How it should ever have been supposed that the highest development of the mother is non-essential to the proper education of the child, we are at a loss to conceive. And yet nothing is truer than that the history of education and the actual administration of a large majority of the institutions of the present, are full of practical denials of her right and necessity. Institutions of learning, of the highest grade, are found in considerable number, and new ones are established almost annually; but only by two or three of the whole number is it granted that woman has an equal right to a share in the advantages they offer.

Now it is not our purpose in this connection or at this time to argue the co-education of the sexes in all institutions and under all circumstances, nor indeed to philosophize upon the propriety of such co-education at all, but rather, in brief, to enter our unqualified protest against the arrogation, on the part of man, of the exclusive educational advantage derivable from the institutions which are endowed and established by government. We demand the authority whereupon this prerogation of exclusiveism is set up, and shall persist in crying *quo warranto?* so long as the assumption is maintained. The time will assuredly come when society will be ashamed of so stupid and flagrant a wrong.—Woman, who ought to have the highest culture, will not always be compelled to remain in ignorance or struggle her way up into respectable intelligence, not simply unaided, but actually impeded by the conventionalities of society.

Already the question of equal natural educational rights is being entertained by several of the State Universities and Colleges, and the alternative is presenting itself, of either dividing the endowment between institutions exclusively male and female, or the admission of ladies into such as have hitherto been exclusively male. Of course so radical a change will be opposed, and we are not surprised at the manifest determination of such institutions as the Mich. University, to distort the truth and even trample it in the dust that they may, yet longer, perpetuate the old errors. H.

Agricultural Education—The Dawn of a New Era.

We are pleased to observe the attention that is being awakened all over the country to this important subject—that it is becoming the common theme of our best exchanges and the most distinguished orators of the country.—Our drawer is rich in eloquent appeals to the people on its behalf, containing as it does addresses by Hon. C. M. Clay, Hon. J. R. Williams, Pres. Mich. Ag. College, Edward Everett, Horace Greeley, and others; each one of which will be published, in full or in part as space will allow, in succeeding numbers of the *Farmer*.

Surely a new era dawns upon the world of toiling men. *Educated* labor is honorable, aye, it is noble, and the best minds of the age are engaged upon the great problem of determining how the working millions who constitute the bulk of human society, may be soonest and most effectually redeemed from the thraldom of a degrading ignorance. Let the farmer and the mechanic rejoice. Let them also labor for the accomplishment of this glorious result. H.

How shall the Farmer be Educated?

We shall resume our answers to this important question in the next No., discussing the University Agricultural Department, and the Agricultural College proper. Had intended the publication of Answer VI. in this number, but other lengthy articles have crowded it out.

MISCELLANY.

The Telegraph—Its History, &c.—Is it a Failure?

It seems astonishing that an agent so universally diffused and evermore operative, so demonstrative, too, in its operations, should have been neglected in the discovery of its principles, and its practical applications until so late a period in the world's history.

As long ago as 600 years before Christ, certain properties of electricity were observed by philosophers, but it was not until the beginning of the 18th century that the method of accumulating and transmitting it along conducting mediums was known.

According to the most reliable sources of information, Mr. Watson of England was the first to suggest the employment of electricity as a means of communicating intelligence from place to place. This was in 1746, but it was not until 1798 that Betancourt actually constructed the first telegraph, which was established between Madrid and Aranguez in Spain—the current being made to pass along insulated wires, and signals being used as letters.

The first telegraph which was operated by the action of the galvanic battery was constructed in 1809, by Soemering, at Munich; but the principle of electro-magnitism—that is of magnitizing iron by passing a current of electricity about it—was not discovered until 1819. To Prof. Oersted of Copenhagen belongs the credit of enabling science to take this most important step in the perfection of the machinery requisite to successful telegraphic communications.

The fourth great step in the perfection of the telegraph was taken by Prof. Joseph Henry in 1831—then of Princeton College, now the distinguished Secretary of the Smithsonian Institute—to whom the world owes those powerful magnets of sufficient intensity and quantity to make impressions at great distances. Without this discovery the Atlantic Telegraph would have been impossible.

The fifth great step was taken by Prof. Morse who patented his celebrated *machine* for recording dispatches, in France in 1838, and in the U. S. in 1840 Since then patents have been issued in England and America to Alexander Bain for an electro-chemical Telegraph, and to Royal E. House for a Printing Telegraph; all of which are now in use in this country and in Europe.

Since the establishment and successful working of the line between Washington and Baltimore, hundreds of companies have been formed in the New and Old World, so that, of land telegraphs,

America now has,	45,000	miles.
England,	10,000	"
France,	8,000	"
Germany and Austria,	10,000	"
Prussia,	4,000	"
Russia,	5,000	"
The rest of Europe,	7,000	"
India,	5,000	"
Australia,	12,000	"
Other parts of the World,	500	"
Total length in 1853,	96,000	miles.

4,000,000 of messages are borne on lightning wings each year over the American lines alone.

The first submarine cable was laid in 1850, between Dover, England, and Calais, France, a distance of 24 miles; since which time, with but one interruption it has been in constant operation. Other short lines have been laid, amounting in all to 750 miles.

In 1852, a company was organized in this country for the purpose of establishing a submarine telegraph between Newfoundland and the main land of America—not with a view of extending it across the Ocean, but to connect with a line of ships plying between that port and the Irish coast. The Co. failed, however, and in February 1854, Mr. Gisborne, one of the officers, applied to Mathew D. Field for assistance in raising additional funds, who, in turn applied to Cyrus W. Field, of N. Y., and David Dudley Field, his brother, both of whom favored the enterprise, and together conceived the project of extending the line from Newfoundland to Europe. The idea once formed grew more and more in the favor of a small circle of scientific gentlemen, until the enthusiasm of Cyrus W. Field became an inextinguishable fire and a sure prophecy of success.

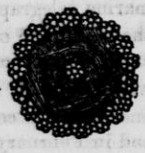
A company was soon incorporated, consisting of Cyrus W. Field, David D. Field, Peter Cooper, Moses Taylor, Marshall Roberts, and Chandler White; the former Newfoundland Electric Telegraph Co. was bought out; and in 1856, after incredible hardships and immense outlays of money—Mr. Field having expended of his own means $200,000—the lines were laid across Cape Breton, 140 miles—across the channel to the island 85 miles—across the island of Newfoundland, through swamps and morasses, 400 miles to Trinity Bay; from which point, in the summer of 1856, the Co. looked hopefully across the broad Atlantic to Valentia on the coast of Ireland, a distance of

nineteen hundred and fifty statute miles! The world laughed and derided, but this little band of heroes only answered, "It shall be done."

The knowledge and genius of the best scientific men on both continents were summoned to the work, and in August 1857 the cable that was to annihilate time and space, and make Great Britain and America next door neighbors, was ready to be let down into the depths of the sea.







In the cut subjoined the first two engravings present an end and side view of the cable, of the *actual* size, and the third illustrates the method of its construction. From which it appears that the diameter is less than three quarters of an inch—the copper wires in the centre, which transmits the current, being very small and only 7 in number, surrounded successively as we proceed outward, by the following non-conducting substances, to wit: 1. Three coats of gutta percha. 3. Six strands of yarn. The strands on the outside, marked 1, eighteen in number, are made up of what is termed "seven inch wire" (about as large as a fine knitting needle) and are intended to give strength to the cable, to bind the insulators and protect them.

The flexibility of the cable is so great that it could be tied about the arm like a rope. Weight 186 pounds to the mile; and tenacity so great that it would bear six miles of its own length if suspended vertically in water.

The first experiment proved a failure, and the work was postponed until the present year. Soundings had been made, the best month decided upon, and trial was again made during the last of July—the noble Niagara and Agamemnon proceeding this time to mid-ocean and thus paying out the cable in opposite directions, the Agamemnon eastward, the Niagara westward, each towards its own country. Thrice the cable parted, and the ships were obliged to return and join the ends anew. But the fourth trial was a triumphat success, and on the morning of the 5th of August, about the time the Agamemnon bore its precious burden into the harbor of Valentia, this end of the wonderful wire was taken on shore at Trinity Bay, amid the joyful shouts and thanksgivings of the gallant mariners and the multitudes on shore, who with beacon lights had hopefully waited their coming.

The remainder of the history of this great achievemant is familiar to the dweller in every palace and hamlet of the civilized world. That this first cable will be a *perfect* success should hardly be expected. But the practicability of *such a work* is demonstrated, and the achievement is one of so great importance that the concentrated genius and united energies of the ablest scientists and of wealthy capitalists will not long struggle in vain with the difficulties which lie in the way. Already, means have been devised which it is believed will perfect the present work; but if not, then, other cables and instruments will be tried. To our mind the ultimate triumph of the Atlantic Telegraph enterprise is as sure as though it were already accomplished. Not only so; we believe the time is not far distant when cable shall have been added to cable, until the dark caverns of old ocean are all traversed by threads of light, and the old and the new continents are webbed into one by countless, thought-weaving shuttles of electric fire. H.

A Rope-covered Cable.—The public attention in England seems to be now directed to a scheme of a new cable, covered with hempen rope instead of metalic wire, proposed by Mr. Rowett. His idea is to have the conductor well and safely insulated with gutta percha, and then simply inclosed without further preparation in the strands of common hemp cable, about an inch in diameter. He professes himself ready to contract to lay the rope from Valentia to Newfoundland, everything included, for £182,000, the cost of manufacturing the cable being about £86 per mile. —*Scientific Artisan.*

Note.—Lieut. Maury is of the opinion that the outside wires are not only useless, but a positive detriment, through their influence upon the electric current.

HOME CIRCLE.

EDITED BY MRS. E. O. SAMPSON HOYT.

A STORY OF BETHLEHEM.

Paraphrased from Luke, 2d Chap. 1-15.

BY MRS. HOYT.

