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THE

WISCONSIN FARMER,

AND

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DEVOTED TO

Agriculture, Horticulture, the Mechanic Arts and Rural Economy.

EMBELLISHED AND ILLUSTRATED WITH NUMEROUS ENGRAVINGS.

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Vol. 7. New Series

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SECRETARY WISCONSIN STATE AGRICULTURAL SOCIETY.

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THIS new establishment is now open to Dealers, agents and the retail trade for the fall of 1863. It contains an unrivalled collection of choice Apples, one and two years old, including over 100,000 *Crown Grafted, grown distinct.* APPLE STOCKS, the present year's growth.

CURRANTS—in great variety—Red, white and Black, one and two years, in large quantities. Also a general assortment of Fruit and Ornamental

Trees, Shrubs, Vines, &c.

The especial attention of the Trade, those wishing to plant largely, and those living remote from Nurseries, is called to this Stock as superior for their wants.

A LARGE FALL TRADE IS EXPECTED.

The best of references given. Send for circular Price List and Catalogue. Packing done in the best manner. Address

J. C. PLUMB.
Madison, Wis.

jy63tf.

STATEMENT

OF THE

Madison Mutual Insurance Co.

FOR THE YEAR ENDING

DECEMBER 31, A. D. 1862.

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		$327,464 67
ASSETS.		
Unimpaired premium notes of policy holders	$281,000 07	
Cash on hand and due from policy holders and agents for cash premiums	45,464 60	
Office furniture and fixtures	1,000 00	327,464 67
Whole No. policies issued		22,061
Am't of outstanding risks thereon		$15,962,060 00
Number of policies issued in 1862		7,706
Am't of outstanding risks thereon		$6,069,813 00
Am't premium notes thereon		108,323 93
Am't cash premiums thereon, less commissions to agents		45,727 80
Am't interest received		972 18
Total am't losses reported during 1862		$17,744 16
Total am't losses paid during 1862, 89 in number		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due		none,
Losses adjusted and not due		none.
Losses unadjusted		292 35
All other claims against the company		97 50
Am't paid for advertising and postage		1,763 66
Am't paid for printing		540 50
Am't paid for policy stamps		600 00
Am't paid taxes to Com'r Internal Revenue		92 92
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses		7,290 98

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : : : : : : EDITOR.

VOL. XV. MADISON, JANUARY 1, 1863. No. 1.

The New Year and Some of its Suggestions.

The world has passed another milestone on the great highway of life, and to-day is striding forward, as ever, into the realms of the Unknown. The Past is forever gone, but its events have found ineffaceable record. Will it not be wisdom in us to turn to that record—particularly to that portion of it which has been made since the opening of the year just departed—and so inform and strengthen ourselves for the duties and privileges of the Future?

THE INDIVIDUAL SOUL.

This holy of holies—the soul's innermost—who shall venture to invade the sanctity of its precincts? Not we; for we have learned that the soul is its own better high priest. But will it minister there as it ought? Ah! that is a question which every pure and noble human soul, and every superior intelligence of the Upper World asks and repeats evermore. Nay, it is a question in which the Great Father himself is more interested than in all else that pertains to this planet. Why? Because upon it hangs the present and future happiness of each individual, the welfare of communities and nations, the progress of the race.

Reader, dare to be honest with yourself this day, and so prove your kinship with the good and true of all ages. Light anew the lamp of conscience and let its intensest rays search out the most obscure places of the heart. If within the temple dedicated by God to Truth, Justice and the highest Purity, the base representatives of Fraud and Taint have been allowed, drive them forth in the might of summoned grace and of heroic aspirations, and then place God's Angel at the door, with sword of fire!

The life of man is full of glorious possibilities; but the period allotted for their fulfillment is brief at the longest. A single year is so quickly gone, and yet it is no small fraction of the whole. Oh, think of what growth you are to make in order to the fullness of intellectual, moral and social stature which should be yours ere the coming of the end. The way is open to you—the bright and shining way, that leads to the attainment of a beautiful and noble selfhood, such as shall be rejoiced in by man and approved by God.

SOCIETY.

We are each our brother's keeper, and no circumstance of life can absolve us from obligation to our neighbor. Has the past been as rich in good will and charitable deeds as it should have been? A man's benevolence is the measure of his life. If narrow and selfish, it is inevitable that he be a miserable dwarf, spiritually and socially. If broad and generous, seeking the good of others and deriving his happiness therefrom, it is just as inevitable that he develop into a great and noble manhood.

The soul is a sacred entity, and he who by willful neglect or misdirection stints or cripples it, commits a most fearful crime, not only against the soul itself, but also against society and against God. There are a thousand ways in which it is possible to contribute to the elevation, progress and happiness of those about us, and so help to make society what it was designed to be—a beautiful and harmonious association of individuals, each aiming at the greatest good of the whole. Let us see if we

may not make the coming year more fruitful of social improvement than the past. The circumstances are likely to try us more severely than ever before; may none be found wanting.

THE COUNTRY.

Our country! What is not comprehended in those two words? The all there is of home, of kindred, of institutions, of nationality, of present and future glory is embraced—things all the more dear, just now, for that they are in peril of being lost.

We had become a sordid people, unworthy the sublime sacrifices of our immortal sires, and another half century of rapid growth and unexampled prosperity would, probably, have ruined us as a nation forever. Even now, ere the close of the first century of our national existence, there is too much ground to fear that the virtue of the people is less than equal to the crisis through which the Republic is passing.

It is now almost two years since the red hand of Treason was lifted to smite down the beneficent and glorious government of our fathers—a government so beneficent and so glorious that all peoples and kindreds have rejoiced in its light and flocked to its standard—and yet the nation is to-day virtually under the power of a degrading and wickedly disloyal sentiment, the very antipode of that lofty and pure patriotism which alone can save us from utter ruin. And to make the case still more desperate, the fires of dissension have been lighted upon our Northern altars by base, unscrupulous partizan leaders, to whom the gratification of party ambition and the aggrandizement of self are of paramount worth. It is these fires that must first be put out before we may hope to extinguish the lurid fires of the Southern Rebellion.

It makes no difference whether God deals with us in special or in general providences; nothing can be truer than that we are doomed as a nation unless there be virtue enough in the people of the free North to hold their leaders to a strict account, even to the compelling a subordination of every other interest to the one great end—the vindication of the authority of the Government and its firmer establishment upon those pure and noble principles on which it was originally based. And if there be not patriotism enough in the land to ensure this, then must it be true that we are unworthy of our rich inheritance, and equally inevitable that it should pass away from us. But it is not alone the Government we love that would be lost with that passing away. With it would go the hope of millions in other lands, who are looking to-day with a trembling and an agony of anxiousness to see the final result of this grand "experiment." If we fail, it is not we alone; Freedom and Humanity will fail with us, and eternity can never fully repair the injury inflicted upon the struggling race. We are to-day fighting the world's greatest battle; let us not be mean enough to think we can settle it upon the narrow and contemptible ground of temporary expedient.

We have given freely of our substance, and of the blood of our dearest kindred to make sure the grand result; so let us continue to give, though demanding of the Government and exacting of our military leaders that our sacrifices be not in vain.

President and people have learned a lesson from the sad mistakes of the past year: God grant that they fall not into even greater errors in the months to come.

THE RACE.

But there is a grander word than patriotism, and yet akin. It is *philanthropy*. Not that poor and soulless sentimentalism which too often wears the name and so brings a reproach upon the genuine love of man as man, but that pure, unselfish sentiment of the all-embracing soul which ignores the narrow boundary lines of nations, and labors for the whole human race. Christ was the grandest and sublimest representative of this sentiment the world ever saw. His vast out-reaching love knew neither circumstances of birth, nor of religious creed, nor of country, nor of race. He was brother to every human soul, and his life's work was for the equal blessing and saving of all.

The race is full of needs, material, social, spiritual. Let us bear this in mind; remem-

bering, also, that narrow limitations cramp and bedwarf the powers of the soul. Let us, in the future, more than we have been wont, emulate this sublime virtue of the great Exemplar and so lift ourselves up upon the higher plane upon which he stood.

The Great International Exhibition.

NO. IV.

GREAT BRITAIN, CONTINUED.

The Coals on exhibition were numerous and highly interesting, as illustrative of the vast resources of the kingdom. The most important coal fields were well represented—the Midland and Welch best—those of Durham and Northumberland, of Lancashire and Cheshire next. But there were likewise fine samples from the Yorkshire, the Scotch and the Irish mines.

Hunt gives the following as the number of collieries and rate of production:

	No. Collieries.	Tons of coal raised 1860.
Scotland,	427	10,900,500
Durham and Northumberland,	142	18,244,708
Lancashire and Cheshire,	324	12,100,500
Yorkshire,	387	9,284,000
Staffordshire,	568	7,648,300
Monmouthshire,	79	6,254,813
South Wales,	299	
Derbyshire, &c.,	205	6,215,000
Gloucestershire,	63	5,503,400
Somersetshire,	37	

It thus appears that the total number of collieries in the United Kingdom is 3,009; the whole number of tons of coal raised being 74,042,698. Of this enormous quantity, much the greater part—nearly all—is consumed at home; still, the total of the exports is considerable, amounting for that year (1860) to 6,788,060 tons.

But the foregoing table but partially represents the great number of varieties which, considered in detail, enter into the commerce of the country; seventy different denominations being imported into London alone. These, however, may be included under four general heads, to-wit:—1, Caking coal; 2, Splint, or hard coal; 3, Cherry, or soft coal; and 4, Cannel, or parrot coal.

Caking coal derives its name from its property of fusing or running together when heated, so as to form one mass, unless broken up. It breaks into small irregular fragments. The coals of Newcastle, whose extensive fields we had the pleasure of surveying during our northward tour in England, are of this class. Caking coal is also derived from many other localities.

Splint coal was shown in large blocks, representative of the Glasgow and other fields. It is more like stone in its hardness, and is quarried with more difficulty than the softer varieties. It does not kindle easily, owing to the absence of the inflammable gases which characterize other coals, but when lighted affords a clear, lasting fire of strong heat. The Anthracite coals of Wales properly belong to this class. Gniscedwyn Co. exhibited a fine block from their mines at Hendreladis, weighing 38 cwt.

The Cherry or soft coals are an abundant and beautiful variety. Velvety and shining in hue and lustre, easily broken, readily kindled and yielding a bright light, with a residuum of white ashes, they are everywhere popular for domestic use. The Staffordshire coals are chiefly of this class.

Cannel is supposed to be a corruption of candle, and to have been applied to the variety of coal known by that name on account of the readiness with which it kindles and the brightness of its burning. It has a waxy lustre and resinous fracture, and the best quality leaves but little ash, which is white and light. Some varieties of Cannel coal take a good polish and can be worked ihto various articles for ornamental use. *Jet* is nothing else than an extreme variety of this coal.

The quantity and quality of illuminating gas derivable from Cannel coal exceeds that of any other, and it is accordingly very extensively used for this purpose.

Such are some of the coals of the United Kingdom. Though the area of their fields is not more than half as large as that of our own, as determined by surveys already made, their resources are nevertheless immense, and they exert a mighty influence on the industry of the country. Indeed, without them, England

could never have been a great and powerful nation, such as she is to-day.

THE MINING OF COAL.

In this country where many of our best coal fields are accessible by lateral or horizontal working—the coal being often drawn out from its bed directly by teams, without any labor of hoisting and pumping, we have but little idea of the business of mining in Great Britain, where facilities of this sort are very exceptional—a great majority of the mines requiring perpendicular shafts many hundreds of feet deep, and a ceaseless working of the most powerful engines to keep them ventilated and free from water.

It is there that mining is done at the peril and almost certain sacrifice of the miner—that families dwell in the night of the mines from generation to generation—that pallor and wretchedness and disease mark their thousands of victims—that often hundreds, by one fearful explosion, or in-flooding of waters, are, in a moment, destroyed.

Science has done much for the race of English miners, however, within the past few years and it is still doing more and more to ameliorate their condition. During our travels we had the opportunity several times to descend into the mines, and can testify from what we have seen. In many of them the system of ventilation is excellent, the means of exhausting the water, which would otherwise render them entirely unworkable, quite adequate, and the safety-lamps such as to secure almost perfect immunity from danger.

MECHANICAL AND CHEMICAL PRODUCTS OF COAL.

The Aberdare Steam Fuel Co. and others had on exhibition specimens of what was called "Puri ed Block Fuel." It is manufactured from the small particles of coal, heated with coal pitch, or other bituminous substance, over a furnace, and then compressed by hydraulic machinery in iron moulds. By this means it acquires a density even superior to that of many coals, and a form which greatly increases the facility of transportation and handling.

"Mineral Black Paint" has been prepared from coal for several years, and of late it has given origin to a large number of the beautiful colors used in the printing of calico.

BRITISH PEAT AND ITS PREPARATIONS.

The peat bogs of Ireland are as famous as the Green Isle itself, and we early sought among the coals for samples of this interesting product of nature. We were not disappointed; not only Ireland but several English localities being represented.

The supply of this half-formed coal is quite inexhaustible, and manufacturers of iron, of gas, of blacking, of phosphorous, &c., are turning it to good account.

Several specimens of prepared peat were on exhibition. When wet, the peat is moulded by machinery; it is then dried by artificial heat, and finally subjected to the carbonizing process, by means of which a hard charcoal is produced, said to stand a greater blast than ordinary wood charcoal, and to be, on other accounts, more valuable.

But much the larger portion of peat consumed is used in its crude state as fuel, and on this account, it naturally suggests the vast bogs which furnish it, together with the innumerable shanties and the wretched groups of half naked, dirty, starving children, where and in the midst of which, we have often seen it smouldering. What could poor, distressed, poverty stricken Ireland do without it?

BRITISH IRON AND OTHER METALS.

The specimens of Iron ore were numerous and varied, representing the Red Hematite, of Wolverstone and White Haven; the Brown Hematite from Cornwall, South Wales, Devonshire, and numerous other localities; Spathose Ore from the Brandon Hills, and other localities; the Argillaceous Carbonates and Clay Ironstones from the coal measures generally; Carbonates of the Protoxide of Iron, from Cleveland; Hydrated Oxides, from Staffordshire, Oxfordshire, Lincolnshire, &c.; and the Black Band Ironstone, from Scotland, and South Wales.

Many of these ores are of superior quality, and the mines whence they are derived are

seemingly inexhaustible. Some of the Brown Hematites make the best steel manufactured in Europe.

The Manufactured Iron constituted one of the most interesting branches of this class of the Exhibition; particularly when considered in connection with the history of iron manufacture. According to the Report of the Keeper of the Mining Records, &c., the quantity of pig iron produced in 1750 did not exceed 30,000 tons. In 1860 there were 582 furnaces in blast, yielding 3,826,752 tons of pig iron.

In the Department of Manufactured Iron, many remarkable examples were shown—a "double-throw" crank-shaft of 1,350 horse power, intended for Her Majesty's Steam ram, Northumberland, being a most wonderful product of the forge. Its weight as it came from the hammer was 24 tons, 10 cwt., 3 qrs. and 19 lbs.—the largest double crank-shaft ever made.

Several armor plates were likewise shown, of great dimensions. But the most notable thing in the way of hammered iron—next after the crank-shaft referred to—was a plate 5½ inches thick, 6 feet wide, and 30 feet long!

The exhibitions of *Steel* were also highly interesting. An improved process, illustrated by W. Hawksworth & Co., exhibitors, for making various shaped tubes, is worthy of notice. It is as follows:

"We take a piece of properly prepared steel, from six inches to a foot long, by from two to six inches diameter, through which a hole of a certain size is drilled, and afterwards by a series of drawings through a wordle and over a mandril (both of peculiar construction), the metal is elongated and highly polished at the same time, and reduced to the given shape and size, internal and external. Should the tube be desired for a gun or rifle barrel, it is afterwards passed through elliptical rolls and the desired cone given; then placed in a matrix and the mandril drawn through to straighten the bore and bring it to the proper size. One machine, worked by five men, will throw out six hundred barrels per week. The process is simple, expeditious and cheap. Cast steel barrels made under it can be sold at but little over the cost price of the present ordinary iron ones; and the principle is, moreover, applicable to all ductile metals."

COPPER ORES AND MANUFACTURED COPPER

Were present in variety and quantity, the former from the Cornwall district, Wales, Devonshire, Lancashire, Yorkshire, Cumberland, Scotland and Ireland; the latter chiefly from the Mona Smelting Works in Anglesea, and from Swansea.

The ores embraced the more valnable commercial varieties, such as Copper Pyrites, Yellow Copper Ore, Grey Copper Ore, Malachite, (green carbonate of copper), and Red Oxide of Copper. The quantity of Copper produced in Great Britain is very much less than sufficient to supply the demand. In 1860 the value of the produce of the English mines was about eight and a half millions of dollars, derived from the sale of 15,968 tons of copper.

In 1861, England imported 74,163 tons; in the same year exporting 14,865 tons in bricks and pigs, and 2,359 tons of sheet copper.

The specimens of copper smelting were marked:

"*Calcined* Ore—copper ore after the extraction of the sulphur.

Coarse Metal—obtained by the 2d process of smelting, producing about 40 per cent.

Calcined Coarse Metal—3d process, for the extraction of sulphur from the coarse metal.

Metal 'Brych'—4th process, producing about 65 per cent. of copper.

Close Regule—5th process, producing 70 per cent.

Spongy Regule—6th process, producing about 80 per cent.

Blister Copper—7th process, yielding about 95 per cent. of copper.

Select Ingot Copper—fine metal as prepared for market.

Tough Ingot Copper—ready for market.

Tough Cake Copper—hammered out by hand in illustration of the malleability of this copper.

Tough Bar Copper—as specially prepared for the manufacture of wire."

PRODUCTS OF LEAD MINES OF GREAT BRITAIN.

The ordinary commercial ores were well represented. They were chiefly the sulphides, consisting of lead 85.13 and sulphur 13.02 per cent. In connection with the ores from Cardiganshire were some tools and a pig of lead, discovered near the close of the last century, and bearing undoubted evidence of having belonged to the Roman miners in the time of the Emperor Adrian. The ores contain silver

in quantities varying from 2 to 40 ounces to the ton.

The production of the lead mines of the United Kingdom in 1860, was, of lead ore 89.-081 tons (yielding 63,505 tons of lead), and 549,720 ounces of silver.

By the earlier, indeed by the quite recent methods, less than 20 ounces of silver to the ton scarcely paid for the expense of working; but by a new process discovered by the late Hugh Lee Pattinson, ores containing only 3 ounces to the ton are economically worked. According to Mr. Patterson,

"This process of desilvering lead is founded on the physical fact, that lead crystalizes at a temperature above that at which silver solidifies, and in this process of aggregation, the silver is separated from the commoner metal. It is effected by the use of hemispherical cast-iron pans, holding about three tons of metal, which are heated by a fire below them; the silver-bearing lead is placed in this and melted, after which the fire is withdrawn and all made air-tight below. The workman now begins to agitate the mass, which he does with an iron rake, removing the solid parts from the edges, as the solidification takes place. With an iron strainer the solid crystals are removed as fast as they are formed; these are nearly pure lead, the liquid mass left behind being rich in silver. This process is repeated three or four times; the mass left after the last operation, which contains from 300 to 400 ounces of silver to the ton, is then submitted to the process of cupellation (heating in shallow crucibles), by which the lead is oxydized, and the silver left in a state of purity behind."

THE TIN MINES OF CORNWALL AND DEVONSHIRE

Are famous as being the chief source for the whole world of this beautiful metal. There is but little doubt that they were worked long before the invasion of the island by the Romans. The Phœnicians certainly traded with the early Britons for tin, and it has been surmised, not without good ground, that the bronzes which decorated the palaces of ancient Nineveh and Babylon derived their tin from this same source.

But notwithstanding this drain upon them for two or three thousand years, the mines of Cornwall and Devonshire are still highly productive, yielding in 1861 more than ever before, to-wit: 10,965 tons of ore, or 6,986 tons of metallic tin.

MANY OTHER METALS,

Including nearly all the precious metals used in the arts, mechanical and decorative, and some which are used solely in the chemical and medicinal, are either found natively in the British Kingdom or are imported into that country in the crude state for manufacture. Beautiful specimens of gold, silver, platinum, iridium, arsenicum, sodium, potassium, &c., &c., were on exhibition in this department of the British Court.

But the most interesting of all—because of its more recent discovery, its peculiar properties, and the many uses to which it is being put—is

THE BEAUTIFUL METAL ALUMINIUM.

A few years ago, who could have imagined that the clay trod under foot in street and field, as dirt or a very troublesome kind of mud, was really based upon one of the most beautiful of metals in the world? And yet such is the case, for the base of clay is Alumina, and this is simply the oxide of the metal Aluminium or Aluminum.

According to M. Deville, in his report to the French Academy in 1855, the most common clays contain 25 per cent. of their own weight. He therefore concludes that "it is eminently suited to become a commonly used metal." It is at present obtained with considerable trouble and expense, but the experience of the past should teach us that the method must be eventually so simplified and economized as to insure its cheap manufacture.

When pure it possesses a beautiful greyish-white lustre, and is so inoxidizable as to be handled for any length of time without tarnishing; indeed it is capable of resisting the action of the air in a "muffle" furnace, heated to the temperature at which gold is assayed; while it is not the least affected by a heat which consumes lead, or melts litharge. Its great lightness adapts it to many uses for which the other metals are inconvenient. The oxide of the metal is pure in the sapphire and the ruby.

With copper it forms a most beautiful gold-colored alloy, which was exhibited under the name of Aluminium Bronze. This alloy also resists the action of the atmosphere, and is excessively hard. The polished surface is exceedingly smooth and soap-like; which property, added to its lightness, and hardness must give it great value in the construction of those

portions of certain kinds of machinery which are subject to constant friction.

Articles of jewelry of every description, decorative ornaments for rooms, watches, clocks, and a thousand other things are being made of it.

Another beautiful evidence of the measureless beneficence of the All-Giver—another triumph of the Genius of Science!

IMPROVING OLD PASTURES.—At a recent agricultural meeting in Cheshire, England, Richard Dutton read a paper on the "Agriculture of Cheshire," in which he remarked: "An old pasture field, rich in good herbage, *should never be brought under the plow*, on a dairy or grazing farm, without an urgent necessity. On our best dry soils, old pastures are apt to become rough, and in seme cases covered with moss. This may be prevented to a great extent by a top dressing of salt, during the winter at the rate of 10 cwt. per acre; or, in some cases, a good dressing of lime, at the same time freely harrowing the surface; or, what is less expensive, stocking them with sheep, during the winter months, at the same time feeding them with turnips or corn. In a very productive summer, or when a farmer has been unfortunate with his stock, he may with advantage mow such parts of his pastures as can be spared for the purpose. It is superfluous for me to say that on a very large proportion of our grass lands, draining and bone dusting are the great means of improvement. A question of some importance may be asked: 'Are all our clay soils improved by draining for mowing and pasture purposes?' I think not. When there is nothing in the herbage produced which indicates the presence of too much water, I think draining will add nothing to the fertility of such soils so long as they are in grass."

FARM HEDGES—HONEY LOCUST.—We have, among other varieties, suggested the honey locust as a plant worthy of pretty general trial, for a farm hedge. It is a strong-growing plant, forming, in its natural condition, a tree of good size, and therefore will require severe pruning to form a hedge. Some have tried it and failed, perhaps from too close planting. It requires considerable room, and if grown as close as the hawthorn or osage orange, will become choked. Dr. Warder recommends it as the most promising hedge plant we have; and Wm. Reid, Elizabethtown, N. J., who has many fine hedges, is satisfied, after twenty-five years, trial, that it is more easily kept and better adapted for a farm fence than any other plant that has yet been used. Those, however, who expect to have a good hedge, in a few years, of this or any other plant that we are acquainted with, will be sorely disappointed.—*Rural New Yorker.*

Drilling Wheat.—Grain Drills.

For many years the drill has been popular in those European countries wherein agriculture has flourished most. But its use in America, to any considerable extent, has been limited to within the past few years. The principle upon which the practice is founded is philosophic, and its popularity must continue rapidly to increase.

We have repeatedly urged upon the attention of our readers the advantages of drilling and and must continue to do so until all have been induced to make the experiment. The following, from the *American Agriculturalist*, will show that we are not alone, among the journalists, in an advocacy of this method of seeding:

"There is scarcely any operation of farming concerning which practice, in different parts of the country, varies more than in this. The grain drill is a rare sight in New England, and rare also in many parts of the Middle and Western States and Canada. Still wherever its use is common it is held in very high estimation. In saving seed alone, a drill more than pays the interest on its cost. The risk of winter killing is greatly diminished, and an even seeding is readily secured. In the following communication from Mr. A. Linton, of Chester Co,, Pa., written in response to a request from ourselves, the advantagea are very simply and strongly set forth, and deserve the attention of every wheat grower who does not use the drill:

THE USE OF THE DRILL.

To say anything advocating the use of the drill in sowing wheat in this section of the country, would be as superfluous as to discuss the excellence of anthracite for fuel, or the utility of steam as a motive power. The use of the wheat drill is so nearly universal here on all land where it can be used, that the sight of a field sown in the old fashioned broadcast way is a rare occurrence.

The advantages of drilling wheat may be very briefly stated as follows: It distributes the seed more evenly over the ground than is generally done in broadcast sowing; the wheat is not so liablo to be thrown out by the freezing and thawing which occurs here during the winter; the depth at which the seed is placed in the ground can be regulated to a certain extent as the moisture or dryness of the soil may require, to insure its speedy germination. It takes less seed; the crops look better and ripen more evenly than if sown in the old fashioned way; and lastly, the use of the drill insures a

more thorough preparation of the ground previous to seeding, being a good cultivator itself.

As to the points to be possessed by a good drill: It should supply the seed regularly and equally to the separate drill tubes. The grain as it drops into them, should be plainly in view, that the operator may see at a glance that they are all working properly. It should not be so as to prevent the regular flow of the seed. It should have an index to mark the quantity of ground sown, and a fixture enabling the user to regulate the rmount of seed per acre. There should be a contrivance to raise or fall the tubes at once, at least one foot clear of the ground; a similar contrivance to raise each tube separately, so that one or all the tubes can be cleared of any sods or other obstructions to successful covering of the seed. Each tube should be so arranged that if it should strike a stone or root, it will fly back without breaking anything more than a small wooden pin. The drill tubes should not be too heavy, and yet heavy enough to put the seed in sufficiently deep. It is better to drill in fall wheat by the first of October, as seed sown after that time often fails. The cause of failure, I think, is owing to drilling the seed too deep; the ground at that season is cold, and seed placed too deeply in the soil is a long time coming up, the plants are stunted, and never after become vigorous."

Eradication of Ox-eye Daisies.—Do you or any of your subscribers know how to eradicate the Ox-eye Daisy? Part of my farm is becoming infested with them, and I want to get them out. *Ans.* They may be kept iu check by sheep, they eating them so close that they will not seed. Sometimes they are kept from spreading by mowing them off with the scythe, while in flower, but they cannot be eradicated except by smothering with rotten wood or straw, or by effective cultivation. J. J. Thomas states in the *Country Gentleman*, that on a farm which he had lately visited in Pennsylvania, the Ox-eye daisy has been so thoroughly eradicated that not a plant could be seen though it is generally abundant in the neighborhood. The mode practiced for its extirpation is to plant two hoed crops in succession, usually Indian corn, both being well manured, to be followed by wheat and seeded to clover. The few weeds which show themselves are dug up.

Putting in Wheat, and the Chinch Bug.—Will you give the best method of putting in wheat to keep the chinch bug from working in it. Some farmers say leave the ground hard as you can get it, is the best way. Please give your opinion in the Farmer. C. S. E.

Garden Valley, Jackson Co.

[We will discuss this subject at some length in a subsequent number.—Ed.]

Preparing Corn Ground.

Ed. Farmer:—I am a reader of the Farmer, and wish to continue so to be. In answer to your request in the Oct. No. to say either yea or nay as to whether the Farmer shall be sustained, I say Yea, it shall be, as far as I can contribute to its success.

I venture to give my experience to the farmers of Wisconsin as to the results of different modes of preparing the soil for corn; and then they who are satisfied with their old system can continue it, and they who would apply a more thorough system can do so.

I planted 3 acres and 60 rods of corn the past season, dividing it into 3 lots and preparing the ground in three different ways. The first lot was fall plowed; the second lot was spring plowed, and both were planted by the 16th of May. The third lot was fall plowed, and then spring plowed, after the other was planted,, and planted on the 26th of May. The twice plowed was planted ten days later than the other two lots. All three lots had an equal share of the hoe and cultivator. The whole lot was new land. only broken up in 1860; no difference in quality. But in husking and gathering in the crops the difference was surprising.

The first two lots—only once plowed—was nearly one-third less in quantity, and did not ripen so early. Moreover, the quality is not so good by at least five cents per bushel. The secret of both fall and spring plowing lies in the extra depth. An ordinary team that can plow six inches deep in the fall, can plow eight inches deep in the spring. An extra two inches of depth is of great consequence to corn. I have seen corn roots only six inches long, with shallow plowing, and I have seen them twelve inches long, where the soil has been loose, and I have measured one this fall, where I plowed twice, sixteen inches long.

In regard to deep plowing, the true theory is that it secures a deep, dry, warm bed of air-exposed soil, and that can be accomplished by plowing one inch deeper every time until a foot of good vegetable soil is attained. The soil is then prepared for the penetration of air and

water to invigorate the plant. By this means I am perfectly satisfied that from fourteen to twenty days can be gained in the maturing of the crop, besides the extra yield and extra quality.

Another important matter is to select the earliest ripe ears of corn out of the field in the fall. D. ARCHER.

SPRINGFIELD, Wis.

How to Boil Cider, and How to Keep it Fresh.

MESSRS. HOYT & CAMPBELL:—The November No. of the Wis. FARMER, which you had the kindness to send me, has come to hand. I have read it carefully, and found it one of the best Agricultural Journals I ever read. Having a little farm myself, I concluded to take the FARMER. Inclosed please find $1.00 for which please send it to me regularly to Schleissingerville, Washington Co. Wis.

I have one favor to ask of you, however, which you will please grant me. I have bought several bbls. of sweet cider, some of which I will boil, and some I will keep till summer.—Please tell me how to boil cider, and if it can be done in an iron kettle, or must it be copper? Please tell me how I must manage my cider in order to keep it properly, in order to keep it good and sweet. By so doing you will much oblige. THOS. JENNER.

SCHLEISSINGERVILLE, Nov. 26, 1862.

ANSWER.—Cider-boiling requires a copper kettle, and the process, though not difficult, requires close attention, particularly when the cider begins to syrup down.

To keep cider sweet, it is recommended by Prof. Horsford to use a small quantity of sulphite of lime—the same agent used to purify sorghum syrup. It is cheap and may be obtained in almost any of the cities. Others recommend putting the cider into a cask that has been used for oil, and others use sulphur, mustard, charcoal, &c., &c. We have never tried the sulphite of lime, but are inclined to think it may answer a good purpose. Cider may be kept nicely in bottles, after remaining awhile in the cask to settle. If a small mass of rock candy be put in, and the bottle close sealed, the cider will be as good as champaigne.—ED

Calves—Chufas—Fruit and other Crops on Sandy Land.

FRIEND HOYT:—I saw a request in a late No. of the FARMER for "the farmers to write for the FARMER," all and every one. I have often conversed with intelligent farmers, and learned many things that were worth remembering, and have asked them why they did not write *that* to the FARMER? They answer, invariably: "I write! Why, I don't know an exclamation point from a comma, and they would not print what *I* would write." I said, "They cannot expect all farmers to be bookworms, and labor too; and none but those that *labor*, know by *experience* what they write. I am no better scholar than you, yet, *I* shall write; if I don't write right, they must make it right."

But I write for advice. I will state my case first: A number of our calves have a dry sore, something like a wart, about their heads, and one has nearly lost an eye by one that began on her eyelid, and appeared to go under till the rough edges rubbed the eyeball. Now can you tell, or can any one else tell what it is, or if it can be cured? They are in very good condition—not any too good, yet not poor. One would suppose they would be very poor with such sore heads.

I must tell you now my experience in the culture of chufa. I raised it on the prairie for 4 or 5 years, and I have raised it *one* year on sand. I raised four times as much on sand as on prairie. So I conclude sandy land is best for chufa. I should like to hear from some one else.

Is sandy land good for fruit? and what kinds do best? Do you think peaches could be raised on sand openings? For instance, take a lot nearly surrounded with woods. I have a great notion of *trying* to raise peaches on such a lot. I tried them on the prairie, but with no success. Some say grapes do well on sand. I set out a number of cuttings last spring, and they grew finely. Some seem to be "dead set" against sandy land, but our one year's experience has been good. We raised good turnips, parsnips, capital corn, potatoes,

any quantity of pumpkins, squashes, cucumbers, tomatoes, endive, peas, beans, &c. Salsify, carrots and onions did not do well. Gumbo did well, but was too late. Chufa beat anything I ever saw; but we cultivated well.

N. M.

LODI, Dec. 5, 1862.

ANSWER.—We know something of the disease referred to. It is due to a foul habit of the animal system, and can often be cured by purges of sulphur and the use of some alterative medicine, such as a compound of one part of Æthiops mineral, two of nitre, and four of sulphur, administered every night, in doses of one-half to one ounce, according to age and size of the animal. The warts may be removed with a sharp pair of scissors, the raw surface of the root being afterwards touched with the nitrate of silver. Pustular eruptions on the edges of the lids, characterized by great soreness, are difficult to cure, but may sometimes be cured by the use of an ointment of the nitrate of mercury. Any druggist can prepare it.

We have but little hope of present success in the raising of peaches in the open orchard in this State. Sandy land with proper manuring will grow good fruit.—ED.

Economy of Small Farms.

The *Maine Farmer*, in an article on Chinese husbandry, deduces some conclusions in regard to the economy of small farms.

1. The term *small farms* may need some qualification. In France, the majority of farms do not average more than five acres each; but here, a farm of from fifty to seventy-five acres would be called a small farm. And we believe there is more profit in working a farm of this size, considering the expense attendant upon it, than in carrying on a farm of three hundred acres. Eventually, all our farms will be reduced in size, partly for the purpose of conducting them with more profit, and also because agriculture will ultimately be the leading profession engaged in.

2. We learn another lesson from their methods of saving fertilizing materials to apply to the soil—a lesson of the greatest importance, and one which we could use to good advantage. Were the same economy in saving manure practiced here as is common in China, we could support a population double our present number, send men enough to war to put down every rebellion, whip England and France, pay all our taxes, and leave everybody rich.

3. In the application of manure and irrigation, another lesson is taught us. There is no doubt that manure in a liquid form is the best food for plants that can be applied. It comes in direct contact with the rootlets, and in a form readily to be available for their growth. The more liquid manure we use, and the more irrigation is practiced—where practicable—the greater will be our crops, and the more sure our success.

The Farmer's Life.

The farmer's life, like the lives of those engaged in other occupations, has its sunny and shady side. It is a mingling of care and comfort, of toil and recreation, of disappointment and satisfaction, of fatigue and freshness. It is not a life fraught with brilliant hopes, with fanciful anticipations, or magnificent expectations. It is not a life whose restless days and sleepless nights are spent in contriving how to gratify a selfish ambition, by extending personal power and influence. Neither is it a life whose chief and mighty object is to acquire an immense fortune, to become the possessor of warehouses, ships, banks, railroads, and all the other costly appendages of a princely fortune.

It is a life that is unperplexed with such vast schemes and bold calculations. Yet it is a busy and honorable life—important to mankind and the world, and it is necessary to build up national wealth, prosperity and happiness. It is a life whose qualifications for success are a vigorous body, a vigorous will, and vigorous common sense. Yet with these important requisites, the farmer's life is not usually favored with rich golden harvests, or sudden pecuniary independence. He does not gain his thousands by a single stroke of financial tact and foresight; he does not look to the uncertain chances of speculation, to place him beyond the reach of indigence and labor, but he toils early and late, satisfied with small profits and managing generally to save a large proportion of his gains.

Thus his income usually exceeds his expenditures, and he is therefore a rich man—according to the definition of riches given by the

wisest philosophers. Business men may have larger yearly dividends in dollars and cents, but their expenses, their cares, their risks, their responsibilities are vastly greater; they are liable to bankruptcy and failure from numbers of causes which they cannot prevent or perceive, and these considerations, perhaps, bring their real incomes nearly on a level with the farmer's.

Besides, the farmer's life contains much that is pleasant and comfortable. He has a home which he can call his own, to beautify and adorn; he can embellish it with all that is tasteful and agreeable to his fancy, and make it a home rich with sweet memories and associations, and attractive for its neatness, simplicity and coziness. He has a garden, in which he can gratify an honest pride, in producing all that is beautiful and useful in the floral and vegetable resources of the climate. He has a farm, which he feels it an inward satisfaction to cultivate, improve and beautify; and thus there is joy in his labor, strength in his fatigue, and thankfulness in his repose. He is acknowledged to be the most independent of all men; working and communing with Nature as he does, must make him the happiest of mortals, or at least, he should be, since wholesome exercise strengthens and invigorates the system, and makes him the healthiest of men.

Having so many spare hours and moments, he has an opportunity, by the aid of books, newspapers and other means, certainly to make himself one of the most intelligent of men.

J. T. Dale.

Lime as a Fertilizer.

I noticed in a late issue of the *Rural* a communication from a subscriber, desiring information on the subject of lime as a fertilizer. In New Jersey and some of the eastern counties of Pennsylvania, lime has been extensively used as a fertilizer for the last twenty years. Many farms in that region which would sell for no more than twenty-five or thirty dollars an acre, are now worth a hundred, and the improvement has been made almost wholly by the use of lime. But renovating worn out lands by the use of lime is a business which a man should understand before engaging in it extensively. It does not act like stable manure, and produce a beneficial effect in whatever manner applied. In fact, were it so used, it would in many cases prove a serious injury instead of benefit to crops. Formerly the practice was to sow it broadcast, at the rate of fifty bushels of slacked lime to the acre, on land prepared far wheat, and just before sowing. But more recently the practice has been to spread it as early in the season as possible, on sod intended for corn the next year. By the first method but little if any effect would be observed in the crop of grain, but the crop of hay following would be more than doubled, as well as the crops following. By the last method a very morked effect would be observed in the corn and following crops. Its effects will always be most distinctly seen in grass. In the extensive peach orchards of New Jersey lime is almost the only manure used.

STOCK REGISTER.

Christian Loads.

"What now? a sermon on the short-comings of christians?" Yes, just that. But then we use the term "christian," in this place, in contradistinction from *barbarian*, and intend to restrict the application of "loads" to the material of one sort or another wherewith the representative teamster is accustomed to burden those poor, patient servants of the field and road—the ox and the horse.

While in London it was scarcely possible to pass the whole length of those great thoroughfares of travel and traffic, Holborn, Cheapside, and Picadilly, without one's human sympathies being tortured by the misfortunes of wretchedly abused horses. The streets are paved with blocks of stone, which, being coated with a slimy dirt, are so slippery that for a horse to stand at all, on anything like a steep grade, is difficult, even when no load is behind him.—What, then, under such circumstances, must be the trials of such as are loaded down to the last limit of their strength—slipping, catching, falling on their knees, and then springing violently to escape the merciless lash, then slipping again and again, and finally sprawling broadside upon the pavement, with strained or broken limbs, and not unfrequently with fearful, fatal ruptures?

But scenes like these are not confined to London. We have seen them too often in most of

our large cities in America. In the country, too, the beast of burden is quite as frequently treated in a barbarous manner. Hauling wheat or wood to market, lumber from town, logs to the mill, and many other jobs familiar to the farmer are occasions for a trial of strength, which not alone the farmer's boys and hired men are tempted to improve: the ambitious, lazy or reckless owner, himself, though old enough and big enough to know better, is often seen in muddy hollow or on mid hill, shaking his lines, brandishing his whip, kicking old Bob under the belly and bawling, "G-i-t up!" when if properly loaded, his team would be able to walk quietly and confidently, at least surely, through, up, or over the difficulty. Such men deserve themselves to be overtasked and put through at the end of the lash.

Many teamsters overload from want of correct judgment. They don't mean to abuse their teams, but lack the ability to estimate the weight of a given load. These are deserving of condemnation for that they do not more carefully experiment—beginning with loads certainly small, and gradually increasing them to the proper limit. A man or boy who won't do this should never be intrusted with a team.

If any of our readers are in the habit of overloading, we earnestly hope that either the bad economy or the barbarity of the practice will influence them to repent and reform.

Cleanly Cattle.

If there is one thing in which the Argovian takes particular pride, and in which he particularly excels, it is in the care of his cattle. They are elephants in size, and their glossy hides betoken some peculiar art on the part of their masters. Not a particle of dust or straw is allowed to cling to them, and they are combed and washed as only horses are elsewhere. Not with a curry-comb, but with old cards, which, being finer and softer, are more agreeable to the animal, and improve the fineness of the hair. This receives an additional lustre by being rubbed with old flannel. They actually shine; and the gentle creatures have an evident consciousness of their beauty, for they are careful not to soil their ashy-gray and chestnut robes by lying in the mud when allowed to take a walk. Animals can acquire, if they have not by nature, a fine sensibility, and when they have once experienced the pleasant sensation of cleanliness, learn to take care of themselves. Not only do they exercise this care for the person of the animal, but are at the pains of removing every feather and other unpalatable substance from their food; and the water-troughs where they drink are kept as clean as if human beings resorted to them. If anybody doubts the efficacy of these means, let him come and see, not only how large, but how intelligent these dumb creatures look; how they watch every motion of those who talk to them, and listen to all they say. What an affectionate moan they will utter to welcome the milkers, who are always men, as they say, "Women tickle the cow, and never take all the milk from the udders, so that she gives less and less." It is said of them that the Argovian will send for the doctor for his cow a great deal quicker than for his wife; but we did not see any evidence that he was not sufficiently attentive to both.—*The Cottages of the Alps—Miss Johnson.*

Clean Stables.

It is the mistake of too many farmers that cleanliness is not essential to the health and comfort of domestic animals. Indeed we have found some who erred so greatly in this direction as to believe *filth* essential; while the practice of the great majority gives sanction to this theory.

Accordingly, it is not an uncommon thing to find cattle and horses in uncleaned, unlittered stables, their legs and bodies two-thirds covered with an incrustation of mud and manure. And the poor hog—alas, how often is he compelled to wade for the whole period of his brief earthly career in mortar of earth and offal up to his eyes.

No greater mistake could be made in the care of animals than this. True, they will, if so trained, tolerate dirt as patiently as do so many specimens of the genus *homo*. But that proves nothing against the doctrine of cleanliness, which has its foundation in a law of nature unrepealed and unrepealable.

There is no animal in domestic use the physiological law of whose system does not demand the utmost cleanliness of the skin, and any treatment that falls short of this mark is therefore, less than philosophic.

But this is not all: the effluvia which must fill the atmosphere of s stable where accumu-

lations of filth are allowed is likewise prejudicial to the health of animals, and should be avoided on this account, if for no other reason.

And then there is another objection to filthy stables which should appeal as directly and strongly as either of the above to the humanity and pecuniary interest of the owner. Filth of the skin produces discomfort, and discomfort diminishes the capacity of the animal for improvement in bodily condition, and, of course, proportionally increases the expense of feeding.

Will not all our readers who happen to have stock, consider this matter and correct their practice by a strict conformity to the principles herein referred to?

Horses Should be Exercised Daily.

Horses require daily exercise in the open air, and can no more be expected to exist without it, than their owners. Exercise is an essential feature in stable management, and like well-opportuned food tends alike to preserve the health of horses.

Daily exercise is necessary for all horses, unless they are sick; it assists and promotes a free circulation of the blood, determines morbific matter to the surface, develops the muscular structure, creates an appetite, improves the wind, and finally invigorates the whole system. We cannot expect much of a horse that has not been habituated to sufficient daily exercise; while such as have been daily exercised, and well managed, are capable not only of great exertion and fatigue, but are ready and willing to do our bidding at any season. When an animal is overworked, it renders the system very susceptible to whatever morbid influences may be present, and imparts to the disease they may labor under, an unusual degree of severity. The exhaustion produced by want of rest is equally dangerous; such horses are always among the first victims of disease, and when attacked their treatment is embarrassing and unsatisfactory.—*Stock Jour.*

A Novel Way of Curing a Breachy Horse.—A correspondent of the *Iowa Homestead* was out riding the other day with a friend, and observed that one of the horses had a hole in each ear. On inquiring the cause, he learned that it was to keep the horse from jumping. "Why," said he, "a horse don't jump with his ears." "You are mistaken," replied his friend; "a horse jumps as much with his ears as with his feet, and unless he can have free use of his ears he cannot jump." He ties the two ears together, and has no more trouble with the horse. We give this for what it is worth.

Best Climate for Sheep.

Sheep can stand cold weather without injury if it is *dry*. Sudden changes and cold rains are very injurious. We believe sheep require shelter quite as much in the Southwest as at North. The weather is not as cold, but is more changeable, and the sheep frequently get thoroughly soaked to the skin. In this condition a cold raw wind and a damp soil can not help but carry off much of the heat which is necessary to the well-being of the sheep. The natural heat of the body of sheep (105°) is much higher than that of horses and cattle. This heat is kept up by the consumption of food (or burning of fuel) in the lungs, etc., of the animal. To prevent this heat from flying off, the sheep are provided with a good warm coat of wool. To be effectual, however, the coat must be kept dry. In a cold, dry climate, if the wool get a little wet on the outside it is soon frozen, and this acts as a coat of mail, with a good warm lining of dry wool inside, so that the heat from the warm body within does not fly off. It is said that the Scotch Highlanders in olden times when exposed during frosty nights, wet their plaids before lying down to sleep, and by holding them a short time from their bodies they were frozen in a stiff hard board, sufficiently thick and impervious to defend them from the cold. The slight coat of frozen wool acts in the same way. But in wet weather there is no such protection, and so it is that you will find it equally important to provide shelter in the warm, but wet and changable, climate of the Soutwestern States.

Lambs Dying from Wool in the Stomach.—The *Irish Farmer's Gazette* says: Lambs very frequently swallow particles of wool, which in playfulness they suck and bite from their dams; to prevent which the dams, when this occurs, should be smeared with a mixture of aloes and water, or assefetida and water. When they swallow the wool and it gets mixed with the curd in the stomach, it forms hard balls that are indigestible; but the administration of a teaspoonful of soda mixed in water twice or thrice a day dissolves and digests the curd, if not gone too far. Calves frequently die of the same disease, and the only remedy yet found is soda.

Film on a Horse's Eye.—A correspondent of the *Country Gent.* says: "About three months since I discovered a serious film on the eye of a mare belonging to me, which made one eye totally blind. I was advised to try different remedies by different persons—the first was to put in burnt alum powdered, twice a day for several days. This had no beneficial effect, but rather the contrary. I then tried bathing with cold water three times a day, taking the water directly from the well. In a week or ten days it began to get better: in two months the sight was restored, apparently as well as the other.

THE BEE KEEPER.

The Apiary—A Chapter of well-settled Facts.

1. All stocks of bees should be kept strong in numbers. A well-garrisoned city may defy assault.

2. A moderate increase of swarms will keep them strong, and secure the largest yield of honey. As the calves are raised, at the cost of butter and cheese, so bees are multiplied at the expense of honey.

3. Bees filled with honey are not inclined to sting. As the robber's knife is stayed by your purse, so bees are bribed with proffered sweets.

4. In natural swarming, bees fill themselves with honey. Emigrants to a new country carry their treasures along, as capital to begin with.

5. Bees, alarmed with smoke, or otherwise, instinctively seize upon their stores. The house-holder, at the cry of fire, secures what he can.