Now it came to pass in those days—
In the days of Cæsar Augustus—That there
went forth a decree
That all the world should be taxed.
And all went to be taxed, ev'ry one
into his own city.
And therefore went up Joseph
From Galilee, out of Nazareth,
into Judea,
Even unto Bethlehem,
With Mary his espoused wife, Mother elect
of Israel's Hope.
And so it was, that while there,
She brought forth her first-born son, and they
wrapped him in swaddling-clothes,
And laid him in a manger;
Because there was no room for Mary
and the Babe in the inn.

And in the same country were shepherds
abiding in the field,
Keeping watch of their flocks by night.
And lo, the same hour, the angel of
the Lord came unto them,
And the glory of the Lord
Shone round about them, insomuch that
they were sore afraid.
But the angel said, Fear not:
For behold, I bring unto you good tidings
of great joy,
Which shall be to all people;
For unto you is born this day, in the
city of David,
A Savior, which is Christ the Lord.
And suddenly was with them a multitude
of the heavenly host,
Praising aloud, and saying,
Glory to God in the highest, and on earth
peace, good will toward men.

A Gift Book.

We would respectfully solicit of all our readers who have children, or who wish to make a small present, that they send for copies of "Little George and his Hatchet." It is just such a book as you would select for a Christmas or New Year's gift, and so cheap that no one would think a moment of its cost in comparison to its value and interest to a child. Then the cause to which its proceeds are devoted is one that appeals to us all for sympathy and aid. Parents and Teachers—both of week day and Sunday schools—send us your names and dimes. See advertisement at the head of "Book Notices."

A Year Ago.

So soon again, and with so little apparent change! How difficult it is to realize that so large a portion of our life-time has indeed passed, since we sat in this same chair, looking out upon the same prospect, and spoke words of resolve and hope to our friends the last closing year?

Slowly, but unremittingly, Nature has done her work; and from that winter of our fear and dread, almost before we knew it, came the spring, the unfolding of whose timid leaf-buds were flower and fruit, in summer beauty, and autumn richness, ere we were aware

"Of the great miracle that still went on,
In silence, round us—the perpetual work
Of the creation, finished, yet renewed
Forever."

And thus it was, we went to sleep one night dreaming of yet other days

"In the gay woods and in the golden air,"

and when we wakened, November winds were shivering through leafless trees, and November rains pattering against our window-panes, through which there was

"No sky, no earthly view,
No distance looking blue."

Ah, that was but yesterday; and now December sits crowned on the dismantled year, through all whose vast domain,

"From the zenith heights above,
To the meanest nook below,
Swiftly as a bannered army,
Sweeps the white-winged, muffled snow,"

Upon which, with noiseless foot-fall, goes out the Old—comes in the New. O Time, swift-winged, and strong, thou unrelenting chronacler of years! What of this last?—this little one, so briefly ours?

No pause, no answer. On, right on, the Time that never yet knew friend or foe!

Dear reader, and friend, let us not forget that while we write, and you read, a portion of the future of our anticipation goes to join that irretrievable Past, no longer ours, or any worth, except as from its lessons we add beauty and wisdom to the coming years.

MAN is a perpetual seeker. He sees always just before him his own power, which he must hasten to overtake. He weighs himself often in thought; yet it is not his present but a presumptive value, of which he is taking account. We are continually entering into our future, and it is so near us, that we draw without fraud, on the credit of to-morrow.—*Atlantic Monthly.*

From the State Journal.

A Sabbath at Mount Vernon.

MOUNT VERNON, Oct. 30th, '58.

MESSRS. EDITORS:—If it be lawful to do well on the Sabbath day, then are we blameless for this Sunday pilgrimage to the Tomb of Washington.

On Tuesdays and Fridays there is a regular steamer plying between Mt. Vernon and Washington City; but, not returning from Richmond until Saturday afternoon, and being obliged to leave for home on Monday, there was nothing left to us but to take a boat to Alexandria on Sunday morning and thence journey by land. Four years ago, during the session of the American Scientific Congress, we visited the place, in company with numerous other members of the Association, but our stay was too short, and besides, we know of no limit, in the number of convenient visits, to the duty we owe to the memory of him who was the Father of our common country; therefore, we are here again, as we hope to be yet many times, hereafter.

Is it not beautiful, how the great and good live long after they are dead, drawing after them the tears and blessings of mankind, and oft exerting a deepening, widening influence upon the lives and destinies of succeeding generations! More than half a century has passed since the illustrious Chief walked among men, by his truly royal life, impressing them with the lofty heroism of his own great soul—since he sat in this identical old arm chair, where now your humble servant would fain attempt a transcript of things as they are to-day, and wrote his imperishable words for the guidance of his cotemporaries and the rebuke of a degenerate posterity. And yet his presence is still with us, silently doing its office upon the minds and hearts of the people, and especially here, where are the works of his own hands, seeming to pervade the very atmosphere of this once elegant but now decaying mansion.

Mt. Vernon is by nature a delightful spot—just such an one, as we would have expected Washington to have chosen as a retreat from the strifes of war and the overburdening cares of government; and there are good evidences that he took great pleasure in embellishing it with all the improvements suggested by a refined and highly cultivated taste, consonant with the highest style of the rural art. But alas, the dilapidation and ruin which mark the premises now! The mansion is rapidly yielding to the wasting influences of time, the pillars of the portico already tottering to their fall. The out-houses, and barns, of which there was a goodly number, admirably adapted to the wants of the household and farm, are falling down, one by one; the wall of the once beautiful garden is quite gone; the fences are overgrown with brush and weeds; and even the tomb, where rest the ashes of the hero, and his nearest friends, looks like the neglected burial place of some common felon or traitor to his country—the vault grown over with brambles, the favorite resort of vermin—the brick enclosures sadly dilapidated, and the sarcophagus itself, all covered with dirt and rubbish.

Our first feeling, on beholding this desolation, was that of deep sadness, mingled with indignation towards the unworthy descendant of the immortal Washington, for thus allowing the mementos that should be dear to every patriot heart—especially so to him who bears his name—and sacred to his memory, to go to wreck as fast as time can efface and destroy. The second was of shame for our heaven-favored but disgracefully neglectful country, for refusing to rescue this holy place from the ravages of decay and restore it to its pristine beauty and elegance.

Mount Vernon ought to be the object of our most pious, filial care—the sacred altar whereon the fires of Liberty should be kept brightly burning—the rallying point for the patriots of the present and of all future time. And such at last will become; for the true hearted women of America have taken steps not only to rescue it from shameful neglect, but likewise to keep it henceforth sacred, guarding the shrine it will then become with all the watchful care of the Vestal Virgins. Aye, Woman, who is ever first to recognize and do reverence to the genuine virtues of the living and the dead, has engaged in this patriotic, christian work, with all the persistent heroism of her soul; nor will she remit her efforts until the debt of gratitude, which the *men* of America have so long neglected to pay, shall all have been cancelled, and Mount Vernon have been redeemed.

Already there is a hopeful looking to the time as not far distant when it may be visited with pride unmingled with shame and reproach. There is no price so high that the women of America may not secure its payment—none so great that it will not be incomparably less than the value of the Home and Grave of the Father of his Country, by every *true* American heart.

But the declining sun warns us that we have already lingered longer than we ought. We have met the just demands of a filial gratitude and reverential love, and shall go home with our patriotism kindled anew, and our heart even more strongly resolved than before, to do all in our power to aid the Ladies Association of the Union in the purchase of this hallowed spot.

Yours truly, HOYT.

NAMES OF THE FRIENDS OF MT. VERNON.—It was our purpose to publish in this number the names of all who have hitherto contributed to the Mt. Vernon fund. Other matter however, has crowded out the list, which must therefore be deferred.

FOR THE CHILDREN.

A SONG OF CHRISTMAS.

BY MRS. HOYT.

Christmas Eve was glad and gay—
Not so glad as Christmas Day.
Christmas Eve, took its leave,
Ere the day.

Christmas Day has come at last!
Christmas Day will soon be past!
All its toys—girls and boys—
Soon be past!

Christmas laugh, and Christmas fun,—
Ended soon, when once begun—
All be o'er, when once more,
Sets the sun.

Christmas snow is white and fair;
Christmas ground will soon be bare;
Snow-bird wee, you and he,
Where, oh, where!

Christmas friends, oh, where are they,
Who were here last Christmas Day?
Some are near, and some are far,
Far away.

Christmas bells, O, ring them well:
Christmas bells, O, who can tell,
Who will hear them, next year—
Who can tell?

Chat with Children.

A merry Christmas and long holiday-week, my dear little friends. May your faces be ruddy with health; your eyes sparkle with joy; your lips chatter of story and song; and may you have what you wish for Christmas and New Year's gifts, and all be good and happy children.

To be sure it is winter, and the weather is freezing cold. The old Frost-King has been round treading down the bright-eyed flowers, and long, wavy grasses, with his foot of ice. He has shaken the tall forests with fierce winds and scattered their bright yellow, and crimson, and brown, and every-colored leaves upon the ground. He has chained up the great rivers and lakes, the sweet fountains and babbling rills. The pretty singing birds, the busy bees and the gay butterflies have all learned to flee before his coming, and will return no more till spring comes back to drive him beyond the hills. But the world of folks—especially little folks—don't mind him much. You farmer boys and girls, who have to go a long way to school, will have a world of fun building up snow men during recess, and noon-times, or pelting each other, by the wayside, with snow-flakes rolled into balls just hard enough to hit—*not to hurt*. Then you will skate, and slide, and go sleigh-riding till, almost, you will love the winter better than the summer time. And when the holidays come on, who of you will not—all forgetful of poor stubbed toes and half-frosted fingers—hail with delight the season that brings you such a week of gifts and pleasure?

When I was a little girl—about as large as many of you—and didn't know any better, how I used to envy good "Santa Claus"—in whom I fully believed—and thought what a nice time he must have going up and down the chimneys the great world over, filling the stockings of all good children with just what they most wanted. How wise, and many-eyed he must be to know just what we had been doing all the long year! How rich, to have such a world of picture-books, toys and sweetmeats! How good, to come so far through the cold and dark to bring them to us!

And now that I have learned that these, and all good gifts come from our heavenly Father, through the hand of some kind friend, I love, on winter mornings, to think of you around the cheerful firesides of the homes where he has nestled your early years. The sparrow wants not a nest, nor the lily a clod for its tender bulb; for, to both, he means to give again the chance to glorify himself with chirp and bloom. And how much better are you little ones to whom he gives so much more than breakfast and blanket.

By every drop of dew that falls,
By summer's silvery cloud;
By every shivering wind that calls,
So sternly and so loud;
By all on earth, and all in heaven,
The lessons of his love are given.

How beautiful is the winter morning!—the winter, of which so many grown-up people make such loud complaint. Just see the hill-tops, the valleys between, field and wood all sheeted over so smooth and white. Look at that great oak in the pasture, and the beech tree by the river, decked out in frost, like diamond dust with countless pendants glittering in the golden sun; and the fairy-like forms, wreathed so daintily in silvery threadings on the bed-room window while you children slept; the snow that falls in many-figured crystals at your feet; the little bird that chip-a-chees his timid song to get a crumb, and leave a thought of God,—these all are the workmanship of his hands. Now you can see their beauty; when you are older you will learn their use, and, we hope, with every year you live learn to love more reverently the great and good Being who, while he stoops to feed the snow-bird and unfold the rose, has all the world of children in his loving care.

EDITOR'S TABLE.

TO OUR FRIENDS.—THE NEW YEAR AND THE NEW VOLUME.

As the sands of the old year are fast running out, and the hour is almost here when the glass must be inverted, a few retrospective as well as prospective thoughts are suggested. Twelve times during the year we have visited your homes, bearing with us glad faces and hands full of the lessons of science and experience—the intellectual and social fruits of many of the best minds of the country and age. We need not reassure you that it has been our earnest desire and actual effort to make our visits profitable as well as pleasant, and that we thank you for your cordial welcomes and respectful hearings. The themes of our discourse, although they may, at times, have been uninteresting to some, have always been prompted by an honest and earnest desire to do you good, and dictated by our best judgment of what the majority most needed. Whatever has not been strictly and immediately practical has nevertheless appeared to us important as preliminary to such matter, and will so prove itself to all who entertain us the coming year. Of this much you cannot fail to have been convinced—that we belong to the party of progress and are determined to give no quarter to the miserable pod-auger theory that the old-fashioned ways are always the best, simply because they are ancient, and that every thing new is essentially a humbug. We believe that as yet agriculture and all the arts that pertain thereto are in their infancy —that in this age of steam and lightning the Art of farming should make corresponding advancement. Therefore we are on the alert for such new discoveries and inventions as promise material aid, and after careful investigation of their merits, offer such to the practical farmer as we are sure will prove advantageous. In a word it has been our aim not only to teach the best practice, but also to stimulate our readers to the attainment of a higher social and professional standard. Agriculture is the great art upon which all else must depend, and we are not content that the seven-eighths of the world who are its votaries should be the mere "hewers of wood and drawers of water" for the professional few. With prophetic eye we see the time when it shall be deemed the *noblest* as well as the most natural pursuit of man, but are not blind to the truth that such a position can only be attained through the intellectual and social elevation of the farmer himself. Therefore we have devoted a portion of effort to the earnest advocacy of the educational needs and rights of the farmer.

Our future policy will not be unlike that of the past, and we feel confident that the hosts of friends who have encouraged our efforts and endorsed our policy thus far will not leave us, now that we are fairly in the harness and prepared to work with greater efficiency—that they will aid us not only with their money, which is the driving wheel of the material work, but likewise with their friendly suggestions and the results of observation and experience.

As to the *times* against which there is so great a cry, and which are unquestionably *hard*, we think we know something of their stringency as well as the farmer, inasmuch as our business as publishers is not only contingent upon his pecuniary condition, but also upon a thousand other circumstances of which he has but little idea. Nevertheless, be the times ever so hard, we intend to publish the *Farmer* right on, making it better and better every year, and are slow to believe there is a single enterprising, ambitious farmer, gardener, or mere friend of the producer, who will not find it desirable and possible to advance the trifling sum necessary to defray the expense of our twelve monthly visits in the year 1859. We believe the extreme of the money crisis has been reached and that the close of the coming year will restore a large share of the former prosperity; but if it should not, what farmer is there in Wisconsin, who cannot by proper economy, under the stimulus of true self-interest, a manly ambition and worthy State pride, save out of what would otherwise be uselessly spent, one dollar or at least the club price of the *Farmer*, for the reading of a magazine which, at the beginning of every month will come to his family with rich stores for every member thereof. If there are any such in Wisconsin—men who will not, if need be, deny themselves a worse than useless indulgence of the bodily appetities for the needful food of the mind—we shall leave them with reluctance as belonging to that class of whom it was said, "Ephraim is joined to his idols; let him alone."

Again we thank you for the pleasant associations of the past and invoke upon all the blessings of Heaven for the coming time.

THE PRE-PAY SYSTEM, AND THE NEXT YEAR.

As stated in the November number, we propose adopting and adhering to the pre-pay system, not only on subscriptions but on all transient advertising, with the opening of another year, and invariably, without distinction of persons. We do this from absolute necessity, instead of choice; and for the reason that it is absolutely impossible to discriminate between those that it will and those that it will not do to trust, without committing many mistakes, besides offending not a few. The one unvarying rule comes the nearest right as a principle, and when our patrons and friends are once familiar with it, it will undoubtedly suit the best all around.

The past practice of permitting agents to trust for a few weeks or months, has made them a world of trouble, and us a deal of loss. In future we must spare our friends the former, and ourselves escape the latter, whatever may be the effect upon our circulation.

That such a course will diminish our circulation materially, we do not believe. The small subscription price of the *Farmer*, whether paid in advance or not, cannot largely affect any man's finances in reality. We will venture the opinion without fear, that there are not ten names on our books, but that can make up the small amount requisite, notwithstanding the hard times, if they make any effort for it; and if they are not disposed to do so, we doubt whether it be good policy for us to make the effort necessary, to advance the means requisite to its publication without their assistance.

In this connection we would say, that we have not a subscriber whom we wish to lose; but on the other hand, we wish and feel, that we ought to have very many more than we already have, both because of the intrinsic value of the *Farmer*, to every business man in the State, as well as for the industry and pains we bestow upon it. We of course are slow to believe, that any other agricultural paper, published out of the State, can be worth one-half as much to a Wisconsin reader, as ours, published in it; and for many reasons that might be mentioned, but which we will omit, saving and excepting the single one, of State pride, which ought to prompt every farmer and business man of the State, to sustain a good home journal of the kind.

We hope that our friends everywhere, will appreciate this consideration, and continue to do what they can for the circulation of the *Farmer*, among all those who ought to take it, understanding fully that it will benefit them, as well as the publishers; as the publication of such a journal is a common interest, that ought not, and cannot languish, without becoming a public as well as a private loss. Let us give the *Farmer* a thorough trial, for the next year, on the pre-pay system, and see how it will work. So say we, and we hope that so will say all; which fact we can best get at, by noting the rapidity with which the new subscriptions come in. Hurry them in friends, from all quarters, that we may know how large an edition to publish.

It is needless, perhaps, for us to say in this connection, that we shall not allow the *Farmer* to flag in any respect, but as hitherto, we propose continuing to improve it, in all respects, as fast and fully as possible, and in no material respect to fall behind any of our neighbors in the Agricultural field. Stick by us, friends and farmers, and we will stick by you, and reciprocate every favor as fully as possible. Of this we think all of you who know us, will feel assured.

AGRICULTURAL SOCIETIES.

Believing that the above organizations are exerting an immensely important influence in stimulating the people of our new country to a more rapid improvement and progress, not only in the substantial, but the social interests of society, we shall as heretofore, labor to the utmost of our ability, to advance their interests in all respects. We shall be happy to publish the reports of their elections, and other important items of information (not too long) in relation to them, when furnished us for the purpose. Such publication will give those matters a prominent position, and permanent preservation, important to all who wish to refer to them, from time to time.

In return for which favors, we trust of course that the officers of such societies will reciprocate our aids and favors, in such manner, as will be calculated to be mutually beneficial to both parties. We have to acknowledge many favors of the kind in the past, particularly from some of the Societies in the State; and purposing to fully merit them in the future, we hope a continuance of them. And on the other hand we would with equal frankness say, that such Societies as do not remember us, nor seem to realize that there is such an institution as the Wisconsin *Farmer*,

must not be surprised if we sometimes forget them in return.

A MONTH IN THE SOUTH.

We have spent the last month in running through the South; mostly in Virginia, the old mother and progenitor of many of her Southern sisters. We were present at the United States Fair, (so called) at Richmond; also at the Virginia State Fair, at Petersburgh; and the Fair of the Sea Board Society, at Norfolk, composed of portions of Virginia and North Carolina united. Being at these three Fairs, during three successive weeks, gave us an excellent opportunity of seeing the people and products of the States concerned. That they differ somewhat from what we are accustomed to see in the North, is quite certain. What those differences consist in, and what are their most prominent peculiarities, we have not space to point out in this number, but in the forthcoming January number, we will treat on the subject somewhat at length. Suffice it for the present to say, that Wisconsin makes more progress annually, than Virginia does in ten, or even twenty years. In fact, in many things, she is obviously progressing backwards. P.

TO CORRESPONDENTS.

Communications from G. De Nevue, Hon. C. Comstock, "Pastinator," John P. Kramer, Dr. H. N. Herrick, J. C. Plumb, J. A. Wood, H. Hemenway, and others, for want of space, have been deferred to subsequent numbers.

☞ Will Mr. Z. Hale give us his P. O. address, so that we can credit him with the $1 he sent us? We receive letters every day, from correspondents, dated at some town they are visiting, which prevents us from knowing where to address them a letter, or giving them credit for money received.

THE ADDRESS OF CASSIUS M. CLAY AT THE STATE FAIR—

We propose to publish in the January number. It will be a sterling document, and well worth the reading and study of all. Its author is one of the bright lights of the nation, and shines nobly, even amid the partial darkness that surrounds him.