6. There should be no communication between occupied hives, allowing the bees of one to pass directly into the other. "No house is large enough for two families."

7. A swarm of bees, destitute of a queen, fast dwindles away, and, unless supplied with one, soon perishes, either by robbers or moths. A country without a government, a farm without an owner.

8. Swarms having combs insufficiently protected by bees, furnish a retreat for millers and food for worms. Unguarded treasures invite thieves.

9. An excess of drones should be avoided by discouraging the construction of the cells that produce them. Drones are the "dead heads" of the hive—the *useless males* in the farmer's herds.

10. The building of drone comb may, to a great extent, be prevented; first, by securing the construction of new combs, in hives containing young queens; and second, by placing frames to be filled in other hives, near the centre. "An ounce of prevention is better than a pound of cure."

11. Queens are most economically reared in small swarms. Who would employ ten men to do what one could do better?

12. Small swarms, if united in the fall, winter more safely, and consume less honey." "In union there is strength."

13. Bees of colonies containing fertile and unfertile queens, should not be put together without first "breaking them up," i. e., inducing them to fill with honey, and destroying the unfertile queen.

14. Natural swarming, always uncertain and perplexing, exposes the bee-keeper to much loss of time and money; while artificial swarming, securing at all times the presence of a worker-layer queen, doir away with all watching, and loss by flight to the woods, is both sure and economical.—*Key to Bee Keeping.*

Bee Government.

Undoubtedly the Great Creator and Wise Law-giver has instituted *a government* for the bees; yet the swarm requires no leader, nor the colony a sovereign The administration is not committed to any one individual. To each member of the community, whether worker, drone, or queen, is assigned a specific duty, task, or function; and the disposition and desire to labor in its vocation is implanted into each, so that in their several spheres all co-operate for the general good—the welfare of the commonwealth. The queen—the mother bee—is, indeed, of the first and highest importance to the colony; but she is not its sovereign, nor in any aspect its guide, leader, or governor. Impelled by the instincts of her nature, she performs her duties in the family, like every other bee, in accordance with her faculties and to the extent of her ability. Nevertheless, she occupies, on the whole, a subordinate station. The supreme power resides in the masses. Decision and action emanate from them as a body. Their will determines; their wishes rule. Though ordinarily shey tenderlp nourish and cherish, protect and defend the queens, drones, and brood; yet when the prosperity or preservation of the colony demands it, they imprison, mutilate, expel, or destroy either. From their arbitrament there is no appeal; their decree is absolute and subject to no reversal; and their power cannot be resisted.—*Baldenstein.*

THE POULTERER.

Plea for the Chickens.

If any cold-blooded philosopher doubts that domestic fowls have cold toes in cold weather; or if any careless keeper of poultry is in the habit of practically ignoring the existence of his chickens and turkeys, except when they come upon the table, we beg to assure them both that they are in serious error. Fowls need protection and care just as really as horses and cattle, and he who neglects to provide shelter and food is guilty of both cruelty and bad economy. It is impossible that they should either fatten readily or lay eggs plentifully unless kept warm and supplied with an abundance of appropriate food. The rudest kind of a shed for roosts are better than nothing. A little pains for a few nights will get them wonted, and then if well fed with grain, meat and vegetables, they will reward you with plumper roasts, and more frequent and merrier cackle.

THE HORTICULTURIST.

A. G. HANFORD, : : CORRESPONDING EDITOR

The Striped Bug.

MR. EDITOR—*Sir:* Some time last spring I wrote you a short sermon in relation to correspondents and for your own special use, which you took the responsibility to publish in the FARMER, thereby informing its readers that I was in possession of a method to prevent the ravages of the striped bug, which, with some other things, I had communicated to the FARMER, had been withheld, through carelessness, or some other unknown cause, from its readers.

Since that time I have received some communications from different parts of the State to learn the mystery, but which came too late to be of any benefit this season, so I have left them unanswered, and now claim the columns of the FARMER to satisfy the curiosity which the publication of my article to the Editor has raised. As it is an old affair, I will occupy no space in explaining the high flown words used in praise of said article, except to state that the cure is founded on the principle of "loving our enemies, or doing good for evil." Now the whole secret is to feed your bugs with something they like better than melons. Do not striped bugs like squash plants better than the plants of any other vine? I think so; and accordingly plant alternate rows of squashes with other vines, putting in ten times the amount of seed which I wish to mature, and thinning out when so large as to interfere with those I wish to grow. In this way I keep lots of bugs in my garden, and have melons sure every year. If I have no squash seed, I plant the next better thing, and if nothing can be had but seeds of the same sort, plant an abundance of them, so that the bugs may have a plenty and have some left for me. T. SEARS.

MONTICELLO, Green County, Wis.

Keeping Orchards Cultivated.

The *Gardener's Monthly*, an excellent journal, published in Philadelphia, Thomas Meehan, Editor, contained an article a few weeks since, the leading idea of which was, "that orchards are more successful through a series of years laid down in grass and annually top-dressed, than when cultivated and cropped." The *Country Gentleman*, and some other papers, dissent from the doctrine, and urge cultivation. The true course, it seems to us, lies between the two extremes. We have never known an orchard to flourish that was continually in grass, no matter what the other circumstances were. Perhaps excessive top-dressing might make it thrifty,—we have never tried it,—but it would certainly greatly promote the growth of the grass. On the other hand, orchard land continually cultivated for many years, and annually manured, will so force the trees as to make them tender and liable to disease, and produce such a surplus of wood as to prevent their fruiting.—*N. E. Farmer.*

Dwarf Apple Trees.

The above cut is intended to illustrate a dwarf apple tree three or four years old. These little trees are especially adapted to the garden and limited grounds. They occupy but little space (5 or 6 feet apart, when on paradise stocks, is quite sufficient), hence a number of varieties may be grown on a small piece of ground; planted along the border and walks, they need but slightly interfere with the other products of the garden.

The dwarf apple tree, like the dwarf pear, may be moved safely when of bearing age, and it is not unusual to send trees from the nursery full of blossom buds; where one is in haste this may do, but trees one or two years old will generally give the best satisfaction.

By observing a little care in pruning and training, these miniature trees may be made objects of beauty, thus adding to the agrea-

bleness of the garden. They come into bearing very young, and are exceedingly productive.

Dwarf apple trees are produced by working any desired sort upon the paradise apple, a French species of very dwarf habit. The Doucain, another foreign sort, is used when a pyramidal tree, or a larger sized dwarf is desired. All varieties seem to do equally well on these stocks; uniting freely, assuming a dwarf habit, coming early into bearing and the fruit often of increased size.

It should be observed that the Doucain being of a more vigorous habit, the trees worked upon this stock will not usually bear fruit quite as soon as on the paradise, and unless checked by root pruning, will attain to a much larger size, intermediate between the standard tree and the paradise dwarf.

We should like to see the experiment tried in Wisconsin of an orchard of low branched trees on Doucain stocks—planted 12 feet apart. It would be very interesting, and could not fail to be profitable.

Winter apples will become so abundant as to be easily purchased at moderate prices. The supply of fine early sorts never equals the demand, besides many are too delicate and tender for long carriage to market.

These early sorts, then, should be chiefly planted in the garden. For the sake of novelty and ornament, the largest and the high colored varieties are often chosen.

The roots of these little trees being near the surface, and all within a limited space, it will readily be seen that they need *good* culture.

Annual dressings of manure in the autumn, mulching in the spring, with thorough pruning, are required to insure the best results.

A. G. HANFORD.

COLUMBUS, Ohio.

TO GROW HYACINTHS properly in water, the bulb and glass should be covered with a black cloth until roots enough have been formed to make sure the support of the stem leaves and flowers. Otherwise the plant will pine, and the bulb begin to decay, before the flower is half perfected.

Fruit Raising in Wisconsin.

BROTHER HOYT:—I believe it is about two years ago that I promised to write for the FARMER. Well, perhaps it is better late than never.

My hobby, as many of your readers are aware, is the cultivation of fruit; and though I have met with many reverses, and many losses, yet I am beginning to get fruit enough to pay a handsome profit. I commenced setting in the spring of 1854, and in order to get a good stand of trees in an orchard of 3000, I have had to set over 4000. Many varieties died out and had to be replaced with varieties adapted to the locality.

Some of your readers will naturally expect a five column article from the above experience, but it is entirely unnecessary. The whole secret of fruit raising can be summed up in three points: 1st. A high and dry location; 2d. varieties adapted to the locality; 3d. give the trees as good cultivation as you would so many hills of corn.

The best varieties for this locality (Rock County) are Yellow Harvest, Carolina Red June, High Top Sweet, or Sweet Lowell, Siberian Crab, Fall Winesap, Fameuse, Westfield Seeknofurther, Northern Spy, Golden Russet, Tallman Sweet, Winter Winesap, Red Romanite, Rawles' Jannet. The Yellow Harvest, Northern Spy, and Rawles' Jannet are not more than half hardy, but possess too many good qualities to be rejected. I have some 300 pear trees, and though some varieties are worthless, yet others have done well, and I have been able to accommodate my friends with some as fine pears as ever grew in christendom. The great difficulty about the tree is, that if the blight strikes it, it is almost sure to die, when the apple tree under the same circumstances would not. The Flemish Beauty is *the* pear. If the primeval Garden contained Flemish Beauty Pears, God knows that my sympathies are with Adam for being kicked out of Paradise.

JOHN TINKER.

CLINTON, (Ogden P. O.) Rock Co., Wis., Dec. 8, 1862.

"Is the Delaware a Good Grower?"

This question is often asked by persons of some knowledge of fruit growing with an air of doubt as to the answer that should be made. In other words, the impression has been made to some extent that the Delaware is *not* a thrifty grower. Now we have no actual experience of our own upon which to base an answer; but while at the Columbus (Ohio) Nursery, a few days ago, we had an opportunity of measuring a vine, trellised upon the south side of one of the buildings, whose growth, during the past season, had been over sixteen feet!

The circumstances of soil and exposure may have been more favorable than would, in all cases, be practicable, and yet we could not see that they were. But, no matter what the circumstances, it was a splendid climb—that of the vine in question—and did much towards settling our own queries as to a possible rapid and thrifty growth of the Delaware.

Pears on Quince.—This subject is well treated by Mr. Saunders in the last *Farmer and Gardener*. He says: Pears grafted on quince require deep, rich soil. Many failures have occurred and much disappointment has been occasioned by planting dwarf pear trees, in the absence of a proper knowledge as to the treatment they demand. Pear cnlture on this system is not for those who plant a tree as they do a gate post, and who look upon the after treatment of both in the same light, viz: leave them until they decay, and then plant another, grumbling all the while about the absurdity of this mode of raising pears. When planting the trees, place some light soil around the roots to give them a start. Cover the whole of the quince root and about an inch of the pear stem with soil. The quince will throw out roots freely from any portion of the covered surface if healthy, therefore deep planting, so long as the soil is in proper condition, is not in this case injurious. If the roots are stumpy, and destitute of fibres, cut several on various parts of their surfaces, to encourage the emission of roots.

Several Articles of value intended for this department came to hand after we had in type so much of other matter that we are obliged to defer their publication until the next number.

MECHANICAL & COMMERCIAL.

Doubtful Currency—A Word of Caution to the Farmers.

Our readers will have noticed that a very large proportion of all the money now in circulation, in this State, consists of the notes of Eastern banks. It will likewise have been observed by those who are acquainted with the place where these notes were issued, that many of them are out-of-the-way places, akin to the nondescript and unfindable "cities" where wild-cat banking is supposed *not* to have been carried on in our own State.

Now, some of these banks are probably sound, carrying on a legitimate business, but, as a general rule, like the eye-waters of quack doctors, it is perfectly safe to let them alone.

What per cent. the bankers get for shoving them off, to the partial exclusion of notes of their own State banks, and of the United States, we are unable to say; possibly they make no more than the exchange, which, of course, they save to themselves, by having the notes of the banks located within the State on whose banks they issue drafts.

But whether the bankers are making themselves rich at the probable sacrifice of the people, or not, the reason above given—to wit: the uncertainty of their soundness, and the probability of their failure when their circulation is all out and far away from home—should be sufficient to make us cautious about getting too much of their "rags" into our hands.

But there are yet other reasons. First, many of the Eastern notes in question are counterfeits—certainly a much larger proportion than of our own bank notes.

Secondly, the Government of the United States directly, and we ourselves remotely, must be the losers by the circulation of this trashy currency; since by it the currency issued by the Treasury at Washington must be limited in its circulation, and the bonds of the Government bearing interest will need to be substituted therefor to the amount of the excess of circulation over the demand for the notes.

The Government *notes* bear no interest, and it is an advantage, therefore, to get off as much of them as possible, in order to save the issuance of bonds instead, and the paying of interest thereon. In this way, if the demand for notes were so great that none would be forced upon the Government for redemption with bonds, an amount no less than about *thirty millions* per annum could be saved to the national Treasury; and if to the Government, then to the people, since it is they, who, in some manner—either as tariff or direct tax—must make up this amount, and, indeed, eventually, pay the whole debt of the nation.

Plainly put, then, the question stands thus: Shall we prefer the Government under which we live, for which we are pouring out our treasure and our blood like water, and without which we are without prosperity and happiness, as individuals, and without strength, honor, and glory as a nation, or shall we rather help the selfish sharpers of New York and New England?

Every patriot will answer in a moment:—"Give us the notes of the Government, and when that fails let us also go to smash. I would rather trust the nation than unknown and doubtful individuals."

Another thought, in support of this policy: The history of the present war has taught us that pecuniary considerations are among the strongest that engage the interest and effort of the American people. Indeed this is true of any nation. *Pure patriotism* is a much scarcer article than we used to think. A heavy and widely diffused circulation of U. S. currency will, therefore, have the effect to strengthen the Government by making almost every man the nation's creditor. It is in a similar way that the debt of England is made a bond of strength to the British Kingdom.

Accordingly, in view of all the circumstances, we feel it our duty to advise the farmers of Wisconsin to demand in payment for what they have to sell—first, *Treasury Notes of the United States.* If these can't be had, then call for the notes of your own State banks. Refuse to take any other currency, at least in considerable amount, or to keep for more than one day, and thus drive back the flood-wood of Eastern money to its own place.

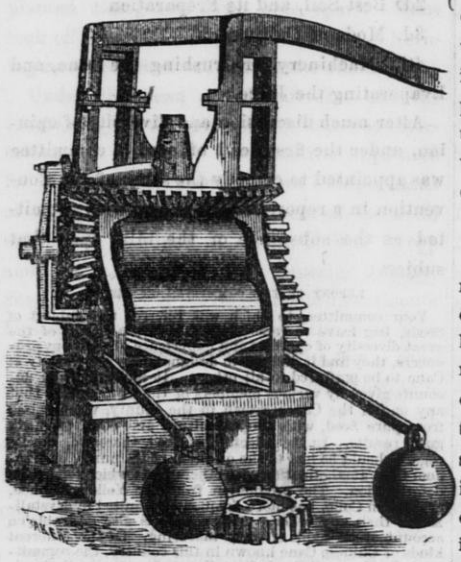
If, as individuals, you find yourselves powerless against the bankers' tide, then organize yourselves as communities, and thus compel the circulation of money such as it will be safe for you to take, and, if necessary, hold.

The Preparation of Iron Plates.

Mr. Mattison, an artisan in the Devonport dockyard, England, has invented a mode of preparing iron plates for ships' sides, which it is expected will very much facilitate that difficult work. It is thus described:

"The first process, taking the mould for the curve of the plate, is effected by what is termed an 'Ordnance box'—that is, a wide piece of iron standing on its edge through which a number of movable bolts are placed. On the points of the bolts being fitted against the side of a ship they are pressed home into the hollows of the curve until the exact shape is obtained. They are then fastened by screws and thus rendered immovable. In connection with taking the mould is another instrument for obtaining the levels and curved edges of the ship's side. It is made of slight polished iron, exceedingly flexible, so that it readily conforms itself to the curve when by movable pieces of iron crossways and lengthways the levels are taken. The instrument on being removed returns immediately to its original flattened shape, the edges only retaining the peculiar form given to it by the ship's side. This instrument is for the levels only, the curve of the ship's side being obtained by the other. The mould being thus taken is transferred to the machine that actually makes the curve, which consists of a kind of an iron box filled with what are termed 'peppots'—that is, a number of pieces of iron about an inch square and ten inches long. These, by screws in the bottom, can also be lowered or raised, and the mould being placed on the top of these movable pieces of iron, the exact shape of the curve is secured, and the 'peppots' are screwed into their proper position. Another framework, containing similar pieces of iron in a converse position, is suspended over the one already described. When the plate to be curved has to be laid on, the lower framework is to be drawn out on a kind of rail; the plate, after being heated, is laid on the top of the 'peppots' and drawn into its former position, when by means of a lever, the upper 'peppots' are brought down with such power as to secure the required shape. The model is 20 inches wide, 30 long and 42 high. The plan is said to possess great advantages over the one now in use for

taking the curves by means of wooden moulds, which are usually 3½ feet wide and 4½ feet thick and about 15 feet long. These moulds are cumbersome and constly. Mr. Mattison's plan has been submitted to Rear-Admiral Sir Thomas Pasley, superintendent, and other officers of the Devonport and Keyham yards, who are understood to have expressed their approval of the invention. The model is to be sent to Woolwich to be tested."



Our Premium Sugar Cane Mill.

It seems to be so well understood now that the economical production of Sorghum syrup and sugar in the Northern States is a feasible thing, that there is no longer need of elaborate argument to prove it. Hundreds of thousands of dollars have been saved to the pockets of our people in this way, during the past year, and the next season will find thousands of farmers engaged in the cultivation of the cane who have never before undertaken it.

Already sugar and molasses have been produced in large quantities, of a quality which compares favorably with the best products of the Southern cane, and there are so many efforts making to still further improve them, that success is no longer doubtful.

One of the great desiderata is perfect machinery for crushing the canes, and evaporating the juice.

One of the best mills with which we are, at present, acquainted, is the "Climax Adjustable Sugar Mill," manufactured by E. W. Skinner, of Madison. It is this mill, therefore, that we have offered as a prize for subscriptiions. (See Prospectus on cover). The above cut illustrates its construction.

It includes three horizontal rollers—the crushing roller being held up by a lever and weight, which insures a constant and unvarying pressure of 5 tons upon the cane. It is compact and strong. The gearing is placed on the top, with sweep attached to rim of crown wheel, and not dependent on the mere strength of a shaft to turn the gearing.

Weight of machine 1,100 lbs.; cost $100.00.

In the earlier stage of the Sorghum experiment, when it was yet a matter of doubt whether it would not prove a failure, and when but little of the cane was grown in any given neighborhood, prudence dictated the purchase of cheap machines, or even the home construction of rude wooden mills. But the time when such a course was economical has passed. It is no longer an experiment, and the best economy now lies in the purchase of good, effective iron mills, even though they cost so much that only neighborhoods, as a general rule, can afford to buy them.

We are acquainted with a number of persons who, during the past year, have operated the Climax Mill, and they concur in the opinion that an active man, who has some knowledge of the business,—and any intelligent man will "get the hang of it" in a very few days—can make it profitable to purchase a mill on his own account, and work up the sugar cane of his neighborhood, on shares. Some have declared it practicable to make more money in this way, than with the best threshing machine in the country.

We have no other purpose to serve in urging the importance of Sorghum culture, and the claims of this or any other good mill, than the furtherance of an enterprise which promises first, gain to the individual, and secondly, to the people of the North a due independence of

SCIENCE, ART, STATISTICS.

Petroleum—Its Use as a Fuel.

Few but those who have visited France, can form any idea of the high price of fuel in that country, or of the vast variety of methods which are employed to economize this necessary of life. Patents, without number, have been granted in France for the manufacture of "artificial fuel." In order to explain this subject more thoroughly, we subjoin one or two of the processes which are largely employed not only in Europe, but also among the half civilized Orientals.

In the neighborhood of the Caspian sea, where petroleum springs are abundant, the inhabitants manufacture a fuel by impregnating clay with the combustible fluid; the clods are afterwards burned on an ordinary hearth. The Norwegians have long economized the sawdust of their mills by incorporating it with a little clay and tar, moulding it into ths form of bricks. Of late years, in England, much attention has been given to artificial fuel in many districts, but not with much success, owing to the want of a suitable combustible, which petroleum is, above all others, best adapted to supply. In France, charcoal is prepared from the refuse of the charcoal furnaces, by mixing it with charred peat or spent tar, and then adding tar or pitch. The materials are ground together and subjected to heat in close vessels, to expel volatile gases. From seven to nine gallons ef tar are mixed with two hundred weight of charcoal powder.

In rural districts, where common fuel is often very expensive, gas, manufactured in portable works, would be largely used for culinary purposes, as it now is where the supply of gas is constant and cheap. But there is no necessity to convert petroleum in-o gas, in order to use it as fuel. Stoves have been constructed for the combustion of this substance without the use of a glass chimney, and without the production of smoke. It will necessarily from its cheapness, supercede alcohol, which is commonly used as fuel for cooking purposes during the summer months. And we may soon look for its adoption as fuel for the generation of steam in our ocean steamers, where economy in bulk and weight is so great a desideratum. —*Phila. Coal Oil Circular.*

The Lowest Race.—Prof. Owen has given it as his opinion that the lowest specimens of humaniiy which the world affords are the Andamans, who inhabit the Andaman Islands, in the Bay of Bengal. They are of diminutive stature, very slender limbs, and jet black. They have no utensils which will resist fire, and they cannot be induced to confer with strangers. The language of this people has not the least affinity with any other known.

Paper and Cloth made of Indian Corn Husks.

The United States Patent Office has received an application from Vienna, Austria, for a patent on "improved methods of manufacturing the products of the maize plant." The inventor, Dr. Alois Ritter Auer von Welsbach, is a distinguished scientific man. He forwards samples of fibre, yarn, linen cloth, and paper of five varieties, in its natural color and bleached. The Washington correspondent of the Cincinnati *Gazette* has examined these samples and writes concerning them as follows:

"The corn husk paper is remarkably good. Some of the qualities forwarded are fine tracing paper, which, though exceedingly thin, has nevertheless a firm, solid body, and an excellent surface. From that the qualities range down to the coarsest wrapping papers, which certainly seem much stouter and tougher than corresponding grades of straw wrapping papers, and, it is claimed, it can be produced at greatly reduced cost. Some of the sheets are an excellent article of book printing paper, others would almost pass for parchment. The inventor's own account of the various steps toward his discovery, is printed handsomely on a large sheet of the corn husk paper, in a style which it would puzzle our printers, with their best presses and papers, to surpass.

"The corn husk yarn and cloth are not nearly as good in their way as the specimens of paper. The yarn, however, is about equal to some of the old-fashioned tow yarn with which our granmothers in this country were familiar, and the cloth is a trifle coarser and less firmly woven than the coarsest tow cloth. For many purposes for which coarse linen fabrics are now used, the corn husk cloth, as already manufactured, is well adapted. If the process of manufacture can be so improved, as the inventor claims, as to make finer qualities equally well, the importance of this new process can hardly be overrated. In this country especially, where the raw material is already produced in the utmost abundance, the discovery of these new qualities will be like the *creation* of a new article of manufacture, that shall cost nothing in the outset, and be capable of supplying one of our most costly wants."

☞ The British Parliament has appropriated £116,695 (about $583.000) for scientific and art institutions for the present year. There are 88 schools of art and science, in which are 91,741 students, for which £45,700 are applied. The South Kensington Museum receives £33,590; the Geological Society, £11,000.—The British Museum receives a specific donation not included in the above.

☞ The use of the arch in building is traced to Thebes, where one was discovered that bore an inscription dated 1540 B. C., or 450 years before Solomon's temple was built.

National Statistics.

[From a Circular recently issued by the Commissioner of Agriculture.]

POPULATION, AREA, AGRICULTURAL PRODUCTIONS, &c.

Population, white		26,975,575
free colored		487,996
slaves		3,953,760
Total, including Indians		31,749,281
Area of the United States	sq. miles	3,250,000
Aggregate of real and personal property		$16,150,616,068
Value of productions of industry	dollars	1,900,000,000
Cash value of farms	do	6,650,872,507
Cash value of farming implements and machinery	dollars	247,027,486
Value of live stock	do	1,107,490,216
Value of lands improved	do	163,261,389
Value of lands unimproved	do	246,508,244
Wheat crop	bushels	171,183,381
Rye crop	do	20,976,286
Indian corn	do	830,451,707
Oat crop	do	172,554,688
Rice	pounds	187,140,173
Tobacco	do	429,390,771
Ginned cotton	bales, 400 lbs	5,198,077
Wool	pounds	60,511,343
Peas and beans	bushels	15,188,013
Irish potatoes	do	110,571,201
Sweet potatoes	do	41,606,302
Barley	do	15,635,119
Buckwheat	do	17,664,914
Value of orchard products	dollars	19,759,361
Wine	gallons	1,860,008
Productions of market gardens	dollars	15,541,027
Butter	pounds	460,509,854
Cheese	do	105,875,135
Hay	tons	19,129,128
Clover seed	bushels	929,010
Grass seed	do	900,386
Hemp, dew rotted	tons	83,247
Hemp, water rotted	do	3,943
Hemp, other prepared	do	17,800
Hops	pounds	11,010,012
Flax	do	3,783,079
Silk cocoons	do	6,562
Maple sugar	do	38,863,884
Cane sugar	hhds., lbs	302,205
Cane molasses	gallons	16,337,080
Sorghum molasses	do	7,235,025
Maple molasses	do	1,944,594
Beeswax and honey	pounds	26,386,855
Value home-made manufactures	dollars	24,358,222
Value of cotton goods produced in the year ending June 1, 1860	dollars	115,137,926
Value of woolen goods produced	do	68,865,963
Leather produced	do	63,090,751
Boots and shoes manufactured in the year ending June 1, 1860	dollars	89,549,900
Value of animals slaughtered	do	212,871,653
Number of horses		7,300,972
Number of asses and mules		1,296,339
Number of sheep		24,823,566
Number of neat cattle		28,987,346
Number of swine		36,022,276
Agricultural implements produced in the United States	dollars	17,802,514
Value of sewing machines	do	5,605,345
Number of patents issued for improvements and inventions in agriculture in 1861		521
Newspapers and periodicals, 1860		4,051
Value of steam engines and machinery	dollars	47,118,550

MINERAL PRODUCTS, &c.

Gold from California, in 1859	dollars	47,744,462
Silver coined at mint	do	610,011
Quicksilver	flasks	45,023
Quicksilver, value of	dollars	2,000,000
Copper	tons	14,432
Copper, value of	dollars	3,316,516
Pig iron	tons	884,474
Pig iron, value of	dollars	19,487,790
Zinc	tons	11,809
Zinc, value of	dollars	72,600
Lead, value of	dollars	977,281
Nickel	tons	2,348
Nickel, value of	dollars	28,176
Coal, anthracite	tons	9,389,930
Coal, bituminous	do	5,775,077
Coal, value of	dollars	19,365,765
Area of coal in United States	sq. miles	200,000
Coal oil	barrels	1,092,450
Coal oil, value of	dollars	1,092,450
Coal oil, daily flow from wells in Pennsylvania	barrels	5,717
Salt, value of, manufactured in the United States, 1860	dollars	2,265,302

FISCAL RESOURCES, NATIONAL DEBT, &c.

Aggregate value of imports in the year 1860	dollars	334,350,453
Aggregate value of exports	do	248,505,454
Value of imports under the reciprocity treaty	dollars	20,019,427
Tonnage of the United States	tons	5,539,813
Tonnage, value of	dollars	221,592,092
Indirect trade	do	34,224,444
Fisheries, the product of 1860	do	12,924,092
Excess of specie and bullion imports over experts	dollars	16,548,531
Revenue from customs and public lands		49,452,784
Total of the national debt December 1, 1861	dollars	267,540,035
Estimated quantity of coin in the United States	$275,000,000 to	300,000,000
Number of banks		1,642
Bank Capital	dollars	421,890,095
Circulation of banks	do	207,192,477
Spirituous liquors distilled	gallons	88,092,983
Spiritous liquors, value of	dollars	24,253,176
Malt liquors brewed	gallons	3,239,545
Malt liquors, value of	dollars	18,001,135

RAILROADS, &c.

Aggre'te length of railroads, 1860	miles	31,196¼
Cost of construction	dollars	1,166,422,729
City passenger railroads	miles	402
Cost of construction	dollars	14,862,840
Length of internal navigation	miles	30,000
Dength of lines of telegraph	do	40,009
By an act of Congress of July 1, 1862, a charter was granted to the Atlantic and Pacific Railroad Company, with a capital of	dollars	100,000,000
For the construction of a railroad, with branches, from the Mississippi river, to the Pacific ocean, about	miles	1,800
In aid of this collossal enterprise, Congress has made a very liberal donation, by grants of public lands lying on the route, and a loan of thirty years six per cent. United States bonds, to the amount of about		$60,000,000

EDUCATIONAL.

The number of principal colleges and professional schools in the United States, including theological, law, and medical, in 1860, was 233. By an act of Congress, of July 2, 1862, about 10,000,000 acres of public lands were appropriated for the support of colleges and schools for the benefit of agriculture and the mechanic arts in the several States and Territories of the Union. Five millions of persons received instruction in the educational institutions of the United States in the year ending June, 1860. The system of common school education has been adopted in nearly all the free States.

Army Chaplains.

According to the *National Banner*, the editor of which has taken pains to ascertain, the chaplains of the army are:

Methodists	one third
New-School Presbyterians	one-fifth,
Congregationalists	one-seventh,
Episcopalians	one-seventh,
Baptists	one-eleventh,
Old-School Presbyterians	one-twentieth,
Unitarians	one-twentieth,
Roman Catholic	less than one-twentieth.

England's Iron-Cased Fleet.

We find in the *European Times* the following list of all England's iron-cased ships and floating batteries, building or afloat:

	Horse power.	Speed in kn'ts
IRON BUILT.—*Building.*		
Achilles,	1,250	14.1
Agincourt,	1,350	14.3
Minotaur,	1,350	14.3
Northumberland,	1,350	14.3
Hector,	800	11.75
Valiant,	800	11.75
Prince Albert,	500	11.4
AFLOAT.		
Black Prince,	1,250	14.3
Warrior,	1,250	14.354
Defence,	600	11.356
Resistance	600	12.231
FLOATING BATTERIES.		
Erebus,	200	about 5.5
Terror,	200	" 5.5
Thunderbolt,	200	" 5.5
WOOD BUILT.—*Building.*		
Caledonia,	1,000	12.4
Ocean,	1,000	12.4
Royal Alfred,	800	11.5
Royal Oak,	800	11.5
Favourite,	400	10.87
Enterprise,	160	9.50
CONVERTING.		
Royal Sovereign,	800	12.25
AFLOAT.		
Prince Consort,	1,000	12.4
FLOATING BATTERIES.		
Ætna,	200	about 6.0
Glatton,	150	" 5.5
Thunder,	150	" 5.5
Trusty,	150	" 5.5

Of the iron-built vessels, the Prince Albert and the three floating batteries are, or are to be, wholly cased with armor plating, the rest partially; of the wood-built, the Favourite and Enterprize are to be partially cased, the rest wholly. Only the Prince Albert and the Royal Sovereign are to be fitted with Coles' cupolas; the rest with masts.

To Detect Explosive Coal Oil.—Many disasters have been occasioned by the use of explosive coal oil. The following recipe for ascertaining whether the article is explosive or not, may, therefore, prove useful. Pour a small quantity into a saucer and bring a lighted match slowly down to it. If explosive. the oil will blaze and flash up almost like powder; if not explosive, it will not burn at all. The very light coal and rock oils should be used with caution for burning in lamps, as they are much more volatile, and equally as dangerous as the old explosive lamp mixtures of alcohol and turpentine. The burning oils which are now commonly used are of a much lower specific gravity than those that were in common use about eighteen months ago. They are quite cheap, clear, free from the fetid smell of old coal oils. and not so liable to smoke.—*Ontario Times.*

EDUCATIONAL.

Parents, Visit Your Schools.

"They (parents) were in the habit of visiting schools often, that they might know their condition and mark their progress in every branch of study. They taught and questioned their children in the long winter evenings at home, and in other ways co-operated so actively with the teacher that much was accomplished in a little time."—*H. Humphrey*

The truth contained in the above extract, though uttered thirty years ago and with reference to the early efforts to promote popular education in this country, is no less important now than then. All modern changes and improvements in our school systems will fail to accomplish the desired end, unless there be active and persevering effort on the part of parents. The act of devising good systems of education, erecting commodious school houses, furnishing suitable text books and employing well qualified teachers, is not all of the parent's duty; nor should he cease his efforts, when he has taken special pains, if need be, to have his children attend punctually and constantly. Something more is requisite—something which will add double value to his other labors. This is frequent visits to the school room and an unfailing interest in his children's studies.

The benefits arising from visiting schools is threefold, viz: encouragement and stimulus to the teacher, incitement to greater diligence on the part of the scholars, and especially an incentive to greater industry and application by the visitor's own children. The parent's presence in the school-room animates and inspires the conscientious teacher in his labors. His duties and respohsibilities are of no trifling character. The thought that he is making, on tender and susceptible minds, impressions either for good or evil, which will never be effaced; that by some careless word or thoughtless act, he may cause a single mind to be directed in a wrong course, is well calculated to make the teacher feel that his work is one of no ordinary importance, and that he needs wisdom and strength superior to his own. To know that he has the parent's sympathy and co-ope-

ration tends, not a little, to lighten the teacher's labors and inspire him with new resolution and corresponding effort to make his school what it can and ought to be.

Frequent visits will often prevent that dissatisfaction which arises in the minds of parents, from not understanding existing circumstances or from perplexing disadvantages under which tha teacher labors. It will enable the parent to enter more fully into the plans whereby the teacher would promote the usefulness of his labors, and make the instrumentalities provided by the community for the advancement of education more effective.

The presence of parents has decidedly a beneficial effect on all the members of the school. Children love to be noticeed; they will take special pains to do well when they know that their labors are to be witnessed by their parents. The thought that their success, arising from particular and long continued effort, will be approved and commended by those whom they love and respect, while their misconduct and unfaithfulness in preparing lessons, will be a source of grief and disapprobation, is a strong stimulus to a conscientious pupil.

Visiting schools affords opportunity to see under what disadvantages the teacher labors, and prepares parents to co-operate with him in removing them. There are, in almost all schools, defects and hindrances, which lie beyond the teacher's reach, and which might be removed, were they generally known to the parents of the district. But, for want of this knowledge, they continue to exist, term after term, and the school is not so productive of good as it might be. Would parents visit their schools, their defects would become manifest, and with a little effort might be removed. Parents, will you visit your schools? Say not that you have no time. Take time, though it be at the expense of other interests. The education of your chidren is of paramount importance. If you can aid or encourage them in the least, to strengthen their minds and treasure up knowledge, it is no light matter not to do it. Say not you have instruction of one in whom you have entire confidence. This is praiseworthy, but it is not enough. Stop not here, when your presence in the school-room may make the teacher's instructions more efficacious. Say not, other parents do not visit schools, but set the example, and they will follow it, and thereby you will be the means of interesting others in a good cause. Go not once only, but often. The oftener you go, the more interested you will become. Say not, I will visit the school next month, or next week, but do it now. Say, reader, whether parent or not, will you visit your school?

N. F. Atkins.

Toulon, Ill.

School House Dedications.

The dedication of churches has been practiced from the earliest times, and ceremonies, more or less imposing, have long been common at the laying of corner stones of collegiate and other public institutions; but the dedication of common school-houses is a custom of very recent introduction. But why should it not become universal? The true theory of the common school is that it is the nursery of the youth of the country—uot alone of the intellectual powers, but also of the moral and physical. In other words, the school is established for the development of the whole being of the child, and what work can be more important? what more sacred?

If, then, it be proper to dedicate a temple to the worship of God, is it not also fitting that the school-edifice be consecrated by public ceremonials to the noble, divine work of educating the youth of the land in those principles, material and spiritual, that shall fit them for the responsible duties of citizens of the Republic, and entitle them to the just rewards of virtuous men and women?

But the dedication of the school-house is not only befitting; it is likewise eminently calculated to promote the success of the school therein to be held, by awakening on its behalf the interest of the whole community in the midst of which it is located.

In view of the vast consequences which hang upon the success with which it is managed,

there is really very little interest manifested by the people of this country in the city, town, or neighborhood school. The cheapest, and hence the poorest, teachers are often employed, conveniences and even comforts are frequentiy neglected, to the great detriment of the school thus badly inaugurated, and parents, the immortal interests of whose children have been thus stingily provided for, rarely—in some instances, never—visit the school-room to stimulate and encourage teacher and children. Practically, to the citizens of such a neighborhood, the district school is a sort of matter of course, and is accordingly left to take care of itself. The effect of the dedication of a new school-house would be to arrest the attention of those who have never given their thoughts to the importance of the interests involved, to quicken those who, though theoretically the friends of education, have allowed themselves to become neglectful and practically indifferent; and, finally, to fasten the conviction upon the whole community that even the common school is an *institution* worthy of the attention and cordial co-operation of the people, if not, indeed, the most important of all the noble and beneficent institutions of this great commonwealth.

The foregoing remarks were suggested by the recent dedication of a handsome and commodious school-house in the village of Stoughton. The people of town and country were present in great numbers, and the exercises—embracing, after a proper organization, a dedicatory prayer, speeches and music—were highly interesting, and will be remembered by the people of at least one generation with emotions of pleasure and pride; while the influence of the proceedings cannot fail largely to promote the highest success of the school.

We would be glad to see the example so worthily set by the intelligent and enterprising people of Stoughton, Clinton, and possibly one or two other localities, universally copied.

THE HIGH OFFICE OF THE TEACHER.—There is no higher office than that of a teacher of youth; for there is nothing on earth so precious as the mind, soul, and character of a child.

No office should be regarded with greater respect. The finest minds in the community should be encouraged to assume it. Parents should do all but impoverish themselves to induce such to become the guardians of their children. They should never have the least anxiety to accumulate property for their children, provided they can be placed under influences which will awaken their faculties, inspire them with higher principles, and fit them to bear a manly, useful and honorable part in the world. No language can explain the folly of that economy, which, to leave a fortune to a child, starves his intellect and impoverishes his heart.—*Dr. Channing.*

The Old School-House Stove.

That old stove should be an object of attraction and friendship. On it depends, in a measure, our advancement and our comfort. Without it, the school-room would be a human barn—the abode of desolation and cheerlessness; but with it it is a spot linked with human hopes, and the most pleasing recollections.

But the old stove, like many unfortunate persons, does not enjoy uninterrupted friendship and regard, though it warms and soothes the just and the unjust, the friend and the stranger alike, yet it is an innocent target for many an assault of scorn and contempt, for many a profane and scurrilous epithet. Imagine the "big boys" of the neighborhood seated around it, as they have been hundreds of times. When conversation begins to fail, when the war of words begins to subside, for want of fresh conversational material, then the old stove is taken up for discussion, its defects and frailties are vigorously commented upon, it is declared to be an intolerable plague, a public nuisance, and a universal eye-sore; it is jammed, kicked, and spit upon in derision, while at the same time the excited speakers are enjoying its advantages, and are attracted to the very spot by the comfort which it imparts.

When the summer months are with us, and the burning sun prompts us to take refuge from the intensity of his fiery rays, then the old school-house stove is regarded as a cumbersome and unsightly appendage; it is considered as a heap of rust and old iron that is

painful to see, and annoying to walk around. It is the cause of a slight tinge of shame on the face of a neighbor, and a smile of surprise and ridicule in the stranger. It is considered a stain on the character of the neighborhood, and a blot on the fame of their public spirit and enterprise. Its broken and patched sides, its cracked top, its shattered door, as well as the tottering, dingy old stove pipe, are all looked upon with wrinkles and frowns.

But when the keen blasts of winter visit us, and our frames are penetrated by its chilling advances, the stove becomes a popular and influential favorite. No sooner do persons enter the room than they immediately patronize the stove, and supply their perishing bodies with a satisfactory amount of its vitality. Arms are unloosed from the forms of playmates, and are affectionately extended around the rusty old stove pipe. The hands of friendship are unclasped, and are patiently held to the stove to invoke its favor. What crowding and striving there is to gain the coveted place where the rays of warmth from its crimson sides annihilate the aches, the agonies, and the bitterness of winter!

What exploits have been narrated, what experience has been given, what revelations have been disclosed, what prophecies have been sent forth, what judgments have been exercised, what wishes have been expressed, and what news have been circulated around that stove by hundreds of beings now in almost every condition and circumstance in life, and some resting in the grave! What an inconceivable amount of joy, sorrow, love, fear, hate, revenge, and agony, enclosed in childhood hearts, has moved around that stove! Volumes would not contain their history, language could not describe them, pencil could not portray them, for they were the interior workings of the heart —hidden from human sight.

And, also, when we consider the forests that have been consumed within that stove, the labor and enterprise that have been bestowed upon it, and the memories and associations that cluster around it, it is not difficult to regard it as a memento of old years and old friendships.

J. T. Dale.

THE HOME.

A Lover's Vow.

By every hope that earthward clings,
By faith that mounts on angel wings,
By dreams that make night shadows bright,
And truths that turn our day to night;
By childhood's smile, and manhood's tear;
By pleasure's day, and sorrow's year;
By all the strains that fancy sings,
And pangs that time so surely brings;
For joy or grief, for hope or fear;
For all hereafter as for here;
In peace or strife, in storm or shine,
My soul is wedded unto thine.

T. K. Hervey.

An Emblem.

A little brown seed,
Very ugly indeed,
Lay asleep in the cold wet ground;
And the bleak winds blew,
And the dead leaves flew
To earth with a rustling sound.

And all winter long
The tempest its song
Sounded dismally o'er its bed,
But the slumb'ring seed
Gave it no more heed
Than if it were utterly dead.

But the April came,
And the winds grew tame,
The heavens made love to the earth:
One stray sunbeam
Broke through the dream
Of the seed, in its lonely death.

It started at first,
Then finally burst
Its fetters in gratefullest glee;
And upward grew,
Till it saw the blue
Of heaven's immensity.

Story Reading.—At a certain age, children of both sexes delight in stories. It is as natural as it is for them to skip, run and jump, instead of walking at the staid pace of their grandparents. Now, some parents—very well meaning ones too—think they do a wise thing when they deny this most innocent craving any legitimate outlet. They wish to cultivate, they say, "a taste for solid reading." They might as well begin to feed a new born babe on meat, lest nursing should vitiate its desire for it. The taste for meat will come when the child has teeth to chew it; so will the taste for "solid reading" as the mind matures, i. e., if it is not made to hate it by having it forced violently upon its attention dury the story-loving period. That "there is a time for all things," is truer of nothing more than this. Better far that parents should admit it and wisely indulge it, than by a too severe repression give occasion for stealthy, promiscuous reading.—*Fanny Fern.*

Good Taste.

Good taste is the "luminous shadow" of all the virtues. It is social discretion, it is intellectual kindness, it is external modesty and propriety, it is apparent unselfishness. It wounds no feelings, it infringes on no decorums, it respects all scruples. A man thus gifted, even though he be not a wit, spreads a genial influence about him from the trust he inspires. The stiff man can unbend, the cold man can thaw, the fastidious can repose on him. No one is committed to more than he chooses; no ungenerous use is made of an unusual or transient impulse. Good taste is practical, though not deep knowledge of character; it is perception of the distinctive points of every occasion; and thus it reconciles and harmonizes, where bad taste perpetuates differences, and necessitates separations. And yet, we by no means wish to make good taste a synonym either for virtue or intellect—it is rather that quatity which sets off both at their best. It is an affair, in some degree, of social training—it is one aspect of knowledge of the world. Those who are little in general society—who confine themselves to family intercourse, or to that of a set or clique, whatever the position, whatever the intellectual or moral pretentions of that clique—are almost sure to fail in it in new scenes.

All persons of a single idea, engrossed by one object, are perpetually infringing on the rules of good taste. If they are religious, they are pragmatical and intolerant, regardless of sensibilities. If they are useful, they do their work with unnecessary fuss. If they are learned, or deep, or clever, they make those good gifts unpopular. If they are grave, they are a check and restraint. They fail in every social crisis. In every difficulty they take the wrong way. They are forward when they ought to be retiring—their diffidence is constantly misplaced. There is no knowing where such people are—to what lengths an emergency or excited spirits will drive them. It is the cause of half the seeming injustice of society.

The man of bad taste cannot comprehend why things are not tolerated in him which are allowed in others. He is the last to see that the presence or absence of a correct taste make the same practice or amusement agreeable or repugnant—that nothing can be judged fairly without taking the manner of doing it into consideration He is therefore, forever grumbling at the inconsistencies and partialities of mankind. The fact is, every hinge with some people, grates and creaks, at each turn jarring on sensitive nerves; while good taste is the oil which keeps the machinery of society, with the least wear and tear, noiselessly and profitably at work.—*London Saturday Review.*

Never too Old to Learn.

Socrates, at an extreme age, learned to play on musical instruments, for the purpose of resisting the wear and tear of old age.

Cato, at eighty years of age, thought proper to learn the Greek language.

Plutarch, when between seventy and eighty, commenced the study of Latin.

Boccaccio was thirty years of age when he commenced his studies in polite literature, yet he became one of the three great masters of the Tuscan dialect, Dante and Petrarch being the other two.

Sir Henry Spelman neglected the sciences in his youth, but commenced the study of them when he was between fifty and sixty years of age. After this time, he became a most learned antiquarian and lawyer.

Colbert, the famous French minister, at sixty years of age, retured to his Latin and law studies.

Ludovico, at the great age of one hundred and fifteen, wrote the memoirs of his own times. A singular exertion, noticed by Voltaire, who was himself one of the most remarkable instances of the progress of age in new studies.

Ogilby, the translator of Homer and Virgil, was unacquainted with Latin and Greek till he was past fifty.

Franklin, did not fully commence his philosophical pursuits till he had reached his fiftieth year.

Accorso, a great lawyer, being asked why he began the study of law so late, answerdd, that indeed he had began it late, but he should therefore master it the sooner.

Dryden, in his sixty-eighth year, commenced the translation of the *Iliad;* and his most pleasing productions were written in his old age.

Sketch of Luther by Carlyle.

A coarse, rugged, plebian face it was, with great crags of cheek bones—a wild amount of passionate energy and appetite! But in his dark eyes were floods of sorrow and deepest melancholy; sweetness and mystery were all there. Often did they seem to meet in Luther the very same opposite poles in man's character. He for whom Ritchie had said that his words were half battles, he, when he first began to preach, suffered unheard agony. "Oh! Dr. Stanpitz," said he to the vicar-general of his order, "I shall die in three months; indeed, I cannot do it." Dr. Stanpitz, a wise and considerate man, said, upon this, "Well, Sir Martin, if you must die, you must; but remember that they need good heads up yonder, too: so preach man, preach, and then live or die, as it happens!" So Luther preached and lived, and he became, indeed, one great whirlwind of energy, to work without resting in this world; and also, before he died, he

wrote very many books—books in which the true man appeared; for in the midst of all they denounced and cursed, what touches of tenderness lay. Look at the Table Talk, for example:

We see in it a little bird, having alighted on the bough of a pear tree that grew in Luther's garden. Luther looked upon it and said: "That little bird, how it covers its wings, and will sleep there so still and fearless, though over it are the infinite starry spaces and the great blue depths of immensity, yet it fears not—it is at home; the God that made it too is there." The same gentle spirit of lyrical admiration is in the other passages of his book. Coming home from Leipsic in the autumnal season, he breaks forth into living wonder at the fields of corn. "How it stands there," he says, "erect on the beautiful taper stem, and bending its beautiful golden head with bread in it—the bread of man sent to him another year." Such thoughts as these are as little windows, through which we gaze into the interior of the depths of Martin Luther's soul, and see visible across its tempests and clouds a whole heaven of light and love. He might have painted—he might have sung—could have been beautiful like Raphael, and great like Michael Angelo.