THE SEVENTH ANNUAL MEETING

Of the U. S. Ag. Society will be held at the Smithsonian Institute, Washington City, on Wednesday, the 12th day of Jan., 1859, for the election of officers and the discussion of important questions. The medals and diplomas awarded at the recent Fair, will also be ready for delivery at that time to successful competitors or their agents.

NOTICE.

STATE AGRICULTURAL ROOMS,
Madison, October 25, 1858.

The annual meeting of the Wisconsin State Agricultural Society, will be held at the State Agricultural rooms in this city, on Wednesday the 8th of December, at 3 P. M., for the transaction of any business that may properly come before it.

And also for the election of the officers of said Society, annually elected.

D. J. POWERS,
Secretary, W. S. A. S.

ECONOMICAL HOUSE BUILDING.

We are planning to build us a farm house, during the coming year, and propose to introduce a number of important improvements, both in economy of materials and construction, and of convenience and utility for use. We think we will be able to demonstrate a number of things, not any too well known, among the inexperienced in building; and if we are not mistaken, we will show a better farm house for the money, than we have often seen. We shall give the plan and all the details of expense, in the consecutive numbers of the *Farmer*, during the year. P.

GROVER & BAKER'S SEWING MACHINES—PRICE REDUCED.

The prices of the aforesaid popular sewing machines have been reduced by the manufacturers, in view of the hard times, nearly fifty per cent. They now sell very neat plain family machines, upon tables complete, for $50.

We have seen the whole family of sewing machines on exhibition at the various Fairs the past season, and been more and more impressed with their great value to human kind; and especially with the intrinsic good qualities of the Grover & Baker machine.

See their advertisement.

RAREY THE FAMOUS HORSE TAMER

Has been demonstrating his science and skill at the several Virginia Fairs, and with his accustomed success. We understand that he has not failed in any instance in taming the most incorrigible animals, not only horses but mules.

His famous European brother, is said to be at present engaged in training the cavalry horses of the English army, under the special employ of the government. How much that is valuable may yet grow out of their new system of training, no one knows.

CROPS AND PRICES AND THE LESSONS THEY TEACH.

Despite the generally prevailing close times, the prices of some leading articles of produce seem to be improving, and even going up to good figures. Pork, particularly during the last few weeks, has been getting up to paying rates, and bids fair to so continue. From $5 to $5.50 is being paid at our lake and interior markets. This of course puts a pretty good face upon corn, of which luckily there is a very good crop. If our farmers had hogs enough to eat the corn crop, it could hardly fail to ease up the hardness of times, materially. The effect of good prices for pork, and plenty of corn, undoubtedly will tend to materially thin off the hog population for another year; hence it will be an exceedingly opportune time to sort up with improved qualities and breeds, for a new start next year. In reference to breeds, of course, every one has his own particular notions, and while on that subject we would not especially advise, we do recommend all to take the matter under careful consideration, and to determine what particular breeds and crosses, they believe they can make the most money out of, and to aim to attain them. Of the more popular breeds, we are happy in saying, that some of our breeders have exhibited as good specimens at our Fairs the past season, as we have seen at any of the other great fairs of any of the States, which we have attended. Hence the means for the first class of improvement is within the reach of all, and within our own State. Let all enterprising farmers look to it in season. During the winter and spring, we shall undoubtedly be advertising most of the good stock in that line.

Wheat is still selling at rather moderate prices, and probably bids fair to for the present; particularly as our wheat is of more than ordinarily poor quality. Spring wheat, even of good quality, stands second rate in the great markets of the world, at best, and when shrunken and poor, and upon a hard market, it is harder yet. The foregoing facts, in connection with many more that might be added, should admonish our farmers not to rely too implicitly upon the wheat crop, at any time; but to diversify their operations as early and as much as is consistent with reason and convenience.

Some wheat, some horses, cattle, sheep, pork, &c., &c., are a much safer reliance for all sorts of times, than any one staple crop, whatever it may be. All know this, why not all profit from it hereafter? The present snug times, rightly viewed and studied, however unpleasant and disagreeable they may be at the time, may and undoubtedly will prove very profitable to many of us, as a means of putting us upon the right track for the future; the track of industry and economy, instead of speculation and prodigality. So may it be.

SORGHO SEED, &c.

The uniform success that has attended the cultivation of this article the past year, is bringing it into great favor, and leading many already to inquire about the seed for next year's use. Our own opinion is, that there will be plenty of it, of good quality, ripened in our own State. We have already bespoken a good many bushels, for distribution among our subscribers, and hope to be able to use at least one hundred bushels in that way.

We had nearly eighty gallons of good syrup made from a little over half an acre of our cane. The best crop by the way that we raised the past year.

We shall also be picking up any other choice seeds that are going, for special distribution.

THE HUNGARIAN GRASS SEED.

How did it prove, with those who tried it? As yet we have not heard a word from it.—Report up gentlemen.

ANTI-EXPLOSIVE FLUID LAMPS.

When in Ohio last month, our attention was called to a recent invention by Dr. Todd, of Columbus, of a *Safety Gas Generating Fluid Lamp*, a very ingenious and apparently safe and economical apparatus for the purpose. It is not unlike any ordinary fluid lamp, except the burners, which are more like a common gas burner, and are so constructed that the heat of the blaze gassifies the fluid in its ascent, and burns it as a gas instead of fluid, thereby making more and clearer light, fully equal to gas, and without a particle of smoke or smell. The burner is furthermore so constructed, that it is utterly impossible for the fluid to get on fire or explode, either when burning, or when being filled, or if overturned or broken, thereby rendering them perfectly safe at all times. It struck us so favorably, after all the fears we had endured of explosions and accidents in our own family for the last two or three years, that we not only brought home a half dozen of the burners, to rig into our fluid lamps, for our own use, but put arrangements on foot, for their early introduc

tion into the State. Alcoholic fluid bids fair to be the main material for our lights, at no distant day, hence the great importance of removing the danger, hitherto attending its use.

One of the lamps may be seen in use at the State Agricultural Rooms. P.

ANOTHER APOLOGY.

In sending out slips to a large delinquent list of no-npyaing subscribers, in the Nov. number, it so fell out that a considerable number received duns that had paid to agents, who had not reported to us. This of course we regret. We never intend, when we know it, to dun any one that has paid, and would much rather lose five subscriptions, than to ask any one to pay the second time. But when those receiving subscriptions for us, do not report them, we have no means of knowing it, or other course to pursue except to send notices to those that appear by our books to be owing us. All who had paid, will see the nature of the case and kindly excuse us; and all *who have not*, will oblige us greatly by doing so as early as possible.

SHEEP vs. DOGS.

We are still continually receiving letters, from the best sheep men in the State, urging the indispensable importance of legislative action for the protection of sheep. These communications assure us of what we knew before, and that is, that many farmers are entirely abandoning sheep-keeping, because of their fear of the dogs.

Under the circumstances, the question is, what is best to be done in the premises?

The plea made last winter, by those legislators who opposed the bill then pending upon the subject, was, that the people had not petitioned for such a law. Now therefore (in lawyer's phrase,) we would suggest to all who believe legislation necessary to encourage and protect the sheep interests (and on this matter we have no doubt) to bestir themselves in the matter, and circulate petitions among their neighbors, to be laid before the Legislature about to convene. Let these petitions set forth distinctly, in general terms, the views and wishes of the community on the subject. This done, and we have no doubt the legislature will give the matter a proper consideration and due disposal.

With the view of aiding in the work to the extent we can, we will prepare a blank petition that can be sent out, to all who wish it, in the January number of the *Farmer*. We hope they may be thoroughly circulated and duly returned, by the members of the legislature, or to us, to be seasonably presented for consideration. We will promise before hand, all the attention that the subject may require.

Those who prefer moving earlier in the matter, need not wait for our petition, but get one up themselves, and put it agoing; it is a simple matter in which no one need go astray.

PRE-PAY SYSTEM AGAIN—HOW OUR AGENTS LIKE IT.

MESSRS. POWERS & HOYT:—Your article on the "Pre-Pay System," in the last No. of the *Farmer*, is just the thing. When I read it, I said aloud—*Amen!* AMEN! AMEN!

This taking subscriptions on credit is quite as much trouble and expense to your local agents as to yourselves. If every one's experience is like mine, you will not be troubled with credit subscriptions for the year 1859.

I sent you a letter about a month ago, stating who *had not paid* for the *Farmer*, but the probability is you did not get it in time for your last issue, and therefore sent duns to all. The consequence is those who have paid are taken with a sudden alarm and some of them with conniption fits, and those who have not paid take it as cool as Dec. Dun those who have not paid as much as you like. There is not a man in town but what can find money enough to buy all the tobacco, whiskey, tea, and coffee he wants. Yours, &c.,

JOHN TINKER.

CLINTON, Wis., Nov. 26, 1858.

THE "UNIVERSITY COMMERCIAL SCHOOL."

The attention of our readers is specially invited to the advertisement of the above newly organized or rather appended Department of the State University. There is a growing demand for commercial education among all classes and professions, and the University has done well to establish, and will do still better to foster this important Department.

D. H. Tullis, Esq., who has been duly appointed *Instructor*, has been for several years connected with some of the best institutions of like character, in Cincinnati and this city, and so far as he is known, the commercial public will require no further guaranty of the success of the school than the fact that he stands at its head. In a word, we cordially recommend the Institution to the young people of the Northwest, as furnishing very desirable facilities for acquiring a knowledge of the correct modes of doing business, and would par-

ticularly urge upon all young men about to "set up for themselves" the necessity of taking such a course of instruction as a pre-requisite to the avoidance of loss, and the attainment of that independence to which they all aspire.

LITERARY NOTICES.

LITTLE GEORGE AND HIS HATCHET; A Lesson of Truth. By Mrs. Hoyt. *Price ten Cents.* Atwood & Rublee, Madison, Wisconsin.