Mozart.

The compositions of Mozart are of every kind, and so numerous that even a bare list of them cannot be given. But from the Sonata to the Symphony, from the simplest romance to the most elaborate musical drama, he, whose career was stopped before he had completed his thirty-sixth year—composed in every imaginable style, and excelled in all. In each class he furnished models of the greatest attainable excellence; exquisite melodies, profound harmonies, the playful, the tender, the pathetic, and the sublime, are to be found amongst his works. Yet he to whom all the really civilized parts of the world are so deeply indebted for the increase, to an almost incalculable amount, of the stock of an innocent and intellectual pleasure, scarcely ever enjoyed a moment's respite from ill-requited labor and corroding anxieties; few, not in a state of actual want, ever suffered more from the evils of poverty, and he who left so valuable a treasure to mankind had not, in the hour of death, the consolation of feeling that he had been able to secure against the miseries of dependance an affectionate wife and her helpless children. His strong disposition for music developed itself when he had scarcely completed his third year. His delight was in seeking out *thirds* on the harpsichord of his sister, and his joy was unbounded when he succeeded in discovering one of these harmonious concords. Before he began to manifest a predilection for music, his amusements were like those of other children; and so ardent was he in the pursuit of them, that he would willingly have sacrificed his meals rather than be interrupted in his enjoyment. This great sensibility was observable as soon as he could make his feelings understood. Frequently he said to those about him, "Do you love me well?" and, when in sport he was answered in the negative, tears immediately began to flow. He upon whom nature bestowed so much vigor of imagination, so little physical strength, never seemed destined to attain longevity. Slightly constructed and feeble in constitution, he required more mental repose than his necessities would allow. His mind did not yield, but his body gave way.

DOMESTIC ECONOMY.

Cranberry Roll.—Stew a quart of cranberries in just water to keep them from burning; make it very sweet, strain it through a cullander, and set it away to cool. When quite cool make a paste as for apple pudding, spread the cranberries about an inch thick, roll it up in a floured cloth and tie it close at the ends; boil it two hours, and serve it with sweet sauce. Stewed apples, or any other kind of fruit, may be served in the same way.

A Dressing for Sandwiches.—Take half a pound of nice butter, 3 tablespoonsfull of mixed mustard, a little white or red pepper, a little salt, the yolk of one egg; braid this all together very smoothly, and set it on the ice to cool. Chop very fine some tongue and ham; a little cold chicken is very nice added. Cut the bread very thin, spread it with the dressing; then spread over the meat, then the bread, and press it together very hard. Trim off the edges that the sandwiches may be all one size.

How to Make Cider Wine.—J. H. Keck, of Macon Co., Ill., gives the following method in the *Country Gentleman:*

Take pure cider, made from sound, ripe apples, as it runs from the press, put 60 pounds of common brown sugar into 15 gallons of the the cider and let it dissolve; then put the mixture into a clean barrel, fill it up within two gallons of being full, with clean cider; put the cask into a cool place, leaving the bung out for forty-eight hours; then put in the bung with a small vent, until fermentation wholly ceases, and bung up tight, and in one year it will be fit for use. This wine requires no racking; the longer it stands upon the lees the better. This wine is almost equal to grape wine when rightly managed.

Removing Rusty Stains from Marble.—Rusty stains upon marble stairs or curbs of railings, into which iron railings are secured, may be easily removed with a solution of oxalic acid. About one ounce of this acid, dissoved in a quart of hot water, will be of sufficient strength. It may be applied with a clean cotton rag or sponge. All traces of the acid must be removed afterwards with clean water. A

thin coat of varnish (by dissolving some white wax in refined turpentine.) applied warm to marble in which iron railings are fastened, prevents the rust from entering its pores.

Cooking Beef Steak.

"Mrs. Hutton! Mrs. Hutton! what on earth are you pounding to make such a deafning noise? I want you a minute."

"Well I am here," (her face all in a rosy glow, peeps above the fence,) not pounding on earth at all, but on my meat board, not to make a noise, but to mangle my beef steak."

"Umph! you are facetious this dull morning; but *apropos* of beef steaks, how do you generally cook them?"

"Oh! the old fashioned way, either frying or broiling. The latter I prefer, as the steak preparod in that way retains more of its natural flavor; yet it is a rosting process to the cook's face and fingers, and when the coals are dull, a wearysome one also."

"Aye! now I can lay you under an idebtedness to me which the presence of a whole roasted ox couldn't cancel. It is how to *broil* beef steak in a frying pan, and have it done in three minutes. My frying pan being wiped very dry, I place it upon the stove and let it become hot, *very* hot. In the meantime I mangle the steak; (if it chance to be a piece of sirloin so much the better,) pepper and salt it then lay it in the dry, hot pan, which I instantly cover as tight as possible. When the flesh first touches the heated pan, of course it seethes and adheres to it, but in a few seconds it becomes loosened and juicy; every half minute or so I turn the steak, but am careful to keep it as much under cover as possible; when nearly done, I lay a small piece of butter on it, and if I want much gravy I add a tablespoonfull of cold, strong coffee; in three minutes from the time the steak first goes into the pan, it is ready for the table."

"Why, you astonish me! What does it taste like?"

"The most delicious, delicately broiled steak, full of juce, yet retaining the healthiest beefy flavor that any John Bnll could require."

"Now, what is the philosophy of it, I wonder."

"Pshaw! why need you care to know? Its practical utility satisfies me, in the saving of time, labor, and my complexion."

"I will try the experiment this very noon; do you think the same method would suit mutton chops?"

"Admirably—only they require a longer time, to prevent them from being rare. I have sometimes made an excellent gravy for them by adding a little diluted cream, thickened with a pinch of flour, into which, when off the fire and partly cool, I stir in the yolk of one egg, well beaten.—*Ohio Farmer.*

HEALTH AND DISEASE.

Breathing Poison.

"*Who's* breathing poison?" Every one who confines himself in a close apartment, without some adequate opening in wall, or window, or door, for the admission of pure air.

A pure atmosphere contains about one two-thousandth part of a gas which is identical with the *damps* in wells, and which, if increased in amount, at last becomes fatal in its effects. Being heavier than common air, it sometimes settles down and accumulates in deep pits and wells in such quantities as to be fatal to human life. Agitation of the atmosphere has a tendency, by mixing the poisonous with the healthful gases, to prevent their accumulation upon and near the surface of the earth, and this is one of the great offices of the winds, which, though they sometimes strand a ship or sink a fleet, a thousand times compensate the world for such losses, by purifying the air for millions to breathe.

But it is this same carbonic acid which is exhaled from the lungs of man and all animals; so that wherever there is much breathing, there there must be an accumulation of much poison. In every public hall, in every church or school room, therefore, when crowded, and not thoroughly ventilated, the air must inevitably become foul, producing the legitimate effects of the narcotic poison referred to—dullness, sleepiness, stupor.

If school directors, church trustees and church-goers only knew how much of what they attribute of dullness and stupidity on the part of teachers and children, pastor and congregation, should be charged to their own stupidity in not acquainting themselves with the laws of life, and so constructing their public buildings and private dwellings as to insure a circulation of pure air, they would first hang their heads in shame, and then earnestly set set about the work of providing for the future.

The bed-rooms of most dwellings are contrived without the least regard to the laws of health. Narrow, pinched up, low and tight, they are no more fit for a human being to sleep in than the hold of a slave ship. For ourself,

we would vastly prefer a wigwam to such chambers as we have been crammed into hundreds of times in this and other conntries. The door must be closed and bolted for protection against burglars, and there we were, shut into a miserable, sour, musty little corner, without the possibility of getting a mouthful of fresh air until morning, unless by knocking out a pane of glass or removing the entire window—a thing by no means easy to do, in most cases, without a set of carpenter's tools. After a torturous night of groaning and horrible dreams, morning came with nervousness, headache, and inward cursings at the diabolical recklessness or execrable stupidity of the architect or proprietor of that particular Calcuttian hole.

Farmers, and every body else, open your windows, if you cant do any better, and so let in the pure air of heaven. It will not hurt you unless you allow a draft to sweep directly over you, and after sleeping a few nights in a pure, health-giving air, yon will never again be content to sleep in the atmosphere of your own exhalations.

YOUTH'S CORNER.

More Things About the Sea.

In the November number we told you some things about the vastness of the Ocean, its depth, the quantity of water it contains, and the immense amount of salt.

THE COLOR OF THE SEA

Varies in different localities, and for reasons not yet fully explained. In some places, as in the inlets on the coast of Norway, it is so clear that, when at rest, the bottom can be plainly seen at a depth of one hundred to two hundred feet. Upon some coasts it has a reddish or purplish hue, upon others white, and again is almost black. In the tropics, it is at one time an indigo blue, then a deep green, and again a slate grey.

On our way across the Atlantic, it varied at different points from a light sky blue, through all the shades of green to a blue black. *Depth* undoubtedly has something to do with the different shades, but does not account for the strange and beautiful hues which characterize waters of about the same depth on different coasts and in the different latitudes.

CURRENTS OF THE SEA.

All our little readers know that rivers have currents, but some of them, probably, do not know that there are also currents in the sea—currents which always flow in the same direction, just as surely as the Mississippi flows southward to the Gulf.

"Yes," says one, "I was on the sea-shore once, and saw one of these currents dash its waters upon the shore, oh, so furiously!" No, that was not a *current*, such as we mean. That is, it did not flow steadily, and always in the same direction. It was only a dashing of the waves, which to-morrow the winds may turn the other way, just as the waters on the little lake near you sometimes wash upon one shore and then upon the other.

One of these great currents in the sea is that which flows from the east westward in all the equatorial regions of the earth. They are compelled to flow in that direction because the earth revolves on its axis in the opposite direction. To prove that this must be so, take an apple, put a stick or knitting needle right through the center, from the stem to the blossom, dip it in water, and then standing with your face to the east, hold the two ends of the needle in your fingers and make the apple go round and round from you towards the east. What water adheres to the apple will flow towards you from the east. Or, look at the grindstone, and see how the water flows in just the opposite direction to that of the hand and crank used in turning.

But we did not intend to give all the reasons. If there should be anything you don't understand, ask your parents or school teacher, or us by letter.

This mighty current we were talking about, is also influenced, on the surface, by what are known as the *Trade Winds*, which blow in the same direction, and for the same reason.

If that part of the equatorial current which flows westward on the north side of the equator, could flow without hindrance, it would wash directly through the Continent of North America; but as it can't do that, it makes a

turn northward and eastward through the Gulf of Mexico, sweeps through the Atlantic Ocean and washes the western coast of Europe—the warm winds of the equatorial regions taking the same direction. And that's one reason why the western coast of Europe is warmer in the same latitude, and why ships sailing from America to Europe in the course of the current, get along easier and faster. It's like sailing *down stream* instead of up. Accordingly, ships starting for England from New York go quite out of a due course in order to get into the Gulf Stream as soon as possible; while, in coming from England, they steer out of course northwest so as to avoid this same current.

And then there is another great current, flowing southwestward from the region of Spitzbergen in the Arctic Ocean, and washing the eastern coast of North America. This current is often freighted with immense icebergs, of which we shall tell you by-and-by, and, of course, is very cold, and must cool the eastern part of this continent. This is an another reason why our American climate is not so warm as Western Europe in the same latitude.

There are also believed to be currents under these surface currents, which flow in the opposite direction. But of these we have not space to speak at length.

It is a knowledge of ocean currents which, more than anything else, has advanced the science of navigation and shortened the long voyages of a hundred years ago, when sailors were entirely ignorant of them and often sailed against them at a loss of three or four miles an hour in their speed, when by turning aside but a very few miles, they might have avoided them altogether.

Dr. Franklin was among the first to investigate this important subject; and of late years, Prof. Bache, Superintendent of the Coast Survey, and Lieut. Maury, the traitor, have done more to enlighten the world in relation to it than any other men who have ever lived.

In the next number we shall tell you all about icebergs, including some that we saw last summer in the Atlantic Ocean.

"May We Girls Skate?"

At the risk of disgusting aunt Prim and mother Prudence, we answer, Yes. Possibly other out-door exercise and sports might be devised which would meet with the approval of the most ultra-fastidious, but until they shall have been introduced, we say to the girls, after you have done your whole duty at home and in the school, and there is yet need of some healthful exercise in the open air—exercise that shall quicken the circulation, invigorate the whole body and make the cheeks redolent of health and beauty—then get you a good pair of skates, and to the ice.

At first, it will seem difficult to learn, and you may need the arm of father, brother, or friend; but persevere, trust to your own *gumption* as much as will answer the demands of prudent courage, and it will be but a short time ere you will equal the bonnie girls of Holland, gliding over the glassy surface of river, lake, or pond like an arctic fairy.

PEREQUISITES TO EASY SUCCESS.

1 A dress that shall not trail two fect behind you, and other appropriate apparel, not omitting the heaviest pair of boots that can be worn without discomfort.

2 A good pair of skates, quite straight on the bottom, a little grooved and with wide straps that shall not hurt the feet.

3 A light, strong stick, about six or eight feet long, with a small spike in each end, to aid you in keeping 'right side up with care.' The stick should be carried in both hands, being grasped with both palms downwards and the thumbs pointing towards each other. It will not at all impede the effort at skating, and in case of danger of falling, either end may in an instant be put down upon the ice and save you. That is, we think so; the invention is original with us, and has never, to our knowledge, been tried.

4 *Good and gallant* company.

If, with all these aids, you don't succeed, send for the Editor of the *Farmer* and let him teach you the coveted art, after the good old style of the time long ago.

WAR MISCELLANY.

Heroes.

BY EDNA DEAN PROCTOR.

Mother Earth! are the heroes dead?
Do they thrill the heart of the years no more?
Are the gleaming snows and the poppies red
All that is left of the brave of yore?
Are there none to fight as Theseus fought
Far in the young world's misty dawn?
Or to teach as the mild-eyed Nestor taught,—
Mother Earth! are the heroes gone?

Gone? in a grander form they rise;
Dead! we can clasp their hands in ours,
And light our path by their shining eyes
And wreathe their brows with immortal flowers;
Wherever a noble deed is done,
'Tis the pulse of a heroe's heart is stirred;
Where right has ever a triumph won,
There are the heroes' voices heard.

Their armor wrings on a nobler field
Than the Greek and the Trojan fiercely trod,
For freedom's sword is the blade they wield,
And the light above is the smile of God.
So, in his isle of calm delight,
Jason may sleep the years away,
For the heroes live, and the sky is bright,
And the world is a braver world to-day.

¶ SACRIFICES OF AMERICAN WOMEN.—A good idea is advanced in the following from the McGregor *Times*. Speaking of a soldier who left his wife and child behind him, while he went to the war, it says:

We will always concede the meed of patriotism and self-sacrifice to the man who leaves his home and business to save his country from threatening peril; but we contend that the fond wife who relinquishes her husband, and with her babe cheerfully accepts the doubled cares and utter loneliness of a three years' separation from him who is more than life to her, in all that goes to make up the sum of patriotic heroism, is immeasurably above her companion. It is quite time the vast army of heroic, self-sacrificing women of this land should receive a just recognition for the important part they have enacted throughout this unhappy rebellion. There is one courage that goes to the battle-field; there is another which cheerfully yields every thing in life worth living for, upon the alter of its country.

The War and the Republic.

The War—what is to come of it? God only *knows;* but it looks now, even to the eye of the most hopeful, as though we were about given over, as a whole people, "to work out our own damnation with greediness!"

Treason in high places, financial corruption and military imbecility everywhere in the army, and the gradual oozing out of much of what seemed, at first, to be a true patriotism of the people are the unmistakeable symptoms of a most malignant disease, the *prognosis* of which is certain dissolution or ultimate recovery, according as it is examined by the constitutionally hopeful or the despairing patriot.

We are glad to be among those who do not yet despair; though we are far enough from believing that the nation is to have a speedy deliverance out of its manifold troubles. The truth is, we have waxed fat too rapidly, and have been well nigh spoiled by successes such as no other nation under heaven has ever enjoyed—circumstances all the more unfortunate for us, politically, in that they have been superadded to ethnological peculiarities whose natural tendency is to sharpness of dealing, though at the sacrifice of high moral principle, and to the indulgence of a narrow and selfish ambition.

Indeed, we are to-day reaping the bitter fruit of our own planting—suffering the humiliation of treason, of stupendous fraud, of wasted substance, of burdens grievous to be borne and such as must be endured for generations to come, of a most terrible destruction of precious life, and, finally, of what to us, as a people, is worse than any of these, the degradation of a government which for three generations of men has been the marvel of the world, and the coveted model of many struggling peoples. And all this because we have trifled with high and holy Principle, trampled upon Justice, and treated with contempt the great landmarks of our Fathers.

But the original principles on which this Republic was founded are as true to-day as they were in the beginning, and the world

needs thair practical application no less now than then. Therefore it is that we believe they are destined to triumph after all.

Underneath the surface scum of corrupt politicians, semi-traitorous military leaders, sordid capitalists, and a host of blatant yet blind and wicked men in private life, the great deep of the American heart is as pure and clear as of old. The storms of the Rebellion will lash its quiet waters into fury, by-and-by, dash that loathsome, poisonous scum upon the rocky shore, and again reflect the face of God.

It should not be forgotten, however, that God's working, in social and political reforms, is not usually alone, but rather in co-operation with good and true men. It is not for us to say quietly, "Ah well, Providence will do as seemeth to him good; there is no need that we trouble ourselves about the result." It is ours, with God's help to make the result what it ought to be. God always most helps those who most help themselves! And this is why the rebels have had the best of it, thus far in the war. *They have been in earnest from first to last, and always.* They have each forgotten their own selfish interests—the body of the people, we mean—have sacrificed everything they had, whether of property, of family ties, of personal comfort or of life upon the reeking altar set up by the minions of Treason, and to-day, by virtue of the consistency and infernal heroism they have shown, challenge and secure a sort of admiration from even those of us who hate them as the worst enemies of God and man. Verily the children of darkness are wiser than the children of light.

That we should hope to triumph on behalf of the Government, while we treat as child's play the most sublime and momentous tragedy of war ever enacted, is worse than vain.—Without money, without clothing, and often without food, and poorly armed, they give themselves to the work as though earth and heaven hung upon the effort of each soldier. With everything that money can purchase or the tender sympathy of friends suggest, *we* fight or refuse to fight, as though the chief end of all our movements was *not* to hurt the enemy!

If we much longer continue in this jumble of political feuds and scandalous speculations and embezzlement, with only a slight admixture of real, earnest war upon the enemy, we are sure to fail of the object of the war; and what's more, we shall deserve to fail and to be damned for it too.

What then is the remedy? It is two-fold:—First, the Administration must leave off its story telling and prepare for a *real war.* And to that end the President, while he guards with jealous care the rights of the people, must make short work of both imbeciles and traitors in the departments and in the field—putting no men into places of high responsibility, nor allowing them to remain there, unless they promptly give evidence of capacity, loyalty, and power. Good Heaven! if General Jackson were in the Presidential boots, how he would squelch with a single stamp three-fourths of all the officials connected with the army—brainless, soulless fops, in fine kids, with nothing to recommend them but rich, persistent and impudent relations and friends! There must be true men of capacity and energy in the country, if not in the army, who are kept out of their true places, because the positions are already filled by ambitious semi-traitors and fools. God help the President to find them.

We do not censure the President. He is as just as Aristides, and as true as Washington to the one purpose of his soul—the salvation of the country. Nor has he greatly lacked wisdom as an administrative officer. His steps have, in the main, been well advised, and in the light of history will doubtless appear wiser than now. He only lacks promptness of decision, strength of will, and that fire of soul which should be the inspiration of the army and people, the terror of the enemy and a sure harbinger of victory. But that man were a marvel who should at the same time be a Washington and a Napoleon. It is such an one whom we need to-day—the Napoleon to annihilate the enemy, the Washington to give back to his peo-

ple and the world the restored Union with an untarnished flag and an uninfringed Constitution.

But God has given us no such prodigy for a President, and therefore, it is that we, in the second place,—we, the people—must the better perform our part in the great national struggle.

"Very well, haven't we done everything in our power?" No; there are some very important things that have yet to be done:

1. We must quit our party wrangling and political scheming and look solely to the salvation of the country.

2. We must do all that we can to hold up the hands of the President. The great question now is, Country, or *no* Country? And it is asked not only by Abraham Lincoln, but also by the true friends of free institutions in all other lands; nay, it is asked by Humanity, and it is asked *of us*. We are to answer it and in the presence of all mankind and of God. If his life should be spared, Abraham Lincoln has yet more than two years to act in his present high position as President of the nation, and, hence, Commander-in-chief of the armies of the Union. If the Union is saved, it must be done within that time. It must, therefore, be saved through him, or not at all. Is it not the sacred duty, then, of every patriot, whether Republican or Democrat, to encourage and sustain rather than distract and embarass the nation's administrative head in this trying time of imminent peril.

3. But it is not enough that we give to the President our moral support. We must also be more ready to make sacrifices for the good of the national cause. Thus far, we of the North have shown much less of this disposition than the enemy. There is nothing which they will not do to promote the success of their arms. We clothe ourselves in fine linen and fare sumptuously every day, and yet grumble shockingly at the prospect of a moderate tax.

The integrity of this Government and the perpetuation of our free institutions are worth the sacrifice of every present material good, if they cannot be made sure at less cost. But unless, as a people, we trample under foot all mean and selfish considerations, whether of self or of party, and think, and speak, and *work* solely for the best interests of the sacred cause of our common country, this glorious American Republic will fail just so sure as there is a God in Heaven!

Napoleon's Idea of Making War.

The following letter was written by Napoleon to Augereau, on the 21st of February, 1814:

"What! Six hours after receiving the first troops from Spain you are not in the field! Six hours of rest is quite enough for them. I conquered at Fangis with the brigade of dragoons coming from Spain, who from Bayonne had not drawn rein. Do you say that the six battallions from Nimes want clothes and equipage, and are uninstructed? Augereau, what miserable excuses! I have destroyed 80,000 enemies with battallions of conscripts, scarcely clothed, and without cartridge boxes. The National Guards are pitiful. I have here 4,000 from Angers and Bretagne, in round hats, without cartridge boxes, but with good weapons; and I have made them tell. There is no money, do you say? But where do you expect to get money, but from the pockets of the enemy? You have no teams? Seize them! You have no magazines? Tut, tut, this is too ridiculous. I order you to put yourself in the field twelve hours after you receive this letter. If you are still the Augereau of Castiglione, keep your command. If your sixty years are too much for you, relinquish it to the oldest of your general officers. The country is menaced and in danger. It can only be saved by daring and alacrity, and not by vain delays. You must have a nucleus of 6,000 picked troops. I have not so many, yet I have destroyed three armies, captured 40,000 prisoners, taken 200 pieces of artillery, and thrice saved the capital. The enemy are in full flight upon Troyes! Be before them. Act no longer as of late. Resume the method and spirit of '93. When Frenchmen see your plume waving, and you, first of all, exposed to the enemy's fire, you will do with them whatever you will."

NEWS SUMMARY.

STATE MATTERS.

Nothing of much importance under this head, except the death of Hon. Luther Hanchet, M. C. for the old Third and new Sixth District; an election on the 23th ult. to fill the vacancy thus created; an application to the Supreme Court for a writ of habeas corpus in favor of certain Ozaukee rioters, on the ground of their not being lawfully held in the custody of the Federal authorities. Decision postponed until next term of court.

DOINGS OF AGRICULTURAL SOCIETIES.

Annual Meeting of State Ag. Soc.—STATE AGRICULTURAL ROOMS, Dec. 10, 1862.—Pursuant to the requirements of the Constitution, the Wisconsin State Agricultural Society held its Annual Meeting for 1862, in these Rooms, on Wednesday, Dec. 10, at 3 o'clock P. M.; B. R. Hinkley, President, in the chair.

The attendance was larger than at any previous meeting since the modificatcn of the Constitution requiring the elections to be held at and during the Annual Fair, and all present appeared to feel a lively interest in the prosperity of the Society.

In answer to inquiries, and in advance of the publication of the Annual Fiscal Report of the Treasurer, the President made a verbal statement of the chief financial transactions of the Society for the past year; the most important being the sale to the Government of the United States of the improvements on the late Fair Grounds, now known as Camp Randall.

The amount of the claim audited by the Federal authorities is $1,953, and was designed to indemnify the Society for the cost of said improvements. The money has not been paid over yet, but the Society has received notice through the Q. M. G. of this State, that the claim has been audited and is now in the hands of the Third Auditor of the Treasury for payment.

The Secretary read the notice, given by him and duly filed at the last Annual Meeting, Dec. 11, 1861, of an intent to offer amendments to the Constitution, together with a copy of the proposed amendments, which were as follows:

Strike out the second paragraph in Article V., as published in the 5th Vol. of Transactions of the Society, said paragraph commencing with the sixth line and ending with the twentieth of said Article V.—and substitute therefor the following, to wit:

The election of all Officers of this Society shall be held each year during and at the State Fair, and the exact time and place of election shall be notified by the Secretary in the public newspapers at least twenty days before such election, and the Life Members of the Society, *and the Presidents of the several County Agricultural Societies legally organized and in active operation within this State*, shall be the legal voters thereat; and the Officers so elected shall continue in their respective offices during the period of one year from the first day of January subsequent to their election, and until their successors shall have been duly elected and qualified.

Hon. Simeon Mills moved to strike out of the proposed amendment the words "shall be notified by the Secretary in the public newspapers at least twenty days before such election," and to substitute in lieu thereof, the following, to wit: "Shall be distinctly notified by the Executive Committee, in all the published programmes of the Fair."

Adopted.

The motion then recurring on the adoption of the amendment as amended, it was carried without a dissenting voice.

On motion of Hon. S. D. Hastings, the Society adjourned *sine die*.

J. W. HOYT,
Secretary.

NATIONAL AFFAIRS.

The war still lags; Burnside's defeat with great slaughter of Federal troops at Fredricksburgh; a Union victory at Prairie Grove, in northwestern Arkansas by Gens. Blunt and Herron over Gen Hindman with great odds in his favor; the arrival of Banks' Expedition at New Orleans, his proclamation on assuming command instead of Gen. Butler transferred, his sending 5,000 troops to Baton Rouge; and the disgraceful surprise and capture of some 1,500 troops at Holly Springs, Miss., under command of Col. Murphy, of the 8th Wis., being about the only transactions of great public interest.

EDITORIAL MISCELLANY.

The Editor's Wayside Notes of European Travel.—NEAR ARGENTIERES, IN THE ALPS, May 29, 1862.—My last letter left me still at Saint Martin's on the open porch of my good Franco-English host, looking out wonderingly and with swimming eye upon the majestic King of the Alps. The very top of the mountain, which, late in the afternoon, had glittered with a pure and perfect whiteness, towards evening assumed a golden tint, the glory of which was indescribable. But suddenly the sun went down quite behind the grand old mountain over whose shoulder he had been looking and glowing all the late afternoon hours, and it was night. For a while the mountains were dimly seen and distant; but gradually the clear white light of the stars illumined their snow-mantled summits, and they stood near again, with a new and overaweing grandeur.

At last, the hour for retiring came, and the good-natured landlady conducted me, after the good old motherly style, to a comfortable chamber through whose open windows I could gaze from my bed upon the face of Mont Blanc; and thus it was, soul-inspired and lifted up in the presence of that sublime transfiguration, that Morpheus found me, and gently, though quite against my own will, bore me away to the realm of glorious dreams.

When I awoke it was 4 o'clock, and the highest peak of Mont Blanc was roseate with the light of the morning. It seemed but a two hours walk to his base, and I flattered myself that directly after breakfast I should begin the

long-anticipated climbing of his snowy slopes. What, then, was my consternation, when mine host assured me that it was not a foot less than 18 long miles yet to Chamouny, where the climbing was fairly to commence! At this rate, it would be after dinner, instead of after breakfast, when I might begin the ascent; and so I resolved to start at once, taking breakfast on the way.

Six miles further up the valley, winding my way around the lesser mountains which lay between, refreshed rather than wearied by the walk through waving fields of grain and sweet smelling clover, fresh with dew, and I came to the little village of Chede, with nothing in the world to recommend it but the romantic beauty of a half hidden cascade whose foaming waters leaping down the rocky side of a near mountain filled that nook of the vale with sweetest music.

Hitherto the road over which I had traveled had been a veritable highway, such as any State of the good old Union at home might covet. But it was a highway no longer, and if we had come thus far in "diligence" or carriage, it could have gone no further with safety to itself or humanity to the horses or mules. We were glad, therefore, to be a-foot and independent.

Up, up! and not so weary! for what were muscles made for, if not to climb? And if to climb, then what climbing in the world like that of the glorious old Alps? This was enough; I was tired no longer, but made the windings of the upward way as nimbly as the happy goats whose tinkling bells delighted and cheered me; stopping here too look down some fearful precipice upon the rushing snowy Arve; there, where a turn in the path afforded a new and better view of his towering heights, up to the cloud-piercing ice of the mountain in whose presence myself, the cottages in its clefts, and all else just around me, were as motes

Next to the mountains themselves, the objects of most curious interest were the human habitations—ofttimes so high above my own dizzy hight, and so utterly inaccessible that a balloon was suggested as the only possible means of communication on the part of the humble dwellers there with the other scattering inhabitants of the mountains. There they were, tucked away, a half mile above the wild gorge below, with ice above and snow on either side, yet surrounded by little verdant fields and orchard trees in blossom, and animated by groups of merry children and the tinkling bells of clambering goats.

A few miles further on, and I approached the quiet village of Servoz. The smoke of its dwellings curling heavenward was an encouragement to my weary limbs and craving appetite; but I had already walked eight miles since rising, and the welcome music of a cow-bell coming from a minature clover pasture in the vicinity of a peasant's cottage a few rods from the highway, wooed me to turn aside and see whether the milk of the Alpine cow was really as good as had been represented. There was no fence to hinder, and I followed the path which promised at least a sight of the cow and the cottage. In a moment I was enjoying both. Her bovine ladyship was a splendid specimen of the Swiss breed—large, mouse-colored, handsome, fat and sleek, cropping off the fresh dewy grass with a relish that sharpened my own hunger and gave assurance of such a breakfast as I had often craved in vain. A rosy maiden of "sweet sixteen," who stood in the pathway carelessly swinging her broad-rimmed hat, politely welcomed me in the most bewitching French, and soon I was seated with a bowl of the most delicious creamy milk and good wheat bread, in the midst of the whole family, answering their eager questions about the far off land whence I had come, and the war, of which even they had heard and knew more than four-fifths of the wiseacres in the English House of Lords.

Another bowl-full of milk, a little shower of centimes—a small French coin equal in value to one-fifth of a cent—many thanks on both sides, a friendly grasp of hands and adieus, a half franc left in the palm of the fair maiden, and I was again on my way to Mt. Blanc, whose ever-receding form seemed more and more averse to familiar approach.

At the village of Le Houches, and for some distance on either side, I fell in with multitudes of people making their way to the church, the echo of whose compelling bell filled the valley and mountins with its religious chimes. Old men in sober black, young men in parti-colored garments and women and maidens in plain but neat gowns—without hoops!—and with white, ruffled caps, old and young, swarmed forth from every dwelling by the road-side and from every cleft in the mountains, until it seemed that all Faucigny had turned out for some grand centennial observance. If American Protestants were as faithful to their convictions of religious duty as these mountain Catholics they would certainly be a much more christian people than now.

A few miles further I came suddenly upon Bossons—the first glacier my eyes had ever seen. Its appearance was as if the ice on the summits of two contiguous mountains, made half fluid, had slid down into the gorge between, and while in the act of plunging into the plain below had been fixed there as forever by a sudden congelation. And there it was, an incalculable body of ice, with deep chasms and irregularities, reminding one of a collossal ruffled shirt-bosom, stiffly starched, melting and melting at the base all the summer months, and yet ever undiminished in its sublime proportions. From it flowed a brook of ashy-grey water, cold as its own frozen bosom—so cold that when from its shady brink I dipped my bare feet into it, I as involuntarily jumped and cried *ouch* as though they had been dropped into a cauldron of molten iron.

At noon I reached the lovely vale of Chamouny, where, filled with ecstacy and awe, I stood, at last, under the very shadow of the Great Mountain.

The valley itself is more than three thousand feet above the level of the sea, and yet so rich is the verdure of the fields, so perfect and profuse the flowers which usually grow in warmer altitudes that one finds it not difficult to fancy himself in the very bosom of sunniest France. It was well I had breakfasted heartily at Servoz, for the enthusiasm that seized me at thought of actually standing upon that very Mer de Glace (sea of ice), in the midst of those icy peaks, the sight of which I had all my life coveted more than the seeing of any other natural object in the wide world, would not for a moment entertain the sordid question of provender. "Would I not dine?" *No, I would not* until my feet had first touched the everlasting ice of Mt. Blanc! My excellent host of the Hotel de Saussure saw I was in earnest, and so placing before me a flask of wine proposed to find me a guide and mules. "I want neither a guide, nor yet mules, sir; I'm obliged to you." This he would not believe, but before the mules were at the door or alpin-stocks* were forced upon me, I had myself found the upward winding path and was climbing the rocky ribs of the mountain, empty handed, on foot, and alone. Up, up I went as it had been on eagle's wings; now following the narrow, stony path, now dashing across the angles made by the zigzag course of the beaten way, and several times startling returning trains of more aristocratic—or, perhaps, only less enthusiastic—travelers on slow-footed mules with as many guides. There were places where the only possible path was along the narrow brink of the most fearful precipice, down which to have fallen would have been as sure destruction as to have fallen clean off the earth into the moon. It was not surprising, therefore, that the ladies in the several parties I met should now and then scream out in such a manner as to almost stop the beating of the heart, lest some one had actually gone over and been irretrievably lost.

The time required to reach Montanvert, a traveler's rest at the extreme end of the winding mule path, and from which one may for the first time look out upon the Mer de Glace, down down upon the distant, shadowy vale of Chamouny, and off upon the snow-covered mountains beyond—is two hours and a half. I found myself standing upon its threshhold within one hour and forty minutes after beginning the ascent.

* The Alpin-stock is simply a staff five or six feet in length, shod with a steel point, and furnished with an iron hook on the top—useful in climbing rocky and icy steeps.

In childhood, and often since, I had read, with wonder, accounts of Mont Blanc and the Mer de Glace, until I half feared I might be disappointed when I should come to look upon them with my own eyes. But there they were, before and above me, even grander than I had dreamed, and peerless in their eternal sublimity! For a half hour I stood almost breathless, and silently worshipped; then with a bound and a shout of inarticulate joy, went down from the hights of Montanvert to the Mer de Glace, a distance of a few hundred feet, and dashed out upon the billowy ice, clambering over its huge, piled-up blocks, and leaping its deep, yawning fissures as if I were a chamois and not a man. The guides, thinking me a mad man, came hallooing after me, and offering for sums unprecedentedly small, to conduct me across the sea. More from a feeling of pity for them than from any felt need of aid, I engaged a couple of them and pursued my way, coming, however, in a very short time to gaps so fearfully wide and of such unknown depth, that to have attempted to have made my way over them without the forerunners with pick and ladder, would have justified their conviction of my insanity, and doubtless made me a martyr to my own ungoverned zeal. Half way over was an immense block of granite, which had fallen from the lofty *aguille* or needle-like peak which rises almost perpendicularly to the hight of probably half a mile, just the other side. This mass of rock was as large as an ordinary dwelling house, and must have been lying there for years, as by the disintegration of the granite a little soil had been formed on one side; and there, within a few inches of the ice, were nestled some half a dozen or more varieties of most beautiful flowers—Butter Cups, Forget-me-nots, Violets, Andromedas, Coronillas, Potentillas, and others. This little natural garden was so delightful a surprise and so touched my heart with the evidence it brought of the infinite tenderness of the beauty-loving soul of the All-Father, that I named it, impromptu, *Le Jardin de Dieu* (the Garden of God.) Butter-Cups, Violets and Forget-me-nots blossoming in the very bosom of this frozen sea, and in the midst of mountain peaks white with eternal snow! Beauty in the lap of Sublimity! Could there be a more striking display of the Creator's infinitude?

From the further side of the Mer de Glace the view of the giant peak of Mont Blanc—the mountain embraces a long range of peaks, some miles in extent—is the finest that can be had. You are already so far above the vale that the houses of Chamouny look like children's toys, and yet, there is the summit of Mt. Blanc, nearly two miles higher still, and, in time, seventeen hours above you, and quite beyond the clouds.

"Did you go to the very pinnacle?" No: it was perilous and expensive, and she who is to be my companion when the summit is climbed was then in the lesser mountains of Virginia, five thousand miles away. Very few persons have ever ventured to the top. One must have six guides, unfailing muscles, an unlimited supply of courage, extraordinary fortitude, and about one thousand francs in money. If any of these prerequisites are lacking, he had better do as I did—postpone the attempt.

The Mer de Glace, so often mentioned, is, as the name indicates, a literal sea of ice, appearing upon the surface as though it had been suddenly frozen while lashed into fury by a storm. It is one-fourth to a half mile in breadth and some miles in length, sloping gradually toward the plain, until it reaches Montanvert, where it drops off like Niagara and becomes a frozen cataract, known as Glacier des Bois. It was formerly supposed to be stationary forever, but investigations have shown that the particles of ice have a slow, imperceptible motion among themselves, so that the whole body of the sea, as if semi-fluid, is gradually moving towards the valley. Altogether it presents some of the most interesting phenomena in the natural world, and, while the Alps endure, will be an object for the wonder and study of man.

It was my desire to spend the night at *Le Jardin*, a mile or more above Montanvert, on the Mer de Glace, where dwells a family in cozy icy quarters, from year to year, but my self-prescribed limit of time would not allow,

and so about five o'clock I shook hands with my guides and made a rapid descent to Chamouny, narrowly escaping an avalanche, the report of whose thundering crash behind may be supposed to have quickened my steps yet more.

Somehow the strawberry girls, who are accustomed to refresh travelers on their way up and down, had not anticipated my coming and were not in their places, so that a bottle of wine and a little bread were not at all distasteful when I reached the hotel. But my day's work was not yet done. Martigny, at which point I am to take the cars for the head of Lake Geneva, was yet twenty-five miles further on, the crest of the Alps was to be crossed before it was reached, and the only train of to-morrow leaves at mid-day. A few miles—probably six, which would take me to Argentieres—could yet be made ere the close of day; and so, after a reluctant adieu to Chamouny, I started for my ultra-Alpine destination via Tete Noire.

But four miles had been made, however, when night found me on the side of a mountain, steep, and dark with cedar, pine and larch, and upon the brink of the Arve, whose foam-white waters dashed with loud roar over a cataract far below. On the other side the mountain was black with evergreens and perpendicular for more than a thousand feet, thus deepening the grandeur of the scene and almost compelling me to stop and meditate upon the almightiness of the God of the mountains. Fatigue lent another inducement and I did pause for almost an hour, resting upon the generous face of a great flat rock with the soft side of a boulder for my pillow, and gazing, possibly for the last time, upon the star-illumined face of Mt. Blanc. At first, the soft, fleecy clouds, like etherial drapery, enveloped his shoulders only, his jeweled coronet of centuries unnumbered glittering as with the radiance of heaven. But soon this drapery of cloud was drawn as a curtain before the face of his majesty and he graciously bade the world and me "Good-Night."

Another mile brought me to this humble dwelling, where I find a cordial welcome from a hospitable Switzer, his wife and some fifteen children, plenty of good bread and milk and a clean, comfortable bed. May Providence ever deal as kindly with you, my dear friends of the great FARMER family, as He has this day dealt with me.

Mrs. Hoyt returned with us from Ohio in December, with health improved and still slowly gaining. In the next number she may be induced to make a report of herself for the year 1862.

The Farmer for 1863.

Shall it follow the Example of other Agricultural Journals?—In what respect? Not in regard to its general conduct, of course. That is a matter in which it will follow the example of no other journal in the world. It has an individuality of its own; whether more or less worthy than that of some other, it is not our business to enquire. We prefer to have it what it is, or we would make it something else.

But there is one thing in which we have been half tempted to imitate many of our worthy cotemporaries. We refer to an increase in the price of subscription! There is one strong argument in its favor; *we cannot afford to publish at the present rate.* We have been so many years "working for nothing and boarding ourselves," that we begin to wonder whether it is not our duty to change the programme a little. This on general principles. But there are new and special reasons why the question of price should come up at this time.

1. The price of printing material is almost double what it has been for years past. That of paper is actually double; and the paper used in publishing a paper is by far the most important item.

2. The price of labor has gone up, also, and it costs more to get the work done than ever before.

3. All the expenses of living, travel, &c., have greatly increased.

What then shall be done? Six diverse ways lie before us:—to increase the price; to diminish the number of pages; to use a less expensive material; to double the circulation; to

stop the publication of the paper; or, lastly, go ahead as though nothing in the world had happened until all our resources are exhausted, and then *smash up!* Of these alternatives some publishers have chosen one and some another. Each has been accepted here or there.

To increase the price is difficult for the very reason that seems to make it necessary. We don't like to diminish the volume of the *Farmer* because with is present liberal proportions we can't get into it more than half that needs to be said. To use a cheaper material lets down the higher style of the periodical, and puts it upon a level with many whose poor appearance we have only tolerated because we knew they were half starved. To stop the publication would be a severe mortification of our pride in the large class of readers for whose benefit it is published, and a disgrace to the State. While to break up is quite too common and popular in the commercial world to find favor with plain agriculturists, such as we are.

There is, therefore, nothing left to us but to multiply our subscriptions until the receipts shall exceed the inevitable expenditures, and *this is the secret of our offering such extraordinary inducements.* Will not every friend of a sound agricultural literature and of a healthy magazine, such as every member of the family may read with interest and profit, renew and redouble his efforts to insure this result?

Appropriations to Co. Agr'l Socs.—We are informed by the Secretary of State, that the law making annual appropriations of $100 to Co. Agr'l Societies that shall have held Fairs and duly reported their proceedings for the year, was not repealed at the late extra-stupid session of the Legislature. Glad of it. But how in the world did they escape?

Clubbing with other Papers —*Changes in Terms.*—Since the publication of our last number, a number of our clubbing exchanges have so increased their rates that we can no longer furnish them in connection with the FARMER on the old terms. Our readers will therefore refer again to our Prospectus, and in sending money observe the rates.

Doing Well.—It is a source of high gratification to editor and publishers, that the FARMER is growing in favor with that best class of its friends, the substantial, sterling farmers of the Northwest, who have been its consistent and appreciative supporters for years, and that such friends and a host of more recent subscribers are working as never before, to give it a circulation more nearly commensurate with its merits.

If even one half of the 80,000 farmers of Wisconsin could be induced to take it—and they ought, every one of them, to do so—we could afford to make it a better Agricultural Journal, in every respect, than is now published in the world.

We most heartily thank you, friends, for what you are doing, and will reward you, in part, by continuing to expect of you even better efforts in the time to come.

Our Premium Melodeon.—The Melodeons manufactured by Prince & Co. are the best in the world. We have tried them, and therefore speak understandingly. For all the qualities which render a Melodeon desirable, these instruments are not only not excelled, but positively unequalled. Their tone is pure and full; they will keep in tune as long as the instrument lasts; they respond readily to the touch, and are beautifully made. Be sure to examine these before purchasing elsewhere. —*Home Journal, New York.*

Missing Numbers of the Farmer.—Subscribers who have only a PART of the Nos. for 1862, can be supplied with the remainder at 5 cents per No. This will make the volume complete for binding, which is done in neat, substantial cloth covers at 40 cents.

Send and get the additional Nos., and send *immediately*, as they are fast running out.

HOYT & CAMPBELL.

Bound Volumes.—We will furnish back volumes neatly bound in black cloth, with handsome gilt-letter backs for $1,12½. Send in your orders—those of you who are new subscribers—and so increase your agricultural libraries by the addition of the most valuable book, for the price, that the farmer can buy.

The Great Knitting Machine.—Since our offer of Aiken's Knitting Machine as a prize, the question has been often asked, Can you give us evidence that it is really a practical and valuable machine. To this question we reply: We have seen it operate to the great satisfaction of those who were competent to judge; but that our readers may have the testimony of those who have used it for sometime, we shall publish from time to time voluntary letters addressed to the proprietors from different parts of the country. Here is one of these testimonials:

EATON, OHIO, December 15, 1860.

I have used one of your machines about ten months, and would not part with it for many times its cost, if unable to get another. Besides the care of a large family, it is no uncommon thing for me to make with it a dollar and a dollar and a half a day, and it is no exaggeration to say, that with no other cares, I could easily make two dollars a day.

I have knit upon it all kinds of cotton and woolen hosiery, and for fancy work it can't be beat. I have knit shawls, nubias, opera capes, sontags, undersleeves, children's sacks, comforts, and other articles too numerous to mention.

I can cheerfully recommend any woman desiring pleasant and profitable employment, to buy one of your machines. If necessary, borrow the money, and with industry it can soon be replaced with interest

MRS. D. A. DICK.

Our Brethren of the Agr'l Press.—There is certainly nothing in our feelings which is illiberal towards the many excellent agricultural publications that come to our table from week to week or from month to month. Many of the gentlemen who conduct them are personal friends in high esteem, and all are our brethren, laboring in the same great field for the advancement of the material and social interests of a common country. As a class, they are excelled by no other profession in their devotion to the furtherance of what is good and ennobling among men, and we are confident that no equal number of public workers have done so much for the progress of America in all the great arts of civilization. Now and ever, they have our right hand of fellowship and most cordial sympathy.

Nor is it seldom that we feel prompted to say a generous word of them, and lend our influence on behalf of an increased circulation among the supporters of our own paper. But somehow, in the multiplicity of our official and editorial duties, so much of what should be said in each number is omitted, that our brethren and often ourselves are crowded out.

But, that our readers may know the address of such of them as we are willing to endorse, we publish the following list, with place of publication:

Maine Farmer, (weekly,) Augusta, Maine.
Boston Cultivator, " Boston, Mass.
Massachusetts Ploughman, (weekly,) Boston, Mass.
Hovey's Magazine of Horticulture, (monthly,) Boston, Mass.
American Agriculturist, (monthly,) New York, N. Y.
Horticulturist, (monthly,) New York, N. Y.
Country Gentlemen, (weekly,) Albany, N.Y.
Albany Cultivator, (monthly,) " "
Genesee Farmer, " Rochester, "
Rural New Yorker, (weekly,) " "
New Jersey Farmer, Trenton, N. J.
The Gardener's Monthly, Philadelphia, Pa.
Ohio Farmer, (weekly,) Cleveland, Ohio.
Michigan Farmer, (monthly,) Detroit, Mich.
Prairie Farmer, (weekly,) Chicago, Ill.
Farmers' Advocate, " " "
Illinois Farmer, (monthly,) Springfield, Ill.
Valley Farmer, " St. Louis, Mo.
Iowa Homestead, (weekly,) Fort des Moines. Iowa.
California Farmer, " San Francisco, Cal.
Oregon Farmer, " Portland, Oregon.

Of the changes which have taken place during the past year, we may mention the discontinuance of the good old *Homestead*, published at Hartford; of the *Ohio Valley Farmer*, published at Cincinnati; and of the *Field Notes*, at Columbus, Ohio. We are glad to learn, however, that the Ohio Farmer and Field Notes have united their fortunes, and are to be published at Cleveland, by our old friend and long-tried knight of the quill, Col. Harris, former conductor of the Field Notes and Ohio Cultivator,

The *Northwstern Farmer*, published until lately by Frank Miller, Esq., has been transformed during our absence, into a weekly newspaper, and gives promise of doing well.