This is a beautiful primmer poem of twelve pages, prettily bordered, with a bright-colored picture cover. The proceeds of the sale of this little book are to go to the Mount Vernon Fund, in aid of the purchase of the Home and Grave of Washington. Besides doing something towards so worthy an enterprise, the book itself cannot fail to interest its little readers, and is worth many times its cost to any child as an illustration of the beauty of Truth. It is just what thousands of parents want for a Holiday gift to their little ones.—Mrs. Hoyt would especially ask the attention of Teachers—*both of week day and Sunday-schools*—as she hopes to dispose of it largely through their agency. Let all who want a nice little present for child or pupil, or teachers who will undertake te sell them in their schools, send on their orders. Packages forwarded without delay, to any part of the country, upon reception of directions with the number desired. Single copies, post paid, to any one who sends a dime or the amount in stamps. Address Mrs. Hoyt, Wisconsin Farmer Office, Madison, Wis.

☞Papers friendly to the Mount Vernon cause will please copy, and those who can, give a standing notice till January 1st.

MILCH COWS AND DAIRY FARMING; comprising the Breeds, Breeding and Management, in Health and Disease, of Dairy and other Stock; the selection of Milch Cows, with a full explanation of Guenons' Method; the Culture of Forage Plants and the Production of Milk, Butter and Cheese; Embodying the most recent improvements, and adapted to Farming in the U. S. and British Provinces. With a Treatise upon the Dairy Husbandry of Holland; to which is added Horsfall's System of Dairy Management. By CHARLES L. FLINT, Secretary of the Massachusetts Board of Agriculture, author of a "Treatise on Forage Plants," &c. Liberally illustrated. Published by Rickey, Mallory & Webb, Cincinnati, O., and A. O. Moore, New York.

This excellent and highly useful book, embodying the most recent information on the subject of Dairy Farming, both in this and foreign countries, is a credit to its able and popular author and cannot fail of a cordial welcome to the library of every enterprising dairyman and farmer in the country. Untiring in scientific research, eminently practical, and strictly conscientious, making no statement of facts unless fully satisfied of their genuineness, and, withal, possessed of a pleasing literary style, Mr. Flint is especially qualified to write for the industrial public, and is annually making valuable contributions to the rural literature of America. This work contains 416 octavo pages, profusely illustrated with superior engravings, and may be obtained, postage free, for $1,25. Address publishers as above, or Bliss, Eberhard & Festner, Madison, Wis.

TWELFTH ANNUAL REPORT OF THE OHIO STATE BOARD OF AGRICULTURE, &C., FOR 1857.

We are indebted to Hon. J. H. Klippart, the able and efficient Corresponding Secretary, for several copies of this voluminous and excellent work. Have not had time to examine it thoroughly, but feel no hesitation in saying, it is most decidedly the best report that Ohio has ever made. In addition to the reports of Co. Societies, it also embodies a large number of valuable essays on important subjects, some of them illustrated by beautiful wood and lithograph engravings.

The Essay on "Wheat, its Origin, Rotation, Diseases, Varieties, &c," by the learned Secretary, comprises some 260 pages, and is not only the most elaborate, but also appears to be the most valuable production hitherto published on that important subject, in this country. When we have leisure we shall scan its contents more carefully.

Ohio is able to furnish the materials for a Report second to none in the Union, and we congratulate her on having found the right man to gather together and embody them in proper form.

SKETCHES OF LIFE AND LANDSCAPE. By Rev. Ralph Hoyt. New Edition enlarged. Stanford & Delisser, 508 Broadway, New York. Price $1,00.

Ten thousand copies of this book of beautiful poems have just recently been published by the Messrs- Stanford & Delisser, in aid of the re-building of the Church of the Good Shepherd, recently destroyed by a violent storm; on which account, as well as because of its high intrinsic merit, we cordially commend it to such as are friends of the Christian Church and to all who are lovers of genuine poetry.

As we think, there are few, if any, more *beautiful* poems in the language than "Snow," and "New," and "Old." If the author had

written none other, these were enough to give him rank among the best poets of America.

For sale by Bliss, Eberhard & Festner, Madison, and by booksellers generally in the larger towns.

NEW EXCHANGES.

The Southern Cultivator,

Edited by Dr. Daniel Lee, though not the most pretentious, is certainly one of the best Agricultural journals published in the Union, and is rendering important service to Georgia and the entire South. Published monthly by W. S. Jones, Augusta, Ga.

The Scientific Artisan.

This is a beautiful large quarto of 8 pages, excelling, in some respects, at least, even the "Scientific American." Indeed, it is equal in the beauty of its engravings and in its general mechanical execution to any similar publication in this country. We are pleased to see that it is under the editorial management of our old friend and professorial colleague, G. W. L. Bickley, M. D., who will conduct it with the spirit and energy requisite to a successful competition with its eastern rival.—The Queen City is amply able of itself to sustain such an enterprise, and we doubt not that it will have a large patronage throughout the entire West. Published weekly, at $2 per annum, by the American Patent Co.

The American Farmer,

Comes regularly, richly laden with its rural lore. The proprietors are up with the times, and evidently don't intend to be outdone, East or West. Well, we'll see. Published at Baltimore, Md., by N. B. Worthington & Co.

The Indiana Farmer

Is ably conducted, and is doing a good work for the agriculture of the Hoosier State. Published by Ray & Wellhouse, Indianapolis, Ind.

"Young's Spirit of the South and Central American."

This beautiful weekly quarto of 12 pages is rapidly winning favor in the sporting circles of the West and South. A faithful and spicy chronicle of the turf, field-sports, literature and the stage, it is quite indispensable to such as would be *posted* on the doings of the day. Published at Louisville, Ky. Terms $5.00 a year, in advance.

The Oregon Farmer!

Well, well! If any body doubts that Bishop Berkley was right, when he said,

"Westward the Star of Empire takes its way,"

let him call at our office and take a look at the handsome quarto that lies before us—its pictured plums, luscious apples and monstrous pumpkins! The *Farmer* is an ably conducted paper and is well worth the subscription price ($2 per annum) to any one who would know what is doing on the shore of the great Pacific. Address W. B. Taylor & Co., Portland, Oregon.

The Kentucky Farmer

Is the title of a new and handsome quarto of 16 pages, published at Frankfort, Ky., by A. G. Hodges, Esq. Judging from the four numbers already issued, we feel sure that it will supply an important desideratum, and sincerely wish we had the means of urging upon the farmers of old Kentucky the importance of giving it a liberal support. Terms $1 a year.

NEW ADVERTISEMENTS.

New advertisements in considerable numbers will be found in our columns, and generally of prime interest to our readers. In the line of Nurseries,

The Great Western at Toledo, Ohio, is one of the most extensive and well established in the Middle or Western States, and is nearly in our own latitude. It is much safer to order from, in the spring, than those further east, at Rochester and elsewhere, as articles can be sent direct and promptly through, with but few changes of cars. Those contemplating planting in the spring will do well to send to them for catalogue and terms.

Also see advertisement of Chas. Hamilton & Son, of Ridgeville, McHenry Co., Ill., offering Nursery Stock for sale. We shall say more of their general orchard trade in subsequent numbers.

Strickland & Co., 134 East Water Street, Milwaukee, THE LARGEST AND BEST book and stationery wholesale and retail dealers in the West, keeping everything in their line that can be thought of, and at eastern prices.

Chapman's Maps, the only standard articles in the market, in relation to the West. Of course our readers who are posted, would buy no others, and could not without the chance of "being sold."

Paper Ware House—Noonan & McNab, 243 East Water Street, Milwaukee, one of the oldest and best established houses in the country. Read their advertisement.

Herman & Whitney, Badger State Book and Stationery Rooms, 175 East Water Street, Mil-

waukee, are highly spoken of, as fair and excellent dealers. See their card.

Dex St. Jorre, manufacturer and *repairer* of Gold Pens, 128 East Water Street, Milwaukee. See card.

Great Western Tea Store—Rob't Gurney's, 174 East Water Street, Milwaukee. Farmers and country tavern keepers read his advertisement.

Ben Franklin Book and Job Printing House, 167 East Water Street, Milwaukee. See card.

Imported Canada Club Wheat for seed. See advertisement of Helliwell Bros. Also see samples of wheat at Farmer office.

Sugar Cane Seed, Manual. See advertisement of C. A. Johnson, of the aforesaid seed, and his forthcoming work on culture and manufacture. He is a reliable man, and understands *practically* what he publishes. We shall notice his work when it appears.

Architectural Designer & Scientific Draughtsman—George Bradbury. So far as we have seen, he appears to be a gentleman of decided ability. As a specimen of his work, he designed the Hall of Fine Arts on the State Fair Ground. See his card.

Fine Stock Breeders—J. A. Carpenter & Co. Waukesha. See their card. Whatever they offer is good. It will be remembered that they won lots of premiums at the St. Louis, Illinois and Wisconsin State Fairs.

The challenge Straw Cutter. See advertisement of G. B. Griffin. Also of

Crowns & Carhart, of Garlick's Improved Portable Field Fence.

State University—Note commencement of Winter Term, first Wednesday of Jan. The Institution is prospering despite of hard times.

THE DIPLOMAS,

Awarded by State Agricultural Society, at State Fair, are now ready for delivery at this office. Those belonging to citizens of Milwaukee, will be found in the care of S. S. Daggett, Esq., and those of Janesville, in the care of Hon. J. F. Willard. We will forward them by express on request, but cannot do so by mail, on account of the frames.

D. J. POWERS,
Secretary, W. S. A. S.

AWARDS OF PREMIUMS AT STATE FAIR.

Copies of the *Farmer*, containing the above awards, will be forwarded to all who may order them, *gratis*.

POPULAR LECTURES ON AGRICULTURE—FIFTH TOUR.

During the past summer and autumn we have had many congratulations upon the new interest awakened, upon the subject of agricultural progress, in the several places visited last winter, and are now in daily receipt of solicitations to visit various localities in the State. Accordingly, notwithstanding the sacrifice of personal ease and comfort necessarily involved in a winter campaign, we shall resume our itineracy among the people—in pursuance of our original design to visit, in due course of time, every city, village and country neighborhood in Wisconsin, and personally urge upon the industrial masses the importance of a higher standard of general culture and professional knowledge.

As heretofore, our lectures will be *free*, and, we trust, of such character as to interest any audience of ladies and gentlemen, however promiscuous as to rank and profession. Of course it is expected that the friends of agriculture among whom we go, will take it upon them to secure an appropriate place for the lecture, post the notices which may be forwarded, and make an effort to get out the people.

The following is the list of appointments for our next tour:

Black Earth,	Monday,	Dec. 13
Mazo Manie,	Tuesday,	" 14
Lone Rock,	Wednesday,	" 15
Richland City,	Thursday,	" 16
Richland Centre,	Friday,	" 17
Edgerton,	Monday,	" 20
Child's Station,	Tuesday,	" 21
Eagle,	Wednesday,	" 22
Genesee,	Thursday,	" 23
Waswatosa,	Friday,	" 24

Early in Jan. we purpose visiting Hartford, Waupun, Ripon, Berlin, Omro, Neenah, Menasha, Appleton and Green Bay.

BORROWED CUTS.

Whoever has borrowed cuts from the Wisconsin Farmer office, are requested to return them without delay.

OUR billingsgate neighbor of the Gazette accuses us of quackery, because we publish Dr. Ayer's advertisements. Now this same editor knows the Pharmacopeia itself is not more free from the suspicions of quackery than his medicines. He knows they are endorsed by the medical journals of this country, are used and prescribed by our best physicians and have the commendation of professors and eminent men of character too exalted for his comprehension, and he knows too that they have done and are doing in this community an amount of good which the utmost stretch of his ability can never hope to equal.—*Berks Co. Press, Reading, Pa.*

George Bradbury.

ARCHITECTURAL DESIGNER AND

SCIENTIFIC DRAUGHTSMAN,

MADISON, - - - - WISCONSIN.

(Late of New York, formerly of Boston.)

CHARGES.

Designs for Churches, Halls, School-Houses, Tombs, Stables, Stores, Manufactories and Dwelling Houses of every variety, and designs for Interior Decorations—2½ per cent. on estimates, cash.

Specifications, Contracts, Estimates and Detail Drawings—½ per cent. on estimates, cash.

Superintendence—1 per cent. on estimates, cash.

Personal advice, when requiring no lengthy calculations or extensive investigations, will be given gratis.

Orders for Architectural Designs, or Mechanical and Topographical Drawings, received by Mail, and Promptly executed.

OFFICE over Levi Power's Store, between the State Bank and U. S. Hotel. Studio, 28, Bruen's Block, Pinckney St.

REFERENCES:

R. M. Hunt, Esq., Secretary of the American Institute of Architects, New York.

Rev. J. E. Woodbridge, (late Editor of the Puritan Recorder,) Auburndale, Mass.

G. W. Briggs, Esq., (Principal of Lasell Seminary, Auburndale, Mass.

Rev. Sewall Harding, (Secretary of the Congregational Board of Publication,) Boston, Mass.

Hon. F. Bradbury, (late Mass. State Treasurer,) Auburndale, Mass.

Hon. D. J. Powers, (Secretary Wisconsin State Agricultural Society,) Madison, Wis.

BY ALL OF WHOM HE HAS BEEN EMPLOYED. and:

Theodore Dehon, 10 Wall street, New York.

Charles Toppan, (Bank Note Engraver,) 111 Broadway, New York.

Rev. Harvey Newcomb, Brooklyn, New York.

Dr. Wm. A. Alcott, Boston, Mass.

A. J. Craig, Editor Wisconsin Journal of Education, Madison, Wis. x xii tf

MAMMOTH BOOKSTORE.

STRICKLAND & CO.,

BOOK AND STATIONERY JOBBERS,

134 EAST WATER STREET,

MILWAUKEE,

Are offering the best stock in the West, in large or small quantities,

At Very Low Rates.

AGRICULTURAL

AND

SCIENTIFIC BOOKS.

at publishers prices.

SCHOOL BOOKS,

AND

WALL PAPER,

x xii 3 at Eastern Prices.

The Great Western Nurseries,

(Formerly the Toledo Nursery Association.)

SOUTH SIDE OF RIVER, TOLEDO, OHIO.

F. PRENTICE, Proprietor. G. H. WHITE, Sup't.

WOULD respectfully ask the attention of ALL to their extensive stock of Fruit and Ornamental Trees, Shrubs, Roses, Green House and Bedding-out Plants, which they offer at the following reduced prices, for cash, viz:

2,000,000 two year old Apple Seedlings at...$4 per hundred
1,000,000 one " " " .. 3 "
Nearly all the different varieties Raspberries 4 "
A few kinds a trifle higher.

Strawberries, viz:—Boston Pine, Cremont's Perpetual, Hovey's Seedlings, Longworth's Prolific, McAvoy's Superior and Extra Large Red, Walker's Seedling, Jenny Lind, &c., at 25 cents per doz., $1 per 100, and $5 per 1000. Some few kinds a little higher.

All the leading varieties of Fruit Trees, viz:—Standard Apples 5 to 7 feet in highth, 20 cents each, $9 for 50, $14 per 100, $100 per 1000. Pears, 1 to 2 years old, very fine, 50 cents each, $35 per 100. Extra large, 3 to 4 years old, 75 cents each, $62.50 per 100. Standard Cherries, very fine, 7 to 8 feet, 50 cents, $25 per 100, $200 per 1000. Dwarfs at same prices 50 cents, $35 per 100. Extra Large, 75 cents, $62.50 per 100. The above prices are for first class stock; inferior trees can be furnished at a much lower price.

We flatter ourselves that no better selection of Evergreens and everything in the Ornamental Department can be found East or West, which we will furnish at as low prices as ANY responsible Nursery, as we sell only for cash, consequently make no bad debts.

We shall graft about 1,000,000 Apples the ensuing winter from the best budding varieties, which we will sell in quantities of 10,000 and upwards, at $6 per 1000.

We intend to furnish nothing but the best of stock, and true to name, and we believe (as we have much the largest Nursery west of New York) that purchasers will find our stock among the cheapest and best in the United States, and will make orders.

We have no agents except those carrying our printed contract books bearing our names.

Those sending us orders will please enclose draft or remit by express, and give particular directions as to mode of shipment, as all responsibility on our part must cease upon the safe delivery of packages in good order to the forwarders.

A small charge will be made for packing. Strict attention paid to orders, and filled in the orders they are received.

Catalogues furnished to those enclosing postage stamp.

F. PRENTICE, Proprietor.

G. H. WHITE, Sup't. x xii tf

Wisconsin State University.

AT MADISON.

Faculty.

J. H. LATHROP, LL. D., Chancellor, and Professor of Ethics, Civil Polity and Political Economy.

DANIEL READ, LL. D., Professor of Mental Philosophy, Logic, Rhetoric and English Literature.

JOHN W. STERLING, A. M., Professor of Mathematics, Natural Philosophy and Astronomy.

EZRA S. CARR, M. D., Professor of Chemistry and Natural History, and their applications.

JAMES D. BUTLER, A. M., Professor of Ancient Languages, and Literature.

JOSEPH C. PICKARD, Professor of Modern Languages and Literature.

J. F. SMITH, A. B., Tutor in Ancient Languages and Mathematics.

THOMAS D. CORYELL, A. B., Instructor in Mathematics, Surveying and Engineering.

DAVID H. TULLIS, Instructor in Book-keeping and Commercial Calculations.

Terms,—Begin:

1.—Third Wednesday of September.
2.—First Wednesday of January.
3.—Fourth Wednesday of April.
COMMENCEMENT:—Fourth Wednesday of July.

Expenses per Term of Thirteen Weeks.

TUITION	$4,00
PRIVATE ROOM,	3,00
WOOD IN WINTER	3,00
BOARD,	25,00

WASHING, 44 cents per doz.
Tuition in the Commercial School, extra. x xii tf

THE CUMMINGS
Hay, Straw and Corn Stalk Cutter.

THE Subscriber takes especial pleasure in offering this machine to the citizens of Wisconsin, and feels fully assured that it will give the most ample satisfaction to all who try it. It has been extensively introduced in the great Middle and Southern States during the last two years and rapidly superceding all others in use.

The subscriber wishes to introduce them into the Northwestern States during the present winter and spring, preparatory to a larger trade another season, and with that view will be glad to sell them to the prominent farmers in the different localities on favorable terms.

He will warrant them in all cases to give the most unqualified satisfaction and to greatly exceed all other machines in use.

It is both a hand and horse power machine, and can be used as readily one way as the other, without a moment's delay in changing, and will cut from one to two tons of feed per hour, without the least difficulty. And all corn stalks and coarse feed it not only cuts but crushes, thereby rendering it vastly superior to common cutting.

This machine has taken above

SEVENTY FIRST PREMIUMS,

at the different principal fairs of the United States during the last two years, including that of Wisconsin the past fall. In fact it never has failed of a first premium when exhibited.

The subscriber would call the attention of all interested parties to this highly valuable, and to the farmer indispensable machine, at their earliest convenience. They will be found on sale at most of the principal Implement Stores of the State, and a specimen may also be seen at the State Agricultural Rooms in this city.

☞ Expecting to be absent from the State considerable of the time, I have made arrangements with D. J. Powers, of the Wisconsin Farmer, to transact business for me in my absence in relation to said machines. Therefore address all communications on the Subject to G. B. GRIFFIN, care of D. J. Powers, Madison, Wis.

The subscriber is prepared to furnish the above machines to all regular dealers on favorable terms, or to farmers individually on order. For further particulars address as above.

G. B. GRIFFIN.

Madison, Wis., Nov. 20, 1858. x xii tf

GARLICK'S
Improved Portable Field Fence.