The *Michigan Farmer*, after a temporary suspension, is again ont in good dress, aud under the able direction of its former Prop. and Editor R. F. Johnston, Esq., Secretary of the Michigan State Agricultural Society.

SOME OF OUR NON-AGRICULTURAL EXCHANGES.

The *Scieniific American*, published by Munn

& Co., New York City, as a journal devoted chiefly to science and the mechanic arts, has no superior, if, indeed, it has an equal, in the world. Its mechanical style, including typography and engravings, is next to perfect, and it is editorially managed with marked ability. A neat quarto weekly, at two dollars per annum. Every one interested in the progress of the useful and fine arts, should endeavor to make it a regular and unfailing visitor.

Hunt's Merchant's Magazine, published by Wm. B. Dana at $5, is absolutely unequalled, so far as we know, by any similar publication. It is a handsome octavo magazine of 140 pages monthly, abounding in articles of the highest value, and touching a wide range of subjects, including Agriculture, Mechanics, Commerce, Nautical Science, Commercial Law, the Finances of Government, &c., &c. The ablest practical writers of the country are contributors to its pages, and all its articles are original. There is no one of the whole number of most welcome magazines which we would not sooner part with than with this.

The Atlantic Monthly.—Among the magazines devoted to Literature the "Atlantic" ranks No. 1. Clothed in its neat russet cover, with the glorious old Stars and Stripes persistently floating aloft, it comes to us twelve times a year, laden with the rich gifts of the first statesmen, philosophers, poets, romancers and reviewers of the times. Liberal and independent in politics, religion, literature and science, it is most admirably adapted to the wants of the best class of the American people, and should have a place in every intelligent family. Published by——at Boston, at $3.50 per annum.

The New York Tribune maintains its high place as a political newspaper of the Republican "persuasion," and has won the credit during the past year of giving the latest, most correct and most complete reports of battles and army movements. Price, a little advanced. See Prospectus on cover of FARMER.

Forney's War Press, published at Philadelphia, is one of the ablest and most interesting newspapers of this country. It belongs to the Douglas Wing of the Democracy in politics and wields a strong influence on behalf of the Government as against the traitors of the South and the aiders and abettors of treason everywhere. It is usually embellished with several spirited engravings, and has a growing popularity. Price, $2 per annum.

Several interesting communications intended for this No. are necessarily deferred.

NOTICES OF NEW ADVERTISEMENTS.

We omitted in our last No. to call attention to Mr. Kellogg's advertisement of Nursery stock at Janesville. Mr. K. is believed to be a successful fruit-grower, and we doubt not that his stock will give good satisfaction.

L. J. Bush & Co., of Milwaukee, advertise the Ohio Mower and Reaper. As agents they are perfectly reliable, and the machine they advertise is one of the best in the country.

See Fowler & Wells' advertisement of their Phrenological Journal. They stand at the head of their profession in this country and in Europe, and their Journal is full of interest.

The Madison Seed Store, as now kept by Messrs. Chapin & Eldred is a credit to this city. They also keep a general and most excellent assortment of family groceries, &c.

O. S. Willey & Co. advertise a quantity of apple seed.

Attention is called to the advertisement of N. J. Moody, Surgeon Dentist. Mr. M. is ingenious in almost any department of the mechanic arts and the fine work to be seen in his office is evidence of superior skill in his profession.

STATEMENT
OF THE
Madison Mutual Insurance Company,
FOR THE YEAR ENDING
JANUARY 1st, 1862.

Made to the Governor of the State of Wisconsin, as required by the provisions of chapter 303, of the General Laws of 1858.

Total amount of accumulations,		$216,865 76
ASSETS:		
Premium notes of policy holders	$180,124 63	
Cash on hand, and due from policy holders for cash premiums,	35,408 66	
Am't secured by mortgage and judgment,	332 47	
Office furniture and fixtures,	1,000 00	$216,865 76
Whole number of policies issued,		14,357
Am't of outstanding risks thereon,		$10,220,789 00
Reported losses awaiting further proof,		3,709 80
Losses recently reported,		3,433 89
Whole number of policies issued in 1861		5,778
Amount of outstanding risks thereon,		$5,315,173 00
Amount of premium notes thereon,		93,944 06
Amount of cash premiums thereon,		48,377 36
Total amount of losses reported during the year,		15,801 13
Total am't of losses paid during the year,		6,881 16
Amount settled by drafts and awaiting the call of the insured,		1,568 85
Amount of commissions paid to Agents,		7,460 84
Am't paid for Advertising,	$1,625 20	
Amount paid for printing,	811 00	
Amount paid for postage,	366 22	
Amount paid for office rent,	200 00	3,002 42
Expenses paid, including all compensation of officers and directors—stationery, extra clerk hire, fuel, lights, and all other incidental expenses,		6,069 56

STATE OF WISCONSIN, } ss.
DANE COUNTY, }

We, the undersigned, being the President and a majority of the Directors of the "Madison Mutual 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 the company, according to the best of our knowledge and belief.

D. J. POWERS, President.
JOHN W. BOYD,
SAMUEL D. HASTINGS,
B. F. HOPKINS,
TIMOTHY BROWN,
ALBERT WOOD,
G. F. HASTINGS,
H. H. GILES,
SAM'L R. McCLELLAN,
G. R. MONTAGUE,
ORRIN GUERNSEY,
LUTHER BASFORD,
DAVID ATWOOD,
D. WORTHINGTON.

Subscribed and sworn before me this sixth day of January, A. D. 1862. V. W. ROTH, Notary Public, Dane County.

Comparative Statement of the business of the Company for the years 1859, 1860 *and* 1861:

	1859.		1860.		1861.	
Total amount of accumulations,		$39,080 93		$110,389 49		$216,865 76
ASSETS:						
Premium notes of policy holders,	$35,462 46		$92,487 27		$180,124 63	
Cash on hand, and due from policy holders for cash premiums,	2,956 02		16,509 74		35,408 66	
Acount secured by mortgage and Judgment,	332 47		332 47		332 47	
Office furniture and fixtures,	300 00		1,000 00		1,000 00	
Whole number of policies issued,		39,080 95		110,389 49		216,865 76
Am't of outstanding risks thereon,		4,807		8,579		14,357
Total am't of losses paid and settled,		$2,409,050 49		$5,451,115 49		10,320,789 00
Losses reported and awaiting further proof,		2,409 45		5,903 31		8,450 01
Whole number of policies during the year,		1,187		3,772		7,351 12
Am't of outstanding risks thereon,	$1,140,076 00		$3,916,115 49		$5,816,173 00	5,778
Am't of premium notes thereon,	17,109 82		68,789 45		83,944 06	
Am't of cash premiums thereon,	11,069 04		35,703 88		48,377 36	
Am't of commissions paid to Agents,	3,317 70		10,339 18		7,460 84	
Am't of expenses paid, including all compensation of officers, printing, advertising, postage, and all other incidental expenses,		3,317 51		5,847 44		9,071 89

The foregoing statement of the business of this Company for the past year gives a gratifying evidence of its high standing in the public estimation and of the success of its rules and principles of action.

Although its business for the preceding year (1860) was much larger than that of any previous year, and notwithstanding the general depression among farmers the past season, arising from light crops and low prices, the above figures show an increase of nearly *seventy per cent.* in the number of policies issued, and of *over seventy per cent.* in the amount of cash premiums for the past year.

We invite a careful examination of this report. Its figures make a stronger argument than any form of words, and prove a rise and standing in popular favor unparalleled in the history of the Northwest.

DIRECTORS AND OFFICERS FOR THE YEAR 1862:

DIRECTORS.

J. W. BOYD, Walworth County.
B. F. HOPKINS, Dane County.
D. WORTHINGTON, Waukesha County.
S. D. HASTINGS, Trempeleau County.
G. F. HASTINGS, Dane County.
DAVID ATWOOD, Dane County.
G. R. MONTAGUE, La Crosse County.
S. R. McCLELLAN, Kenosha County.
ALBERT WOOD, Dane County.
ORRIN GUERNSEY, Rock County.
F. H. ROPER, Dodge County.
JOHN TOAY, Iowa County.
CICERO COMSTOCK, Milwaukee County.
TIMOTHY BROWN, Dane County.
L. BASFORD, Grant County.
H. H. GILES, Dane County.
DAVID TAYLOR, Sheboygan County.

OFFICERS.

JOHN W. BOYD, President.
BENJ. F. HOPKINS, Vice President.
SAMUEL D. HASTINGS, Treasurer.
D. WORTHINGTON, Secretary.
G. F. HASTINGS, General Agent.

LOSSES PAID BY THE COMPANY IN 1859.

S H Coleman, Juneau, Dodge co.,	$10 00
J H Seaman, Richland, Richland co.,	10 00
Fanny Plummer, Mauston, Juneau co.,	15 00
Geo F Taylor, Madison, Dane co.,	15 50
Nelson Sickles, Waterloo, Jefferson co.,	690 38
A L Beebe, Dunn, Dane co.,	650 00
J B Barber, Juneau, Dodge co.,	68 00
Jas H Main, Juneau, Dodge co.,	403 57
Thos Mayhew, Merton, Waukesha co.,	27 00
W N Seymour, Madison, Dane co.,	20 00
Wm Edwards, Sugar Creek, Walworth co.,	400 00
Leonard Hatch, Kenosha,	100 00
	$2,409 45

LOSSES PAID IN 1860.

J S Willmarth, Sun Prairie, Dane co,	$314 50
Cyrus S Davis, Menominee Falls, Waukesha co.	5 00
J W. Cook, Dane co.,	15 35
Lewis Thompson, La Prairie, Rock co.,	174 52
Henry Johnson, Somers, Kenosha co.,	12 50
Pliny Putnam, Rubicon, Dodge co.,	5 00
E B Thurtell, Jamestown, Grant co,	500 00
A A Anderson, Delafield, Waukesha co.,	7 00
James T Walklin, Eagle, Waukesha co.,	20 00
C Sutherland, Fitchburg, Dane co.,	10 00
Harrison Koonz, Concord, Jefferson co.,	400 00
Owen Garity, Sullivan, Jefferson co.,	6 00
C P Churchill, Waukesha co.,	5 58
Caleb Jewett, Town of Madison, Dane co.,	17 51
Mary La Follett, Primrose, Dane co,	115 00
Wm A Stowell, Cottage Grove, Dane co.,	1,041 71
Samuel H Sabin, Windsor, Dane co.,	18 00
Abel Strong, Marcellon, Columbia co.,	382 71
Quartus Towry, Johnstown, Rock co.,	5 00
Robert Hornby, Fairfield, Sauk co.,	496 05
Thomas Stevens, Dane, Dane co.,	200 06
John Wightman, Berry, Dane co.,	751 80
Douglas Oliver, Glen Haven, Grant co	1,000 00
Josiah Pierce, Pardeeville, Columbia co.,	400 00
	$5,903 23

LOSSES PAID IN 1861.

L D Lateer, Janesville, Rock co.,	$499 53
Edward Walsh, Centre, La Fayette co.,	306 80
Nathan Kellegg, Madison, Dane co.,	15 00
Henry A Chapman, East Randolph, Col. co.,	20 00
Jared Bishop, Jamestown, Grant co.,	371 00
Allen Hoxie, Porter, Rock co.,	1,000 00
O. C. Burdick, Christiana, Dane co.,	2 00
Samuel Crossett, Juneau, Dodge co.,	13 50
Albert Gaston, Cottage Grove, Dane co.,	11 13
Stephen Young, Somerset, St. Croix co.,	380 00
A L Beebe, McFarland, Dane co.,	699 01
Alfred Taber, Delavan, Walworth co.,	350 00
Lydia D. Crocker, Lake Mills Jefferson co.,	2 00
John Feller, Bear Creek, Sauk co.,	646 65
C B Francis, Janesville, Rock co,	20 00
G W Harger, Tafton, Grant co.,	5 00
J M Hartlin, Rutland, Dane co.,	4 50
B C Hildreth, Summit, Waukesha co.,	4 90
J S Dayton, Janesville, Rock co.,	30 00
William Kendrick, Oregon, Dane co.	37 50
Henry Mitchell, Hazle Green, Grant co.	25 00
John Mortimer, Boscobel, Grant co.,	10 00
John Kispert, Jefferson, Jefferson co.,	399 00
Darius Reed, Sullivan, Jefferson co.,	250 00

John A Gilman, Sparta, Monroe co,.....	375 00
Rasselas Bardeen, Albion, Dane co., ...	50 00
Hiram E. Coon, Palmyra. Jefferson co.,.....	200 00
John W Butts, Cottage Grove, Dane co.....	262 63
William Aldrich, Burlington, Racine co.,.....	30 00
W W Fowler, Eagle, Waukesha co.,.....	280 05
Levi G Kendall, Fort Atkinson, Jefferson co	100 00
John Wright, Waukesha, Waukesha co.,.....	100 00
J W Herrick, Rutland, Dane co.,.....	340 96
George Auschetz, Ozaukee, Ozaukee co.,.....	40 00
	$6,881 16

A brief summary of the Company's plan of operations.

1. To insure buildings at not more than two-thirds their cash value, and thus protect the Company from the designs of the fraudulent, and keep the insured interested in the preservation of their property.
2. Not to insure more than $2,000 in a single risk.
3. To insure no building within twenty feet of any other building.
4. To allow the insured to set up additional stoves or make additions or alterations to the buildings, if the hazard is not increased thereby; without notifying the Company.
5. To pay damages caused by the effects of lightning, although the property may not be burned.
6. To hold itself responsible for the correctness of the surveys and other official acts of its Agents.
7. To avoid over-hazardous property, such as stores, mills, taverns, saloons, factories, &c., &c., and confining its business to farm and homestead risks.

☞ 8. The Premium Notes given to this Company expire with the policy for which they are given, and are not held as a perpetual indebtedness against the maker—as in many Mutual Companies.

From a large number of testimonials both of the press and of persons who have been paid by the Company for losses sustained, we have only space for the following:

[From the Milwaukee Free Democrat, Aug. 1, 1861.]

"This well established and popular Insurance Company seems to be in a most prosperous condition.

That its business is well managed, a glance at its list of officers is a sufficient guarantee. The system of mutual insurance has been very popular, and many of the stock companies at the east, finding their business cut into so much by the mutual companies, have engrafted a participating branch upon their business. It is a system by which the profits of assurance are divided between the stockholders and the policy holders. In this Company the whole profits inure to the policy holders. In fact, insurance comes to the insured at net cost. It is emphatically a farmer's institution, no risks being taken in villages and towns, except upon isolated dwellings, consequently the risks are all first class.

Those wishing to get insured can not do better than patronize this home institution."

[From the State Journal, July, 1861.]

"We publish to-day the semi-annual statement of this old and reliable company, to which we would call special attention. It shows a large increase of business over any past year. This company, by fair and honorable dealing, has worked its way into public confidence in a high degree; and it now stands first among the home companies in the State, and is doing more business than any other. There is no safer company in the country, and we commend it to all who have property that comes within its class of hazards."

Office, Porter's Block, Madison.

D. WORTHINGTON, Sec'y.

WAKELEYS & VILAS,

ATTORNEYS AT LAW,

Office in the United States Block,

MADISON, ...WISCONSIN.

BOUNTIES and PENSIONS for Soldiers and their families promptly collected.

E. WAKELEY. CHAS. T. WAKELEY. WILLIAM P. VILAS.

Cream City Agricultural Warehouse.

THE

OHIO MOWER & REAPER

FOR

MINNESOTA AND WISCONSIN.

The Celebrated

"BALL'S OHIO MOWER AND REAPER"

Will be sold to the Farmers of Minnesota and Wisconsin during the coming season by "Live Agents" in every county.

DODGE, STEVENSON & CO.,

Of Auburn, N. Y., have secured the EXCLUSIVE RIGHT to manufacture for the above named States.

All orders. Letters of enquiry, and APPLICATIONS for AGENCIES must be addressed to their Western Agency with the

"CREAM CITY AGRICULTURAL WAREHOUSE,"

L. J. BUSH & Co.,

28 East Water st. MILWAUKEE.

N. B. None need apply for Agencies except "live," active business men (farmers generally preferred) with ☞ GOOD REFERENCES.

N. J. MOODY,

SURGEON DENTIST,

OFFICE IN KLAUBER'S NEW BLOCK,

OVER FULLER'S SHOE STORE.

ALL operations in Dentistry performed in the most thorough and scientific manner.

Teeth inserted from one to a full set, in any of the styles now in practice—gold, silver, platinum plate or vulcanized rubber work,—all of which is warranted to give satisfaction. jan

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"THE HUMAN FACE DIVINE." Eyes, Ears Lips, Mouth, Head, Hair, Neck, Hands, Feet, Skin, with "SIGNS OF CHARACTER," and how to read them, given in

THE PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED FOR 1863,

devoted to PHRENOLOGY PHYSIOLOGY, PHYSIOGNOMY, PSYCHOLOGY, and to all that relates to the Intellectual, Social, Moral, and Spiritual Nature of Man. Amply illustrated, and adapted to the comprehension of all. New volume. Subscribe now. Only $1 00 a year. Samples 1 cents. Address

FOWLER AND WELLS, 308 Broadway, New York.

APPLE SEED.

CROP OF 1862.

FOR SALE AT FIVE DOLLARS PER BUSHEL BY

O. S. WILLEY & CO.,

MADISON,.....(jan1-2m).....WISCONSIN.

BLOOMINGTON ILL. NURSERIES.

140 ACRES.

To Tree Planters and Dealers in the Northwest.

The Subscriber. after twenty-one years experience in tree-growing at the West, twelve of which were spent in the Delavan Nursery, Wisconsin, offers a complete, and it is believed, UNEQUALLED ASSORTMENT of

FRUIT AND ORNAMENTAL TREES,

SHRUBS, EVERGREENS, GREENHOUSE and GARDEN PLANTS, ROOT GRAFTS, NURSERY STOCK, &c.,

Especially adapted to the Northwest—at wholesale and retail, and *at Lowest Rates for Cash only.*

Our trees from here have been tried for years in Wisconsin and Minnesota, and as far north as St. Paul, and thoroughly approved. ☞Send red stamp for Catalogue —and notice on any map how admirably we are located for shipping in all directions, but especially north—being only 140 miles from the Wis. line. Read the following

TESTIMONIALS.

Elkhorn, Wisconsin, June 24th, 1862.

We, citizens of Elkhorn, Wis., having purchased fruit trees and other nursery stock of Sames L. Tubbs, agent for the Bloomsngton Nursery, Ill., F. K. Phoenix, Proprietor, would state that in every instance we were highly pleased and entirely satisfied with the manner in which our orders were filled, clearly proving the selections to have been carefully made, by a person well qualified; and we would advise and recommend all who are desirous of obtaining Fruit Trees, Evergreens, Bulbs, Ornamental Trees and Plants, and to have their orders promptly filled, and have *thrifty, healthy stock*, such as are well adapted to the changeable winters and summers of Wisconsin, to purchase them of Mr. Tubbs.

H, F. Spooner, Henry Cousins, Peter Golden, J. L. Holley, B. V, Babcock, S. Ogden, W. Spooner, W. H. Pettit, B. B. Davis, J. F. Brett, Alex. Stevens, W. H. Congar, L. C. Merrick, R. Salisbury, Thomas Brande.

Springfield, Wisconsin, June 10th, 1862.

J. L. Tubbs, Esq.—*Dear Sir:*—Please accept the thanks of the undersigned for the promptness and good faith with which you have filled our orders for Fruit Trees and ornamental shrubs. We were particularly well pleased with the quality and also the condition in which they were delivered; we find them strong, healthy, and fresh from the nursery, giving unmistakeable evidence of thorough cultivation, judicious selection, careful handling, and expeditious delivery; being in point of freshness and vigor much superior to trees raised in a climate and soil foreign to ours, and exposed to the vicissitudes of a thousand miles of railroad transportation; and we in good faith recommend those desirous of procuring fruit or ornamental trees to order them of you.

David Williams, C. K. Phelps, S. E. Johnson, Amos Fellows, Peter Ossell, A. Hofstatter, Wm. Meadows, Frank Freytag, Charles Davis, L. S. Cary; J. J. Dewey, Geneva; Dan. Locke, Geneva; S. Read, Bloomfield; E. S. Sawyer, Burlington.

East Troy, Wisconsin, June 14th, 1862.

We, the undersigned, do hereby certify that we ordered from J. L. Tubbs, agent for F. K. Phoenix, fruit trees, &c., the last spring; that said trees were received in due time, in good order, grown, and in good healthy condition;—and we can, from our own experience, recommend those wishing fruit trees to order from the Bloomington Nurseries, through Mr. Tubbs, agent at Elkhorn, Wis.

A. O. Babcock, G. W. Lower, J. G. Dorrance, H. B. Clark, Stephen Field, J. R. Stone.

Bloomington Nursery, - Bloomington, Ill.

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The slightest reflection will show that a Knitting Machine, by its novelty, and the various uses to which it can be applied, is altogether better, as a profitable investment, than a sewing machine, for the Knitting Machine is an *actual producer of goods*, which are very saleable, because every one wears stockings, socks, &c., which can be made on the machine, and sold at a very liberal profit. From $2 to $3 a day profit can be made on them—those who use them attest to this fact. The Farmer can knit his wool, and sell the goods manufactured. In a neighborhood a Machine will pay for itself easily in a short time.

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J. W. HOYT, : : : : : : : : : : EDITOR.

VOL. XV. MADISON, FEBRUARY 1, 1863. No. 2.

Interesting Letter from New Mexico.

I reached this place on the 27th of September last, after a journey of thirty-nine days from Lawrence, Kansas. Though we received two heavy showers on the plains, one of which reached from Pawnee Fork to the mountains, yet the plains have been uncommonly dry the past summer, and the grass was short. These vast prairies of hundreds of miles in every direction are such, because they are without a swell to catch the currents of air which pass over them from the Gulf of Mexico, to deposit their waters far off to the north.

In New Mexico all cultivation is carried on by irrigation, and consequently is confined to the valleys and plains near the streams. These of course must be the best lands, formed as they are from the washings from the mountains, of which the old volcanic ashes, and decomposed felspathic rocks make a large ingredient. The long droughts and hot sunshine of summer draw the salts from these, as well as from the salt-bearing rocks on which they are deposited, to such an extent, that almost every foot of land shows the white incrustations of the singular salts which here abound, and which in many places, where there is more than common moisture, lies like a heavy hoar frost over the whole surface. Such places produce only those plants that would thrive on the sea-shore, and are the resort of cattle for their supply of salt.

The lands which are cultivated are productive to a degree perfectly astounding to a stranger, when the mode of cultivation they have undergone, and exposure suffered for all past time, are taken into the account. Sometime in the month of April, May or June, and the people are not very particular about the time, all the weeds and vegetables on the land are burned up, and the water is let out of the ditch upon the piece of land to be cultivated, and is made to run over every part of it Without this the land is too hard for plowing. The seed, if wheat, oats, barley or peas, is then sown over the land, and plowed in, generally with a Mexican plow, never more than three inches deep; after which a log is drawn sidewise over the land and the small ditches cut for future waterings, and the work is done till watering time arrives. Corn is planted in the same manner, except the seed is placed in the bottom of the furrow at proper distances apart, and is covered by the next furrow. Crops require about two waterings to perfect them. The yield exceeds belief. Wheat, which excels all other crops, not unfrequently gives fifty times the amount sown, and is of a superior quality. A hundred to one has been known. The other grains yield about the same as in the States.

After the crop is taken off, the land is trampled over and fed by the cattle until the next plowing time, when, without having received any manure, or even water, it is again replanted as before. But that is not all. There is never sufficient frost here to penetrate to the depth of eight inches, and seldom lasting more than ten days at one time. From January to April there is scarcely a day in which the wind does not blow with such force as to remove every particle of dust from the face of the earth as if it were snow. In many places all the earth which has been stirred by the plow during summer, is carried off during winter, no

one knows where, as there is not a tree, bush or fence in any Mexican field to prevent it, nor water in the soil to hold it together. An entirely new soil has then to be broken up for the next crop. All this might be prevented by watering the land during the winter months; and such watering would be of vast service to the next crop. Deep fall plowing would be of as much service here as in Wisconsin, if followed by proper waterings during the winter; without that, it would only tend to deprive the land of its soil. Last winter there was a fall of three feet of snow in the Taos valley, which lay on the ground from Christmas to April, all of which melted and soaked into the ground. The result has been that this summer they have reaped on that land, which has been in cultivation, without any manure, for a hundred and fifty years past, from fifty to seventy-five times the amount of wheat sown. Without winter irrigation of some kind, the water will never penetrate below where the plow has broken the soil, and there will be no spare moisture for vegetable life ten days after the waterings have taken place. Showers fall in July and August, which help out the crops, and sometimes within the mountains, (that is, beyond the first ranges,) corn is made by the rains alone.

The grain crops consist of spring wheat, corn, oats, beans and peas; and the green vegetables are onions, cabbages, red peppers, beets, carrots and *calabazas*, (a sort of hard shelled squash). Few of these are raised, owing to the fact that there are no enclosed gardens, and cattle are free commoners by the first of October.

The food of the Mexicans is meat, wheat and corn. All the green food is consumed by Christmas. Wheat is ground, sifted in a wire seive, and made into *tortillas* (tor-teel-yas), and corn into *atole* (a-to-le). *Tortillas* are wheat meal mixed hard with water, platted very thin with the hands, and baked on a hot iron. They are very tough, and pieces answer the purpose of spoons for eating soup or beans. *Atole* is made from the meal of parched corn, like a thick porridge, and is drank from a cup.

No portion of the Union pays the laborer so well for cultivating the soil as New Mexico. While he expends no more labor here than in Wisconsin, and reaps as large a crop, he gets from three to sixteen times as much for it. The following are a few of the prices this year:

Corn, wheat and oats $5 00 a *fanega*, (2½ bushels); Beans and peas $10 to $12 a *fanega;* Turnips, beets, carrots and parsnips $5 to $8 a *fanega;* cabbages, kohl-rabies, ruta bagas 25 cts. each; onions and red peppers 4 cents each; winter squashes 50 cts. to $1 each; Mexican calabazas 25 to 50 cts- each; oats unthrashed $50 per ton; prairie hay, corn-stalks and straw $30 to $40 per ton. All merchandise three or four times as high as in Madison. Mexican men labor for $25 a month and board themselves. Butter is seventy-five cents a pound, and scarce at that price.

I am told that a tract of about seven acres of land here, this year, planted in corn and oats, has yielded crops to the value of $750, and another patch cultivated as a market garden. has yielded $1,200 from an acre; and if it had been cultivated as some of the gardens about Madison, and other places in Wisconsin, are cultivated, its value might have been doubled. I know of no land so well adapted to the culture of all the tap roots, as are the bottoms of the streams in New Mexico. I have not mentioned the price of potatoes in the above list, because they do not thrive well here, and their production is seldom attempted, notwithstanding there is a small wild one which grows spontaneously. Last year, owing to failure of snow in the mountains, there was no water in this river, the Mora, and no planting could be done at the proper season; but on the 30th of June there was a heavy shower, so that the land could be plowed. On the first of July the owner of this place commenced with five teams to plant corn and oats, planted till the tenth—most of the corn in drills for feed; and without any water from the river, his ten days work yielded him $7,000 in cash after harvest. These yields and prices are not confined to this portion of the Territory. As much produce, and as high and higher prices may be obtained at any place, where cultivation can be had,

from here to Fort Craig, a distance of 400 miles. Farming here pays better than gold digging in California or Pike's Peak.

J. G. KNAPP.

BARCLAY'S FORT, near FORT UNION, New Mexico. Dec 5.

The Great International Exhibition.

NO. V.

GREAT BRITAIN, CONTINUED.

In our last we completed such brief account as it seemed advisable to give of the mineral resources and products of the British Kingdom. And although much more might well be said of such products and of *Processes*, yet, through fear of becoming tedious, in view of the much that remains to be said of the splendid contributions of this and other nations, we hurry on to consider, in this number, the next branch, in logical order, of the English Department, to wit:

VEGETABLE AND ANIMAL PRODUCTS.

The Forests of Great Britain were not very well represented in the Exhibition; still there were samples of some of the more common varieties of timber, such as the oak, ash, maple, elm, sycamore, birch, poplar, pine, larch, chestnut, &c., from the numerous small forests belonging to private estates, which, however, together with those of Hampshire, Gloucestershire and Nottinghamshire, constitute in the aggregate what by an American must be considered a very moderate supply of timber.

There is, nevertheless, so exhaustless a supply of coal and of peat in the British Islands that there is but little suffering for want of fuel, while the importations of timber of all kinds, and at moderate rates—owing to the extent of their matchles smerchant marine—furnish their ship-builders and other workers in wood with needed material.

OF THE CEREALS OF GREAT BRITAIN there were 25 exhibitors—some of the collections being very fine.

Wheat was there in several varieties and from most of the grain growing districts of the kingdom. Of the white varieties, the Chiddaw, Hunter's. the Talavera, and the Velvet or Woolly-eared wheats are the most popular.

Chiddaw, or Cheltham, is a round, fair, even-grained wheat, adapted to soft, rich soils, and grown in the finest wheat districts of England. It is a free-grower, long-strawed, ripens early, and is not liable to lodge or mildew. Weight in dry summers, often as high as 67 pounds. It is not so well adapted to the latitude of Scotland.

The Hunter's wheat was chiefly from the eastern counties of Scotland. Samples shown by the Messrs. Lawson, distinguished seedsmen of Edinburgh, grown in east Lothian, were very fine. It is adapted to medium and even to inferior soils, has a moderate length of straw, a hard, flinty kernel, and is a great favorite with millers and bakers.

The Talavera wheat is regarded in England as the best spring variety for black and gravelly soils. As a winter wheat, it is rather short strawed. Grain large, oblong, thin-skinned, very white.

Velvet variety, (common, originally from Dantzic), adapted to rich, loamy soils, and a great favorite in the counties of Sussex and Kent. The grain is semi-transparent, and yields an excellent flour.

The Irish White is, as the name implies, popular in Ireland; also cultivated in some parts of England with good success. It is a winter wheat and is never sown in spring; adapted to light soils; grain, large, oblong, rather brownish, flinty; in favor with bakers for mixing with softer and whiter sorts.

Among the red wheats of England, are the Lamma, adapted to inferior soils and to a mild climate, and hence grown chiefly in the south and southwest of England, Spaulding's Prolific, Clover's, and the Red Nursery.

REMARKABLE RESULTS OF THE CAREFUL "BREEDING" OF WHEAT.

Samples of the last named were shown by Mr. Hallett, of Sussex county, as "Hallett's Pedigree Nursery Wheat." They purported to have been "bred" on the same principle of repeated selection which has produced our pure races of animals. "A certain quantity of the best Red Nursery wheat was sown, and on the

corn ripening, the seed from the largest ears only was selected and sown for the following year; when fully grown, the seed from the largest ear of the second year's growth was selected and sown, and so on until the present results were attained, at the end of the fourth year."

There is philosophy in this mode of selecting and improving seed, and the specimens exhibited by Mr. Hallett were interesting demonstrations of what might be done in this way. One grain from the original ear or head—which was rather small, only three and a half inches long, and contained only 87 kernels—was planted December 17, 1857, and produced 10 heads and 688 grains. One grain from this produced 17 heads with an aggregate of 1,190 grains; the largest head containing 91 grains and being 7 inches in length. One grain from this head produced 39 heads, containing 2,145 kernels, but the season was bad and the crop not otherwise so good as it should have been. Nevertheless, one grain from this best head produced 52 other heads, of which the largest was *nine inches in length and prolific in proportion!* By the process described the "tillering" properties of this wheat were so improved that one bushel was said to be "ample for four acres if properly planted!"

Rye is but little cultivated in Great Britain.

Barley is extensively cultivated for malting purposes, and as food for cattle. Indeed, in Scotland it is much used as human food—particularly in the form of what is known as "pearl barley," which is simply the grain deprived of its husk, and rounded in a machine constructed for that purpose.

Oats likewise succeed well and are in favor; being used not only as food for animals but also, in the form of oat-meal gruel and groats, as a very common food for the poorer classes of the people, many of whom make it their chief and almost only diet.

Samples of numerous varieties of beans, peas, flax-seed, &c., &c., were present, but the limits of our space will admit of no special account of them.

Hops were there from the famous counties of Kent, Sussex, Surrey, Hampshire, Worcestershire, and Herefordshire—the taste, smell and economical value varying with the district where grown. It was our pleasure while on a visit to some of these counties, to see immense fields, and a great many of them, standing thick with luxuriant growths of this crop so essential to ale and beer drinking Old England.

Grass Seeds.—No country in the world that we have yet seen can compare with the British Isles for the production of the best varieties of the Grasses. Such soft, beautiful, and ever-verdant meadows and charming velvet lawns as are common there we have never seen elsewhere. This superiority is owing to the almost unvarying moisture of the atmosphere. Less rain falls during the year than in many parts of this country, but owing to the insular position of Great Britain, the pinching drouths so injurious during certain summer and autumn months here, are never known there.

The exhibition made by Messrs. Sutton & Sons, Seedsmen by appointment to her Majesty, the Queen, to the Government Gardens of India, and the Royal Agricultural Society of the Cape of Good Hope, was one of the finest displays we have ever seen. Among a thousand distinct and popular varieties of farm and garden seeds, there were one hundred and twelve sorts of grasses, representing the meadows, lawns and pasture lands of the various portions of the kingdom.

Other Vegetable Products used as food were there in great variety. Tea from China, Java, Assam, Japan, and tea produced at home—*black* teas without number, and alone fit for the beverage of Christian mortals; and *green* teas in multitude, so cleverly colored with clay and Prussian blue by the Celestials for the "silly barbarians" of other lands.

Coffees, chocolates, cocoas, chicory, &c., &c., and sundry samples of the "vile weed," home produced and foreign, were also present.

India-rubber, gutta-percha, &c., together with numerous illustrations of their applicability in the manufacture of many articles of luxury and use, were also exhibited in this connection, but as these are all the natural

products of other countries, and have no proper place in the British court, except in the branch of manufactures, we shall content ourself with this bare mention.

The Collection of Wools shown by the Royal Agricultural Society of England was very fine—over an hundred entire fleeces, each representatives of some distinctive breed, cross, grade or quality. They were handsomely put up with labels, and so situated as to be accessible to those who would carefully examine them. Great Britain ranks among the first wool growing countries of the world, and yet her annual imports exceed one hundred and twenty-six millions of pounds of foreign wools —so great is the amount consumed in the thousands of her teeming factories.

John Bull is a staunch, stubbed, practical fellow, caring much for the economies of life, and, hence is better pleased with those wools that will make a strong, stubbed fabric than with those alone adapted to the production of a light, fine and handsome cloth, such as is most popular in France and America. The South-Downs, Leicesters and the middle-wool-producing sheep generally are, therefore, most popular in Great Britain. This truth was illustrated by the collection of wools above mentioned.

British Silk was also on exhibition, but not in either amount or quality to justify more than a bare mention.

All things considered, the Agricultural branch of the British Department of the Great Exhibition, though interesting, and, in some respects, gratifying to those whose credit was most involved, was, nevertheless, *exceedingly meagre*, when viewed with reference to the vast agricultural resources of a mighty kingdom, two-thirds of whose revenue is derived from this first and paramount branch of human industry.

BRITISH MANUFACTURES.

Hitherto we have been, as it were, in the vestibule of the vast temple wherein are displayed the glories of the British Department —stumbling our way over the rough, though rich, products of Brittania's varied and inexhaustible mines, and stopping for a moment to pay a half-reluctant respect to the simple, yet most essential representatives of her forests and fields.

The more intelligent and the earnest seeker after knowledge has not been impatient of this hurried and necessarily dry detail, because it has shown to him the deep and solid foundations of a vast empire, whose power and sway are, therefore, first among all the nations of the earth. To him and to all we open now the great portal which reveals the interior magnificence.

Let us stand here a moment in silence with uncovered heads, awe-inspired, and lifted up by a new consciousness of the almost infinite possibilities of man!

But we are not under the grand dome with power to sweep, at one glance, over the vast area, within which multitudes of nations compare their greater or lesser resources and progress in the arts of civilization. Another month and that privilege may be ours.

PRODUCTS OF CHEMICAL PROCESSES

Looking first about us, we are in the midst of the weird wonders of the Genius of Chemistry.

Acids.—Boracic, made from Peruvian borate of lime, Thibitian and Persian *tincal*, (biborate of soda), direct from the boiling, vapory lagoons of Tuscany; aqua-fortis from the nitre of South America; hydrochloric, from common salt; and every other, with sulphuric, king of them all, at the head.

Alkalies and Alkaline earths, with their multitudes of salts—offspring of their marriage with the great family of acids, and each begotten for some important office in chemic or pharmaceutic art. Even a very concise account of all of them would fill many volumes.

Large quantities of magnificent crystals of carbonate of soda induce a few words of comment, as the manufacture of the salts of soda constitutes so attractive a feature of this branch of the Exhibition. So late as 1820 all the soda of commerce was made by burning a certain plant—the *salsola soda*—found and cultivated on the coasts of Spain, Ireland and

Scotland, and in some of the islands of the sea. Now it is manufactured from common salt—which is hydrochlorate of soda—and numerous immense establishments in Great Britain yield it in unlimited quantities, and at the comparatively trifling cost of some £4 per ton.

The improvements of late years consist in greatly increased facilities for the saving of almost everything of the least value, which either already exists in the materials employed or which may be the result of chemical action and re-action.

A visit to some of the great manufactories where salts of soda are manufactured afforded us an excellent opportunity to prove the correctness of this statement One of these occupied no less than 30 acres of ground, and one thousand to fifteen hundred hands, turning out an incredible number of products—here glauber salts, there hydrochloric acid: here sal soda, there chloride of lime; here bicarbonate of soda or saleratus, there iron or copper for castings!—and yet leaving, after all, an amount of refuse which had already accumulated in the neighboring open fields in quantities almost mountainous. Who knows but that, in the further progress of chemical science, this, too, will become a mine of fabulous wealth to some fortunate manufacturer? At present the following raw materials are necessary to the production of a single ton of *soda ash*:—1¼ tons of pyrites, 1¼ tons of salt, 1½ tons of limestone, 1 cwt. nitrate of soda, 3½ tons of fuel. Formerly, and but a few years since, so much of all this was lost in the process of manufacture that the price of carbonate of soda was £60 ($300) per ton.

Sodium itself—the pure metallic base of soda, and a beautiful silver-white body, so light and so inflammable that it will float and kindle into a blaze upon water—though within our recollection as high as two dollars an ounce, is now manufactured on a large scale, and sold at a few pence per pound.

This greyish powder here, marked Chloride of Lime, is a very simple looking substance, and will attract but little attention from the unscientific observer; but it is, nevertheless, one of the most potent and valuable chemical agents within the vast area of the Exhibition Palace. Think of what it has done for the cotton manufacturer—that most important branch of the manufacturing industry of the greatest manufacturing nations of the world!—of the innumerable millions of yards of brown, dirty looking muslin it is annually converting into the handsomest cotton fabrics, of an immaculate whiteness! True, we have the rain and sunshine and dew, with all their clever bleaching powers, just as then, but who wants to wait six months for a result which chemistry can accomplish for us in just a few hours? And more unanswerable yet, where would little, sea-girt England, with her thousand cities, standing so thick in all their sootiness, find meadow enough whereon to spread the thousands of miles of such muslin required to supply the craving markets of the more and more exacting and fastidious world? Moreover this chloride of lime is also a deodorizer and disinfectant—ridding the atmosphere of hospitals and private abodes of noxious smells, and, as some believe, neutralizing a thousand fatal poisons which float therein. If it could only neutralize the virus of bad principles and rid the great American Republic of the bad odor of the Rebellion!

Here, too, are numberless metallic salts and other chemicals—useful and beautiful products of the wonderful chemic art; as also a host of other highly interesting bodies, such as Iodine, with its train of iodides, applicable in the strange and beautiful processes of sun-painting; Phosphorus, that most irritable and fierce of all the elements, with its numerous family of phosphates, and a fair show of lucifer matches, so ready to kindle at a touch, and yet patient to wait until wanted. But we have no time for all these, and so must admire and pass on.

But here we come to a group of

REMARKABLE PRODUCTS FROM COAL.

Tar, pitch, naptha, napthaline, napthalmine, para-napthaline, nitro-napthaline, benzole, nitro-benzole, creosote, paraffine, carbolic acid, picric acid, analine, and a multitude of new

and beautiful dyes! The world has been familiar with stone coal for many generations, and thinking men have wondered at the inexhaustible store of it in those parts of the earth where it seems to be most needed for the production of heat and the generation of steam; but who could have dreamed, even twenty years ago, that out of that black, shapeless mass, which men quarry from the depths of the earth and sell for a few shillings per ton, should come, obedient to the magic wand of of Science, all manner of snow-white oils, a host of substances that, as yet, defy all rules of classification, and—stranger than all the rest—a multitude of such delicate, brilliant, and altogether incomparable colors as the world-admired *Mauve* and *Magenta* of to-day?

Years ago, Baron Liebig said prophetically: "It would certainly be esteemed one of the great discoveries of the age if any one should succeed in condensing coal-gas into a white, dry, colorless substance, portable and capable of being placed on a candlestick or burned in a lamp." This was in 1840; and in 1857, James Young, of Bathgate, Scotland, had fulfilled the prophecy, and placed upon golden candlesticks, at the Great Exhibition of that year, beautiful white paraffine candles, "finer than the purest wax." Mr Young's chemical works have now become the largest in the known world, and his paraffine and liquid paraffine oil for use in lamps, are to-day shedding a cheerful, pleasant light in a multitude of homes in all foreign lands. *Paraffine* is not explosive in the least; let it not suffer, therefore, for this sin of the many rascally imitations by which its fair reputation has been cursed.

The beautiful dyes referred to—including the popular *Mauve* and *Magenta*—are, many of them, products of the chemical reaction of certain salts and acids upon another of the coal series, known as *analine*. They have no rivals in the world of artificial dyes, and the beautiful crystals of which we are talking are just about worth their weight in gold. The two or three crowns in these glass cases, looking so like crystal amethysts and so much admired by the multitude of thronging visitors, when dissolved—fate of all crowns, is it not?—will become the Magenta dye, and sometime in the future may serve to heighten the otherwise insufficient attractions of aspiring ladies in the kingly courts of the Old World, or, appropriately displayed upon the fairer forms of hundreds of worthier maidens in the New, take as by storm the eye and heart of many a noble Badger boy!

And then this

MAGNIFICENT COLLECTION OF PAINTS

Of origin various and remarkable—who can look at them without wondering at the profound science of the chemist, and craving the genius of the artist to put them upon wood, plaster, porcelain, or canvas, and so make them immortal as representatives of the Beautiful and Good in God's Nature and in man? Derived from the most inconceivable sources, and by processes incomprehensible to even the chemist, how wonderfully, either alone or in combination, do they imitate every tint and hue with which the Great Author has adorned and blessed this beautiful world!

Ultramarine, one of the loveliest of them all, and of which two varieties occur in commerce, to-wit: blue and green, was, for a long time, prepared exclusively by burning the *lapis lazuli*, a precious stone, found in China, Persia, Siberia, and, we believe, California. When reduced to powder; it is mixed with resin, wax and oil, and then kneaded in water which slowly dissolves out the coloring matter. This is afterwards repeatedly washed and finally digested in alcohol, to separate all particles of the pitchy compound. The collection by Messrs. Winsor & Newton, of the North London Color Works, are the finest ever exhibited and must be worth many thousands of dollars. But the world doesn't like to pay too dearly for its luxuries, and accordingly certain German chemists have succeeded in manufacturing an artificial ultramarine, almost as good, by burning together definite proportions of China-clay, sulphate of soda, carbonate of soda, sulphur and charcoal; carrying the tint from a pure cold blue, through all possible gradations,

to an exquisite rosy violet, by simply varying the proportion of sulphur. This pigment is sold, at wholesale, for about fifteen pence per pound; the native ultramarine being formerly as high as twenty-five dollars an ounce—another of the triumphs of chemistry.

Many of the lead, zinc, antimonial, tungsten and other pigments used in the arts are interesting, but we have no time for them now.

ARTIFICIAL INDIA-RUBBER.

A new and remarkable substitute for India-rubber! It is made of oxydized linseed-oil varnish with a small proportion of shellac, and is already being put to most of the uses for which caoutchouc has been famous the few past years.

Prepared cloth, stretched in frames, is dipped into cauldrons of the varnish, exposed to the air for a day and then dipped again, and so on until a thick layer has accumulated. This is then scraped off, crushed in hot mixing rolls, worked into dough, and spread upon the fabric to be coated, or moulded into any required form. It may also be worked with pigments and vulcanized, without sulphur, so as to form a hard compound like vulcanite or ebonite.

AN ARTIFICIAL AND PERFECTLY TRANSPARENT GUTTA PERCHA,

Exhibited by Alexander Parkes, of Birmingham, the inventor, is a yet more wonderful product of modern chemical science, and was never presented to the public before. It is made by combining oil, chloride of sulphur, and collodion. The hardened mass, called Parkesine, solidifies at once, and is hard, elastic, transparent, and water-proof. It may be made opaque by the use of any desired pigment. It possesses powerful insulating properties, is unaffected by damp, is capable of being moulded or pressed into any conceivable form, and promptly acquires a hardness almost rivaling that of iron! The cost of production is only about twelve cents a pound, and there seems to be no limit to the practical uses to which it may be put.

Here we must stop in our examination of the countless products of the chemic art. The view has been hurried and a thousand things passed by without even a glance. But we have been delighted, it is hoped, with the progress of the past ten years, and convinced anew that *the subtile forces of Chemistry are the real wonder-workers of the world.*

Depth of Sowing Wheat.

We have heard of an instance in England where wheat had been sown broadcast on the land, and before it could be harrowed in, rain fell and continued to fall for days, so that the seed never was covered, yet the crop did well. On the other hand, we have known seed wheat plowed in three or four inches deep, and this also did well.

Still, the depth at which it is best to sow wheat is a matter of some importance. If all the conditions are favorable, there may be little difference in the resnlt of covering deep or shallow or not at all. But in the case of a very dry fall, and especially on land from which a spring crop has been removed, it is very important to bury the seed deep enough to insure moisture sufficient for its germination. Hence one advantage of sowing with the drill.

One of the editors of the *Country Gentleman* sowed some wheat on the 21st of last May at various depths, and carefully noted the result. That which was covered half an inch deep came up in 5 days; 1 inch deep in 6 days; 2 inches deep in 7 days; 3 inches deep in 8 days; 4 inches deep in 10 days; 6 inches deep in 12 days. Five weeks afterwards, there was no perceptible difference between that planted half an inch and an inch deep; that planted 2 inches deep was not quite so good; and so on, decreasing in quality as the depth of planting increased. At six inches depth, there were but very few slender stalks.

In the fall of the year the ground is warmer than in May, and it is well known that the warmer the soil, other things being equal, the sooner will seed germinate. On this account we should perhaps sow a little deeper in the autumn than in the spring.

As a rule, we may conclude that the shallower grain is covered, so that a constant and adequate supply of moisture is furnished, the more rapidly will germination proceed. If wheat is sown early enough, rapid germination is not very essential, and therefore the aim should be to get the wheat well and evenly covered, even if germination is delayed a few days. In the spring, when the ground is moist and cool, wheat need not be covered more than an inch deep. In the fall it may be covered deeper, say from one to two inches—and if the ground is very dry, a little deeper.—*Genessee Farmer.*

Winter Evening Thoughts.

In "Rainy Day Thoughts," in the September No. of the FARMER, Agricola shows how a farmer gets rich. I intend to show how a farmer gets disappointed, and is, more than any mechanic, dependent on circumstances not under his control.

A mechanic, when he gets his day's work or job done, is sure of his pay, but a farmer has to lay out his work years in advance, and when he would reap the fruits of his labor, they will be snatched from his grasp.

Six years ago I planted five apple trees; they were all killed the first winter, except one; this one stood the cold of five winters well, but last winter it was killed nearly to the ground. At the same time I planted 2 lbs. of apple seed. The first winter the young plants stood well; the next winter killed all of 1,000 or more, except about 50.

Three years ago I set out a variety of small fruit; the second year they bore some, and this year I expected a full crop. The crowns of Houghton's gooseberries were killed last winter, but they sprouted out again from the root. Of some Lawton blackberries which I had protected through the winter, a frost in June killed all the blossoms. My grape vines were killed down in May, and in June again. I never saw anything more promising than my Victoria currants and raspberries this spring; they were loaded with blossoms, but the frost destroyed them all. Also the blossoms of the plum trees fell off. I had set out 100 head of cabbage for seed; they were worth $4 00 last fall and about $8 00 this spring. I never had better luck to get them through winter; they were in full blossom, when, on the 19th day of June, the frost reduced the harvest from about 10 lbs. to 1-4 lb. The same frost destroyed all tender flowers, vegetables and corn.

Wheat is only half a crop; potatoes nearly all rotten; still I am planning for another year. What will be the result no one knows.

ADOLPHUS.

MT. PISGAH, Dec. 1862.

Introduction of the Potato into the United States.

MESSRS. EDITORS:—To answer the inquiry of "A Co. Gent." of New Britain, Ct., as it is put, would be to say that the potato was introduced into America by the Creator "in the beginning" or since, as it is one of the indigenous productions of *South* America. But the question probably is, when it was introduced into the United States? Answering that question in full will also explain why it is called the Irish potato, as was perhaps the case years ago more than it is now with us, and still is at the South in distinction from the sweet potato.

The only authority I know of in relation to the matter is Belknap's History of New Hampshire, and as the book is not common, I will give, as briefly as possible, the substance of that historian, and if there is further or other information upon the matter, we shall be glad to receive it.

In 1719 a large number of emigrants came to this country from the north of Ireland, and settled a township which they called Londonderry. They were called Irish, and there was no little antipathy felt towards them, which would have been very foolish even if they had been natives of Ireland, but they were from a colony of Scotch Presbyterians that had settled in the province of Ulster, Ireland, in the reign of King James I. They had a thirst for civil and religious liberty which their situation in Ulster did not satisfy, and nearly the whole colony removed to America. About one hundred and twenty families came. One hundred families came to Boston, and the rest landed on the coast of Maine. Of the former, about sixteen families were those who made the settlement of the town of Londonderry. The historian referred to says: "These people brought with them the necessary material for the manufacture of linen; aud their spinning wheels, turned by the foot, were a novelty in the country. *They also introduced the culture of potatoes*, which were first planted in the garden of Nathaniel Walker, of Andover. They were an industrious, frugal, and consequently thriving people." Hence, these people being called Irish, the potatoes which they introduced were called Irish potatoes.—A. B. B. in *Country Gent.*

CORN AS FUEL.—The editor of the Nebraska *Advertiser*, published at Brownsville, N. T., discusses the comparative cheapness of corn as an article of fuel. He says that corn is worth ten cents, and coal twenty cents, per bushel, and wood two dollars per cord. At these prices he concludes that the choice is altogether dependent upon which is obtainable with the least trouble—in other words, that 20 bushels of corn are of the same value for fuel as a cord of wood ready to put into the stove. Wood bears a higher comparative price here at present. It would be singular if we should get to burning corn as a cheaper substitute.

A Man who Knows his best Interests, and Sundry Others who Don't.

PUBLISHERS FARMER:—Enclosed please find $8 00 to be applied as follows: * * * *

I would write an article for the FARMER but that I have nothing of much interest to write, save that farmers in this locality are "too poor" to advance their agricultural interests by subscribing for the FARMER! that business generally, and farming in particular, is at rather a low ebb, just now; and that the *excuses* that have invariably met my frequent endeavors to obtain subscribers *should* have been their *greatest incentives* for patronizing it, viz: "the war," and "hard times."

A great many are disaffected toward the "Indian land," because it is so sandy. I suppose it will not produce as much grain per acre as the prairies, but every country has its drawbacks, and for my part, I am very well satisfied with our part of the country. If the soil is not so productive, we have such beautiful soft water, and for the healthfulness of our climate, this section cannot be excelled.

We can raise good fruit, too, if we try. Last year our farm produced 30 bushels of wheat per acre, and we had an average prairie yield this year. You now and then see a well regulated, productive farm on the "sand," even; and why? Its proprietor takes the FARMER, and profits, as far as his limited means will allow, by its teachings.

Some farmers complain that they have to cultivate 40 acres to get what ought to be the product of ten. Now, if such men took the FARMER, they would know that the fault lay more in the cultivator than in the land, and if they improved by the reading, as they ought, they would save enough extra labor in a few years to supply themselves and families with all the reading that would profit them—more would be useless. Every man should patronize the FARMER, whether rich or poor, who would promote the agricultural interests of his State, as also to show to its pains-taking editor that his labors in that direction are appreciated.

H. J. KENDALL.

ORDINO, Marquette Co., Dec. 16, 1862.

Cure for Potato Rot.

The *Scientific American* says, lime applied to potatoes after they are dug, will prevent them from rotting. It applies the lime as the potatoes are put into the bin, say about a bushel of lime to 40 or 50 of potatoes.

The other day, while calling on a neighbor of ours (Dr. U. Potter), he took us into his cellar and showed us his potatoes, all limed, and some covered with sand. He saw his potatoes were affected, when he put them into the cellar, and soon after began to rot badly. He then applied the lime.

The lime had absorbed the moisture and most of the rot, so that the potatoes were dry and nice. The rot was arrested, and the potatoes were better in quality, more mealy—the result of the lime.

We know lime applied to the soil will improve potatoes; and here it is demonstrated that it will benefit them after they are grown. I have had ocular and experimental evidence of the truth of this. A very commom potato may thus be improved.

This is of importance. If we can improve coarse, watery tubers by the application of a little lime, to say nothing of the prevention of rot, a very great point is gained.

Another thing. Potatoes should be left in the ground till late. This is the practice in some parts of the country. If left till winter compels them to be removed, those intending to rot will do so, and will soon be among the missing ones—absolutely decayed, gone into the soil, and only sound ones remain.

This is better than to bother with them after they are secured. To be sure, there are less in a hill and those not of the best quality, for the best always decay, especially the ripest. That probably accounts for those remaining in the hill (left late) being generally small, and more or less unripe. Dig a potato before it is ripe, and it will not rot; hence those dug very early will be sound. Have we not here a hint toward the discovery of the rot?—*Val. Farmer.*

CLOVER AS A FERTILIZE .—John Mears says in the Boston *Cultivator*, that a gentleman of Livingstone Co., N. Y., in 1839, in conversation with him, stated "that a lot of land came into his possession, which by bad management had produced only six or eight bushels of wheat to the acre. He put it in clover, sowing two bushels of plaster per acre. This crop, when brown from ripeness, was turned under. The process was repeated, and the lot put to wheat, which yielded 40 bushels per acre for four acres together. While one of the clover crops was on the ground, he measured off two feet square, or four superficial feet, digging to the depth of one foot, and removing all earthy matter. It gave over one pound per foot, or more than 22 tons of vegetable matter to the acre."

Agricultural Clubs.

Now is the season when an agricultural club should be put into operation in every town and densely populated neighborhood in the country.

Come, neighbors Thrift and Go-ahead, call your brethren together and organize without delay. In times like these every farmer needs the best information available, in order to insure the largest returns for his labor. If any man has a better method of doing his work than his neighbor, let him communicate it to them at the Club, and so add to the common stock. No one need be afraid of giving more than he will get, unless he absolutely knows that he is wiser than all his neighbors put together. To help on the good cause by giving a wider circulation of important facts and experiences, we propose to publish a synopsis of all valuable reports of the proceedings of such clubs.

A Leaf from a Young Grant County Farmer's Experience.

Dr. Hoyt:—I enclose one dollar for that *indispensible*, the Farmer. It has been a monthly visitor for a long time, and I will assure you it is a welcome one. It is the best paper to stimulate the farmer to duty that I know of; besides, it is full of good information and timely warnings.

I will try and scribble out some of my experience, although I am troubled with a lame arm and am also lame at composition.

I have been "for myself" eight years, as the young farmers say. I received my farm education in Canada West, near London.

PLOWING MATCHES, &c.

Your Farmer warns the plowman to plow a little deeper. I think that every county in the State should encourage plowing matches for both men and boys, and especially for the boys, for they do most of the plowing. I may be allowed to state in this connection that the first two premiums offered on plowing by the Iowa Agricultural Society at their late Fair were won by J. C. Traner, of this town.

SHEEP-RAISING AND GRAIN-GROWING.

My first six years in Wisconsin I turned my whole attention to grain-raising, which most of eastern people do because they can raise such an abundance of it. I cannot say but I have been as successful as most of my neighbors in raising grain. I have raised as high as forty bushels of wheat to the acre.

I have not forgotten what you said about the importance of us farmers turning our attention to raising sheep in your discourse at the Grant County Fair. You hit the card that I had been pulling at but had not put it into effect. Two years ago I paid two hundred and thirty-five dollars for sheep. Since that, I have realized my money back twice, and have five hundred dollars worth of sheep on hand now, all in good condition.

John Batie.

Tafton, Dec. 1862.

Receipts of Wheat.—The number of bushels of wheat received at Chicago in the month of November, of last year, is reported at 1,291,511. During the same month in 1861, 2,043,960 bushels were received. In the three months of September, October and November, 1862, 4,964,960 bushels were received, against 8,695,931, in 1861. At Milwaukee, in the same three months, 5,440,405 bushels are reported against 7,074,088 bushels in 1861. In the two cities there is a falling off of the receipts, for those three months, of 5,365,040 bushels, as compared with last season, being equal to about 34 per cent.

Fractions of an Acre.—It is often desirable for the farmer to measure off from a lot of land fractions of one acre, for the purpose of making a series of experiments upon different modes of planting, cultivating or manuring. To facilitate this, we give below the measurement of the side of a square containing the following fractional parts of an acre:

1-16 of an acre	contains	about		52½	ft. square.
⅛	"	"	"	73¾	"
¼	"	"	"	104⅓	"
⅓	"	"	"	121½	"
½	"	"	"	147¼	"
1 acre		"	"	209	"
2 acres		"	"	295½	"

Who Can Beat This?—I raised seventy-one and one-half (71½) bushels of Buckwheat from twenty-two (22) quarts of seed sown. It was sown on prairie which had just been broken and harrowed, in the month of June.

J. A. Mapes.

River Falls.

The Economical Disposition of Straw.

MR. EDITOR:—In the November number of the FARMER I noticed you gave several subjects for discussion, one of which was "The most Economical Disposition of Straw."

My plan is, to make a pen, by setting crotches in the ground, so that a heavy pole laid into them will be three or four feet above the surface: then set rails on the end inside of these poles, and about two feet or twenty inches apart. This pen may be ten or twelve feet wide, and long enough to hold as much straw as desired.

In this way cattle may be much protected from winds and storms, and the straw all saved.

F. N. GOODRICH.

MONEY CREEK, Minn., Dec. 15, 1862.

Queries and Recipes—Leather, Pork, and the Farmer.

ED. FARMER:—I would like to have you tell, through the FARMER, how to obtain seeds from the Patent Office.

HOW TO SAVE SHOE LEATHER.

As it a benefit to some to save money, I would say to the farmers, you can save one-third of your shoe leather by sending for the FARMER, and oiling the soles of your boots and shoes with linseed oil, as much as they will soak in, especially when they are new—but not on the *uppers*, as it will make them hard and cause them to crack. Those who wear boots in summer, without socks, would do well to grease them on the inside. They will keep softer, wear longer, turn water better, and never rub their feet. Try it; leather is worth saving.

TO PRESERVE PORK.

I often hear of persons losing pork by spoiling. I have kept it two years in this way:—Put 25 pounds of salt to the barrel; then make a brine and put on cold. After it has become pickled through, scald, skim the brine and turn it on hot, as soon as it has settled, and scald as often as it is bloody.

THE WISCONSIN FARMER.

I think I shall be able to send you a club for the FARMER, as I think it is among the indispensibles. I have taken it ever since it was first published, and I have them all preserved. They are a treasury of good reading.

Home Binding for the Farmer.—I bind them in this way:—Take wire No. 4, and put them together, when the volume is full, with a gimlet or anything to make the holes with; put it through about half an inch from the back. Take of the wire a piece long enough to bend over both ways and come together across the back. Hammer it down firmly, and the numbers will keep their places and never tear out. I think this a good way to preserve them for future reference, where we cannot get them bound at the book binders. W. EMERICK.

WEST GREEN LAKE, Dec. 1862.

BEGINS RIGHT.—MESSRS HOYT & CAMPBELL:—Having borrowed the November No. of the FARMER, I herewith send you one dollar in hearty acceptance of your offer to every new subscriber before January 1st.

I have just commenced farming, having spent nearly all my life until now behind the dry-goods counter, and am happy to see a journal for the farmer so full of enterprise as yours appears to be. I will endeavor to obtain other subscribers for you, when I have opportunity.

I intend to plant 5 or 10 acres of tobacco. Have you any article published or accessible on the subject of the cultivation of tobacco in this climate? CHAS. H. TOPPING.

DELEVAN, Dec. 23, 1862.

NOTE.—We are no friend to tobacco, but will cheerfully furnish the best information we can gather, in the next number of the FARMER.—ED.

CULTURE OF PEANUTS.—MR. EDITOR:—I wish to inquire through the columns of your magazine about the propagation and culture of the peanut. I would like to gain some information as soon as possible, in time to make arrangements for this season's crop.

E. N. CARVER.

CHARLES CITY, Iowa, Dec. 1862.

Who knows all about Peanuts?

The Most Economical Disposition of Straw.

As an article of food, straw can properly rank next to marsh hay; for it is all that we can do to keep our stock thrifty on such hay, and it requires but a little extra feed to do the same on straw.

There are two points to be particularly taken into account in feeding straw most profitably: First, the greatest amount of good to be obtained for the stock; and secondly, the value of the manure.

The best results that can be attained, practically, I think, will depend on the following principles: Make a point of feeding the straw to young stock between the ages of two and five years. Make another point, and a decided one too, of raising enough roots to give each animal a peck a day regularly.

I think it is conceded that in order to do well an animal must have something to fill up its stomach, whether it has any nutriment in it or not. Straw will do this, and if aided with roots is sufficiently nutritious. It has, no doubt, been noticed by all farmers that straw has a very astringent effect upon their stock. No animal can do well when it is too costive. Potatoes, turnips, and all such articles rectify this tendency and keep the animal in good condition. The droppings are much more valuable also. Whether it will pay to cut the straw depends much upon the relative price of labor. All stock should be housed and well bedded in cold weather. W. A. B. Bangs.

Kingston, Wis., Dec. 1862.

Whisky and Newspapers.—A glass of whisky is manufactured from perhaps a dozen grains of corn, the value of which is too small to be estimated. A pint of this mixture sells for one shilling, and if of a good brand is considered well worth the money. It is drank in a minute or two—it fires the brain, sharpens the appetite, deranges and weakens the physical system. On the same sideboard upon which this delicious beverage is served lies a newspaper. It is covered with half a million of types—it brings intelligence from the four quarters of the globe. The newspaper costs less than the glass of grog—the juice of a few grains of corn; but it is no less strange than true that there is a large portion of the community who think the corn juice cheap, and the newspaper dear!—*Scientific American.*

The Most Economical Use of Straw.

We are all supposed to use straw like everything else, so that we may get the most dollars and cents for it, and for the time and labor bestowed.

My mode of treating straw is, when it leaves the machine, to put it into the barnyard in a tidy stack, to which sheep, cattle and colts can have free access while they are in winter quarters. Then I throw off every morning and let them pick the best during the day, and at night, before putting them into their stalls, I gather up and put in for bedding a good supply, so that it may absorb all the liquid manure. The next day it is wheeled into the barnyard—the great receptacle for all manures—and the following spring or autumn it is taken to the field and plowed under the surface as deep as a good team can do it.

It is a common practice among farmers to spend an hour or two each day in cutting straw, so that they can coax their animals to eat it; and still more common to throw it out as it comes from the thresher, and say to them, "Eat that or nothing. If you die before spring it won't be because you have had nothing to eat." That kind of farming always reminds me of the man who skinned a flint worth a cent, and spoiled his jack-knife worth eighteen pence.

Much more might be said, but the stiffened fingers of farmers require them to be very brief, if they write at all, at this season of the year Ira Bliss.

Sheboygan, Dec. 1862.

Shrinking of Hay and Corn by Drying.—An exchange states that the loss upon hay weighed July 20th, when cured enough to put into the barn, and again February 20th, has been ascertained to be 27½ per cent. So that hay at $15 a ton in the field, is equal to $20 and upwards when weighed from the mow in winter. The weight of cobs in a bushel of corn in November, ascertained to be full 19 pounds in November, was only 7½ pounds in May.

This matter of shrinkage is one of which farmers do not usually make sufficient account when they decide to *hold on* for better prices.

STOCK REGISTER.

Barracks for Fodder.

Mr. Editor:—I have often wondered why some one more competent than myself has not said something in the agricultural journals in favor of building barracks for fodder. I have lived over twenty years in this State and have never seen one in it. I think no farmer should be without at least one, in a country like this, where so much stacking is done, which is many times attended with much extra labor and loss of grain and hay in consequence of bad weather; which would not be the case, if our farmers were provided with good barracks. When the expense of building them is taken into account, it sinks into insignificance when compared with the benefit and convenience the farmer would derive from their use.

Doubtless many of my brother farmers have never seen one, and have a very imperfect idea of what it looks like. Therefore I will give a little description of its construction.

I will briefly describe two ways of building them.

First, the cheapest: Four posts (white oak is best) say 20 or 24 feet long and 7 inches in diameter. If straight, round will answer; if not, they should be hewed 8 square, commencing 8 feet from the end, the unhewed portion to be placed in the ground—the top end dressed to a point. Then with 1¼ inch augur, bore holes 8 or 10 inches apart, commencing, say 8 feet from the butt and continuing to within 2 feet of the top. Then place the posts, say 3 feet in the ground, or deep enough to stand firm, and 20 feet apart, forming a perfect square. Next procure 4 pine plates 20 feet long, 6 or 6½ inches square, halved together at the ends and placed on the outside of the posts and pinned—the posts standing close in the corners. The plates should rest on four round iron bolts 1¼ inches in diameter, 20 inches long, one end turned up one or two inches, short blocks 3 or 4 inches square on the bolts for the corners of the plates to rest on. It is now ready for the roof. This is made of poles and rye or wheat straw, threshed with a flail. The former is best.

With a 2 inch augur bore holes in the plates, commencing near the corners, say two feet apart, or thereabouts, for the framework of the roof. The boring should be commenced on the inside corner, with a suitable slant for the pitch of the roof. I would not recommend boring clear through, lest it should weaken the plate. The poles for the framework of the roof should be of suitable length for the pitch, which of course must be governed by the size of the barrack.

A round block about 2 feet long and 10 or 12 inches in diameter, the top end dressed to a point, in which 1¼ inch holes are bored, in which to insert the framework poles. Smaller poles are nailed or otherwise properly fastened across the main poles, commencing within 4 or 5 inches of the plates and about one foot apart, and continued to the top. The next step is, as the Dutchman says, *to shingle it mit straw*, which any person who understands thatching can do. The expense would probably not exceed $20.

I will now proceed to give a sketch, according to my best recollection, of the other mode of building one, 20 feet square.

Four sills 20 feet long, 7 or 8 inches square; 4 posts, 20 feet long, 7 inches square; 4 posts, 8 feet long, 7 inches square; 4 girths, 20 feet long, 7 inches square; 4 posts, 4 by 4, 8 feet long; 8 girths, 10 feet long, 4 by 4; 8 braces; 4 plates (pine), 6 inches square, 20 feet long. When framed together, board up to top of girths, with door in front.

The posts must be 8 square from top of girth. It must be recollected that holes and iron bolts are required to hold up the roof in this as well as in the other. Any carpenter can make a board roof. Where a straw roof is to be made, the other description will answer.

The roof can at all times be raised or lowered by means of a lever. It must be remembered that the lighter the roof is made, the better.

What I have said in relation to barracks is

principally from recollection of when I was a little boy, living among the farmers in the valley of the Mohawk in the State of New York.

ALBERT BOVEE.

EAGLE, Wis. Nov. 18, 1862.

The "Farmer" pays the Subscriber. Cure for Bloat in Cattle.

MR. EDITOR:—Having been a reader of the FARMER for three years, I have found it to be a very valuable paper, in which I am much interested as a farmer. The more I read and profit by it, the more I am interested. Though I feel the effects of poor crops and of the war, yet here goes the money for the FARMER for 1863, and I consider the money as well invested as it could be in any other interest, and to better profit.

It should not be necessary to throw out such inducements as you have, for the FARMER is well worth the money without.

While writing I thought it might not be amiss to send another Recipe to the readers of the FARMER. Though it may not be in the season when needed, yet if remembered by your readers it will be all right. I am induced to give this, from the fact that so many cattle died in this vicinity last spring.

Cure for Bloat in Cattle.—Take from 1 to 3 heaping table-spoonsful of saleratus, according to the size of the creature; dissolve in from a pint to a quart of water, and pour the same down with a tunnel. It will give speedy relief if given in season.

LA PRAIRIE, Dec. 1862.

"I DON'T MAKE BUTTER IN WINTER."—MR. EDITOR:—The enclosed two dollars is to pay you for your valuable paper the past and coming year. And now for the discussion proposed in the November No.: As for "making butter in winter," I never do it. Kind Mully needs a little rest after having her teats pulled nine months, and I prefer allowing her the winter months for that purpose, that she may be the better prepared to give a flowing pail-full when the green herbage of the coming year is luxuriant, and the southern breeze and the summer sun will encourage her to give more ample return for the kindness shown her during the freezing winter.

I. BLISS.

SHEBOYGAN, Nov. 17, 1862.

Training Colts.

MR. EDITOR:—We send you a short article on training colts as we have not seen anything of this kind in your journal, and think it a matter of some importance to most farmers, for the reason that the vicious habits of most horses are attributable to bad management in this respect.

We think that a little caution used in preventing bad habits is better than all the cures that were ever invented.

In weaning a sucking colt, provide a companion for it, if possible, and by all means have your pasture or enclosure well fenced. Also, in leading or driving it, wherever bars or fences have to be taken down, never through laziness compel or allow the colt to jump over two or three rails: but take down the fence to the ground. Such precautions as these prevent breachy horses.

In tying a colt for the first time to anything stationary, use a tether which will sustain the entire strength of the animal. Persevere in this for a short time, and you prevent the nuisance of hanging back and breaking halters.

In attempting to lead a colt, be sure you can hold him, and don't let him go if he should attempt to flounder about. If he is very strong and resolute, better have a bit in his mouth. We think the *bitting harness* a good arrangement to be used for a few days before breaking, as the animal becomes familiar with the bit and learns to hold his head in position when in harness.

If you break the colt in winter—and that is the best time—hitch him to a sleigh beside another horse which is well broken, if possible; if not, drive him around for a while without any load. In starting him, give your customary signal and then touch him lightly with a whip or switch, *but on no consideration whip him until he is told to go.* If he is afraid of

anything in particular, or is of a timid disposition, better not use the whip at all; but use all means to make him understand you do not wish to hurt him. If he is masterly or vicious, it may be necessary to apply the whip, but the moment he submits, stop it. Never show that you are afraid of him, and, above all things, *keep your temper*.

If you are an indifferent horseman, a good time to begin is when the animal is fatigued. To a good horseman this matters little. We think a colt should be "broken" at the age of three years, but should never be put to very hard labor till he is five years old. To overtask a colt, in our opinion, is apt to injure his constitution, or produce a balky horse.

JOHN RHODES.

BRIGHTON, Dec. 1862.

[First rate rules, neighbor Rhodes. Now let the farmers and farmers' boys all observe them.]

HOW TO CURE SCRATCHES.—MR. EDITOR:—Here is a recipe to cure scratches in horses, communicated by a reliable man who has proved it to be a certain cure. The remedy is simply a decoction of oat straw applied to the limbs.

I shall try and give you something more from my pen hereafter. W. A. BARBER.

WANTS A DURHAM BULL.—MR. J. W. HOYT:—I herewith enclose one dollar to renew my subscription to the FARMER one year. As I am an old patron, please inform me through the FARMER or otherwise, where to get a full-blood young bull *for beef purposes*. There are none in this part of the State.

I. C. COMFORT.

LINDEN, Dec. 1862.

FOOT-AIL IN CATTLE.—A correspondent of the Albany *Cultivator*, in reply to an inquiry on this subject says:

"I would prescribe as a sure remedy, spirits of common salt, (muriatic acid). A teaspoonful applied to the diseased parts once in two or three days, for half a dozen times, will cure its worst form, and a single application, taken in season, will often be enough.

Farmers, please try it, and let me hear from you. The milder form, or scratches, which often appears on horses as well as cattle, may easily be cured by the application of pot-fat, or lard, well saturated with salt. The former is best. Both are sure remedies in this vicinity. Every farmer should have the former by him."

THE POULTERER.

Diseases and Treatment of Fowls.

In M. Jacques' work on Poultry, he says:—"A barbarous custom, as ridiculous as it is abominable, consists in tearing off the horny tip of the tongue in order to cure the malady called the pip, and which is only canker or *apthe*. This substance is as natural to the tongue as the nail is to the finger. I have seen people take a sick hen, examine the interior of the beak, then seeing it was suffering from canker or *apthe*, take a pin and tear off the end of the unhappy patient's tongue. As a precautionary measure, all the birds in the yard were examined. As they all had the horny tip, it was settled that all were about to suffer from canker, and then all hands set to work to mutilate the entire poultry-yard. The wound it causes is long in healing, and sometimes is incurable. One of the most dangerous maladies, because in time, and almost imperceptibly, it will invade a whole yard, young and old, is a disease I will call the 'white.' It is a sort of itch, evidently caused by invisible vegetations, which appear first on the feet, on the combs, on the wattles, on the cheeks and on the deaf ears, in the form of small flour-covered patches. These patches extend and thicken until they stop the ears, form crusts on the face, make holes in the legs, raise up the scales and cause them to fall off, and at last invade the whole animal. As soon as the appearance of white is ascertained, a remedy is at hand which is a certain specific. It is merely sulphur ointment, the recipe of which is powdered or flowers of sulphur and lard or hog's fat in equal quantities. These two substances thoroughly kneaded together for a long time, will form a very thick ointment, which should be abundantly applied. If the white is of old date and very floury, a cutting instrument should be used and the parts thoroughly scraped with it to the quick, even in the most difficult places; the ointment should be abundantly applied, and renewed every third day till a cure is effected.

"The ointment should be applied whenever it is necessary, care being taken to raise the feathers in layers so that the animal shall not be greased all over. To conclude with a general rule, any fowl, sick of any malady, should, if a cure is desired, be put by itself, and fed with refreshing food such as millet, dough made of barley flour, grass and very clean water complete the treatment. As fast as the birds are cured, they are let out to regain strength and vigor in those places where there is the greatest amount of vegetation."

THE BEE-KEEPER.

Items about Bees.

Feeding Brown Sugar to Bees.—In March, 1850, Dr. Kittell discovered that one of his colonies required feeding, and being unable to procure either pure honey or sugar candy, he concluded to try common brown sugar dissolved in warm water, so as to form a tolerably thick syrup. He fed them with this freely and had every reason to be satisfied with the experiment. Breeding commenced as early, and was continued as regularly, in the colony thus fed, as in any of those which had ample stores of honey.

Signs of Swarming.—Every colony that contemplates swarming will, for some time previous, cease to work as industriously as it might do in view of its numbers. A disposition to "hang round" indolently seems to seize a majority of the population, and they cluster together in masses, apparently for the purpose of helping each other to do nothing. But, get control of them, permit no natural swarming, furnish them continual opportunities to be doing something, and you will not perceive among them any tendency to idle away time. —*Bee Journal.*

☞ A drone-breeding colony is generally very unwilling to accept of a fertile queen when introduced into the hive, and speedily destroys a sealed royal cell if inserted. Mr. Kaden says this perverseness and obstinacy may be easily overcome, if the sealed drone-brood be destroyed by passing a sharp knife through it. A fertile queen than offered will be kindly received.

Chloroform.

Chloroform has been employed to stupify bees. A correspondent of the Edinburgh *Evening Courant* has adopted this plan successfully. The quantity of chloroform required for an ordinary hive, is the sixth part of an ounce; though a very large hive may take nearly a quarter of an ounce. His mode of operation he describes as follows:

"I place a table opposite to and about four feet distant from the hive: on the table I spread a thick linen cloth; in the center of the table I place a small shallow breakfast plate, which I cover with a piece of wire gauze, to prevent the bees from coming into immediate contact with the chloroform. I now quickly and cautiously lift the hive from the board on which it is standing, set it down on the top of the table, keeping the plate in the center; cover the hive closely up with cloths, and in twenty minutes or so, the bees are not only sound asleep, but, contrary to what I have seen when they are suffocated with sulphur, not one is left among the combs; the whole of them are lying helpless on the table. You now remove what honey you think fit, replace the hive on its old stand, and the bees, as they recover, will return to their home. A bright, calm, sunny day is the best; and you should commence your operations in the morning before many of the bees are abroad."

THE HORTICULTURIST.

A. G. HANFORD, : : CORRESPONDING EDITOR.

The Orchard—Seasonable Hints.

Sun Scald.—Young fruit trees are this month more liable to injury from the action of the sun on their exposed trunks than at any other season of the year. Protection is readily afforded by tying on south side of tree lath, strips of bark, or long straw; or a narrow board may be secured to the tree with small nails. Trees with high tops, and those which lean to the north or northeast, especially need this protection.

Pruning.—Advantage should be taken of the warm pleasant days during this month and next to finish up winter pruning. While there are some very good reasons for doing the work of orchard pruning at mid-summer, we believe all things considered, this will be found the best, it certainly is the most convenient, time for farmers to give attention to this work.

Don't delay until the sap is in active motion, and the buds ready to open, or injury may arise from bleeding. Wounds made then do not heal over so kindly as when done earlier.

We do not favor *severe* pruning at any time, and if a little seasonable attention is given to this matter, it will never be necessary.

Young trees need such shoots removed as cross and chafe, and are useless suckers, from around the trunk. The head should be kept open for air and light. Regard should be had to symmetry as well as to convenience in moving about in the tree bye-and-bye when gathering the fruit; all this can be accomplished with but little pruning at any one time.

An ill-placed or superfluous shoot should never be allowed to grow on a young tree more than a single season.

Attention during the season of growth will

obviate the necessity of the knife now, but the summer is a busy season with farmers, and such attention is often quite impracticable.

In pruning, cut close, just outside the shoulder or swell, at the base of the shoot or limb, being careful to avoid injuring the surrounding bark; use sharp tools and pare smooth. Cover every wound over half an inch in diameter with grafting wax, paint or like preparation. An excellent one for this purpose is shellac dissolved in alcohol. Common rosin will answer nearly as well, and is cheaper.

Cleaning the Bark.—A little later in the season, or early in April, choosing a cloudy, rainy day, go into the orchard with a stiff broom, a pail of soft soap diluted with an equal portion of soft water, and give the trees a thorough scrubbing from the ground up as high as you can reach; it will cleanse the bark of fungous growth, insects and dirt, give it a lively, pleasing appearance and stimulate growth. Ley of medium strength, the last run of the leach-tub, or sal soda 1 lb. to 1 bbl. of water are excellent. It will be well to repeat this application early in June.

Cultivation.—We are most decidedly in favor of thoroughly cultivating the orchard, even in the severe and somewhat peculiar climate of Wisconsin. After the first two or three years avoid *deep* plowing; keep the surface mellow by frequent use of the cultivator during the early part of the growing season, and cease entirely by mid-summer, that the growth may ripen up seasonably. While the trees are young, some hoed crop will pay for manure and culture. When they reach a bearing age, they will need the entire soil, the increase in both quantity and quality of fruit will then abundantly pay for the culture.

Diseased Trees.—Promptly remove from the young orchard all diseased or decaying trees, and replace with healthy, thrifty ones. Better do this than put up with the good-for-nothingness of their lingering life, which in a few years fails entirely. Fill all vacancies at once.

Poor Fruit.—Common seedling trees, and others producing inferior fruit should be grafted as soon as their poor character is discovered. The scions should be secured now, if not already done. The grafting may be performed during April.

Old Orchards that have been turned out *to grass* for years, and which from this or other cause have ceased to grow, producing only small, poor and scabby fruit, will be greatly improved by the general treatment advised for the young orchard. A. G. HANFORD.

COLUMBUS, Feb., 1863.

Grapes, Their Culture, and Other Things.

Every successive year brings to light some new development, either in varieties or culture. Not long since the Clinton and its class was thought good enough for any epicure; and the Isabella and Catawba were for the few, not the masses, and none thought of improvements. But how changed! Hybridizing, crossings, and raising seedlings is pre-eminently the rule; and though we may be treading on the verge of a "grape mania," good is surely to come from the labors of those few who are riding their hobby grape horse so severely these trying times.

Now there are many varieties that have made a long stride beyond the sorts named above, and no amateur list is complete without some of them. Says an esteemed correspondent; "We have attended all the County Fairs of northern Illinois and southern Wisconsin. Grapes have been largely shown and commented on. The four leading sorts for another season's planting will be the Delaware, Concord, and Hartford Prolific, named in order." These sorts have more than equalled the expectations of their friends the past season, wherever ripened in the State. Whether the Delaware will become a favorite in all soils is yet uncertain, but it appears to be a settled fact of its popularity in limestone situations; and wherever known is thought to be the best native grape in America, which is saying considerable for any one sort. It can scarcely help being a favorite in the northwest, with the hardiness of the Isabella, ripening as it does some three weeks earlier than that sort in similar locations.

The other sorts are better known, having been longer before the public. Concord has been fruited for some time, and though not quite up to the standard, is nevertheless an excellent grape; will bear much moisture and yield very good crops. The vine is remarkably vigorous, hardy and very productive; fruit large and showy, always commanding its share of attention in market; ripens early, and is not damaged by remaining for some time after on the vines.

Diana is a splendid grape, not so hardy or early as the former, nor so productive. Have heard of its rotting in some localities, but with care and judicious pruning yields a full average crop.

Hartford Prolific is very early and promises to be very desirable in northern localities. Hardy, vigorous grower, and should be planted much more than is.

All vines have now become so cheap and abundant that none need fail of planting the best of all; but a due preparation and care of the vines is absolutely necessary to ensure even ordinary success. No hap-hazard, half-way doing it will answer, only with those who will be faint-hearted and shortly discouraged, and willing to eat "sour grapes" till their teeth are set on edge.

We know parties who are now negociating for 5000 vines "to start a vinyard with next spring," and "bound to have them *cheap*," whose grounds are yet in wheat stubble, never having received more than a slight skimming with the plow. To plant largely with such preparations will be folly, with the chances largely in the planter's favor of a "cheap" affair all through, and disappointment in the end.

In traveling about the country we observe many vines yet uncovered, and, of course, exposed to all the changes which a Wisconsin winter always brings. If the vines are not killed, they are severely damaged by such an exposure, and the coming crop much diminished. Improve the first warm days, bend down the vines, cover with a litter if earth cannot be moved. Soil is preferable, but no certainty of using it in the winter season. Prune superfluous wood from unburied vines, pack in sand or moist sawdust, keep till spring, then plant. It will do you no harm to raise a few extra vines for yourself or to give to your neighbor who has a taste for the same, but not the wherewith to purchase.

Fork over your stable manure this month for the first time, and if twice the better. Give it an opportunity to heat and destroy all foul weed seeds. A heavy coating around currant and gooseberry bushes, not forgetting the raspberries, will be found very beneficial. Apply it as soon after spring opens as possible. A light coating of manure well mixed with ashes and refuse lime can also be given to the strawberry bed with good advantage, but this must be prepared by several turnings and be fine, else it will smother the plants, or unkilled weed seed will rule the day.

Prune currants, cutting out all superfluous old wood, with a proper regard to fruit-bearing and new growth. Save the cuttings, (the new growth is only of use now,) many of your neighbors "haven't a currant bush in the world," and won't have till some generous neighbor gives them the cuttings, or, better yet, the bushes. One cutting now made is worth two neglected till spring.

Many farmers have planted seedlings in their orchard, "intending to graft with best sorts." Now is the time to cut or secure the scions. There are varieties in every neighborhood which have excelled. Your soil or aspect is similar; secure some of these; make up an additional list of some of the best leading varieties you can command from Western horticultural journals and friends, extending through the season. Secure the scions, tying in separate packages the several sorts, and pack as described for grapes.

If the strawberry bed is not yet covered with clean straw or cornstalks, do it at once. A plantation intended for fruiting may have its value largely and sometimes totally destroyed by the thawing and freezing process. It certainly can be of no benefit to have half their

roots broken off, with the other half two-thirds out of the ground.

Where rabbits are troublesome in the orchard, wind the bodies with straw, paper, or old cloth bandages. Thousands of trees last winter were destroyed by rabbits, they even entering the yards of our cities and towns, and doing incalculable damage to choice plants. "An ounce of precaution is worth a pound of cure."

O. S. WILLEY.

MADISON, WIS.

SPIRÆA LANCEOLATA.

The Spiræa.

Among the many flowering shrubs that embellish the early spring and summer months, none are more deserving or worthy of prominence than the Spiræas.

They are neat in habit, flower profusely during the spring and summer months, are hardy, and of the easiest culture, thriving in any soil. Several are brilliant in their autumn foliage.

The following are varieties of established merit and will afford a nice selection:

LANCEOLATA—*Lance-Leaved, or Garden Spiraea.*—Slender, spreading branches, and long, narrow foliage.

The flowers are single, borne in clusters 2 or 3 inches in diameter, (see cut) and produced on lateral shoots the whole length of the graceful, arching stems, pure white, very showy. Autumn foliage fine. June.

PRUNIFOLIA—*Plum-Leaved Spiraea.*—Very neat and pretty bush, covered in early spring with beautiful small, pure white blossoms, double as daisies; foliage rich, glossy, green through summer, gradually changing at the approach of autumn, assuming the most bril liant tints, red, scarlet, and golden. One of the most desirable species of the whole family.

BILLARDI—*Billard's.*—A low bush, of erect, neat habit, flowers bright rose color, produced in terminal spikes, first at the extremities of the branches, afterwards in the axils of the upper leaves; continues long in bloom.

OBOVATA—*Obovate-Leaved.*—Small and glossy toothed leaves, flowers white, in small spikes, pretty. July and August.

DOUGLASSII—*Douglas' Fine Red.*—Elegant foliage, beautiful deep rose colored flowers, in dense plumes, blooms late in the season, needs a sheltered situation, or slight winter protection in Wisconsin.

TRILOBATA—*Three-lobed leaved.*—Small lobed leaves, white flowers. dwarf habit, pretty.

CALLOSA—*Chinese Pink Panicled.*—Foliage neat and pretty, young leaves tinted with red, flowers rich, purplish red, in large corymbs, blooms through July and August; this is one of the very finest, and when better known will be regarded as indispensible in the smallest collection; it is perfectly hardy here, but may need a sheltered situation or slight protection in Wisconsin, and is well worth all the trouble that may be necessary to protect it.

SALICIFOLIA—*Willow-Leaved—Queen of the Meadows.*—Slender, branching shrub, with a profusion of long, narrow, willow-like foliage, with terminal heads of neat white rose-tinted flowers; retains its leaves and verdure late in autumn. June and July.

THALICTROIDES—*Thalictrum-leaved—Meadow Rue leaved.*—Slender, spreading branches, covered like wreaths with clusters of small white flowers, very early in spring.

ULMIFOLIA—*Elm-leaved.*—Branches strong,

erect; leaves oval oblong; flowers white, with long stamens, produced in pyramidal clusters, on lateral shoots 6 or 8 inches long, on the entire length on the previous season's growth. June.

SORBIFOLIA — *Sorb-Leaved Cluster.* — Strong grower, leaves, which it puts forth very early in spring, like the mountain ash; flowers yellowish white, produced in large, pyramidal clusters in June.

A. G. HANFORD.

COLUMBUS, O., Jan. 1863.

Wheat, Fruit and Crops in Winnebago Co.

HOYT & CAMPBELL:—Please find enclosed five dollars, &c. * * * * *

I did not feel able to take the FARMER for 1863, but it continued to come and I continued to like it better and better, and I could not say "stop!" for if there ever was a time when farmers required all the information available, in their calling, it is now.

Our wheat crop has not averaged more than ten to twelve bushels per acre this year, and at 75 cents per bushel the profit comes on the wrong side of the account.

Our fruit trees have grown well this season, but have, as a general thing, failed to bear. Of pears, the Flemish Beauty, which bore profusely last year, has this season failed to produce specimens enough to exhibit at the Agricultural shows.

Apples have not done much better, though a few varieties, as the Lowell, Early Pennock, Spitzenberg, English Redstreak and Keswick Codline, have with me fruited well every year.

Now permit me to ask you a question which is of great importance to all who have young orchards just beginning to bear: What shall we do with them in the summer? It is a great trial to a man's patience to cultivate hoed crops in an orchard, and the trees always have a sickly appearance where grain or grass is grown among them. Will you enlighten us on this subject in the FARMER?

HENRY W. NICHOLSON.

EUREKA, Wis., Nov. 16, 1862.

NOTE.—Our own opinion is that a medium course is the true one. An orchard may be cropped to the impoverishment of the soil and the detriment of the trees; or the fruit-trees may suffer, on the other hand, from being buried up and half choked by a tight turf. Trees growing thriftily are much less liable to suffer from the depredations of insects and from the ravages of disease of whatever kind than those that are stinted or dwarfed in their growing. We recognize the principle in its application to animals, but forget it altogether when we come to growing fruits.

Thorough pruning, occasional breaking up, cultivating in hoed crops, with suitable manuring, and then for a brief period seeding down with clover, are, in our estimation, cardinal points in the treatment of an orchard. Possibly many fruit-growers may differ with us; if so we hope they will be prompt to correct the error of our teaching.

We have no pet theory to championize and seek only the *truth*. Will the Horticulturists give us the benefit of their views and a full discussion of the subject in the FARMER? Our columns are open, and they are always welcome.

Egypt.

We have been asked several times lately, if our impressions of southern Illinois are still as favorable as as formerly, referring to communications of ours in the FARMER.

To which we reply: they are, and *more so*. No section with which we are acquainted offers anything like equal advantages for fruit-growing. Some notes of what has been done there we intend to write out for the FARMER.

It is true this section in common with others on the border has suffered largely from this unfortunate war, still there are many new fruit farms opened up every year, and more trees are planted each season than the previous one.

The amount of planting the coming spring will depend somewhat upon the supply of help. This is a matter of considerable importance there just now. So large a portion of the able bodied men being in the army, operations in

all departments of industry are seriously impeded.

A. G. HANFORD.

COLUMBUS, O., Dec., 1862.

MECHANICAL & COMMERCIAL.

The Ohio Grain Drill.

The rapidly increasing interest and faith, among our farmers, in drill-sowed grain, as compared with broadcasting, leads us to again refer to the subject, and to repeat, in substance, some of our old arguments in its favor.

We have long been fully convinced, both by our own observation, as well as the testimony of the wisest and most observant farmers both of this country and of Europe, that drill-sowing is the only way in which seeds can be uniformly and evenly planted.

That there is a proper depth to plant wheat, to enable it to germinate and grow in the fullest perfection, cannot be doubted; and the proper depth for one kernel must also be the proper depth for every other kernel sown under the same circumstances. Admitting the soundness of the foregoing theory, and we hardly see how any one can doubt it, we would next ask, how any such uniformity and evenness can be attained by any broadcast work whatever?

We are aware that some are quite partial to broadcasting, and are ready to buy any new-fangled implement intended for that purpose; especially if it has some kind of a drag or cultivator hitched behind it with which to cover the seed.

Now, how can any *drag or cultivator* cover seeds uniformly to the same depth? Of course some will be left on the surface, some half an inch deep, and some four inches, just as it happens; and no mere broadcasting contrivance can possibly avoid it. Not so with a good drill; it distributes the seed evenly, and plants it to any depth desired, with a uniformity and accuracy that cannot be attained in any other way.

So much for the theory and principle of things; now for the practical results to back them up. Numbers who have sown with drills during the past season, assure us that they obtained much better crops than their neighbors who broadcasted upon the same kind and quality of ground.

One remarkable instance occurred in a neighboring town, last season: Two neighbors purchased a drill between them, and when the sowing season came, both being in a hurry, one sowed with the drill half of the day and the other broadcasted; the other sowed with the drill and the first broadcasted; thus changing each half day upon the same field, putting in strips of drill and broadcasting, side by side, of five or six acres each. Mark the result: In every one of these changes the drill-sowed yielded from four to seven bushels the most per acre. What better proof than this could be asked to establish the superiority of drill sowing? Many other cases more or less striking may be adduced in every neighborhood where drills are used.

We will not spend further time now to argue the abstract question of drill as compared with broadcast sowing, as propably few need convincing upon that subject, but will add a word in relation to drills.

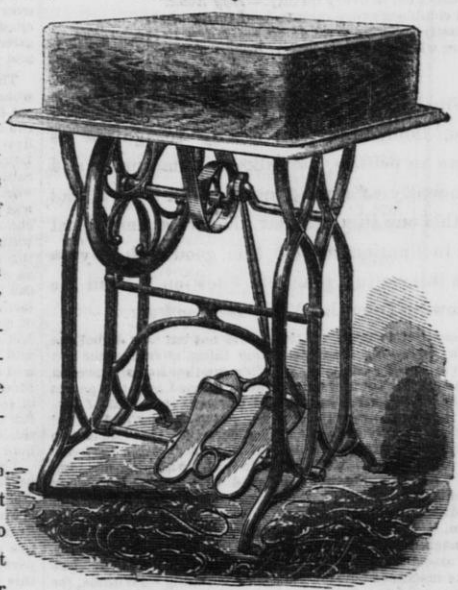
The cut at the head of this article illustrates a comparatively new, and to all appearances, a much simplified and highly improved drill, now being extensively manufactured by Powers & Sherwin, of this city. Many of the defects peculiar to the ordinary styles of drills seem to be obviated in this. The old way of attaching the shovels to the forward part of the frame, so that when in action, especially in hard lands, they draw down upon the horses' necks with a crushing weight, is entirely obviated in this machine; the shovels being hitched to the main or centre shaft on which the wheels have their axle, thus leaving an entirely free, light tongue at all times.

Then again, the shovel is so constructed with an ingenious spring adaptation that it cannot catch and hold fast upon any obstruction, no matter whether stump, stone, or what not, but readily passes over all impediments not over eighteen or twenty inches high, thus being able to work in any common opening field, where the ordinary style of drills would never think of going. This last feature is a great advantage, and will add much to its popularity and usefulness, and enable thousands to avail themselves of the great benefits of the drill who otherwise could not until their lands were more cleared.

Then again, it has a *positive* revolving feed apparatus, that enables it to feed all kinds of seed *to a certainty*, and with great exactness, thus leaving no blanks in the field after sowing. Many other improvements might be mentioned, if space permitted, but all good observers will readily see them on examining the machine, and comparing it with others.