THE UNDERSIGNED would call the attention of the public to the foregoing highly valuable improvement in the way of fence. In point of economy, convenience and general utility, it is universally admitted by all good judges, to be the best thing of the kind in use. In fact, to be so perfect as to hardly admit of further improvement. It is so simple in construction, as to be easily made as any common board fence; and when made, is even more durable, as their is no posts to rot in the ground; well made and well taken care of, and it will last twenty years as well as ten, so far as decay is concerned.

The undersigned believe that a general introduction and use of this fence, will work a great economy throughout the entire farming community; and that it only needs to become known to come into universal use and favor.

We are selling Farm, Town and County rights, throughout the State, and append hereto the certificates of members of our best and well known farmers.

It has received the first premiums at all the Fairs, when exhibited, over all competitors (and they are numerous.)

What we most especially desire is to call the attention of good Farmers, and active business men to the subject. Feeling assured that it will be all that is necessary to cause it to be appreciated and at once brought into use.

Those wishing to purchase any of the aforesaid rights or to make future enquiries upon the subject, can address the subscribers, owners of the right of Wisconsin.

CROWNS & CARHART.

Fox Lake, Dodge Co., Nov. 20, 1858. x xii tf

Nursery Stock For Sale.

200,000 Apple Trees one year from graft, $12 per 1,000, in lots of $100 worth. 100,000 Root Grafts in spring of 1859, at $5 per 1,000 for 10,000 or more. 40,000 Currants of varieties, including 4,000 Cherry Currants. Scotch Hybrid Pie Plant, $6 per 100. Grape Vines, &c. &c.

Circulars gratis on application.

CHAS. HAMILTON & SON.

Ridgefield, McHenry Co., Ill., Dec. 1858. x xii 3

Sugar Cane Seed.

THE SUBSCRIBER has for sale a few bushels of carefully saved Chinese Sugar Cane Seed, which may be had in pound packages, one pound being sufficient to plant an acre.

This seed ripened in September, on the cane that produced the *FIRST PREMIUM SUGAR* at the Wisconsin State Fair of 1858.

Price of Seed: One package for 50 cents; three packages for $1,00.

—ALSO—

A Hand Book of Chinese Sugar Cane Culture; Syrup and Sugar Manufacture, &c.

in pamphlet form, is nearly prepared for the press, and will be ready for distribution about the first of January. Price 50 cents.

Orders accompanying the cash may be sent to C. A. Johnson, Madison, Wis., and will receive prompt attention.

C. A. JOHNSON,

x xii tf At Wisconsin Farmer Office.

BEN FRANKLIN

Book and Job Printing House.

THE Proprietors of the "Ben Franklin," announce to the public, that having lately added a new and improved

Jobbing Press

to their establishment, they are now better prepared than ever to fill all orders for CARDS, CIRCULARS, BILLHEADS, and every description of Bank, Railroad and Commercial Printing, at lower rates than the same quality of work can be done for at any other establishment in the State.

☞ Call and examine our specimens.

BURDICK & TREYSER, Proprietors.

Phœnix Building, 167 East Water-St.,

x xii 12 Milwaukee, Wis.

Important to Farmers.

CANADA CLUB SEED WHEAT FOR SALE.

IN ORDER to satisfy the demand which has been made by wheat growers for "Canada Club Wheat," for the purpose of renewing the seed, the subscribers are now receiving a quantity of Club wheat direct from the wheat growing districts of Canada West, which they are prepared to sell for seeding purposes.

As the quantity is limited, an early call will be necessary in order to secure the seed. Orders may be left with John Helliwell, Waupun, or with the subscribers in this city, where samples can be seen.

x xii tf HELLIWELL BROS.

ROBERT GURNEY'S

Great Western Tea Store,

174 EAST WATER STREET, MILWAUKEE.

FARMERS and others visiting Milwaukee, in search of GOOD TEA, COFFEE, AND SPICE, will find it to their advantage to call at the

GREAT WESTERN TEA STORE,

where they can save twenty-five per cent. in the purchase of TEA. Remember the number, 174 East Water Street, Milwaukee. x xii 12

J. A. Carpenter & Co.

FINE STOCK BREEDERS.

HAVE for sale Devon Cattle, South Down Sheep, Essex and Suffolk Hogs, Dorking Fowls, &c

Waukesha, Wis. x xii tf

DODGE COUNTY

Mutual Insurance Company.

WAUPUN, - - - WISCONSIN.

THIS Company having now become established and widely known as a strictly

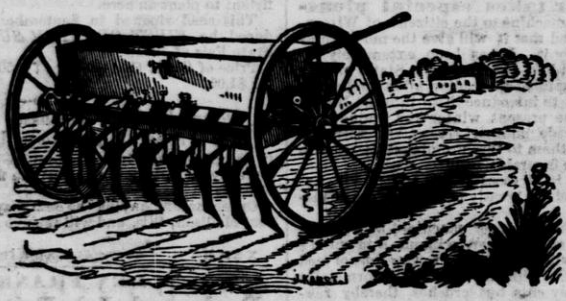
FARMER'S INSURANCE COMPANY,

would solicit the patronage of the FARMERS of the State. No risks taken except on isolated dwellings and farm barns. All losses promptly paid. Policies issued on both the mutual and cash plan.

OFFICERS:

JOHN WARE, President, Waupun.
EDWARD BARKER, Vice President, Waupun.
GEORGE W. BLY, Treasurer, Waupun.
L. B. HILLS, Acting Director, "
EDWIN HILLYER, Secretary, "
EDWARD BARKER, General Agent. x v 11

STONER'S NEW PREMIUM GRAIN DRILL AND SEEDING MACHINE COMBINED.



Patented Dec. 1, 1857. Is now ready for the Farmers of Wisconsin, and is in every respect up with the spirit of the age. This machine is a combination of all the qualities of other Drills, besides possessing several new principles just put into use. It is to this Drill that the first premium was awarded at the State Fair held at Madison, which is a proof of its superiority over all others.

Price of Drill $70, which is $15 less than any other Drill in existence, and is the only one manufactured in the State.

Every Farmer is invited to attend the trial of these Drills which will take place twice a year at the beginning of each seeding season, for the benefit of the purchaser. Time and place will be duly published. Farmers cannot do better than call upon or correspond with the proprietor and manufacturer.

A. STONER,
x xii tf No. 2, Spring Street, Milwaukee, Wisconsin.

BADGER STATE BOOK AND STATIONERY ROOMS.

HERMAN & WHITNEY,

175 East Water Street, Milwaukee, Wis.

WE would respectfully invite the attention of the residents of the interior of the State, to a choice and select stock of BOOKS and STATIONERY just received from the East, and which we are selling at prices SUITED TO THE TIMES, and which must prove satisfactory to all. We extend a cordial invitation to all to come and see us, with the assurance that they will not be asked to purchase unless they think it for their interest to do so. Our motto is, "QUICK SALES AND SMALL PROFITS," and we shall adhere to it.

We are the agents in Wisconsin for the "Atlantic Monthly." *Call and see us, and give us a trial.*

C. H. HERMAN. [x xii 12] J. WHITNEY, Jr.

Chapman's Sectional Maps.

1858. NEW EDITION. 1858.

WISCONSIN.

Containing all the new surveys, Progress of all the Railroads, New Counties, Towns, villages, &c. Price $1,00. South half of the State, 50 cents.

MINNESOTA.

Ninety newly surveyed townships have been added this year—over two hundred new places, names of Rivers, lakes, &c., not on previous editions, or any other map. Price 50 cents.

IOWA.

New surveys and new places added This is the only Map certified to by the Surveyor General. Price $1,00.

SURVEYOR GENERAL'S OFFICE, Dubuque.

I certify that this Map of the State of Iowa was projected by Major James A. Reid, from the original plats on file in this office, and that it has been carefully compared, and is correct.

WARNER LEWIS, Surveyor Gen.

LAKE SUPERIOR REGION.

The only Sectional map of Northern Wisconsin, and the Northern Peninsula of Michigan, containing the location of all the Mines. Price $1,00.

ILLINOIS.

Much improved, with Distances on Railroads, &c. &c.

TOWNSHIP MAP OF NORTH-WEST.

A complete Pocket Companion, showing all the Routes of travel in the North-West, being a condensation of the Sectional Maps.

LAPHAM'S SECTIONAL MAP OF WIS.

Scale, 6 miles to an inch. Price 2,50.

☞ Any of the above maps will be sent, postage free, on receipt of the price. Address,

S. CHAPMAN, Publisher,
x xii tf Milwaukee, Wis.

University Commercial School.

THE REGENTS of the Wisconsin University, at their meeting in July, established a

COMMERCIAL SCHOOL

In connection with this Institution, and now offer its advantages to those who desire to qualify themselves for Business and the Counting Room.

THE COURSE OF INSTRUCTION

Is as extensive and thorough as that of the best Colleges of the west. Special attention will be given to

Single and Double Entry Book-Keeping,

embracing every department of business accounts to Commercial calculations, practical penmanship, &c., &c.

Pupils are instructed individually, and not in classes, so that the student may enter at any time, and proceed in the ratio of their capacity and assiduity.

TERMS:

For a Full Course, time unlimited, in advance,	$ 30 00
Four students entering at one time,	100 00
Penmanship alone, per month,	5 00

Room No. 14, 3d story, Bruen's Block.

For further particulars, address,

D. H. TULLIS, Instructor.

Madison, Wis., Sept. 28, 1858.

Paper Ware House.

NOONAN & McNAB,

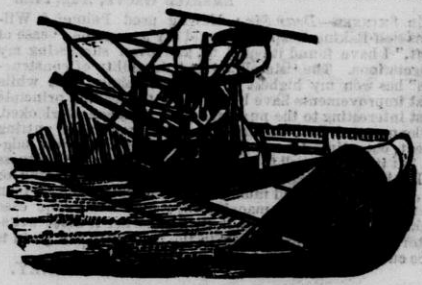
254, East Water Street, Milwaukee.