We recommend to all farmers to buy and use grain drills, if they would have even, good wheat, and, as far as possible, avoid chinch bugs, for thus far we think the drill has been found the best remedy against them, as it is well known that they work much the most and worst upon shallow-sowed grain.

We shall, from time to time, refer to drilling until we think it is thoroughly popular and generally adopted among our Wisconsin farmers.



Our Prize Sewing Machine.

Without disparaging other machines, we are free to confess a partiality for Wheeler & Wilson's. At home, everybody who has proved the machine likes it, and abroad it ranks before all others in the world.

In England, Scotland, France, and Germany we found it in the work-room of the rich man's palace, and in the less pretentious homes of the middle classes of the people. In the Great Exhibition, too, it ranked first, and won a gold medal.

Nor are we alone among the Editors in our high opinion of its merits, as the following quotations will show:

OPINIONS OF THE PRESS.

We prefer them for family use —*Tribune*,
They are the favorites for families.—*Times*.
It has no rival.—*Scientific American*.
Do the work of ten ordinary sewers —*Jour. Com.*
Equal to nine seamstresses.—*Home Jour.*
An almost perfect instrument.—*Evening Post*.
The machine for family use.—*Advocate and Journal*.
We cannot imagine anything more perfect —*Evangelist*
The best ever invented —*Christian Enquirer*.
A triumph of mechanical genius —*Ure's Dictionary*.
We praise it with enthusiasm.—*Ch. Intelligencer*.
It surpasses all others.—*Ladies' Repository*.
It is an American institution —*Knickerbocker*.
A complete success.—*National Magazine*.
It is eminently superior —*Dictionary of Mech*.
Makes the best stitch for sewing—*Am. Farmers' Mag*.
Beyond all question the machine.—*Life Illust*.
They maintain the pre-eminence.—*Express*.
Are pre-eminently superior —*Ladies' Visitor*.
Unrivalled in every quality.—*Day Book*.
It combines every essential.—*Living Age*.
Vastly superior to all others —*Golden Prize*.
Are without a rival.—*Am. Phren Jour*.

VIEWS OF HENRY WARD BEECHER.

Finally, we call in Henry Ward Beecher, who, though not universally recognized as *sound* in politics, yet talks so humorously and eloquently of sewing machines in general and of this one in particular, that we cannot resist the inclination to vote him good authority on this interesting practical question. Read the following from the *N. Y. Independent:*

Among the things which we did not but now do believe in, is the Sewing Machine. One thing after another had been invented; one machine after another had superceded manual labor, until human hands seemed about to go out of use for any other mechanical purposes than that of lovers' pressures, orators' gestures, and for beaux and belles' gloves. But we always consoled ourselves that one or two things there were yet which no machinery could perform. We could imagine children put through a whipping-machine and we had long been accustomed to see them taught by automatic machines. There was a time-honored custom handed down to us, without a break, from the Garden of Eden, of courting,—and kissing as one of its ordinances—no machinery could ever perform that. Machine poetry and machine sermons we were familiar with. Babbage can make machines for ciphering, for computing logarithms, for casting up interest, but can he invent a machine for *saving* interest and capital too, for that matter? And oh! can there ever be a machine for answering letters? We would pay any price for a machine, into which letters being put and a crank turned, there should drop out at the other side answers, as good as the letters, folded, directed and stamped.

But machines have steadily gained ground, and the iron muscle has relieved the flesh hand; machines for boring, sawing, cutting, planing; for making bread, (I wish there was one for eating some of it,) for pumping water, for making cattle draw their own drink. But, notwithstanding, we firmly believed that some things would never be done by any fingers except human, and eminent among these impossible things was sewing! Nothing, we were sure, could ever perform that, except the latest and best invention of Paradise—Woman!

When the rumors began to prevail, then, respecting an invented sewing machine, we lifted our eyebrows gently, and went on our way with a quiet consciousness that we could not be taken in by any such story. We regarded it as of a piece with new-found morality in old politicians, with the thousand annual rumors of some heaven-dawned virtue in Washington City—a mere device to catch the credulous.

But day by day the clatter grew. Indeed we surprised ourselves with a coat, sewed in important respects by machine. We saw linen pyramids of sheeting made for hotels and steamboats by sewing machines.

The case was growing serious indeed; and, at last, it came to a head, when the head of the family informed us that a woman was to come in a few days, with her Wheeler & Wilson, and do up the family sewing. Of course, we submitted without a word. And the three capable persons of this household began to prepare matter for the machine, to an extent which showed how perfectly they had been fooled by the story of its executive ability. Piles of large stuff lay in each corner; little stuff covered the table, and miscellaneous stuff lay everywhere. We ran against cotton heaps, were in danger of getting tangled in webs of linen and sheeting at every turn, and such ripping, and tearing, and cutting, and basting, as went on, would lead one to imagine that an army was to be clothed.

The day dawned. The woman came, and the iron Wheeler & Wilson came with her, only the lady had to act as beau, and offer her aid to wait on Messrs. W. & W. After a little, there arose a hum from our chamber, not unlike the buzz of a wheat-mill, such as we have heard in summer, sitting under willow trees on the edge of a stream, over against a red mill, white dusted. Soon we heard excited exclamations. Everybody seemed stirred up. The girls left their work; the children forsook their playthings, and we followed the example.

There sat before the simple machine-stand a fair young woman, some sixteen years old, whose foot, like that of the old fashioned flax-spinners, was working the treadle with the nimblest motion. Then came the conviction, for the first time, that sewing was conquered and vanquished! Long sheets entered the fatal pass, streamed through, and came out hemmed, in a ridiculously short time. An hour's work was done up before your eyes in one minute. A shirt was set in, of such dimensions, that (we call Baron Munchausen to witness!) a man could not get round it by fair walking in less than—well, in some time! It streamed through the all puncturing Wheeler & Wilson about as soon as a good sized flag, being hoisted, would unroll and flow out to the wind. A bundle of linen took its turn and came forth a collar, a handkerchief, a cap. There goes in a piece of cloth! there comes out a shirt! We were bewildered. Not much was done for some hours in that house but gaze and wonder. We mistake. A good deal more was done, and done more effectually, than had ever been done in ten times the time before. What heaps of towels,—what piles of sheets,—what bedfuls of small trumpery,—what bureaus full of fine trash—what carpet-littering stocks of unmentionable matters that make up the cloth-inventory of household wealth!

The dismayed woman of the house saw her three days' prepared work melting away before noon, as a three days' April snow disappears in a few hours!

The voracious machine began to show its teeth and to demand more food,—and now it was a fair race, whether two women could prepare as much as one machine could perform. It did our very souls good. At last, we hoped this was working fast enough. Oh, what early hours has our lamp been made to illumine! Oh, what breakfasts have we eaten, and seen cleared away, long before the sun touched even the cheek of day! What impetuous industry had glowed about the house, forenoon, afternoon, night, midnight—never enough, never overmatched! We grew tired even to look at it. At last we said, you've got your match. Now, then, we will sit down and see this race, with a satisfaction that shall include years of revenge for disturbed indolence.

For a long time the match was doubtful. Sometimes it was the machine that had the advantage, and sometimes it was not. The contest was passing into the middle of the

afternoon. It was doubtful. Sometimes the fast-driven needle evidently gained; then again in rounding up a sleeve-gathering, the needle flagged, and then the hand-worked scissors gained. But iron and steel are more enduring, even, than a housewife's courage. And though for any single hour the hand could prepare faster than the machine could execute, yet, taking the day through, Wheeler & Wilson had the advantage, and came out at dark decidedly ahead. That settled it. There was a revolution in this household Our Miriam sounded her timbrel and triumphed over the cruel Pharaoh of the needle, whose dynasty and despotism were ended.

Now, sewing is the family amusement. Our Wheeler & Wilson is played on a great deal more than our Steinway piano—and is the cause, too, of more real music than is ever get out of that instrument; for two Canary birds, perched on either side of the bookcase, understand the first click of the sewing machine to be a challenge, and while the machine sings *staccato*, they warble *ad libitum*, and between the *solfeggio* of the one and the *cantabile* of the other, we go crazy.

After all this testimony, who wonders that we selected this from all the machines in the world as a suitable prize to be awarded our enterprising, hard working agents for large lists of subscribers? Farmers, or whoever else wants the best sewing machine of which *we* have any knowledge, now is your chance *to get one, without a cent of money!*

Cotton Spinning in Russia.

Every Russian peasant, male and female, wears cotton clothes The men wear printed shirts and trousers, and women are dressed from head to foot in printed cotton also. When it is remembered that Russia contains something like 33,000,000 of serfs, besides other classes amounting to 20,000,000, all using this article more or less, one can estimate the demand for cotton goods. But a calculation is not to be made from data afforded by free and more prosperous countries. The peasantry are poor, the cotton prints are dear. Hence there is not a tithe of the right amount of consumption. Still, the cotton trade in Russia is a large trade, and it is supplied chiefly by native labor, in mills containing machinery made in Oldham and Manchester, and superintended by Englishmen from the same and neighboring towns. There may be five or six millions of spindles at work spinning this cotton; together with the weaving and printing of the same, that forms a large item, perhaps the largest among the manufacturing processes of Russia, and employs a capital of thirty millions sterling. The largest mills are in the neighborhood of St. Petersburg, one of these having some one hundred and twenty thousand spindles, and a few others are of seventy thousand and sixty thousand, but the great bulk of the trade is in the Moscow district, and scattered about the land in that direction. The number of spindles there may not be so great in any individual mill as in some of the large St. Petersburg establishments; but the mills are more numerous, some of them nearly as large, and all of them are of respectable dimensions, even according to an English estimate.

SCIENCE, ART, STATISTICS.

Interesting Statistics.

Mr. B. F. Rindge, of Heart Prairie, Wis., sends us the following memoranda of important events, affecting the lives and property of the people of all Christendom, from 1848 to January 1st. 1863. How accurate the figures may be we have no means of knowing, but the figures are certainly as large as they *ought* to be. In view of the wars that have committed their ravages since 1848—including the Revolution of '48, the Crimean War, the Italian, the Circassian, the East Indian, the Mexican, and the American—the number "230,792" of lives lost by shipwrecks, earthquakes, and battles looks rather small. Probably one-half of that number have been lost by the batttles on this continent alone, within the past two years. Mr. Rindge is, doubtless, a careful noter of such events, however, and the following are his statistics:

No. fires of considerable extent,	5,133
No. buildings destroyed by fires and earthquakes,	199,019
No. vessels wrecked,	1,473
No pounds cotton burnt,	1,423,434,000
No. lives lost by shipwrecks, earthquakes and battles,	230,792
Am't of loss by fires, shipwrecks and earthquakes,	$1,066,917,000

Flax Cotton.—The legislature having appropriated the sum of $2,000 for the machinery to test the experiment of manufacturing flax cotton, to be expended under the direction of the State Agricultural Society, the Executive Committee would call the attention of those interested in the culture and preparation of flax to this subject. The object of the legislature was undoubtedly to secure a preparation of flax as an economical substitute for cotton, so as to be used on cotton machinery.—*Journal N. Y. S. Ag. Soc.*

Petroleum for Oil-Stones.—A correspondent of the *Scientific American* says:—"I have an old stone very much soaked and gummed up with oil, so much so that my plane iron would slip over it without sharpening. I took to using petroleum oil on the stone, and it seems to work first-rate. It draws the oil out of the stone, and has a tendency to make the iron or chisel cling to it, which greatly facilitates the whetting.

THE MINER.

J. MURRISH, : : CORRESPONIDNG EDITOR.

Wonderful Copper Discovery in the Portage Lake District.

Some two weeks ago says the Lake Superior *News and Journal* of Oct. 31st, a huge mass of float copper, weighing at least twenty tons, was discovered on the location of the Mesnard mine, at Portage Lake. In size it was some sixteen feet long, four wide, and one and a half thick, which is by far the largest *float* mass ever before found upon the Lake. Such being its prodigious weight, it was patent that it came from a vein near by, as it was impossible that any human agency known to exist in the past, could have moved it a great distance. Beneath it, charcoal was found, and also stone hammers, indicating plainly that the ancient miners, whose history is unwritten, and of whom nothing is known, except as traces of their workings are thus found, had either taken it from its original bed and placed it in fire, in order to burn the rock from it, or finding it in the spot where it was now discovered, placed it in the fire for the same purpose. We find those who are of the opinion it was never put in the place where it was found by human agency, for the reason that a large amount of the float copper in small masses, weighing from a half pound to fifty, are found scattered immediately around it. Already some two tons have been gathered, and whose existence in proximity with the large mass, would indicate that water and ice may have been the agencies by which they were thus moved and scattered from their original resting place. The agency, however, by which they were thus placed over the surface, it is not so important to know, as their existence, and the more important fact to which they point, viz: *that they must have come from some vein near at hand.* With this conviction, simultaneously with the cutting up of the huge mass, and the collecting of the smaller ones, the work of a most thorough exploration was begun, in order to find the vein from which they came. What was thus reasonably manifest, seems to have been accomplished, for the work of a few days uncovered, about forty feet distant from the huge float a mass of still larger dimensions in the vein itself. At last accounts, this new wonder had been stripped some five feet in breadth for a length of twelve feet, and three thick, with no indication of growing less at any point. It is opened sufficiently to indicate that it will far exceed the float mass. The vein in which it is found has been known for years. It runs through the Quincy, Pewabic, Franklin, Pontiac, Albany, and Boston, &c., and they all, in the value of their stock, must at least feel the effect of this development.

The vein is of the Epidote character, but from some cause seems to spread and soften at the spot of this discovery. We have heard it described as an Amygdaloid belt of the Epidote character. The agent of this thus fortunate mine, is prosecuting the work of opening the vein with diligence, employing all the labor he can obtain. The general impression among the oldest and ablest mining men is that a vein of extraordinary richness has been struck, which will add new interest to this heretofore wonderful district.

Portage Lake is the general name by which that section is known. The Lake itself is an inland body of water, cutting the range nearly east and west but whose general course is southeast and northwest. Its outlet is into the west side of Keweenaw Bay, and has been made navigable for first-class steamers. This however, has been secured by dredging out the channel at its confluence with the bay, and building piers on each side to protect it from the action of the waves. A number of its shortest bends have also been abandoned, and new channels cut, while others have been greatly improved, which was easily done, the shores of the outlet being marshy. These improvements have cost about $50,000; but the parties making them have organized themselves into a corporation, known as the "Portage River Improvement Company," and levied a toll upon all articles passing either way until they shall have been reimbursed. This toll is a small consideration to the benefits conferred, as steamers now pass in and out, by day or night, at pleasure.

This lake, with its outlet, extends nearly across the base of Keweenaw Point—there being a portage of only two miles between its northwestern extremity and Lake Superior—one half of which distance is low, marshy land which can be easily opened, while the remaining mile, through dry land, is low—simply a sand beach covered with Norway pine. There is no question but that what is now Portage Lake was, at one time, simply a vein of Lake Superior, connecting its waters on the west side of Keweenaw Point with those of Keweenaw Bay, thus leaving the point itself an island: nor have we any question but that the day is hastening when this short portage will again be opened, and made to contribute to the security and dispatch of commerce. It is estimated that $100,000 judiciously expended, would so open it as to permit the passage of steamers and vessels. This would secure at once the double advantage of shortening the distance from Portage Lake ports, to those above, nearly one hundred miles, and affording a good and secure harbor on a dangerous coast now without one; while every west wind would cause a current of pure fresh water to course through this passage, the value of which to health cannot be estimated.

This channel from the outlet of Portage Lake to where, if thus opened, it would again con-

nect with Lake Superior, would be about 26 miles in length, with an average depth of fifty feet, and half a mile in width. It cuts the copper range nearly midway from the Bay to the Lake, it being fourteen miles from this point by Portage Lake to Keweenaw Bay, and twelve to Lake Superior. Upon each side the hills of trap rock rise at an angle of some 20° to a height of five and six hundred feet. Up these angles, and on these summits, are located copper mines of remarkable richness, that are being worked with great vigor and success. At their base are located the villages of Hougton and Hancock.

EDUCATIONAL.

The State Agricultural College.

However persons may have differed as to the policy of establishing an Agricultural College by means of individual contributions and State aid, there can be no question as to the propriety of doing so, now that the General Government, with an enlightened forecast, has provided an endowment—only asking of us that we provide the necessary buildings.

We are a great industrial community, and nothing will so effectually secure our materia and social prosperity as the better education of the whole people—not only in the rudiments of language and science, but also in the discovered and approved application of the sciences to the practice of their pursuits in life. The bare recognition of this truth, on the part of a few, has already wrought a great improvement in Agriculture and the Mechanic arts, in all parts of the civilized world; what, then, may we not expect from its universal recognition and the united efforts of a whole people for the establishment of an institution whose sole work it shall be to advance, dignify and ennoble the Industrial Arts?

In Wisconsin, the common disregard of the natural adaptations of various crops to the soils in which they are attempted to be grown, the almost total neglect to save and properly apply manure, the burning of straw, shallow plowing, the preponderance of unprofitable grain-growing to the exclusion of sheep husbandry and other equally profitable branches of stock-raising, the failure of fruits, the destructive ravages of noxious insects, and the absence of what should be an extensive manufacturing industry, all appeal, in language stronger than we can use, for some means of educating the farmers and mechanics in all the established principles of these essential arts.

It is our conviction that a sufficient number of the influential citizens of this State appreciate the force of this reasoning to give to this new project their most cordial support, and we have, therefore, no misgivings as to its ultimate success. The other states are bestirring themselves in this important matter, and we trust the people of Wisconsin will require of their representatives in the Legislature a reasonable liberality in the provisions necessary in order to an acceptance of the grant in good faith.

The attention of our readers is especially directed to the extract bearing on this subject from the Governor's Message. See the News Department.

Parents' Duty to the Neighborhood School.

Mr. Editor:—As the result of a suggestion in the November number of the Farmer, we have in its last issue a valuable article on the "Parent's Duty to the Neighborhood School." I trust that your readers will not object to hearing further upon so important a subject. As the common or district school is the Alpha and Omega of educational facilities to the majority of the people, the duty of properly maintaining this institution is imperative. It is nearly allied to the Divine injunction, "Train up a child in the way he should go." Here the twig is being *bent* that is to shape the destiny of the future tree.

Mr. Editor, what I wish to impress upon the hearts of your readers is, that just in the proportion that you prosecute the work of educating your children in an economical and business-like manner, will you be successful in attaining the object you have in view. If you sow sparingly, you will reap sparingly. What costs you nothing will bring you nothing. You can no more have a good school, one worthy of the day in which we live, without a generous and judicious expenditure of time

and money, than you can build a good house without it.

There are some few things absolutely essential in order to have a good school. In the first place, a good house, of ample size, properly seated, warmed, and ventilated; where the children are not huddled together like sheep, and without room to conduct the exercises with either pleasure or profit. In the next place, keep a school in that house from nine to ten months in a year. Short terms and long vacations will work the ruin of any school. The evils are two-fold: As a general rule first class teachers will not engage such a school. They can do better. In the next place, a large part of what the pupil learns in the school term is lost during the long vacation, together with the interest in their studies.

There never was, and there never will be a well-advanced and interesting school where it is taught but six months in the year. The progress of such a school is much like that of the toad climbing out of the well, which, it is said, climbed up three feet every day, but fell back two every night, to sleep. That toad was a long time, I am thinking, in getting out of the well, and your children will be equally long in getting out of the well of ignorance, if you pursue this intermittent system of schooling.

Added to this, you can hire none (with rare exceptions) but second and third rate teachers, and these will be sure to leave their *mark*—such a mark as a bungler of a tailor leaves on the cloth you furnish him to make a coat, such a mark as a third-rate mechanic leaves on your lumber when you employ him to build you a nice house.

A stream will not rise above its fountain. Grapes will not grow on thistles, nor figs on thorn bushes; and second and third rate teachers never teach first-rate schools. But, say you, these latter should be encouraged to do better. Some of them should, while others should quit at once, having wofully mistaken their calling. But how can *you* encourage them to prepare themselves fully for the work, while you will employ them for only half of the season and leave them to do something else the other half? The truth is that we must give teachers longer employment and remunerate them better, before we can ever hope to secure permanently the services of that higher order of talent necessary to make our schools what they should be.

Remember that the Teacher's art is *the art of all arts*, that the highest order of talent is not out of place in the teacher of even a common district school. No skilled artizan that ever put his hand to wood, or brass, or marble block ever had so delicate and responsible a work before him. Parents of Wisconsin, ponder upon these things, and act wisely.

J. C. B.

DANVILLE, Dec. 1862.

The Public Schools of Wisconsin.

The 14th Annual Report of the Superintendent of Public Instruction has appeared to us, after a somewhat careful examination, one of the most interesting and valuable hitherto published. It abounds in valuable suggestions from the able Superintendent, and embraces numerous reports from the County Superintendents—showing, altogether, more thoroughly what is the condition of our common schools than any report yet published. Mr. Pickard has fully met the high hopes of his numerous friends, and is at once an honor the Department over which he presides and to the great cause of Universal Education.

We shall quote from the Report before us, from time to time, but in the present number have barely room for a summary of the statistics which it embraces, as follows:

No. counties reporting,	56
No. towns reporting,	775
" not reporting,	2
No. whole districts,	3,787
No. parts "	1,764
No. districts, reckoning 2½ parts equal to a whole district,	4,571
No. districts not reporting	164
No. parts districts not reporting,	117
Whole no districts unreported,	220
No male children between 4 and 20 y'rs of age	157,138
No female " " " "	150,918
Total number " " " "	308,056
Excess of males,	6.220
Increase since last report,	8,923
No. districts maintaining school more than one term,	3.070
No. male teachers employed winter term	2,349
" " " summer "	418
No. female " " winter "	2.340
" " " summer "	3,462

No. different persons employed in teaching during the year,	7,069
No. pupils registered winter term,	149,786
" " summer "	128, 00
Whole no. days attendance of pupils wint term	5,8 ,890
" " " " summer "	4,690,913
" " " " during y'r,	10,577,833
Whole no. pupils attending during the year,	191 366
No. children under 4 who have attended school	2 420
" over 20 " " "	2,149
No. select and private schools,	189
No. pupils attending them,	2.049
Average wages p'd male teachers winter term	$25 45
" " female " " "	16 61
" " male " summer "	26 19
" " female " " "	15 14
State fund apportioned during the year,	149.891 00
Tax levied by county boards,	126,317 55
Tax levied by towns	60 626 70
District taxes for teachers' wages,	349,367 00
" " for school houses,	81,116 61
" " for maps, charts and apparatus,	2 86 51
" " for other purposes	82,969 09
Total school taxes raised,	$703,262 52
No, stone school houses,	166
No. brick " "	192
No. frame " "	2 324
No. log " "	1,227
Total number school houses,	3,909
No. sites containing less than one acre,	3,111
" un nclosed,	2,959
No school houses without blackboards,	63
" " " outline maps,	2 849
Total valuation of school houses,	$1,2 5 85 00
Highest valuation of any one school house,	12,000 00
Lowest " " " "	01
Average value of school houses,	322 25
No. district libraries,	81
No. volumes in same	32.8 5
" purchased this year,	1,050
" loaned this year,	20,.71

Farmers, Educate Your Sons!

We have ever thought, that if there was a profession in the world of which a man had a just right to be proud, it was that of the farmer; and yet no class in the community place so low an estimate upon their calling as farmers themselves. Why is this? Has the idea that mere physical force is the only essential qualification of the man who tills the earth, obtained such a hold of the minds of our people, that the thought of ever placing agriculture in a loftier position has been utterly abandoned? We hope not; and yet with many this appears to be the case. Is it not lamentable, in an age like ours, that any such absurd and positively injurious notions should prevail? Who is prepared to estimate the pecuniary losses actually sustained by the encouragement of such nonsense? Millions upon millions are annually lost by the cultivation of too much land, the over-stocking of farms, errors in the rotation of crops, the entire abandonment of farm accounts, the ignoring of all improved implements, &c. When will all farmers awake to a true sense of their own interests? When will they, as a unit, resolve to place their profession where it deserves to stand, at the very head and front? Why should it not? What other profession involves so much of the scientific as well as the practical? What branch of science is not more or less intimately connected with, and what profession holds out so many inducements to the man of inquiring mind—to the observer and admirer of nature's works, and to him who, if he have no higher object, seeks to amass a fortune? None that we know of, that may be called legitimate. Why, then, farmers, will you not one and all improve the golden opportunities so freely afforded you? Why not educate your sons to believe that the calling of the farmer is ennobling and remunerative, if it be but intelligently pursued? Point them to the men, who, discarding the pernicious ideas already referred to, have entered upon the great work of placing agriculture in its proper position.

Have they not earned a reputation which will live when the ephemeral notoriety of politicians and speculators will have passed from the mind of the world? Bustle and Skinner, Downing and Wilder, Bartram and Peters, all hold a high place in the hearts of the lovers of agriculture and horticulture—a place which can never be usurped. Educate your sons to love this profession of their fathers, and you will confer a blessing not only upon them, but upon the world at large.—*Farmer & Gardener.*

Agricultural College in Pennsylvania.

We are pleased to learn through a letter and accompanying documents from Dr. Evan Pugh, President, that the Agricultural College of Pennsylvania is in a prosperous condition.

This institution was incorporated in 1855, but owing to a variety of embarassments—chiefly a lack of money—did not open until 1859. It was based upon a fund made up of donations from citizens to the amount of over $50,000, with an appropriation of an equal amount from the State, and the buildings were erected upon lands, in Centre county, generously donated by Gen. James Irwin. For a time after it opened its success appeared somewhat doubtful, but its numerous friends persevered, and, in spite of all impediments, it has continued to increase and strengthen, so that last year there were 110 pupils in attendance, with a graduating class of 17.

The late munificent grant of lands will *give it a new impetus*, place it upon a firm foundation and give a new impulse to the cause of Industrial Education in the great Keystone State. Dr. Pugh and his worthy colleagues have our warmest congratulations and our best wishes.

THE HOME.

"At the Last."

The stream is calmest when it nears the tide,
And flowers are sweetest at the eventide,
And birds most musical at the close of day,
And saints divinest when they pass away.

Morning is lovely, but a holier charm
Lies folded close in Evening's robe of balm;
And weary man must ever love her best,
For morning calls to toil, but night to rest.

She comes from Heaven, and on her wings doth bear
A holy fragrance like the breath of prayer;
Footsteps of angels follow in her trace,
To shut the weary eye of day in peace.

All things are hushed before her, as she throws
O'er earth and sky her mantle of repose;
There is a calm, a beauty and a power
That Morning knows not, in the evening hour.

"Until the evening" we must weep and toil,
Plow life's stern furrow, dig the weedy soil,
Tread with sad feet our rough and thorny way,
And bear the heat and burden of the day.

Oh! when our sun is setting may we glide,
Like summer evening, down the golden tide,
And leave behind us, as we pass away,
Sweet, starry twilight round our sleeping day.
—*Independent.*

Marriage.

Love is the master passion of life, but its sweets must be gathered with a gentle hand. The kindly laws of nature set woman to man,

"Like perfect music unto noble deeds."

But the harmony to be preserved, must touch the heart and purify the senses. Therefore the sacred institution of marriage has been ordained to strengthen and dignify the union. The uses and duties of this holy state have ever been a subject of interest to mankind at large; and in almost every age marriage has been regarded as one of the great agents in the improvement and cultivation of the human family. Morally and physically its influence for the benefit of mankind has been enormous; for, independently of its original purpose, the perpetuation of our species, it has those high claims to our regard which are born out of the noblest and loftiest emotions of the soul. It is the foundation of all love and friendship, and creates a sentiment in the mind out of which spring the elements that foster and promote civilization.

To quote the words of one of the most eloquent of our prosewriters, Jeremy Taylor: "Marriage, like the useful bee, builds a house and gathers sweetness from every flower, and sends out colonies, and feeds the world, and obeys kings, and keeps order, and exercises many virtues, and promotes the interest of mankind, and is that state of good things to which God hath designed the present constitution of the world." The learned bishop might have gone further and stated that marriage was the author and encourager of almost every virtue we possess, and that as it was the first engagement into which man entered, so it has ever since remained the grand leading event of his life, and one intimately associated with his temporal and eternal welfare.

Home Tyrants.

For his rule over his family, and for his conduct to wife and children, subjects over whom his power is monarchical, any one who watches the world must think with trembling of the account which many a man will have to render. For in our society there is no law to control the king of the fireside. He is master of property, happiness, life almost. He is free to punish, to make happy or unhappy, to ruin or to torture. He may kill a wife gradually and be no more questioned than the grand seignior who drowns a slave at midnight. He may make slaves and hypocrites of his children, or friends and freemen; or drive them into revolt and enmity against the natural law of love. I have heard politicians and coffee-house wiseacres talking over the newspapers and railing at the tyranny of the emperor, and wondered how these, who are monarchs too in their way, govern their own dominions at home, where each man rules absolute. When the annals of each little reign are shown the Supreme Master under whom we hold sovereignty, histories will be laid bare of household tyrants cruel as Amurath, savage as Nero, and reckless and dissolute as Charles.—*Thackeray.*

YOUTH'S CORNER.

About Icebergs.

Every little boy or girl who has studied Geography knows that in the great oceans which surround the north and south poles of the earth it is cold, that immense bodies of ice must form, if they do not, indeed, freeze over those seas entirely. It is just as if there should be no more summer in Wisconsin and the ice on lake and river should continue to get thicker and thicker until bye-and-bye the water should all have become ice.

You have seen pictures, perhaps, of Greenland or Iceland, with scarcely a tree in sight, and here and there a great white bear, hunted by a band of dwarfed and muffled-up men. What then should you expect still further north, where the rays of the sun fall so slantingly upon the earth that they are never able to warm it up to a temperature above fifty degrees below zero, by the thermometer—in other words,

where it is always ten times colder than the coldest day you ever saw in the coldest winter? Well, it is there where icebergs are formed. The word means *ice-mountains*, and is true to the reality.

HOW THEY ARE MADE.

Icebergs are formed in various ways: sometimes by the sliding down into the water of the polar seas vast accumulations of ice from the tops of high mountains on the coast, just as the glaciers we saw last summer, in the Alps, are gradually sliding down into the valleys below; there being only this difference—that the glaciers melt when they get down into the warm valleys below and run off in little streams, while the polar glaciers slide down into the cold, deep ocean of the frozen zone, and are broken off almost entire.

Again, it sometimes happens that great icy cliffs, which overhang the water, as the bluffs or rock in places overhang the Mississippi, by the wearing away of the ice below, are plunged into the water with a fearful splash and then float away.

And, finally, it once in a while occurs that the vast sheets of ice that cover the Arctic and Antarctic oceans is broken up into fragments, each of which is thenceforth, until melted, an iceberg.

WHY THEY FLOAT SOUTHWARD.

Were there no currents in the sea, there would, of course. be no motion of these mountains of ice. But we have seen [by article in last number] that there are such currents and that the direction of the great polar current is from Spitzbergen and Iceland southwesterly towards the eastern coast of North America. This is why the icebergs seen in the Atlantic ocean are always floating towards the equator.

DIFFERENT KINDS OF ICEBERGS.

In saying "different kinds," we simply refer to extent and form. When occurring in one vast sheet, so large that it cannot be bounded by the eye, it takes the name of *field;* if definable from the mast-head of a ship, it is called a *floe.* Several floes crowded in together are called a *pack.*

It sometimes happens that floes in jamming into one another force great masses up upon the surface, so that they stand out like hills. These elevations are known as *hummocks.*

SIZE OF SOME ICEBERGS.

Fields are not unfrequently miles in extent and very high. Capts. Parry and Ross and Dr. Kane, Arctic explorers, often found them two and three hundred feet high, and so deep that they were aground in water over a quarter of a mile deep! Let us see if this could be true: It is found by experiment that ice left to float in water will present one-eighth of its thickness above the surface. If, then, you have an iceberg the height of which above water is three hundred feet, its whole thickness must be eight times three hundred feet, or twenty-four hundred feet. So the portion of such a berg below the surface must be two thousand and one hundred feet, or two-fifths of a mile!

Can you think of anything grander than the spectacle of a group of such monsters floating in all their majesty out of the realms of the frozen zone into the burning tropics?

But they can never reach the equator. Indeed they are never seen below the 40th parallel of latitude; for as soon as they get into the warm Gulf Stream and under the warmer sun of the Temperate zone they rapidly melt away and disappear.

EFFECT OF ICEBERGS ON CLIMATE.

It is strange how far the influence of even one iceberg will extend. When crossing the Atlantic, we felt a change in the weather when no nearer than fifty miles. What then should we expect of a *pack*, such as Dr. Kane once got into the midst of, consisting of two hundred and eighty icebergs and extending in every direction for many miles?

It has occurred sometimes that quantities of these ice-mountains have floated into Hudson's Bay, and diffused very intense cold all over the northern portion of this continent. And when it is known that they are capable of so cooling the water in which they float, as to make a difference of twenty degrees by the thermometer all around them for fifty miles, we should expect the climate on the eastern

coast of the United States to be, as it is, much colder than western Europe in the same latitude.

Suppose, then, they should not melt until they reached the very equator, and that numbers of them should be drawn in by the current which sets into the Mediterranean sea, through the straits of Gibraltar, what then would be the result? Why, that sea would become as cold as Hudson's Bay, and glorious France and sunny Italy have a climate like that of Russian America or Labrador.

In the next number we shall tell some stories of the icebergs we have seen.

A Brave Boy.

Capt. Boggs of the Varuna tells a story of a brave boy who was on board his vessel during the bombardment of the forts on the Mississippi river. The lad, who answers to the name of Oscar, is but thirteen years of age, but has an old head on his shoulders, and is alert and energetic. During the hottest of the fire he was busily engaged in passing ammunition to the gunners, and narrowly escaped death when one of the terrific broadsides of the Varuna's rebel antagonist was poured in. Covered with dirt and begrimed with powder, he was met by Capt. Boggs, who asked "where he was going in such a hurry." "To get a passing-box, sir; the other one was smashed by a ball!" and so through the fight, the brave lad held his place, and d d his duty. When the Varuna went down, Captain Boggs missed his boy, and thought he was among the victims of the battle. But a few minutes afterwards he saw the lad gallantly swimming toward the wreck. Clambering on board of Captain Boggs' boat, he threw his hand up to his forehead, giving the usual salute, and uttering only the words, "All right, sir! I report myself on board," passed coolly to his station. So young a lad, so brave and cool in danger, will make himself known as years go over his head.

WIT AND WISDOM.

One year of struggle with wrong for the sake of the right contributes more to progressive life than forty years of compromise with wrong, or mere timid allegiance to right.

Are your horses matched, farmer? Yes, friend, first-rate; one of them is willing to do all the work, and the other is willing he should.

The ancients placed the statue of Venus by that of Mercury to signify that the pleasures of matrimony chiefly consist in sweetness of conversation.

Concentration is the soul of achievment. One thing at a time, and one thing for all time—this is what makes a life successful.

Most persons ascribe their adversity to Heaven, but their prosperity to their own prudence.

Thales, on being asked why he did not marry, said, "it is too soon." Subsequently he was interrogated again upon the subject and replied, "it is too late."

"Just painted," said a girl to her lover, who was about to imprint the token of affection.

Marriage is a harp of a thousand strings, the least of which, if broken or out of tune, destroys the harmony.

If one marries her whom he does not love, he will be quite sure to love her whom he does not marry.

Silence discovers wisdom and concealeth ignorance.

It requires less strength of character to do a brave act in secret than not brag of it afterwards.

HEALTH AND DISEASE.

Take Care of the Feet.

"Of all parts of the body," says Dr. Robertson, "there is not one which ought to be so carefully attended to as the feet." Every person knows from experience that colds, and many other diseases which proceed from colds, are attributable to cold feet. The feet are at such a distance from "the wheel at the cistern" of the system, that the circulation of the blood is easily checked there. Yet, for all this, and although every person of common sense should be aware of the truth of what we have stated, there is no part of the human body so much trifled with as the feet. The young and would-be genteel footed, cramp their toes and feet into thin-soled, bone-pinching boots and shoes, in order to display neat feet, in the fashionable sense of the term. There is one great evil, against which every person should be on their guard, and it is one which is not often guarded against—we mean the changing of warm for cold boots or shoes. A change is often made from thick to thin soled shoes, without reflecting on the consequences that might ensue. In cold weather, boots and shoes of good thick leather, both in soles and uppers, should be worn by all. Water-tights are not good if they are air-tights also; India-rubber overshoes should never be worn, except in wet, splashy weather, and then not very long at once. It is hurtful to the feet to wear any covering that is air-tight over them, and for this reason India-rubber should be worn as seldom as possi-

ble. No part of the body should be allowed to have a covering that entirely obstructs the passage of the carbonic acid gas from the pores of the skin outward, and the moderate passage of air inward to the skin. Life can be destroyed in a very short time by entirely closing up the pores of the skin. Good warm stockings and thick-soled boots and shoes are conservators of health, and consequently of human happiness.—*Selected.*

DOMESTIC ECONOMY.

Treatment of Cream in Winter.

A correspondent of the *Homestead* who has experimented carefully and extensively on the treatment of cream, and in butter-making, announces the following conclusions:

"Milk should be strained immediately after milking, and two quarts is sufficient for one pan. No more cream is obtained from milk that has been heated than from that which has been kept in a room of the proper temperature. Cream should be kept at the same temperature after being skimmed as before, during cold weather; also, it should be stirred twice a day and a little salt stirred in two or three times while being gathered for a churning; this will prevent the white particles of curd so frequently seen in butter. Forty-eight hours is sufficient for the milk to stand before being skimmed, if proper treatment is pursued. For churning the cream should be warmed gradually."

Solvent for old Putty and Paint.—Soft soap mixed with a solution of potash or caustic soda; or pearl ash and slaked lime mixed with sufficient water to form a paste. Either of these laid on with an old brush or rag, and left for some hours, will render it easily movable.

WAR MISCELLANY.

A Good General Described.

The fortitude required of him is very different from the unthinking alacrity of the common soldier or common sailor in the face of danger and death; it is not a passion, it is not an impulse, it is not a sentiment—it is a cool, steady, deliberate principle, always present, always equitable; having no connection with anger; tempering honor with prudence; incited, invigorated, and sustained by a generous love of fame; informed, moderated, and directed by an enlarged knowledge of its own great public ends; flowing in one blended stream from the opposite sources of the heart and the head, carrying in itself its own commission, and proving its title to every other command, by the first and most difficult command, that of the bosom in which it resides—it is a fortitude which unites with the courage of the field the more exalted and refined courage of council; which knows as well to retreat as to advance; which can conquer as well by delay as by the rapidity of a march, or the impetuosity of an attack; which can be, with Fabius, the black cloud that lowers on the tops of the mountains; or, with Scipio, the thunderbolt of war; which, undismayed by false shame, can patiently endure the severest trial that a gallant spirit can undergo, in the taunts and provocations of the enemy, the suspicions, the cold respect, and "mouth honor" of those from whom it should meet a cheerful obedience; which, undisturbed by false humanity, can calmly assume that most awful moral responsibility of deciding when victory may be too dearly purchased by the loss of a single life, and when the safety and glory of their country may demand the certain sacrifice of thousands.—*Burke.*

Our Country and her Flag.

The following spirited lines, by Dr. Francis Lieber, we have in Part X of the *Rebellion Record:*

We do not hate our enemy:
May God deal gently with us all!
We love our land, we fight her foe,
We hate his cause, and that must fall

Our Country! Oh, that goodly land!
Our noble country, whole and hale!
We love her, live for her, or die;
To fall for her is not to fail.

Our Flag! the Red denotes the blood
We gladly pledge. The snowy White
Means purity and solemn truth,
Unsullied justice, sacred right.

Its Blue the sea we love to plough,
That laves the Heaven-United land,
Between the old and older world,
From strand, o'er mount and stream, to strand.

The Blue reflects the crowded stars—
Bright Union, emblem of the free;
Come every one, and let it wave—
That floating piece of poetry.

Our fathers came and planted fields,
And manly law, and schools and truth.
They planted Self-Rule—we will guard
By word and sword, in age and youth.

Broad Freedom came along with them,
On History's ever-widening wings.
Our blessing this—our task and toil;
For "arduous are all noble things."

Then sing and shout for our free land,
For glorious Free-land's victory,
Pray that in turmoil and in peace,
Free-land our land may ever be.

NEWS SUMMARY.

STATE MATTERS.

The Legislature convened on the 14th ult., and promptly organized by the election of the following offiicers:

Senate.—President, Wyman Spooner, of Walworth; Clerk, F. W. Stewart, of Sauk; Sergeant-at-Arms, Luther Basford, of Grant.

House.—Speaker, J. Allen Barber, of Grant; Clerk, J. S. Dean, of La Fayette; Sergeant-at-Arms, A. M. Thompson, of Washington.

THE GOVERNOR'S MESSAGE.

The late message of Governor Salomon, delivered by him Jan. 16th, was a comprehensive, well-advised, and statesman-like document. In his review of the affairs of the State there is no mark of the mere politician, but rather of the clear-headed, liberal, and sound political economist, ignoring none of the great interests of the State, but giving to each its due share of importance, and presenting the claims of all in a concise, lucid and forcible manner. We quote a few passages:

OF MANUFACTURES, AGRICULTURE, &c.

"Manufacturing is yet in its infancy in the State. Our natural resources give ample opportunity for the advantageous employment of capital in that direction. It should be the policy of the State to encourage by proper legislation the development of these resources, for only thus do they become a part of the wealth of the State.

"Our State is mainly an agricultural state; yet, owing to a modification by the last Legislature of the law requiring the Assessors to make annual returns of the results of the industry of the State, I am without sufficient data for any accurate statement in regard to this most important branch of our industry. It is an occasion for congratulation that, notwithstanding the withdrawal from peaceful pursuits of so large a number of our citizens who have volunteered in their country's behalf, the area of our cultivated crops has been increased rather than diminished during the past year. The last season was not favorable to the productions of the great staples of agriculture in some portions of the State so that the aggregate yield was probably below the average of the three preceding years. The amount of sugar cane and of syrups and sugar produced has been, as I am informed, much greater than at any previous period, and it is believed by many that as a State we may eventually make ourselves quite independent of all foreign sources in respect to these necessaries. Gratifying progress has been made in the proportionate increase of stock as compared with the grain-growing interest, especially in the important branch of sheep-husbandry, while the improvement in breed of all our domestic animals is constantly receiving more attention.

"The agricultural societies in operation have exerted great influence in advancing the material interests of the State. They should, therefore, be encouraged by wise and liberal legislation. The affairs of the State Agricultural Society have been much embarassed by circumstances which have compelled two successive omissions of its accustomed annual exhibition, and by the withdrawal of all State aid by an act of the Legislature passed at its last extra session. Although the nation is at war, our peaceful State should not forget or neglect the arts of peace; they become now doubly important in many respects. The usefulness of this Society, especially in the absence of a State agricultural bureau, which exists in some other states, should not be underrated or impaired by unfriendly legislation at a time when its efforts are particularly important. The transactions of the Society, as published from time to time, contain material of great value, and their wide distribution at home and abroad has done much towards securing for Wisconsin the name of an enlightened and enterprising commonwealth. The small appropriation requisite to their regular publication and distribution could hardly be more economically expended.

AGRICULTURAL COLLEGE.

"By an act of Congress approved July 2d, 1862, the United States have granted to the several States a quantity of land equal to thirty thousand acres for each Senator and Representative in Congress to which the states are respectively entitled by the apportionment under the census of 1860, for the support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, upon certain conditions particularly set forth in the act, one of which is that 'No State shall be entitled to the benefits of the Act unless it shall express its acceptance thereof within two years of the date of its approval by the President.' Under this act the State would be entitled for our eight representatives in Congress to 240,000 acres of land, and it becomes your duty to decide whether you will or will not accept the grant on the conditions imposed. Your careful attention is invited to this important subject. The conditions imposed are such only as seem to be required in order to insure a useful, perpetual, and *bona fide* application of the grant for the

purposes for which it was intended, and while the State cannot rely upon this grant alone for the establishment of the college, if carefully and properly applied, with adequate aid from the State, the grant seems to be sufficient for the purpose intended, i. e. 'to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.' I trust that at an early day you will take the necessary steps to secure to the State the benefits of the grant, and to carry out in good faith the objects of the donation; especially since this State, by its Legislature in 1858, memorialized Congress for such a grant."

ENLARGEMENT OF ERIE CANAL AND FOX & WISCONSIN RIVER IMPROVEMENT.

Under this head the Governor refers to the efforts now being made to secure an enlargement by the General Government of the Erie Canal, and urges the importance of that work to the agricultural interests of the northwest. The enlargement of the Fox & Wisconsin River Improvement so as to allow the passage of gunboats is forcibly presented as a matter of great importance to our state and to the nation.

Under the head of

COMMON SCHOOLS

This important suggestion is made:

"If by some means attendance upon schools could be enforced, if parents who often retain their children at home and permit them to grow up in ignorance, could be compelled to send them to school for a certain length of time, as they are rigorously compelled to do in Prussia and some other European states, I should gladly advocate the passage of the necessary laws for that purpose. I do not consider such laws an improper interference with individual liberty; the child is not the property of the parent, the state has a large interest in its education and may well make regulations concerning it. Not entirely satisfied that such a law could be carried into effect in our State, I leave this matter to your superior wisdom and consideration."

On the 22d the Senate and Assembly met in Joint Convention and elected Hon. James R. Doolittle U. S. Senator for the six years next succeeding the 4th of March, 1863—the vote being as follows:—James R. Doolittle 76, E. G. Ryan 57, M. H. Carpenter 1, James S. Brown 1.

The decision of the Supreme Court in relation to the Ozaukee rioters was announced on the —th in the affirmative, though the writ of *habeas corpus* was not issued; reason given, a desire to avoid a collision between the State and Federal authorities in this time of great public danger.

DOINGS OF AGRICULTURAL SOCIETIES.

The International Ag'l Exhibition at Hamburg.—This great Exhibition, to be held at Hamburg on the 14th to 20th inclusive of July, 1863, gives promise of large success. There will be a general co-operation on the part of many of the German and other European Agricultural Societies, and the inventors and manufacturers of this country would undoubtedly do well to attend. ☞ The 15th of April is to be the last day of entry. The following letter from the American Agents of the European Commission contains information of interest to such as may desire to attend:

OFFICE OF THE AMERICAN AGENCY FOR HAMBURG INTERNATIONAL EXHIBITION OF JULY, 1863.
NEW YORK, Jan'y 21, 1863.

J. W. HOYT, ESQ., Sec'y Wis. St. Ag. Soc.—DEAR SIR:—We beg leave to call your attention to the Great International Exhibition to be held at the city of Hamburg, Germany, in July next, under the Auspices of the German Agricultural Society.

The members of this Society and the citizens of Hamburg are very desirous that our National and State Societies should be represented at this Exhibition and that it should include the many improvements and inventions in agricultural implements and machinery of this country, of which at present but little is known in central and northern Europe, and as far as practicable, specimens of our domestic breeds of Animals, &c.

The N. Y. and Mass. Societies have already determined upon sending representatives, and we presume all the Northern States will be represented by delegates from their several State Societies. The expense will not be great, as we anticipate a concession from the regular rates by the Hamburg Steamers which will reduce the cost of passage out and returning to about $200.

We are convinced that the inventors and manufacturers of agricultural utensils and machinery will do well to avail themselves of this opportunity of opening a new foreign demand for these articles, and we hope the attention of the prominent makers of agricultural machinery, mowing machines, reapers, &c., may be called to this Exhibition.

There are many reasons why we should improve the present very favorable opportunity for cultivating more intimate social and commercial relations with the people of this portion of Europe, which we hope may be approved to the people of your great agricultural state, and induce them to take a lively interest in this great gathering of the representatives of the great agricultural nations of Europe and the United States.

Asking your kind co-operation in this matter, we beg leave to remain Yours, very respectfully,
AUSTIN BALDWIN & Co.

P. S. We can furnish any number of the programmes you may desire for distribution to your state and county societies. A. B. & Co,

County Ag. Societies.—At a recent meeting of the Green Lake Co. Ag. Society, the following officers were elected for the present year: S. M. Knox, President; M. H. Shipley, V. Pres.; M. H. Powers, Sec'y and Treasurer;

S. B. Welch, C. S. Walker, H. Thomas, Uri Carruth, M. H. Howard, John Davis, Executive Committee.

A. D. Gray, Esq., writes that at the annual meeting of the St. Croix Co. Ag. Society, the following persons were duly chosen officers for the year 1863: J. N. Van Slyke, President; Geo. Spaulding, Wm. L. Perrin, Geo. W. Martin, V. Presidents; A. F. Gallop, Rec. Sec'y; A. D. Gray, Cor. Sec'y; A. J. Goss, Treasurer; A. H. Weld, Ira Parke, T. Dwight Hall, Executive Committee.

NATIONAL AFFAIRS.

On the 31st of December the President signed the bill admitting "West Virginia" into the Union. The new state embraces 48 counties and has a population of some 390,000.

On New Years day Gen. Rosecranz won a victory at Murfreesboro, recapturing that place from the enemy; on the —th of January Gen. McClernand fought a great battle at Arkansas Post (near the mouth of Arkansas river), slaughtering great numbers of the enemy and taking some 7,000 prisoners; on the 11th Gen. Sumner attacked Vicksburg, but after a gallant fight of two days, without the aid of the fleet which failed to *come to time*, was repulsed with considerable loss; and on the 26th Gen. Burnside resigned his command of the Army of the Potomac, and has been succeeded by Gen. Hooker; such are the important news items of the past month. Two tremendous battles—one for Vicksburg, the other for Richmond—impend; when they will be fought it is impossible to predict, though they cannot be long postponed.

EDITORIAL MISCELLANY.

A Large number of brief and interesting communications intended for this No. are crowded over to next month.

See Publishers' Notices under Contents.

Editorial Notes of European Travel

—Crossing the Alps.—The Retrospect.—FORT DU TRIENT, May 30, 1862.—"Love in a cottage" was never sweeter than the rest and sleep I enjoyed in the humble Savoyard home where my last letter left me, at the foot of the mountain. My bed was of straw, but no down was ever softer; supper and breakfast of bread and milk, yet better relished than ever the richest repast of kings.

At the village of Argentieres, which lies at the head of the lovely vale of Chamouni, and bravely confronts a grand old glacier, large enough to wash it from its place and submerge the entire valley, should it suddenly become liquid, the way I had designed to take leads me upward toward the snow-mantled peak of L'Aigouillet, on whose top rest portentous clouds of the morning. Already a sprinkle of rain begins to fall, and I must avail myself, for the first time since leaving Versailles, of my umbrella, which has so faithfully served me as a staff. But a clever goatherd tells me it is not to be a rainy day, and so at this sublime elevation I may halt a moment and look backward. Farewell, fairy vale! Farewell, milky Arve, along whose wild and beautiful banks I have these three days wandered in dreamy ecstasy! Farewell, O king of the Alps, whose presence still sublimely overshadows me, and whose majestic form of all the works of God shall ever stand fast and first in the soul of memory!

The rain has stopped; the clouds break, and the genial face of the sun looks kindly over the tops of the mountains. The rough and winding path descends again and my feet now walk upon the brink of a little stream, source of the river Eau Noire, which, though parallel in its course, flows in a direction exactly opposite to that of the Arve, and empties into the Rhone on the further side of the mountains whose snows and ice supply them both.

There are several little hamlets and villages by the way, though the communication between them can be only on foot or upon mules—Tretechant, La Poyaz, Contteray, Val du Nant, Plane de l' Envers, Le Grot, Vallereines, Barberine, Barme,—some of them nestled in a mountain cleft, some of them low down in the defile, and others upon some elevated slope a half mile above me. Near the place last named I found in the wild woods some half dozen women with enormous baskets of moss and pine leaves npon their heads. On seeing me approach, they sat down upon a log, and awaited my coming. I, too, was tired, and sat down with them to talk. The contents of the baskets were garden mulch. They were happy in their Alpine home and wondered that anybody could live anywhere else: were pleased to meet so genial an American, and would like to become his guide through the devious paths to Martigny, via Tete Noire;—such was the substance of our conversation. When I arose to resume my journey, one of the handsomest young dames urged me so bewitchingly to accept her services as guide, that I found it *slightly* difficult to decline; and she, to punish me for such unheard-of obstinacy, told me of a parting of the road at the foot of a certain cascade a mile and a half below, where there were no hamlets near, and where it would be impossible for me to know which course to take.—Should I be beaten by the fair Savoyard, or should I go ahead, trusting to instinct and to Providence? I waved them all a pleasant adieu and took the responsibility. The sequel proved that we were both right—she in her assurance of difficulty, I in my trust.

Rounding my way up the mountain, the wildest—and next to that of Mt. Blanc the grandest—scenery I had yet beheld presented itself. The deep, zigzag bed of the Eau Noire, the water white with foam, dashing over immense masses of rock; the sublime proportions of Mt. Perroz, girt about with dark evergreens, crowned with perpetual snow and furrowed by milky streams leaping their way down from the summit; while above and behind me rose the majestic form of a mountain on the projected shelf of whose granite rock had been cut my narrow path,—these were the features of a picture which can never be effaced from the memory of him who has once, in the midst of it, wondered and worshipped.

Tete Noire is a collection of a half dozen houses at that point on the winding way which is highest. Here I took a glass of cold water, rested a moment, and then began my downward journey, as I believed, to the town of Martigny, where I am to take the cars for Villeneuve this afternoon. Down, down, down! At last the brink of the Eau Noire is reached again, but Martigny is not there—only a small number of rude dwellings and workshops, known altogether by the name of Trient. But, maybe, I shall have no more climbing. Possibly Martigny is further down this narrow valley. Not so; the road I travel begins to wind upward again, and now it is up, up! Goats and calves are browsing among the shrubs, but the side of the mountain is so steep that it seems impossible that they should keep their footing. Browsing "under difficulties." At length the summit is reached, and from the heights, standing with one foot in Savoy—now a part of the French Empire—and the other in the Switzerland of to-day, I look down on the broad, beautiful valley of the Rhone!

Shall I say I am weary? No; but I am, and so will avail myself of this traveler's rest, called "Fort du Trient," at least until the gendarme who represents the Swiss government shall have vised my passport and thus authorized my entrance upon the soil of the Mountain Republic.

"Bonjour, Monsieur!" "Thank you, sir; may it be a good day to you." "Je ne comprends pas, monsieur." Don't understand the American language, eh? Well then, perhaps I may have a little fun." "Mon passeport, monsieur," [handing him my commission as representative for Wisconsin at the Great Exhibition] Gendarme looks at it carefully, examines the great seal, knits his brow, looks me in the eye, and starts off to his office to put

the required signature to the document! This is the first time my passport has been called for, and if the commission shall serve me as well everywhere else, it's a pity I fooled away so much time in getting the real paper at London and afterwards in getting it vised by the American Consul and Prefect of the Police at Paris.

THE RETROSPECT.

It is now almost noon, the train leaves at 1:15 p. m., and I am told it is yet three hours down the mountain to Martigny. But I am not quite ready to resume my journey, for the mind inclines, ere yet I leave the Alpine heights of glorious France, to a rapid review of what she is and is doing, before passing on to those other countries which lie in my predetermined path. Only a bird's-eye view, however, at the present.

THE EMPIRE OF FRANCE.

To the Frenchman, all glowing with enthusiasm over the past glory and present power of the dear France of his heart and hope, there is no grander empire on the globe—scarcely one whose area is larger. Nor is this surprising, in view of the petty kingdoms which lie at its gates, northward and eastward. But let us look at it with an American eye, and its boundaries rapidly shrink to within quite moderate measurement.

The island of Corsica and the newly added territory of Savoy included, its area is 207,973 square miles, or 130,439,648 acres—a little less than as large as four such states as Wisconsin. Of the entire length of frontier, 1400 miles are on the land side, and 1,530 are coast. With the exception of portions of the Alpine district of Savoy, and several lesser branches of the Alpine and Pyrenean systems of mountains which intersect the country in different directions and form great water-sheds for the drainage of the empire, almost the entire surface is susceptible of cultivation; statisticians say four-fifths of the whole. Of this, over 60,000,000 of acres are arable, about 11,000,000 in meadow, 18,000,000 in wood, 18,000,000 are heath land, 2,000,000 in vineyards, and nearly 1,500,000 acres in orchards and gardens.

MINERAL WEALTH.—France is rich also in her mines of iron,—which are found in nearly all all parts of the country, and which yield annually about 700,000 tons—of lead, copper, and zinc. Gold, silver, cobalt and manganese are likewise found, and in the aggregate yield considerable wealth. Coal beds are numerous and the salt mines and marshes yield annually over 25,000,000 bushels of salt. Inexhaustible quarries of valuable building stone of various kinds, of marble, of porphyry, and of alabaster abound everywhere; the number of those actively worked numbering some 22,000, and giving employment to over 80,000 men.

THE CLIMATE of France is greatly diversified by differences of latitude, elevation, exposure, soil, &c., and is probably unsurpassed by that of any country in Europe. Cool in the north, and well adapted to the growth of the cereals; mild and equable in the central portions, where the vine flourishes best; dry and hot in the olive regions of the south.

THE ASPECT of the country is well diversified, presenting a good deal of beautiful scenery with an agreeable admixture, particularly in the eastern and southern portions, of features of picturesque grandeur. The banks of the four great rivers (*fleuves*) of France—the Seine, the Loire, the Garonne, and the Rhone—present some of the finest scenery in the world—broad, well cultivated fields, beautiful, sloping vineyards, and grand old mountains, crowned with evergreen forests or never-melting snows.

THE PRODUCTS of the country may be understood, as to character, from what has already been said. But a word of their quantity and relative proportion:

Of the whole area, 54 per cent. is devoted to agriculture. The average aggregate yield of some of the most important crops is about as follows; of wheat 225,000,000 bushels, rye rye 85,000,000, oats 14,000,000, barley 50,000,000, potatoes 250,000,000. Vineyards extend through some 76 of the "departments" and yield 900,000,000 gallons of wine, worth about $160,000,000 at the places of production. Nearly one-fourth part of this is exported.

Live stock has not received quite so much

attention as other branches of husbandry. According to the latest statistics I remember to have seen, there are in the empire about 3,000,000 of horses, 35,000,000 sheep, 12,000,000 horned cattle; mules and jacks, 900,000; swine, 5,000,000; goats, 1,000,000.

The raising of poultry receives a good deal of attention, and bee-culture is also in favor. In the south of France where the mulberry flourishes the silk-worm is produced to a considerable extent, and the annual products of both silk and bee-culture are said to be worth 100,000,000 francs, or nearly $25,000,000.

One of the most remarkable peculiarities of French agriculture is the extent to which roots are cultivated—particularly the *sugar beet*. I have found it growing in nearly all parts of the country and have visited a number of large establishments where the sugar and alcohol are manufactured. The production of beet sugar, alone, has equalled 150,000 tons in one year. I can see no sufficient reason why the sugar beet may not be successfully grown in the lower latitudes of the northern United States, and shall look with new interest to the result of the experiments now making in Ohio.

The general system of agriculture is both good and bad, though better than I had expected to find. The agricultural schools established within the few past years are doing much to enlighten the great public on this subject, and to explode the old errors which have so long weighed like an incubus upon the industry of the country.

As a Manufacturing Country, France ranks next to Great Britain, and is steadily progressing. In the manufacture of those articles which require fineness of taste and a skill akin to that which is necessary in the department of Fine Arts, she is superior to all other nations. Total annual value of her manufactures of silk, jewelry, iron, woolen fabrics, cottons, leather and glass, $4,000,000,000.

Commercially, she is also a great nation. Her merchant marine consists of 13,000 ships, with a tonnage of about 1,000,000 tons. Besides this, about 30 per cent of her foreign trade is carried on by land.

The Internal Improvements of France constitute one of its chief glories. Paris is the centre, whence radiate six great railroads into as many great divisions of the empire, with an aggregate mileage of 8,500 miles. Besides which, there are 214 Imperial highways, with an aggregate length of 22,000 miles, 79 canals with a total of 3,600 miles in length, and several navigable rivers. So that the aggregate length of land and water communication is scarcely less than 555,000 miles. Of the thousands of magnificent bridges, national buildings, public gardens, monuments, &c., a volume would be necessary to an enumeration. Of the highways I shall have something to say in a separate article.

POLITICAL DIVISIONS.

France is politically divided into 86 Departments of nearly equal extent, each with its capital. These are again divided into 363 arrondissements, these into 2,850 cantons, and these cantons into 36,826 communes or villages.

The government, at the present, as everybody knows, is an enlightened, severe despotism.

THE PEOPLE OF FRANCE.

Warm-blooded, earnest, enthusiastic, genial, generous, patriotic, heroic, I love them most heartily. They number over 36,000,000; of whom some 20,000,000 are agriculturalists, 2,500,000 manufacturers, 8,000,000 mechanics, with 3,000,000 devoted to the "liberal" professions.

The Religious Toleration France is scarcely surpassed, although the dominant religion is Catholic. Number of Protestants about four millions. The clergy, whether Catholic, Protestant, or Jewish, are supported by the government; the total salary of the Catholic clergy alone being $5,000,000. But with all this support of the religion of the empire, the people of France are by no means too *pious!* Religion is one of the fashions of the day. The sabbath is practically crowded into a few hours, and the remainder of the time which in America would be Sunday is devoted to *having a good time.*

Public Instruction in France furnishes so

wide and interesting a theme that I must, at some time in the future, prepare a separate article upon it for the Educational Department of the FARMER. It is under the general direction of a special Minister, assisted by an Imperial Council of eighteen Inspectors-General, and is characterized by many features worthy of our own consideration. This is especially true of the Professional schools, where instruction is given in the Natural Sciences and in the liberal and fine arts; in all of which France excels all other nations.

CHARITABLE INSTITUTIONS abound in every needed locality, and the wants of the afflicted and destitute are provided for with a most commendable benevolence. This fact is illustrated by the circumstance that in all my stay in the cities of France and my travels in the country I have never once been asked for alms. There is, no doubt, suffering, and too much of it, but the Government carefully provides reasonable means for its alleviation, and then by stringent laws forbids any demonstration of pauperism in public. In this respect France contrasts very strongly with Great Britain and most other countries.

But I have already extended this review of the empire beyond my first intention. It has been but a glance, however, and will only give the reader a faint idea of the reality. Some day, O France, I shall hope to see thy sunny plains and grand old mountains again—aye, and thy glorious people, who will then have grown both wiser and better than now. For the meantime a reluctant and loving farewell!

Sorghum Convention For Wisconsin and the adjoining States.—STATE AGRICULTURAL ROOMS, Madison, Jan. 25, 1863.—Believing that the general, and especially the agricultural interests of Wisconsin would be promoted by the holding of a convention with special reference to an increase of information among the farmers of this State as to the best varieties, methods of cultivation, and machinery for the manufacture of Sorghum; and having, moreover, been petitioned therefor by numerous persons whose active interest in matters of this sort entitles them to high consideration, the undersigned in full and cordial concurrence with their views, would hereby announce that a Convention for the purposes above named will be held at Madison on Wednesday and Thursday, the 4th and 5th days of March, 1863. All persons interested in any branch of the general subject proposed for discussion in said Convention, whether citizens of this or of any other State, are cordially invited to attend, and to bring with them samples of seed and of the implements and machinery necessary to the manufacture of syrup and sugar, together with the representative products of such manufacture.

J. W. HOYT, Sec'y Wis. St. Ag. Soc.

[Wisconsin papers, and the Agricultural Press please notice.]

Personal.—We are pleased to learn that Thos. P. Turner, Esq., of Waukesha Co., who accompanied us to London, last spring, and who remained to visit friends after our return, has at length arrived in safety. We found him a most agreeable traveling companion, as well as a very careful, appreciative observer of whatever looks to the progress of Industry and of Man, and sincerely hope that his visit to the land of his nativity has been in all respects highly satisfactory.

Be Patient.—Those subscribers who have ordered maps will be supplied at the earliest possible moment.

NOTICES OF NEW ADVERTISEMENTS.

Madison Mutual Insurance Company.—We publish in this number the annual statement of this company as made to the Governor of the State agreeably to Statute, and can do our readers no greater favor than to commend to them the benefit of its protection.

The American Cyclopedia, on the subject of insurance, says: "Much the largest amount of insurance against fire in the United States, is now done by mutual insurance companies; and these are so numerous, so well regulated by the Statutes of the several States, and in general so well conducted, and the principle of paying only what the actual risk is worth, is so well carried into effect that no person is excusable for not protecting himself and his family or creditors against this loss."

The success of this company sustains the justice of the above remarks, and proves that a company or corporation is in no danger of rupture or failure from a rapid increase or large amount of business, if guided by wisdom and justice. So far from this, every additional risk under such conditions adds to the safety and economy of the thing.

A glance at the comparative statement of the business of the company for the last four years, exhibits a present vigor and stability which few companies can boast. Here

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : : : : : : : EDITOR.

VOL. XV. MADISON, MARCH 1, 1863. No. 3.

The Great International Exhibition.

NO. VI.

GREAT BRITAIN, CONTINUED.

Prominent among the numerous classes of articles in the "Eastern Annexe," where we but recently found a multitude of the wonders of the Chemical Arts, we find

AGRICULTURAL AND HORTICULTURAL MACHINES AND IMPLEMENTS.

The display of these is magnificent, and to an agriculturist would, of itself, have been worth a voyage across the sea. They are properly divisible into five sections:

1. Implements for the tillage and drainage of the soil, such as steam cultivators, plows, scarifiers, pulverizers, grubbers, harrows, rollers, and clod crushers.

2. Implements for the culture of the soil, and the harvesting of crops, to wit:—dibbling machines, drills, manure distributors, horse-hoes, mowing machines and hay makers, reapers, horse-rakes, wagons, carts, and the like.

3. Machines for preparing grain &c. for market and food for cattle—locomotives, portable and fixed, steam engines, steam elevators, threshing machines, winnowing machines, crushing and grinding mills, machines for cutting and pulping feed, apparatus for washing, cutting and steaming roots, &c.

4. Miscellaneous agricultural machines, implements and articles, such as churns, washing machines, carts, cheese presses, cider mills, &c.

5. Horticultural implements and machinery.

THE ENGLISH "GRUBBER,"

You will observe, consists of a heavy iron frame supported upon two wheels like a cart, with a small wheel running before, and with strong, forward-curving, coulter-like teeth or tines which penetrate the soil like the cultivator or scarifier. When drawn by four powerful English horses no mass of roots has any business to attempt a resistance to its steady progress.

Stump-pullers are not so much in demand in the great garden of England as in the wilds of this new continent, and accordingly we find nothing of this sort in the British Department worthy of especial notice. But their

PLOWS

Of every description, except the superior Yankee specimens, are the finest here. Fowler makes a splendid show in this branch of the implement department—exhibiting a hundred plows and models of plows, ancient and modern, illustrations of the history of traction tillage from Scripture days down through the classic period of palmy Greece and Rome, until this present. Here are the rude forked stick; one branch sharpened answering for the post; another for the beam; while the trunk, dressed down to proper size, served as a handle by which it was held upright. Time went on, and next we have the Roman plow, similar to the first, but its nose pointed with iron. A few generations having passed, we get the better Roman plow, consisting of several parts rudely put together with carpenter's tools, and with trowel-shaped, shovel-share of iron. A few generations more, and we have the horizontal and the inclined share, with two narrow wooden mould-boards; then one mould-board in the middle between two shares; next a single horizontal or slightly inclined share with

one mould-board fixed at the side; then, after centuries had passed, with a variety of trifling improvements, a wooden mould-board faced with thin iron; afterwards, an iron mould-board; and, at last, the present implement with all its convenient appurtenances, and mould-board of hard steel!

Isn't it wonderful how slow and tedious the improvement of so simple and universal an implement? And even yet it is rather rare to find a plow the curve of whose mouldboard is just what it ought to be for the purpose it was designed to answer; so little has been understood by practical men of the principles of mechanical philosophy.

And then of the best modern plows, how many varieties there are!—each designed for some particular use. With most English farmers, the *wheel* plow appears to take precedence; others prefer the *swing* plow, and in this agree with their Yankee cousins.

John prides himself on the superiority of his plow and won't acknowledge, even after fair trial and being badly beaten, that Jonathan is even with, much less ahead of, him. The trial, in 1857, by a committee, of which Col. Johnson of New York was a member, convinced all who witnessed it that the Yankee plow was the best; but John has a very short memory and to-day stoutly denies that such a conclusion ever was legitimate! Still, many of the English plows are of excellent construction, and it is not unlikely that we may gain a useful hint or two from some of them. One thing we shall never like, however; they are chiefly of iron, and very heavy. We shall illustrate a few of the best models, after a time, in the FARMER.

But see! here are also steam plows, of various patterns. Let us mount this new leviathan of the soil and look down from it upon the old crooked stick used by the proud and classic Virgil, and so make him feel our superiority! A long stride, good fellow of the olden time, between this mighty engine with its hedge of sharp steel shares, and that antiquated concern which you thought in your pride was so great an affair as to entitle it to poetic description, thus:

> "Of eight feet long a fastened beam prepare;
> On either side the head produce an ear,
> And sink a socket for the shining share." &c.

But then, let us count the years since then. Almost two thousand! Now the laugh is on t'other side, and we'll quietly get down without further comment.

Of the style and working capacity of the English steam plows we have talked at length, (see report of the Great Trial under the auspices of the Royal Ag. Soc. at Farmingham, in November No.), and need add nothing further now—except that we have ordered engravings of some of them, and one of these days shall be able to give the farmers of Wisconsin a better idea of their construction than is possible with words merely.

In the matter of

CLOD CRUSHERS,

We incline to think John may be ahead. His soil, as a general rule, needs more knocking to pieces than the richer and more friable soils of the New World, and he is, moreover a great deal better farmer, and would work his soil more thoroughly than the American, though it should not *need* it half so much. These circumstances may account for the universality of the use of such implements in England, and for the other fact, of superiority. Crosskill's still stands without a rival. It consists of a series of independent iron rings upon an iron axle—upon the extremities of which wheels may be placed when it is desired to remove it from the field—each ring having its edge notched, and bearing flanges upon both of its flat sides, the outer end of which is flush with the edge at the bottom of each notch. This crusher won a gold medal, worth $185, at a late trial by the Royal Ag. Soc., and is probably one of the best implements in use in this or any other country.

THE ENGLISH HARROWS

Are likewise deserving of approval. They are usually of all iron, and consist of a series of light harrows—two, three, or four—linked together. The teeth are lighter and more nu-

merous than in most American implements.

Under the general head of

CULTIVATORS AND HARVESTERS

There is a fine array of implements for putting in the seed, cultivating various crops, harvesting them, &c.

The *drill* has been in use in England since the middle of the 17th century, though it is probable that the one invented by Jethro Tull, even as late as 1730, was considerably less perfect than many of these before us to-day. And yet, most of *these* seem quite too complex, and are evidently susceptible of improvement.

The *horse-hoe*, so seldom seen in America, is a favorite implement here. *We* shall learn to use them in course of time, when thorough farming becomes a necessity.

Manure-distributors belong to the same category, and must wait some years yet for a general introduction on "the other side the pond" —at least until American farmers shall have learned that manure is of some practical value, if not "the mother of the meal chest," as is claimed by the more rational English farmer.

In the matter of reapers and mowers, horse-rakes and hay-makers, England is quite behind America and is glad, at last, to take lessons of McCormic and his numerous confreres.

FOOD-PREPARING MACHINES.

What a multitude of horse-powers, threshing machines, fanning mills, grinding mills, root-cutters, &c., &c.!

Most of the mills for grinding grain for either the family or for cattle are burr stones variously arranged. Scarcely any cast iron mills, such as we have at home, are here.

One of the best *kibbling* mills consists of two solid steel rollers, with fluted surfaces, made to pass each other at different velocities. By means of this machine, beans, peas, oats, barley, Indian corn, &c., are crushed easily and to any required size. With a power capable of giving it 100 revolutions a minute, it will crush 22 bushels of beans per hour.

Root cutters and pulpers without number and of excellent construction. England knows the economical value of roots for stock. We have yet to learn that important lesson.

THE THRESHING MACHINES

Are, some of them, novel in construction, and do their work admirably. "Ransome & Sim's Patent Combined Double-blast Steam Threshing, Riddling, Straw-shaking, Winnowing, and Final Dressing Machine" is one of the most interesting of these. The drum is 54 inches in clear width, and is fitted with reversible wrought iron beaters, which do not break or injure the grain, and which "will thresh barley so that it will malt perfectly." The grain is fed into the machine lengthwise, so that the straw is not beat in threshing, and, consequently, it leaves the machine uninjured. After the grain has passed through the drum, the straw is carried into the shaker, which is of peculiar construction—separating the straw so that any grain remaining in it may be retained in the machine, carrying back the grain and short straws thus separated to the dressing part of the machine; and carrying away the straw so that it may be easily removed from the tail of the machine. These several important objects are accomplished by means of the following contrivance: The rollers are so placed that the spikes of one roller nearly touch the circumference of the adjacent rollers, and also the board which forms the bottom of the shaker. The rollers revolve at equal speed so that as the straw leaves the drum it is shaken continually in a jerking manner, exactly like the action of handshaking by means of a rake or fork.

The riddling apparatus consists of a series of riddles with meshes differing in size, so as to adapt them to different kinds of grain. Whilst the corn is passing through the riddling apparatus, it is subjected to a blast from the fan, made stronger or weaker by opening or closing the doors at the end of the fan box; the chaff being blown towards the back of the machine.

After the threshed grain has passed through the riddles, the clean portion is carried down to the elevator bottom, whence it is carried up by the elevators, dropped into the barley awner, through which it passes into a cleaner

which effectually strips off all the husk that may be adhering to the kernel. The grain then passes over the seives which are arranged in a common fanning mill, and is simultaneously operated upon by a blast which removes all the dust, dirt, &c., leaving it perfectly clean. Finally it passes into the adjustable rotary screen, which separates the thin kernels from the best grain, and leaves it ready for market.

THE "CHAFF" CUTTERS

Are all constructed on the same principle; the usual arrangement of rollers being used to *feed* up the straw, hay, or other fodder, while the operation of cutting is performed by two curved knives fastened to radii of the large fly-wheel which is turned by a crank or by a drum, if *power* be used. There were hundreds of these at the Royal Agricultural Society's Exhibition, and we have seen scarcely any other kind anywhere in the country.

ALL SORTS OF IMPLEMENTS AND APPARATUS

Come next,—apparatus for steaming food, so constructed that the water is heated in coiled tubes with a saving of fuel; American and English churns; butter washers, which force the butter through innumerable small openings, causing it to fall into pure water in ribbons or filaments and thus washing it free of all buttermilk without the intervention of the hands; differential pulleys, with two sheaves or wheels of different diameters in the upper block, with teeth gearing into the endless chain which hangs in two loops, in either of which is placed the single block having a hook for attaching the weight to be hoisted, and thus preventing all slipping or giving way or "running down;" gates, fencing, bee-hives; hand implements, such as hoes, rakes and forks, all inferior to ours; and a thousand other things of use on the farm.

THE GARDEN IMPLEMENTS

Are also numerous and interesting; consisting of seed dibblers and sowers, weeders, engines for watering, washing, &c., lawn-mowers, capable of shearing the grass from any smooth surface as even and neatly as it is possible with a keen razor to shave the face of a man. Passing out of the Annexe into the grand Gardens of the Royal Horticultural Society—which have been heretofore described as lying on the crystal side of the Exhibition and between the two annexes, the side opposite the palace being occupied by a magnificent crystal conservatory—we shall be able to see this mower in operation and prove the correctness of what has been said.

Magnificent grounds indeed! Such lawns, parterres, borders, walks, statues, fountains, terraces, crystal streams and miniature lakes! Then in all the open arcades there are likewise implements, apparatus, vases and garden ornaments without number. Beyond is the great "Machinery Annexe," two hundred feet wide and nearly one-fifth of a mile in length, full of all conceivable machinery in actual operation. Even at this distance the indefinable music of a thousand engines and strange machines reaches the ear and invites us to the exciting scene of their wonder-working. But ere we enter, let us rest a little on this beautiful grassy slope at the foot of the Garden Cascade.

Make Ready for Spring.

March should be one of the busiest months in the year on the farm, where the success of the summer campaign depends so much—so almost entirely, we might say—upon the degree of preparation for its important duties.

Let not a day be lost. Employ the pleasant weather in cleaning up the fields, getting together material for building and repairing fences; the stormy days in repairing old implements, or getting new and better ones, in preparing seed and devising the best methods for carrying on the work of the season. This, in general terms, for the farm.

The garden and orchard will also need attention, and unless you get fully ready for what they require, it will be very likely to go undone another year. But few farmers have gardens fit to look at; and the reason is because they neglect making the necessary preparations until the more imperative *farm*-work crowds out everything but the work of plowing and

putting in field crops. Take our advice, then, and now, while you can, look up the fruit trees, garden seeds, &c., you ought to plant, and determine positively that this year the garden shall not be a weed patch, nor the orchard a vacancy.

Wool, and How it Works at Home and Abroad.

About four months ago, we took up our pen to give our readers a little information about wool, and remarked that we would advise all who could to hold on to their clips, as by November we might look for higher rates than had yet been paid, and that it was not unlikely that even after that time we might see prices go upward, so that wool would likely range from 75 cents to $1 per pound. Well, we note that in the principal foreign wool markets, prices have gone up so that with all our pressing wants, our importers cannot profitably purchase foreign wools, pay transportation, duties, and difference of exchange, and sell at a profit. So that in reality foreign wools cannot be brought into competition with our own supplies at present. Here is one reason why, as the consumption of wool proceeds, during the next four months we should look for an advance in prices. Hence we say to our readers, that if you can hold on without hurting yourselves, don't sell the clips you have stored away for yet awhile.

The importation of wool at the port of Boston for the first nine months of the present year, has been about thirteen millions of pounds. The same amount had been imported during the same period for the past two years. At New York, however, the importation has been much greater than in previous years, and during the month of October, the average receipts of foreign wool have been about 3,000 bales.

All the circulars indicate that a further rise in prices may be looked for. G. W. Bond, of Boston, says:—"All the new levies of the armies being provided for, we may look for a consumption of wool by army supplies equal to the wants of one million of men, or from thirty to forty millions of pounds." It is true that these same men would require a large supply of wool if they remained at home, instead of in the army, but the wear and tear is more than double, and may be set down as requiring certainly twenty millions of pounds of wool more than the same men at home and devoted to the acts of peace. Hence again, is another reason for the advance during the next four months.

The same Boston circular states that a much larger share than usual of the domestic clip has found its way into the hands of the manufacturers, and has been taken at prices ranging from 55 to 67 cents for the coarser lots. In the meanwhile during the last three months the advance in foreign wools in England has been from 20 to 25 per cent. The *N. Y. Economist* makes the following remarks:

"From all we can gather in our perambulations through the Wool trade, there is nothing that exhibits itself to us of any prospective reduction in the price of wools. Fine wools are the most in request now, and last week all the desirable parcels that could be had at below 58c were taken. The range now is 60a65 cents. Coarse wools are not so much in demand, still they are pretty firmly held, and the impressions are that they will yet be wanted. Our army and the late additions thereto are to be clothed, as well as the drafted men to come, and we see no reason why coarse wools should not advance and be in active request. The stock of Domestic Wool in this market is estimated at about 1,000,000 lbs, which is very small, it usually ranging from 2,000,000 to 2,250,000 lbs. The high and constantly advancing prices of wool in the European markets increases the value of stocks here, and those of our readers who anticipate or look for any decline in wools of any sort before the close of the present year will certainly be mistaken. Even should the war be terminated sooner than expected, there is the South to be clothed; true, they have cotton, but need to have wool also, and our impressions now are that wool will see a higher range of prices this year and next than were ever known. We make these predictions from our conversations with intelligent men in the Wool interest, and give them to our numerous subscribers to act upon as best suits them."—*Mich. Farmer.*

Orchard Grass.

In an article on the "Qualities of Grasses," the editor of the Boston *Cultivator*, quoting from a recent English writer, adds the remarks following:

"'Cocksfoot-grass grows in a few stalks of a tall height, which are coarse and ineligible for hay, but for pasture the herbage comes early, and affords a good bite from the tufted roots in the spring, and by close stocking the ground to keep down the coarse stems. The seed weighs about 12 pounds per bushel.'

"This is commonly called orchard grass in this country. As observed in the quotation, its stems are rather coarse, which lessens its value for hay. Still from the abundance of long leaves which it throws out, it makes a fodder, which, if cured at the proper stage, is well relished by stock. The aftermath is often of more value than the first crop. It seldom sends up seed-stalks after the first crop, but the numerous leaves continue to grow all the season, presenting in autumn a mass of soft herbage. As above remarked, however, its greatest value is for pasture; no grass starts quicker or grows more rapidly after being cut

or fed off. It is best adapted to strong, loamy or slaty soils, where it retains its vigor many years. From the strength of its roots it is seldom injured by frost, and it is superior to most species in sustaining itself against drouth."

Aid to Agriculture.—The National Agricultural Department.

The efforts now making on the part of a few members in Congress, to secure the practical abolishment of the Agricultural Department, just created, are convincing proof, if further proof were needed, that the mere politicians are not yet all dead, and provoke every thinking man of liberal views to exclaim, How few real statesmen have anything to do with shaping the political economy of this young and giant Republic! We produce food enough for two mighty empires equal to our own: we invent and manufacture a thousand articles of luxury and use; our ships, like countless shuttles, are weaving the web of Commerce all over the seas; we war with the enemies of our country without limit of money, men or time; but all is done pretty much *as it happens;* we had no great, comprehensive, stable National Policy!

The passage of the Homestead Bill, the bill for a grant of lands to establish colleges for Agricultural Arts, and for the establishment of an Agricultural Department of the Government came like the dawning of a new era, and we shall be slow to believe that there will thus soon be a retrogression on any one of the important subjects involved in these great acts of the National Legislature. It will be well, however, for the friends of Agriculture to be on the alert, and we would advise all who feel any interest in the war now waged by certain narrow politicians in Congress upon the great interest with which, as a people, we are so largely identified, to see to it that they who so ably represent us at Washington, be not left in doubt as to the sentiments of the intelligent people of the State of Wisconsin.

Touching this general subject the following article from the pen of an able writer in the *National Republican* so well presents the record of what has been done, as well as the claims of Agriculture upon the Government that we republish it entire, with the request that none fail to read it:

"It is a singular truth that fewer public men are proficients in political economy than in almost any other statesmanlike requirement. The graces of eloquence, forensic ability, and parliamentary practice are comparatively common qualifications. Many a superficial character has attained some eminence in one or more of them. But a political economist in Congress has formerly been considered a *rara avis*, notwithstanding the presence of occasional illustrious examples; nor are other legislative bodies, in other countries or ages, more favored with this quality of statesmanship.

"It requires no small fund of knowledge, acquired by the most patient and painstaking research, involving the study of man in every clime and station—the knowledge of the arts, commerce, and civilization—and an acquaintance with travels, history and philosophy. The political economist must note the rise, progress and decline of varied industries; mark the causes, operations and results of different systems of labor; compare the different customs, regulations and institutions of different nationalities, with the varied circumstances affecting the advance or retrograde of civilization. It will thus be found a work of mighty magnitude to arrive at a correct understanding of the laws regulating the production, distribution and consumption of wealth; a work that has more of labor, mental application and capacity, with less of public appreciation or food for ambitious advancement, than is tasteful or desirable to the great mass of public men.

"It is a common thing for shallow and unreflecting minds to decry statists and political economists and depreciate their labors; and it is a lamentable confession, a belittling indication, that there has been so little fostering of statistics, and practical development of results of which they are capable by our Government.

"It is a truth that there is no means, at present or hitherto employed, for furnishing data for an accurate statement of the exports of our

country, and obtaining a precise knowledge of what productions are actually the basis of foreign exchanges.

If in the sale of thirty millions of bushels of wheat, little more than one-sixth of the crop, the loss of but one dime per bushel results to the farmer from a want of just such collections of statistics, home and foreign, as every Government should furnish, it is a snug three millions out of the pocket of the hard-working farmer, and in the purse of the shrewd speculator, who uses a part of it to secure the fostering influences of Government to protect financial and commercial interests.

"What would be thought of a general commanding, who should march a force of fifty thousand men across a desert two hundred miles, without first ascertaining how much of forage, rations and ammunition would be needed, and then seeing that a sufficiency was secured? Yet, as a people, an army of thirty millions, we have a twelve months desert to cross, with no chance for obtaining supplies from the rear of other years, and without any definite knowledge of the amount of commissary stores. To be sure, we generally have a surplus of some things, yet always a dearth of others; and the knowledge of the precise proportions needed would be a great convenience, and a saving of millions yearly.

Let us see how appreciative upon this subject our legislators have been. The following is a list of the appropriations made by Congress for the encouragement of agriculture:

1839	$1,000 00
1843	2,000 00
1844	2,000 00
1845	3,500 00
1847	3,000 00
1848	3.200 00
1849	3,500 00
1850	4,500 00
1851	5,500 00
1852	5,000 00
1853	5,000 00
1854	35,000 00
1855	65,078 78
1856	105 000 00
1857	60,000 00
1858	60,000 00
1859	40,000 00
1860	60,000 00
1861	60,000 00
1862	60,000 00
Total	$583,578 78

"Thus, a half million has been spent in aid of agriculture in twenty years, almost at the rate of a full million in a generation. And yet ours is an agriculture, one interest of which, that of wheat, at one hundred and seventy-five millions of bushels, is worth annually more than one hundred and fifty millions of dollars; and twenty millions of tons of hay, at seven dollars and a half, are worth one hundred and fifty millions more; and even the greasing of the throats of our people with five hundred millions of pounds of butter, at fifteen cents, adds the trifle of seventy-five millions, just half as much as the wheat or the hay; while the very market gardens of our Dutch women and Irish men, and other growers of vegetables for sale, count, at a very low figure, fifteen millions—with many other crops to swell the list to a prodigious sum.

"Now, it may be said, and is said, that agriculture is strong enough to go alone. Such talk may tickle the vanity of farmers struggling with taxes and interest on money owed to bankers or merchants. *They* know very well that commerce is strong, too; that its capital is concentrated, and organized for defence and aggression by boards of trade; that its votaries are intelligent, active, observant and studious. But that does not prevent commerce from availing itself of the encouragements and fostering protections of Government. For example:

"In 1837, as a little item, one of a series for several sessions, an appropriation of $400,000 was made for the 'continuation' of the custom house at Charleston, South Carolina.

"The same year, perhaps, $1,200,000 was voted for a war steamer and several sloops for 'service in the Chinese seas.' Then, all these ships were to be manned and provisioned, making altogether a nice item for the protection of our commerce in the silks and teas of a country on the opposite side of the globe. Traders in all those seas are rich, and reap enormous profits, become millionaires, and can afford to spend a good deal of money to convince Congress that such protection is for the interest of the nation—as it is.

"Why, the cost of a good war steamer would equal all the money expended upon agriculture in these twenty years; and to man, provision, and keep in repair, would require about as much more.

"Yet merchants can pat the poor farmers on their backs, and tell them they need no aid in an art scarcely less scientific than that of the physician, who deals with the mysteries of animal life—a business which involves so much of science and practical experience, such myriad forms of life, and kaleidescopic results of endless complications in heat, moisture, light, soils, propagation, hybridization, that no man has ever reached, or ever will, a point in knowledge beyond which nothing further can be known.

"Do not farmers remember when more than $800,000 a year were granted to a steamship company for carrying mails from New York to Liverpool? That is sufficient, according to the past, for thirty years of agricultural appropriations. The Havre line cost $350,000 more—good for a dozen annual grants for the farmers.

"The estimates for the coming year ask for expenses of the six auditors of the Treasury $470,240; for the coast survey, $559,200; salaries of consuls, $414,000; care and repair of light houses, 606,509; each about equal to the entire sum doled out to agriculture for twenty years. If those sums are not too much, is it a fair presumption that Congressmen have not brains to see how homœopathic is this agricultural dose for so powerful a patient? or that they deem farmers so stupid as not to feel and resent the neglect? No; the present Congress has not exhibited such a vacuum of practical sense, nor will it.

"The same estimates ask $1,236,190 for foreign intercourse; $1,000,000 for the suppression of the slave trade; 264,000 for colonizing the freed negroes of the District of Columbia; and $110,000 for the Metropolitan Police of Washington. On an average the agricultural appropriations, for the most extensive system of agriculture in the world, would, in four years amount to enough to pay the police of the Federal city. And yet, when our farmers were, on the first of July, for the first time, represented in our Government, there are found a very few Congressmen, from an agricultural section too, who would begrudge the sum of $130,000 for it—just enough to buy a rotten steamer to answer as a coffin for a battalion of soldiers bound south! Is it not paltry? Is it not base neglect, or stupid ignorance of the wants of farmers, and the facts of political economy?

"We do not write this to complain of the action, or of indisposition to right action on the part of law makers. On the contrary, the present Congress has evinced a higher appreciation, perhaps, of the importance of the agricultural interest, and a better understanding of its wants than any other. But it is calculated to excite the impatience of a man half alive to the benefits that would result from a more wise and liberal policy, to note how cavalierly demagogues have treated the agricultural interest, and with what asinine stupidity the great mass of our fellow farmers have borne the infliction."

Cotton Culture in Utah Territory.

Presuming that some information in regard to the culture of cotton in this Territory might interest your readers, I have obtained some items on the subject which I embody in this communication.

The cotton country proper—known universally here by the name of "Dixie"—embraces certain portions of Washington county, the most southern in the Territory, and the lands adapted to its culture are the bottoms lying along the small streams forming the head waters of the Rio Virgin river, which flow southwardly, and empty ultimately into the Gulf of California. The sources of these streams are separated but a few miles from those of Sevier river which flows to the northward and debouches into Sevier Lake.

The general features of the country are very uninviting. being rough and mountainous, and aside from its adaptability to growing cotton, presents but little inducement for settlement.

The native grasses, however, grow luxuriantly and will doubtless be made subservient to a somewhat extensive system of grazing, when that section of country shall have become well settled. The first colony was established in 1852, being sent out from the great parent hive of Mormondom, whose symbol of industry is "Deseret," the honey-bee.

The settlements increased in population but slowly, there having been but seventy-three families in the whole extent of the cotton country so late as the autumn of 1861. Since that date, however, a great impetus has been given to the movement through the direct agency of the "Church," which has sent off hundreds of individuals and families with the comforting assurance that they had "a call" to labor in that field of duty. Some two hundred families were thus transferred to the cotton region during the autumn of the last year, and now, I am informed, there are some five hundred families in that part of the Territory.

The culture was attempted as a *dernier resort* only, owing to the scarcity and extreme high price of the staple and the fabrics manufactured therefrom, both in the States and here. It was not supposed that enough could ever be raised to make a surplusage over home consumption, and mayhap not even for that; as investigation and a careful calculation based thereon demonstrated the fact that *no greater area in the entire Territory than eight to ten thousand acres* was adapted to the cultivation of the staple.

Cotton was first planted in the spring of 1865, and was found to be eminently successful, although requiring a laborious and extensive system of irrigation, in common with all operations in this Territory looking to success in agricultural pursuits. No extensive tracts or large fields were planted, a small "patch" or perhaps an acre or two, at the most, being tilled by each of the families then resident there. It is estimated that two hundred acres was the entire area thus cultivated, the total yield of which is calculated at seventy-five thousand pounds, an average of three hundred and seventy-five pounds to the acre. The best yield per acre was thirteen hundred and fifty pounds, "in the seed," equivalent to four hundred and fifty pounds when ginned and cleaned.

Washington and Santa Clara were found to be the best localities for the culture, which places are about three hundred and sixty miles south from this city, and north but a few miles from the southern boundary of the Territory.

The quality is a fair upland, and I enclose a sample that you may be enabled to judge of the length and fineness of the fibre.

There were but two cotton gins in the Territory prior to the arrival of the "Church trains" from the States, late in the season, and those, being made here, were clumsy and inefficient in operation. The trains brought in four of the most improved construction, precisely like those in use in the cotton producing regions of the southern States.

It is confidently anticipated that with the experience gained by the last year's operations together with the improved appliances now at hand for ginning and cleaning the cotton, that henceforth the production will be largely increased, sufficient at least to supply the more urgent needs of the people. At any rate, the development of home resources in that respect will be tested by the thorough application of an extended system of labor, rendered effective by the characteristic industry of the working classes here.

I will further state, while the cotton country is under consideration, that the Chinese Sugar Cane is extensively cultivated there, far more than a home supply of sorghum being manufactured, the surplus being exported and exchanged for flour and wheat produced in Iron county adjoining Washington on the north, both of which counties stretch entirely across the Territory from the eastern to the western limits. The farmers of the latter find it much more profitable to devote their attention to the cultivation of cotton and cane, rather than in raising cereals.

Grapes succeed in perfection, even rivalling California in that respect, and extensive vineyards have been started by means of the thousands of cuttings obtained from this city as

well as from the above named State. The vines need no especial care or protection, flourishing luxuriantly in the open ground, and producing in great abundance the most luscious fruit. Apple trees also succeed admirably, growing fine and thrifty; but with peach trees the case is different, the severity of the winters being sufficient to kill them.

The keeping of bees is likewise a great success, and efforts will be made to introduce and feed them on quite an extended scale. Experiments have demonstrated the somewhat remarkable fact that nowhere else in the settled portions of the Territory can bees be made to live or thrive.

I will mention that about forty miles northward from the village of Santa Clara, in the cotton country, was the scene of the terrible "Mountain Meadows Massacre," where, in 1857, a large company of men, women, and children, who were crossing the plains from Arkansas to California, were suddenly attacked by blood-thirsty savages, and one hundred and twenty of them most barbarously murdered in cold blood. A ranche is now established within three miles of the scene of that sanguinary conflict.

To the kindness and courtesy of Hon. Geo. A. Smith, Church Historian and Recorder, am I especially indebted for much of the above information. C. H. HOWARD.

GREAT SALT LAKE CITY, Jan. 10, 1863.

FARMERS SHOULD CORRESPOND.—What the *Michigan Farmer* says we say:—The long winter evenings are now passing—your crops are gathered and stored or sold; you have leisure hours which can and should be devoted to writing, which we hope every farmer will improve by corresponding and giving us the results of their practical agricultural operations on the farm. Many of the most important features that have been so valuable to the agriculturist at large, have been arrived at by a personal narration of the simple facts themselves; these are productive of great good, and we trust our farmer friends will find time to write; give us the points, and we will put them in ample form."

Utilization of Pond Mud.

In reply to "Skye" relative to the utilization of mud taken from a fish pond, I beg to say that within the last five years I have had the ornamental waters here cleaned out, and obtained a large quantity of mud. One of the ponds had not been cleaned out for upwards of thirty years and the deposit was very great and rich. There is a stream running completely through the ponds, and there are large quantities of leaves and other decayed substances left in them. The method I follow is to load the mud on to the grass land as soon as it has become sufficiently solid to bear carting, and then spread it; and the effect on the grass is surprising. One year I put it on so thick that I expected I had destroyed the grass, but the following summer it was very difficult to mow from the thickness and length of the grass. I believe that lime does not do as much good when mixed with the mud, as the mud alone. It must not be left one year before spread, but done at once.—*London Field.*

Washington Agricultural Department.