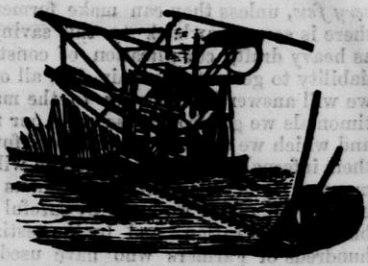
DEALERS in Printing, Wrapping, Book, Cap, Letter, Job and Manilla papers of every variety and price, embracing the most extensive assortment ever brought west of Lake Michigan. Also, dealers in ROPES, TWINES and CORDAGE OF EVERY VARIETY, including BROOM CORN THREAD and TWINES.

Cash for rags.

November 5, 1858. x xii 8

PALMER & WILLIAMS' PATENT
SELF-RAKING REAPER,





AND MOWING ATTACHMENT.

Another harvest of unbounded success to this Reaper gives us additional confidence in offering it to the Farming public, and in recommending it as the very best Reaper, all things considered, that the Farmer can purchase. In the badly crinkled and tangled grain of the past harvest, where from hand-rakers the sheaves would be delivered with the buts in the centre and the heads scattered every way—forming a complete hen's nest—the Self-Raker has struck with its strong arm and sinews of iron, into the very worst tangled gavels and brought them off with unerring precision—half straightening out their tangled forms as they passed along the curve board and long platform to the ground, at the same time saving all scatterings, and leaving the bundles in regular shape, slightly spread out, to dry quickly.

Aside from raking-off, there are other points which should be well considered before purchasing a machine, such as

Durability of Construction;
Ease of Draft;
Freedom from Side Draft;
And General Facility with which it can be managed.

In all or any of these points we wish to compare the Palmer and Williams' Machine with any other Reaper made. Those manufactured for Wisconsin are built at the old and reliable shop of Huntley, Bowman & Co., Brockport, New York, out of well selected white ash, seasoned for two years, and put together with the utmost care and precision.

The drive-wheel is large, being four feet in diameter, with a wide face and flanged, to prevent cutting into wet ground. The grain-wheel is thirty inches in diameter, and the machine is so evenly balanced that less than the weight of the tongue rests on the horses' necks when the driver is in his seat. The sickle can be thrown out of gear by simply removing a pin, and the rake stopped at any place in its revolution and retained any desired length of time, by pressing the foot or knee against the lever—thus putting the size of the bundle completely under the control of the driver. The cut can be raised or lowered by simply loosening a nut which is done by hand. And there being no trucks to bother, it can be turned and backed like a cart, around stumps and other obstructions, and turn perfectly square corners. *It is the invariable testimony of every farmer using them, that in all points above referred to,* THIS MACHINE IS UNEQUALLED.

To the Farmer, a difference of a few dollars in the first cost is a trifle compared with having a reliable, labor-saving machine. The expense of an extra man and the drawing of him around the field day after day, for one harvest, will more than make up the difference in cost between our Self-Raker and the cheapest hand-raker built—to say nothing of the saving of grain from scattering—and in lodged grain it also saves one hand in binding.

The Farmer has often been tempted to purchase an inferior machine, by the representation of Agents, who dwell long on their warranty, but when harvest comes on, of what value are these? The warranty may save part of the price of the machine, but the grain is spoiling and must be cut without delay.—How many an honest man has in this way lost more than the price of two machines in a single year. In order that a machine should answer the farmer's purpose, not only should the plan be good, but *every part* should be perfect. For instance, of what use to a farmer would a Reaper be, which, though perfect in every other respect, had a poor sickle, or one that would clog every little while; or want of experience in the particular builder may have left some material part too weak.

Farmers!—Beware of the representations made by proprietors and agents of hand-rakers. They see and know that their only hope of selling a machine is to keep the merits of the Self-Raker from being known to the purchaser and consequently they vent all their spleen on our machine, if it be but mentioned in their presence. What farmer will buy a machine that requires two men to operate it, when he

can get one that will do the work much better, with one man or boy to drive, and the same amount of team. The proprietors of hand-rakers know that their sales are numbered to *very few*, unless they can make farmers think there is some drawback to this saving—such as heavy draft, complication of construction, liability to get out of repair, &c., all of which we will answer by referring to the many testimonials we get from those using our machine and which we consider a sufficient refutation of their infernal slang. Our machine will cut as many acres in a day with one team as any other, and our raker, we know by careful and unbiassed observation, and by the testimony of hundreds of Farmers who have used them—will lay off all kinds of grain better than the most skillful hand of any hand-raker.

THE MOWING ATTACHMENT.

By removing six bolts, the main platform and Rake are detached from the Reaper, and the mowing bar can then be attached. It then forms one of the most simple, substantial and light running Mowers in use. It has been used extensively, and given universal satisfaction. No combined Reaper and Mower has yet been able to equal this, both as a Reaper and as a Mower.

TESTIMONIALS.

From Farmers who have used this Reaper the past harvest we have many testimonials, which we shall publish in our annual circular, which will be sent free of postage to all applying for them. These testimonials are not bought, or written out for the farmer to sign, but they are the spontaneous offerings of Farmers of high reputation, who would be above affixing their names to anything but their honest convictions. A few of these testimonials will be found below.

AGENTS.

BENJAMIN CHASE, Hampden, Columbia Co., Traveling Agent for Northern Wisconsin.

ERASTUS BEMENT, Oregon, Dane Co., Traveling Agent for Southern Wisconsin.

S. H. REYNOLDS, Johnstown, Rock Co.

C. S. HOYT, Emerald Grove, Rock Co.

Q. H. BARRON, Fox Lake, Dodge Co.

J. W. RHODES, Somers, Kenosha Co.

JOHN THILKIE, Prairie du Sac, Sauk Co.

I have also Local Agents in different parts of the State, who will solicit orders and furnish circulars.

PRICES.

Self-Raking Reaper, cutting 6 feet wide, delivered at Milwaukee, Racine, or Chicago, $160

Mowing Attachment, cutting 4½ do do 80

A LIBERAL DISCOUNT MADE FOR CASH.

Address us making any inquiry you wish, and the letter will be promptly answered, and blank orders furnished to those wishing them.

E. W. SKINNER, Madison,
General Agent for Wisconsin.

TESTIMONIALS.

Farmers! Read what Farmers Say!

EMERALD GROVE, Aug. 24th.

MR. SKINNER—*Dear Sir:* Having used Palmer & Williams Self-Raking Reaper, I would say as regards "ease of draft," I have found it equal to, and even surpassing my expectations. The "simplicity and durability of construction" has won my highest favor, for it shows that while great improvements have been made, the leading principle most interesting to the purchaser, has not been overlooked. "Cleanness of Cut"—I have used the reaper in cutting wheat, oats, timothy and Barley, some of which was lodged, but it cut them all to my entire satisfaction. "Neatness of Raking"—This part is most perfect, and men binding for me, say that they bind much faster after this machine than after any hand-raking machine they ever saw. The ease with which this machine will turn a corner is most satisfactory, not requiring a cradle in the field after the grain is once cut round. Yours truly,

R. CHENEY.

DARLINGTON, Sept. 1st, 1858.

DEAR SIR:—As I have used one of Palmer & Williams' Self-Raking Reapers the past season, and consider it just the thing for which it was designed. I think it the easiest running Reaper I have ever seen, considering the amount of labor it performs. It cuts as nice as any one could desire. It rakes off the grain much better than I expected. I consider the chain for driving the reel a great invention, as it never slips or allows the reel to stop. I have used the Reaper to cut about 165 acres of grain, and consider it about as good as when started. There is little or no side draft, and no weight of tongue. Any one wishing to purchase a Reaper for the next harvest, I would recommend Palmer & Williams' Self-Raking Reaper before any other in use.

Yours truly,
OLIVER S. WOLCOTT.

MONROE, Aug. 30, 1858.

E. W. SKINNER—*Dear Sir:* I have used one of Palmer & Williams' Self-Raking Reapers the past harvest, and can say that I am well pleased with it. I am likewise well pleased with the Mowing Attrchment. I cut from twelve to eighteen acres per day with one team, and twenty acres with four horses. I can cheerfully recommend it to others wishing to buy a Reaper. Yours truly,

G. W. BRIDGE.

COOKSVILLE, Rock Co., Aug. 30, 1858.

MR. A. PALMER, ESQ.—*Dear Sir:* I have used your Self-Raking Reaper, and I am well satisfied with it. For ease of draft, neatness of cut, and raking off, it cannot be beat I have cut this harvest 136 acres of grain with a light team, part of the time with two horses and part with three. I find no difficulty in cutting 10 to 12 acres per day with one pair of light horses. I have run your Reaper but one season and would not be without it for double the cost. I think it far superior to any hand-raking Reaper in use, for saving both grain and labor. Yours,

RICHARD HOUFE,
M. COOPER.

BURNETTE, Dodge Co, Aug. 28th, 1858.

MR. SKINNER—*Sir:* I have used Palmer & Williams' Self-Raking Reaper five years. Last year I thought I would try Mr. Atkins' Self-Raking Reaper, a new one that had been run through harvest, to cut some lodged oats. I cut about three acres and set it one side and took my old Reaper. I found that I could do better work and do it easier. I cut with the old Reaper about six hundred acres, and then sold it for $25 and bought a new one. I am perfectly satisfied with the simplicity of raking off and ease of draft. I cut from 10 to 16 acres per day, with two teams and might cut more The machine combined works to a perfect charm. I believe it is the best in use. Yours truly,

JOHN DOUGLAS.

MANCHESTER, Green Lake Co., Sept. 4th, 1858.

DEAR SIR:—I have used one of Palmer & Williams' Self-Raking Reaper with Mowing Attachment, and consider it ahead of any other Reaper that I am acquainted with, for ease of draft, doing more work with the same power than anything I am acquainted with, cuts cleaner and rakes neat, leaving my fields much cleaner than I ever had them before when using the hand-raking Reaper. I have cut twelve acres per day with one team, and consider it no harder than plowing two and a half acres per day. I have cut 90 acres in all, reaping only for myself. The mower works excellent. I have mowed 28 acres with it.

JOSEPH STALKER.