The Commissioner of Agriculture has communicated the following to the House of Representatives:

DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., Dec. 13, 1862.

SIR:—In compliance with the resolutions of the House of Representatives of the 3d and 5th inst., I respectfully submit the following statement: No official transfer of the property of the Agricultural Division of the Patent Office in the Department of the Interior has been made to this Department, nor has any official report or transfer of the unexpended balance, if any, of the Agricultural Fund of the fiscal year ending June 30, 1862, been received. Bills chiefly for contributions to the Agricultural Report of the Patent Office for 1861 (completed prior to the organization of this Department), and amounting to about $1,000 have been referred to me for settlement by the Commissioner of Patents, and others outstanding will, according to his letter of the 8th inst., to the House of Representatives, probably swell the amount to a sum not much short of $4,000. If, as is intimated in the opinion of the Attorney General, a copy of which is hereby annexed, marked B, this Department may be called upon to meet these claims or any part of them, I shall be compelled to ask a special appropriation for the purpose. This Department entered into operation on the 1st of July, 1862. The sum expended under its direction, for all purposes, up to the 5th inst., as shown by the detailed statement, a copy of which is hereunto annexed, marked A, is $27,782 22, leaving an unexpended balance of the appropriation for the fiscal year ending June 30, 1862, of $32,217 78. The outstanding claims against the Department are as follows, viz:

Charles Hill, for tobacco seed,	$600 00
Little, Browne & Co,	33 23
Bullock & Renshaw, for chemicals	27 75
Phillips & Solomons, for stationery	270 00
Charles Margargee & Co, for stationery,	303 42
H. A. Dreer, for bulbs and cuttings,	26 99
F. R. Elliot, for balance due for contribution to forthcoming report,	150 00
Wm. Saunders, for vines and cuttings,	125 00
Bibley & Guy, for stores and fixtures,	115 00
Total,	$1.651 00

Riggs & Co., £70 exchange, to be added, for the purchase of wheat in England not yet arrived.

In addition to the cereals and seeds (to the amount of $7,900), already purchased and paid for, orders to the amount of $8,000 have been sent to Europe for additional new and valuable varieties, which will be ready for distribution to the members of both Houses early in the new year. An order has also been forwarded to China for a fresh supply of pure sorghum seed, to meet a very general demand throughout the Western States, where the growth of sorghum sugar and syrup is attended with the most gratifying success.

I have the honor to be
Your very obedient servant,
ISAAC NEWTON, *Commissioner.*

Sorghum.

MR EDITOR:—Sorghum has really become one of the chief absorbing topics of the day, and many of the skeptics of a year ago who could not believe in the success of Sorghum as a profitable crop, are already upon the anxious seat, and looking with much faith towards another season in which to make a trial.

Many are those who talk of planting enough for home consumption, so as not to be dependent upon any Confederacy for the little sweet that they may wish to use. It is true that the past year was very favorable to the growing of cane, and many from this fact have been induced to make a thorough trial as soon as winter shall have passed. And this is not all; many have learned from the experience of others that this will undoubtedly be a *paying* crop, and this is a great incentive to trial; besides, at the present time each man feels something of the necessity of bringing within the means of his own production as much of what is necessary to his comfort as he can. All things combined have so changed the operation of mind that it gives us a great prospect for a larger crop of cane the coming season by five hundred per cent than has before been raised in any one year in Wisconsin. I am really glad to see so much interest manifested in the production of this essential crop. I am, as ever, a firm believer in its success as a profitable crop, even in Wisconsin.

I have manufactured about one thousand gallons of syrup, during the past fall, for myself and others. The cane was drawn to my machinery and piled up, as you would pile cord wood, without shelter. Some of the cane was much injured by the hard frosts after the first of October, by lying thus exposed. Heavy frosts will injure cane even after it is harvested. All cane for manufacturing purposes should be well sheltered as soon as the first of October.

In this vicinity only about one half the quantity of cane was grown that would have been, had the seed been good. Many had the sorrowful experience of labor without its equivalent—a crop. But so it is, and so it has been. Having had a similar experience myself, I thought to guard against a second defeat from the same cause. Consequently I sent to Missouri for a quantity of seed, and it proved to be of an excellent quality. The cane was, as far as I can learn, some earlier than from the seed grown here. In the growing of sorghum one *very* important thing is to have good seed. My advice to all who intend to raise cane the coming season, is to know that the seed is good before it is planted. No one can be too particular in this respect.

There are many things to be said upon the subject of Sorghum raising, and its manufacture into syrup and sugar, also in relation to the machinery to be used; and on this account I am glad that we are to have a State Convention for the purpose of talking over these matters, and thus becoming more enlightened as to the manner and way of growing this crop successfully, as well as manufacture it advantageously. Further; I hope that those who are somewhat experienced in the raising of Sorghum and its manufacture will make the FARMER a medium through which to give their experience and suggestions. O. P. D.

PALMYRA, Jan. 18, 1862.

God Speed the Plow.

God speed the plowshare! tell me not
Disgrace attends the toil
Of those who plow the dark green sod,
Or till the fruitful soil.
Why should the honest plowman shrink
From mingling in the van
Of learning and of wisdom, since
'Tis mind that makes the man.

God speed the plowshare, and the hands
That till the fruitful earth,
For there is in this world so wide
No gem like honest worth.
And though the hands are dark with toil,
And flushed the manly brow,
It matters not, for God will bless
The labors of the plow.

—*Mark Lane Express.*

The "White Willow."

The farmers of the Sucker State and, to a more limited extent, of other states also, have been greatly exercised of late in relation to the newly discovered and wonderful qualities of the so-called "White," "Grey," or "Powder" Willow, as it is variously called.

Personally, we have no acquaintance with this new wonder, but are a little inclined to think it rather possible that its friends claim too much for it, when they represent that it is good for every conceivable and inconceivable use. If we are to believe all that is said, and just a little more, it will make, in a very few years, a tree compared with which the Cedar of Lebanon is but as a Dogwood sapling under the shadow of the giant Pines of California; the wood will be splendid for fuel, for building timber, for lumber, for shingles, for gunpowder and paper; the juice will yield most excellent sugar, brandy, lamp-oil and turpentine; the bark will make corn-baskets, sap-troughs, clapboards, canoes and babies' cradles; the buds are to yield invaluable gums, balsams, resins and a capital substitute for Spaulding's glue; and the leaves shall be for the healing of the nations! Every part is, in and of itself, exclusively a "big thing,"—except the *roots*, and they can probably be coaxed to all grow of a shape suitable for sled-runners and ship-knees!

Nor is this enough: It will, if the slips are planted near to each other, in a short time produce a live fence, or, more properly a living wall, against which the storms of heaven, the waves of Lake Michigan, and possibly fire itself shall not be able to prevail! This, indeed, is to be its chief glory.

Well, we heartily wish all these things might be true, and would, by no means, discourage the purpose of many of our farmers to give this remarkable member of the Salix family a trial. But is there any need of going crazy over it, and buying it *by the mile* of irresponsible peddlers, who may or may not furnish you with the genuine article, and who, in any event will most likely charge you two prices for what they sell.

If the argument of rapid growth—six or eight inches in diameter in four or five years!—be good for anything, then you can afford to begin moderately, and afterwards, when satisfied of its value, plant out cuttings by the mile from your own young trees.

Some farmers in this vicinity have paid $40 per mile, when they could have got them just as well for $25.

But, says one, the Illinois State Horticultural Society have investigated the qualities of this Willow and pronounced it a grand thing. Gently, neighbor. Let us see. In the Journal of the Illinois State Agricultural Society, Dec. No., page 30, we find the following:

THE GRAY OR POWDER WILLOW.—The Illinois State Horticultural Society, at the September meeting in Chicago, after a pretty full discussion of the subject, passed the following preamble and resolution:

Whereas, The impression seems to have gone out that this Society, in endorsing the Gray or Powder Willow, recommended it for a live fence,

Resolved, That in investigating the merits of this Willow, this Society never intended to recommend it for live fence, nor does it now.

This doesn't look to us as though the truth of its value for the purposes for which some of our farmers are buying it at wholesale, were yet fully established; and accordingly, we say, Farmers, don't get unduly excited. *Keep cool!*

☞ The two great prerequisites to success in any calling are industry and a definite purpose in view. Industry alone is not enough. Many a man who is as industrious as his neighbor does not succeed half so well, simply because he works hap-hazard.

White Willow—How to Plant.

As many of the readers of the FARMER are investing in this really valuable "novelty," and notwithstanding it is one of the easiest of all shrubs or trees to grow from the cutting, not a few may fail in growing the desired uniform hedge, from not beginning right. We, therefore, offer a few brief

DIRECTIONS.

Prepare the ground, whether in hedgerow or grove planting, by *double plowing*, *ridging* or *subsoiling*, to the depth of twelve inches, so that it will be thoroughly pulverized and mellow; an even and thorough preparation of the ground will tend to secure what is very desirable—uniform growth of the hedge. Set the cuttings by line, shoving them in at an angle of about forty-five degrees from the perpendicular, deep enough to show but the tip out of ground, but still the base of cutting will be in mellow, warm soil. If found projecting from the surface, they can be lightly ridged with the hoe or plow to nearly cover them.

Set early! Let the earth be stirred deep enough to have two inches of good soil below the base of the cutting.

A light mulch of sawdust or rotten straw from the stack bottom, will do much to ensure their growth. A weekly stirring of the soil for two feet or more on each side of them during the first season, will be all the care they will ordinarily require. J. C. PLUMB.

STOCK REGISTER.

The Sheep Fever.

Some of our friends who remember the zeal and persistency with which in times past we urged upon the farmers of this State the importance of wool-growing, and that we especially advocated it at the opening of the present unhappy war, wonder that we say so little on the subject at the present time when the excitement runs so high.

In explanation of this *coolness* on our part, we have only to say:

1. We thought we had said enough, in view of the low prices of wheat and other agricultural produce of that sort and the high price of wool—circumstances in themselves a fulfilment of our prediction and a stronger argument than we could possibly present.

2. We saw the fever rising in the body agricultural and deemed it wiser to refrain from the administration of any stimulant. Men, in general, are prone to extremes, and farmers are no exception to the rule.

Now, therefore, while our views as to the advantage of sheep-husbandry as a branch of farming are unchanged and while we still advise all who are in a position to do so economically and on such basis as to insure success, to engage in the business, we cannot be true to our convictions of duty as a journalist for the agriculture of the Northwest, unless at this juncture we caution moderation

Wool-growing is decidedly the best business in which any farmer in any of the northwestern States could have engaged two years, or even one year, ago, and we are glad to know that a few of the keener ones were able to see it and prompt to secure large flocks of sheep when the prices were low. But now the case is somewhat altered, and it is by no means certain that it would be economy for every farmer to purchase a large flock at the current high rates.

On this subject one of our cotemporaries who has had much experience, very properly says:

"It is also well for farmers to commence with a small flock of ewes, say good, *strong*, *common sheep*, and then secure a good fine-wooled ram, two or three years old, and one that has not been abused, or suffered to serve ewes while young. The get of such sheep would be an improvement on the quality of the wool of the old ewes; and the lambs with proper care, would take a higher grade. By keeping the same ewes and buck another season, quite a nice flock might be raised. Next, cull out all the old ewes, and fatten, with such ram lambs of the first year as may be desirable. Now change your breeding ram and get one of a finer grade, if possible, and keep breeding up, not suffering an inferior ram to serve your ewes at any time.

"Sheep are healthier in small flocks than in large ones. But should any ailment befall any of them, they ought to be separated from the

flock, because many of the diseases of sheep are contagious.

"We would caution our brother farmers who have a touch of the *fever*, and advise them to keep cool. Do not pay extravagant prices for sheep. Ohio, Michigan and Vermont have sheep to export. Enter into correspondence with some upright man; you may gratify your desire at fair prices; but remember our motto: "*Be sure you are ready and then go ahead.*"

Excellent advice.

Management of Young Colts.

EDITOR WIS. FARMER:—Will you be kind enough to give your readers (and me in particular) your idea of the best managment of a colt (spring) from birth till one year old. By so doing you will oblige me, and possibly some others. SUBSCRIBER.

LAKE, Mil. Co., Feb. 3, 1863.

ANSWER.—Certainly, with pleasure. The rearing of colts is a subject of importance, and one in regard to which many farmers are greatly at fault.

Concerning the measures necessary to insure the *getting of a colt worth raising* no question is asked; we therefore leave the discussion of that matter to another time.

The first year is the most important period in the whole life of the horse: beacause it is the formative period. "Just as the twig is bent, the tree's inclined" is of the widest application, and the requisites which it implies cannot be neglected without sure and serious failure.

The rule in dealing with the young colt should be to make it, in health and habit, as nearly as possible what you would have it when grown.

To this end, the mother should, if practicable, for a time have comparative quiet—that is she should not immediately be put to hard work. She should not, however, be confined, as is the practice with some, to a narrow stall. Freedom of motion—and a part of the day, at least, in the open air—good, nourishing diet—these are essential.

At first, of course, the young colt will desire nothing but its mother's milk, but, after a time, it will learn that grass and the *mash* or mess of grain (which if bruised or coarsely ground will be all the better) are also good, and it should have free access to them with the mother.

If the owner depends upon the mother for spring and summer work, she will, in a short time, be competent to perform a reasonable share; but she should not be put to severe labor until the colt is old enough to rely, to a considerable extent, upon food other than milk.

When at light labor, the colt, if not too inconvenient, should be allowed to accompany the dam and to draw the needed milk when hunger prompts. But if the labor be so hard as to *heat the blood* of the dam a good deal, it would be better that she should have time to cool and rest before allowing the colt to suck, as the milk would otherwise be unwholesome. In cases of this sort the colt should be confined in some way, and yet so near that occasionally—say once or twice in the forenoon and as often in the afternoon—the dam may be taken to it for the relief of its hunger. An enclosure of moderate size is better than a large field for its confinement, as in such enclosure it will run and worry less. But it answers very well, in some respects best of all, to tie the colt on the margin of the field during the hours of its mother's labor; as in this way it may be the more conveniently and the oftener fed, while it is at the same time taught to stand hitched. The dam when performing hard labor should have more dry feed, and grain at least twice a day.

Proper handling is only second in importance to proper feeding. The colt is a most sagacious and tractable little creature, and its character may be moulded—at least its habits may be formed—almost at will It is the prerogative of the owner to say whether he will have an unruly, biting, kicking, fractious, balky, halter-breaking, runaway brute, or an orderly, kindly, obedient, faithful, noble animal worthy of being ranked almost as a member of his household.

If he would have the mean and devilish brute first delineated, let him simply compel the young colt to jump over the bars which its dam can only straddle over with effort—tease,

and nip, and in every way torment him on all convenient occasions—try to hold him by main strength under circumstances which render failure probable, at the same time scaring him half to death by the fruitless tussle to do with him he does not know what—tie him with a strap or rope not strong enough to hold—and finally, on all occasions strive to make him feel that his master is habitually as mean as he is himself naturally docile, clever and willing to serve. Nothing further will be necessary.

But if, on the other hand, he would prefer the noble, trustworthy, really useful animal, let him observe the law of *kindness, gentleness, and patience.*

When, at the age of six months or more, it may be desirable to *wean* the colt, let it not be done abruptly, as it might be too much of a change to leave the sweet, nourishing milk of the mother for grass and other food exclusively. Let him have milk, say, once a day for a little time; giving him a little extra food to form the habit of relying upon something other than milk. And finally, when it is determined to wean him entirely, let him be placed, if practicable, in a lot with other company where he will but seldom see his dam. In a short time he will thus acquire the habits of the independent horse, and no longer pine for mother and milk.

The first winter is an important period in the colt's history. See that he has company, if any at all, not disposed to master and drive him about; and especially avoid yarding him with horned cattle. Let his feed be wholesome and nourishing food, with access to pure water, and provide some sort of a shelter under which he may have security form storms.

Observe these rules, and follow them up in their spirit, for the four succeeding years, and if your colt doesn't come out at the end of the year a little better than the average, and in the end make a valuable horse, it will be because his pedigree is bad. It will certainly not be either your fault or ours.—Ed.

☞ Shelter your stock from March winds.

Wool-Growing—Advice Adapted to the Times.

Editor Farmer:—Having been told by several of my neighbors, "We should like the Farmer, but can't spare the dollar," the ways and means requisite to obtain the dollar to spare for the most useful agricultural paper published in the West naturally revolved in my mind.

I said to myself, eight or ten times as many sheep may be kept with but very little additional labor and expense. The same may be said of bees and turkeys. When men accept these facilities for obtaining wealth, they will surely have a dollar to spare to secure the monthly visits of so valuable a friend.

When we consider that the facilities for transporting our grain to market do not keep pace with the increase of its production, we must be aware that freights will continue to rule high until there is some remedy.

One of the most prominent means for the salvation of Wisconsin from high taxes and individual indebtedness is wool-raising. Wheat-raising alone for many years in succession pays but poorly; reducing both the land and its owner to poverty, unless pains be taken to fertilize with something more valuable than straw.

But few countries possess greater natural advantages for sheep husbandry than ours; in none are sheep more healthy. I don't forget that most regions are less troubled with dogs; neither do I forget that some men would not take care of them, but those who will may combine pleasure and profit.

I intended to have said something about sheds, feed-troughs, and racks, but that is pushed aside by the preceding—probably indefinitely postponed. I presume you'll say, The most important things are generally left untouched by persons unaccustomed to writing

S. L. Miller.

Fulton, Feb. 5, 1863.

[Not so, friend Miller; you couldn't have hit the nail more squarely on the head. Don't forget to write soon again on some of these practical themes.—Ed.]

Take Good Care of Your Stock.

March is usually one of the most trying months on live stock of every kind. Fodder not unfrequently runs a little short, the horses, cattle, and sheep are frequently turned off with straw, and the storms are more than ever trying upon the health. A little extra pains should therefore be taken to make every available means subservient to their comfort and vigorous health.

If the hay is run out, and the corn-fodder begins to wane also, chopped straw, sprinkled with bran, and fed in troughs, or long straw with a sprinkling of brine occasionally, will be relished, and help to eke out spring feed. Of course you are not well supplied with carrots. Farmers in Wisconsin haven't yet learned that they are among the best crops that can be produced for cattle, and horses particularly, and accordingly they don't raise them. It's all right so far as the farmer is concerned, but for his starving animals we feel sorry.

Marauding Cattle.

Cattle may be educated to do almost anything A quiet cow may be converted into a skillful jumper in a single season. The first requisite for such training is short feed, resulting from over stocking. The second is low fences; and the third, tempting crops of corn beyond these low fences. In the spring, grass is usually good, corn and other crops are small and uninviting; but during the midsummer periods, when the pasture is dried up, the process often begins. One or two rails are accidentally blown from the fence; the quiet and orderly animals stretch their heads over to reach a morsel of the tall grass; they throw down accidentally two or three more rails, and finally leap over. The owner drives them out as soon as they have learned the difference between delicious food on one side and short commons on the other, and puts up a rail. They have already learned to leap a little, and the next day they improve and go a rail higher. Another rail is added, and the process is repeated until they become quite expert.—*Country Gent.*

[During this month the "feed" on meadow or pasture is neither "short" nor long, nor do "crops of tempting corn" stand just beyond the pasture fence. But of how many farms can it be said, *The fences are not low?* Neighbors Slack and Hard-up, now is your time to attend to this matter of preparing to put the fences in order. Rails or boards can be hauled better now than when the weeds are choking the corn in summer, and no farmer is ready to begin the work of putting in crops in the spring until the fences about all such fields are staunch enough to withstand the assaults of the most unruly cattle in the neighborhood.]

A New Whifeletree.—Many accidents occur from horses getting frightened and running away, caused by the whiffletree being detached and dropping upon the horses' heels. An invention to obviate this difficulty has been made, and a model of the whiffletree forwarded to us by the inventor, Jacob Muzzy, of East Eddington, Me. The whiffletree is hollow, and is strengthened by an iron fastened upon the under side, of the same dimensions as the whiffletree. Through the wood part a leather strap passes, playing at each end over a roller. To the ends of this strap the fastenings for the traces are firmly placed. The whiffletree is designed to remain stationary, the motion of the horse or carriage acting with ease by means of the rollers at each end, and all noise or clatter is done away with.—*Maine Farmer.*

Sheep-Raising and Wheat-Growing.

Editor Farmer:—A short time since I sent you, in a business letter, a few lines on the subject of wool-growing. I now send you more money, and add a word or two on my favorite topic, which appears to me to be of sufficient importance to warrant even a repeated discussion.

A man with industry and ingenuity enough to become a successful farmer can keep as many sheep as he has acres of land, without diminishing his nett receipts from wheat.

Most men can comprehend and understand that 30 acres of wheat yielding 20 bushels to the acre is quite as valuable as 80 acres averaging but 10 bushels.

By seeding with clover and allowing the sheep to convert it into manure, we may fit our land for raising large crops of grain, instead of wild buckwheat, wild oats and other foul plants which tell largely in the diminution of our valuable crops.

Let us bear in mind that sheep are fond of nearly all the vicious weeds which harass and

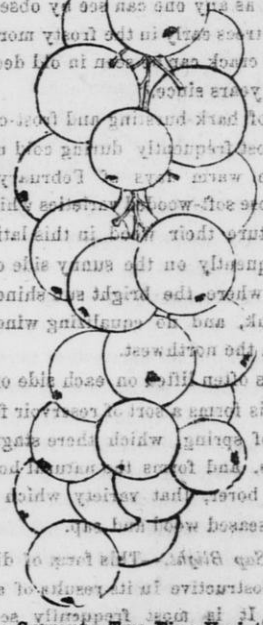
annoy the farmer, not allowing them to go to seed if they have access to them.

Clover will do the subsoiling, sending its roots deeper than most other plants, thereby loosening the soil to a depth sufficient to insure a healthy and vigorous growth of the succeeding crop. Sheep, properly managed, will do the manuring and weeding.—S. L. Millard.

Fulton, Feb. 1863.

THE HORTICULTURIST.

A. G. HANFORD, . . . CORRESPONDING EDITOR.



The Currant.—Two Fine Varieties.

The Cherry Currant.—The largest of all currants, reaching with good culture one and a half to two inches in circumference, color deep red, rather more acid than *Red Dutch*, and by some thought not equal to it in flavor; bunches short; plant vigorous, shoots very stout, foliage large, distinct, productive.

J. J. Thomas says from twenty-four bushes planted close, making a row thirty feet long, the third summer from planting was gathered a full bushel by measure; the fruit hung in dense masses. An acre like these, in rows four feet apart, would have given over three hundred bushels.

White Grape.—The best white currant, and to our taste the best dessert currant in cultivation: fruit very large, of a mild, pleasant acid. Growth rather slow, of a low, spreading habit and dark green foliage; very productive.—A. G. Hanford.

Columbus, O.

☞ A friend, in whose skill and judgment we have great confidence, deprecates the doctrine advanced in one of our recent articles touching the cultivation of orchard soil. He thinks seeding down, even temporarily and to clover, should *never* be advised. What say our other horticultural friends?—Ed Farmer.

Winter Killing.

Frost Blight—Bark Bursting—Frozen Sap Blight.—The injury which trees and plants receive from the sudden changes of temperature, in all latitudes where frost prevails, is one which, above all other troubles of the horticulturist, stands pre-eminent, the dread barrier in the way of unlimited propagation.

Especially in the west has the horticulturist had to contend with climatic changes unusual in the Eastern States, and been led to the most careful examination into the cause and remedy. Indeed, so far has this gone that Western fruit growers have generally concluded to "set up for themselves" in the way of theory and practice, especially in the matter of location, and varieties suitable for this climate.

We say this is wise; for though we would profit by the long experience of the Eastern fraternity, it has come short of reaching our case, especially in pointing out the remedies available by us.

But Western experience, we think, has fully demonstrated to the people the way of *complete success in fruit growing*, and we already see the enterprising farmers of the northwest planting immense numbers of trees, confident of enjoying the fruit thereof.

The various phases of disease caused by the sudden transition from heat to cold, commonly called "winter killing," may all be classed under the above heads, and we will speak of them briefly.

1. *Frost Blight*—Death of the young and tender wood and foliage, not ripened or hardened by maturity sufficient to resist the effects of frost.

Occurs any time of the year, but most frequently in autumn and late spring; affects tender plants of all kinds, especially the tender tips of late growth in autumn. It is productive of no material damage only so far as it extends; as, for example, the frost-bitten corn when just out of the ground, and the frost-bitten tip ends in the nursery. The part affected soon dries up and no circulation corrupts the balance of the tree or plant.

2. *Bark Bursting.*—Another, and more serious form of injury, is a longitudinal opening or bursting of the bark of the sappy trunk of young trees at the ground, and extending upwards, sometimes to the first branches.

In the nursery it generally appears a rupture of one inch or less, at the surface of the ground, and the bark is separated more or less on each side, sometimes extending clear round the trunk, and with more than one crack. The injury corresponds with the extent of this disbarking. Cause, hard freezing when full of sap.

In large trees, when this bursting extends upward considerably, it always occurs on the sunny side of the trunk, and generally a crack clear into the wood can be observed when actually frozen, as any one can see by observing their injured trees early in the frosty morning, and the same crack can be seen in old decayed trees injured years since.

This form of bark-bursting and frost-cracking occurs most frequently during cold nights following the warm days of February and March, in those soft-wooded varieties which do not fully mature their wood in this latitude, and most frequently on the sunny side of the hill or grove where the bright sun shines full upon the trunk, and no equalizing winds are blowing from the northwest.

The bark is often lifted on each side of this crack and this forms a sort of reservoir for the flowing sap of spring, which there stagnates, sours, decays, and forms the natural home of the grub or borer, that variety which preys only upon diseased wood and sap.

3. *Frozen Sap Blight.*—This form of disease is the most destructive in its results of any of the class. It is most frequently seen in young orchard trees of those varieties named as soft-wooded or sappy, as the R. I. Greening. Roxbury Russet, Baldwin, &c., &c., also the peach, some varieties of the pear, the quince, and many roses and ornamental shrubs.

It is caused by a sudden and severe freeze following a warm term in autumn, while the sap is yet abundant in the trunk of the tree. It does not cause bark bursting or cracking,

nor does it always kill the young shoots, but is more apparent on the trunk and large branches.

The frozen sap seems to coagulate and is retained in the liber or inner bark, which soon turns dark colored, but the tree generally shows no outward sign of decay until warm weather of the following spring. Then the bark often becomes colored through, and rapid decay of root and branch soon follows.

This blight does not always affect the whole tree; sometimes only in spots, upon trunk and limbs. Such spots shrivel and dry up without permanent damage to the tree, but there is often a superabundance of sap at the point of junction of limbs, which when thus frozen is very apt to injure permanently the tree. It is well known that undigested, acrid food from the human stomach introduced into the blood, rapidly contaminates and poisons the whole system. Precisely so this diseased sap, if car- downward and inward in the course of the regular circulation, will poison the trunk and root and induce decay.

Having briefly pointed out the causes and effects of this wide spreading and truly disastrous evil, we will next indicate the remedy. Here the "prevention better than cure" is peculiarly apt.

Omitting to describe the oft repeated modes of winter protection by banking, mulching, strawing, winding, boarding, &c., all good, and often positively necessary, in some form, for half hardy plants, we wish here to speak particularly of that prevention which lies in the essential character of the tree, called vitality, or constitutional vigor, which is attained only by a certain degree of maturity.

It is a well known principle of vegetable physiology that very much depends on the degree of ripeness or maturity which the tree attains, for its capacity to endure atmospheric changes. Again, that every such change from one degree to another, if borne without injury, places the tree in a position to endure another and more severe shock in the same direction; as exemplified in the increased fortitude of the tree as it passes from the summer heat, through the cool and frosty autumn, to the intense cold of winter. The gradual change of the weather producing a corresponding change in the tree.

A beautiful lesson of Life! why should not fruit growers heed it? Does it not show plainly that our valuable trees for fruit, should be set in such situations as will give the most equal temperature throughout the year?

In our State such situations are always found *on the highest ground*, and where exposed to a free circulation from the north and west.

The remedy we propose for the diseases we have been considering lies mainly here, and, in connection with the all-important matter of thorough underdraining of the subsoil, either naturally or artificially, will secure that healthy growth, early and complete ripening of the wood, and hence that vigor and hardihood which will enable it to resist all the demands of climate in its greatest extremes of temperature.

We will briefly advise all who plant trees for profit or pleasure to *to plant on high land, a cool location*, where the wind blows freely from the cold quarter. Such localities are generally quite exempt from sudden changes in temperature, from damaging frosts in spring and autumn, and, beyond all, ripen their wood early in the fall so as to be prepared for the rigors of winter.

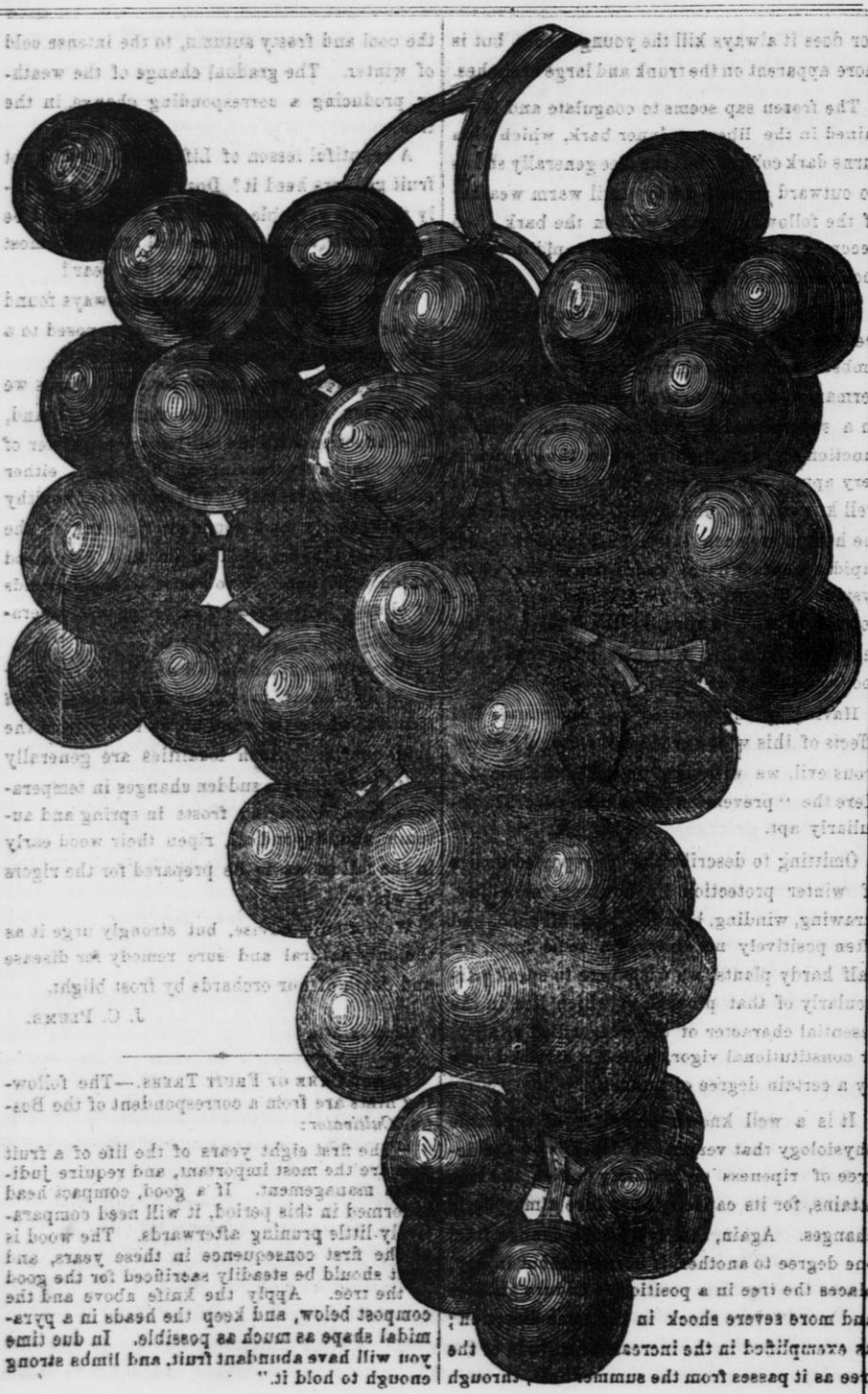
We not only advise, but strongly urge it as the only natural and sure remedy for disease and death of our orchards by frost blight.

J. C. PLUMB.

MADISON, WIS.

EARLY CARE OF FRUIT TREES.—The following hints are from a correspondent of the Boston *Cultivator*:

"The first eight years of the life of a fruit tree are the most important, and require judicious management. If a good, compact head is formed in this period, it will need comparatively little pruning afterwards. The wood is of the first consequence in these years, and fruit should be steadily sacrificed for the good of the tree. Apply the knife above and the compost below, and keep the heads in a pyramidal shape as much as possible. In due time you will have abundant fruit, and limbs strong enough to hold it."



The Concord Grape.

It is about ten years since this most excellent hardy grape was first introduced. It has fully sustained the high character given it and is growing in popular favor every year.

It is emphatically the best *farmer's grape*, or the *grape for the million.*

The vine is very vigorous, making strong wood. Foliage large and healthy. Berries roundish, large, under good culture very large, sometimes an inch in diameter, bunch large and handsomely shouldered, color dark, almost black, covered with a dense blue bloom, skin thin, juice abundant, with a sweet aromatic flavor.

It ripens full one to two weeks earlier than the Isabella, is extremely hardy, and will bear neglected culture better than most other sorts.

It was first sent out at $5 per vine, afterwards at $3; it may now be obtained of most nurserymen, and the price so reduced as to be within the reach of all. Good vines may be had for 50 cents to $1 each, according to size and age, and much less by the dozen or hundred.

A. G. HANFORD.

COLUMBUS, O.

Culture of Asparagus.

MR. EDITOR:—Please give the best time to transplant Asparagus. ELLEN M. CLARK.

Scarcely any garden vegetable, whose good qualities are well established and universally recognized by those who have been accustomed to its use, is so little known to the farmers of this country, as asparagus. We have thought it well, therefore, to more than answer our correspondent's question by publishing the following directions, copied from Buist's Family Kitchen Gardener:

PROPAGATION.—Sow the seed early in spring (about a pound will be sufficient for a family) thinly, in drills, one and a half to two inches deep, and eighteen inches from row to row—in good, rich, sandy, loamy soil, well manured and prepared. Strong one-year old plants are much better for transplanting than those of even three years old, when the growth has been indifferent. Rake the ground even, and keep it free from weeds by frequent hoeing. About the first of the following November, some stable litter should be spread over the ground, to keep the roots from frost.

CULTURE.—The best ground for Asparagus is a light sandy loam, at least two feet deep. Before planting it should be dug very deep or trenched in the way we have recommended, burying in plenty of manure, as no more can be supplied after the beds are planted (unless by surface dressings). The ground can scarcely be too rich, for the sweetness and tenderness of the shoots depend on the rapidity of the growth, which is greatly promoted by the richness of the soil. A plot of ground twenty feet wide and from forty to fifty feet long will be suitable for a moderate-sized family. Over it sow from fifty to one hundred pounds of salt, incorporating it with the soil to the depth of four or five inches. The ground having been well prepared and properly leveled, divide it off into beds four feet wide, with alleys of two feet between them. The work should all be done in fine weather, about the end of March. [This for the latitude of Philadelphia; in Wisconsin the work should be done in April usually.—ED.] Drive in a strong stake at each corner, take up the plants carefully from the seed-rows with a fork, and expose them to the air as little as possible, keeping them covered during the time of planting, and not allowing the roots to get dry. Stretch a line lengthwise along the bed nine inches from the edge, and with a spade cut a small furrow, six inches deep. Having the plants ready, set a row along the trench, nine inches apart: with the crown of the roots a little below the surface, drawing a little earth upon them to fix them as placed. Having finished a row, cover them directly with the earth that has been thrown out of the furrow, raking it regularly and to an equal depth over the crown of the plants. Proceed to open a second furrow a foot from the first; plant and finish it as above, when you will have four rows to each bed. After all is planted, rake the beds lengthwise, drawing off all stones and rubbish; dress the surface neatly and evenly. Let the edges be lined out in exact order, allowing two feet to each alley. As these alleys will be of little service the first season, and no waste ground should ever be seen in a garden, dig them up and plant a row of cabbage in each. Nothing further will be required during the summer than to destroy all weeds. The following winter cover them to the depth of three or four inches with rotten manure, to keep the crowns from sun and frost; if, in the spring, the earth is found to have settled in any part, the deficiency must be made up with more mould. It is a common practice to sow radishes upon the beds, but it is an injurious one, as it robs the ground of a great portion of its nutriment, so essential to their luxuriant growth. The plants are permitted the two first years to run up to stalks, that strong crowns may be formed at their base for the future crop.

After the third year, the beds will require the following mode of treatment. From the

middle of October to the end of November give them their winter dressing, which consists in cutting down the stalks close to the ground and clearing the beds from weeds; drawing them off at the same time with a rake into the alleys, to be buried or taken to the compost heap to be mixed up with other litter and again returned to the soil. Cover the whole of the bed with two or three inches of manure; the alleys must be dug spade deep, at the same time spreading some soil over the manure on the beds, and level the whole evenly. It may be supposed that the annual dressing in this way will in a few years considerably raise the bed; but by the spring forking and raking, together with the hoeing and dressing during summer, a considerable portion of the earth is being continually drawn again into the alleys.

As soon as the frost is fairly out of the ground in the spring, loosen the surface of the beds with a fork, introducing it three or four inches into the soil, turning up the earth with care not to wound the crown of the roots.—Then make the surface of the beds even and equal, drawing off the rough earth, stones, &c. into the alleys; finish by stretching a line along the edge of the beds, and trim them off neatly with a spade. Stirring the bed in this manner enables the shoots to rise in free growth; admits the air, rain and sunshine into the ground, and encourages the roots to produce buds of a strong size. A full crop may be expected the fourth season after planting. The proper method of cutting them is to scrape a little of the earth away from each shoot; then, with a sharp pointed, long bladed knife, cut off the shoot slantingly, about three inches under the surface: taking care not to wound the younger buds that are advancing below in different stages of growth. It is in the best state for cutting when it is four inches above ground, and while the top remains close and round. The cutting should never extend beyond the middle of June.

Asparagus beds, with good culture, will continue to give bountiful crops for twelve or fifteen years. It is frequently forced on dung hot-beds, and in the hands of the initiated, with great success; but to go into the general minutiæ of forcing kitchen vegetables would take us entirely beyond our limits; a few hints however, will give an idea of the operation. Prepare a hot-bed of two lights, in the way directed for cucumbers, about two feet high at back and twenty inches in front. Cover it with four inches of soil; lay thereon roots that are at least four years old; cover them three inches with the same soil, and give the whole a copious watering. Admit air at the back by tilting the sash daily, in sunshine. In two weeks, or three at most, you may expect to be able to cut for the table. A bed of this sort will produce daily, or at least every two days, a dish for the table, and continue in bearing three or four weeks. The process may be carried to the extent of the demand. Where properly managed, it will fully compensate either as a luxury or a marketable article.

THE BEE-KEEPER.

Handling Bees.

It is of primary importance to the apiarist that he be so far familiar with the nature and habits of the bee as to enable him at all times when necessary to handle them with impunity, and without danger to himself or harm to the bees.

The question arises at once, can they be so handled? And the answer as promptly comes in the affirmative. We have knowledge of no animal so dependent upon man for its prosperity as the bee. The reason for this will appear in a subsequent article on "The wants of the Bee." Hence it was designed by the All-Wise First Cause that we should tame them and control their operations.

Within two years past a gentleman from Indiana appeared on a public occasion with a swarm of bees *in his hat*, and during the exhibition he would frequently fill his mouth with them, thereby causing some who joined the crowd of spectators while the bees were in his mouth to exclaim "The Evil One is among us!" as they saw the bees going in at a hole in the hat and coming out of the mouth, as they supposed through an opening in the crown of the head,—the idea of their passage through the head being no more marvellous than to see this irascible insect so fearlessly handled.

Many similar instances of fearless handling could be cited, but the *fact* is better known than the method by which it is accomplished.

When bees swarm they are easily hived—the operation being performed with bare hands and unprotected face. The reason is that they are gorged with honey. It is found that bees having their honey-sacks well filled will never volunteer an attack. Hence, when any operation is to be performed with them, if they be placed in this condition they are wholly under our control, and may be handled as freely as *flies*, as long as the operator avoids pinching or oth-

er offensive demonstrations toward them. Jarring the combs, rough handling, quick motions, offensive breath, are all peculiarly disagreeable to them.

The crowning instinct of the worker bee is to gather and store honey, and their attachment to their stores is stronger than their love of the young. Hence they cannot withstand the temptation to partake of liquid sweets—find them when or where they may—that they may add to their accumulating stock for a winter's use. Consequently, when seriously frightened in the hive, their stores being their first care, their honey sacks are filled at once, that they may be prepared for either emergency, of being robbed or driven from their homes. Could we gain access to our bees at all times so as readily to sprinkle sweetened water on and among them in the hive without danger of being stung, our object would be accomplished. This only the most fearless operator will do.

If the bees are confined, and a series of raps performed on the hive, they will be frightened and at once gorge themselves with honey, thus placing them in the desired condition. Or, if smoke from tobacco, a burning cloth, or punk, be blown in among them quite vigorously through the entrance and the openings at the top of the hive, the bees will be frightened thereby, and at once appropriate to themselves all they can of their stores, thus again accomplishing the desired end. This latter mode is adopted and *commonly* practiced by most apiarians.

Although this frightening process produces the desired effect for present purposes, it is the opinion of Dr. Kirtland, the celebrated scientific apiarist, that *too frequent* use of smoke causes permanent irritation among the bees, making them more quarrelsome than they would otherwise be. In an article on Bee culture, in the December No. of the FARMER, mention was made of a process for "taming and quieting" bees, recently discovered. A recent visit to Ohio convinces me that *important* results are to follow from the introduction of a *new* compound that has been successfully used the past season, not only in quieting bees, but in actually *taming* them, its effects being apparently permanent.

This compound is composed of several ingredients that can be procured at any of our larger places and at most of the country towns.

J. M. STEBBINS.

APPLETON, Jan. 10, 1863.

A Challenge to Bee-Keepers.

MR. EDITOR:—Being a Bee-keeper, and hearing a great deal about Patent hives, I wish, before purchasing any *Patents*, to become thoroughly convinced that I am to gain anything by the change from the old hive. And to test it fully, I should like to take ten of my colonies, in the old box hive, and challenge any keeper of bees, in patent hives, in this State, to produce more honey the coming season than I can. The hives to be weighed on the 20th of April, and again on the 20th of September—weighing all increase, and all box honey that shall be gathered by the ten swarms and their increase, all to be weighed on the 20th of September.

I hope you will be pleased to publish this in your next number, and that some one of the numerous Bee-keepers of Wisconsin will accept the challenge.

A BEE-KEEPER OF THE NORTHWEST.

OSHKOSH, Feb. 1, 1863.

THE POULTERER.

Poultry Against Pork.

MR. EDITOR:—A few days since some person was enquiring, through the *Herald*, into the relative profit of *hens and pigs*. I will state my experience in 1861.

I commenced the year with 15 hens and one turkey, and raised during the year 40 chickens and 28 turkeys. I kept an exact account of expenditure and income, as follows:

Dr.

To 15 hens and 1 turkey, Jan. 1, 1861	$8 50
Corn, 37 bushels at 63 cents, average price	23 31
Oats 35 cts. barley $1 45	1 80
Meal $1 50, shorts 25 cts. potatoes 62 cts	1 37
	$34 98

Cr.

By poultry sold, 351 lbs. at 13 cts	$45 63
Eggs 166 dozen at 15 2-3 cents	25 90

Hens alive 24 lbs. at 10 cts.	2 40
On hand Jan. 1 1862	11 75
	$85 38
Deduct expense	34 68
Profit	$50 70

During the spring several of the hens were engaged in hatching eggs and taking care of young, and during the summer several were killed, so that the average number of laying hens during the year was about eleven. Then 166 dozen eggs divided by 11 hens gives 15 dozen to each hen, and 15 multiplied by 15⅔ cents (average price) gives $2.35 as the produce of one hen. As to the cost of keeping hens: I gave during the winter one quart of corn per day to each eight hens; or for one hen 1½ bushel per year. This, at 63 cents per bushel, is 94 cents. This gives $1.41 as the profit on one laying hen.

During the year I had two hogs, and kept an account with them, as follows.

Dr.

To estimated value Jan. 1, 1891	$8 00
Corn 42 bushels at 63 cts. average price	26 46
Barley 3 bushels at 76 cts. average price	2 28
Turnips 20 bushels at 15 cts. per bush.	3 00
Skim milk of 2 cows 400 gallons at 4 cts.	16 00
	$55 74

Cr.

By 810 lbs. pork at 7 cts per lb	$56 70
Deduct expense	85 74
Profit	96

It will be seen that with corn at 63 cents per bushel and skim milk at 4 cents per gallon—which I take to be about its value as compared with the corn—one pound of pork will cost 6⅞ cents, while the cost of raising the poultry, according to my estimate, was 6⅝ cents.

It will be noticed that the prices of corn, eggs, poultry and pork were correspondingly low. My poultry did well, and so did my hogs—the two hogs averaging over 400 lbs. each, rather better than the average of my neighbors' hogs.

The refuse from the kitchen and dining-room of a small family has been about equally divided between hens and hogs, the meat being given exclusively to the hens. Hogs require much less care than poultry. In the winter, hens need a warm, light pen, with plenty of room. They also need a variety of food—grains, roots and meat. Oats are useful unless the hens have access to a barn floor with hay and litter. Sand, gravel, crushed bones, clam or oyster shells, and wood or coal ashes for wallowing in, should be furnished in abundance; also water—not snow nor ice—should be furnished at all times.

The same value of food fed to hens will produce more manure than if fed to hogs; but it is not so easily saved if the hens run at large, nor are they as useful as hogs in making compost.—*Cor. Newburyport Herald.*

MECHANICAL & COMMERCIAL.

Commercial Honesty.

"Commercial *honesty?* What's that?" A thing difficult to explain, since we have almost nothing with which to compare it in modern times. Commercial *dis*honesty we understand, having daily and hourly exhibitions of it on the smallest and most gigantic scale. Nay, dishonesty is no longer the word; it is *corruption*, and so let it be written and adjudged.

As a people we have long borne the character of shrewd and sharp traders, and it is this element which, perhaps, more than any other, is involved in the world's idea of Yankee character. But sharpness and shrewdness are not necessarily inconsistent with the strictest honesty and uprightness. It is only when they have cut loose from the anchor of conscience that they are liable to drift a whole people into the whirlpool of irretrievable ruin. But this is just our condition to-day—our condition as a whole people.

The spirit of speculation is rife and rampant everywhere in the land, and the frequency of the most shameless practice of fraud and rascality, even at the peril of the life of the Republic, is truly appalling. And, the worst of it is, the people laugh at it as an evidence of extra smartness, and the Government, instead of dealing with the perpetrators of these frauds with an iron hand, either permits them without rebuke, or at best deals with them most tenderly. In a word, scoundrelism is at a premium. Manufacturers, dealers, contractors, mere capitalists, and army officers are vieing with each other in the abominable work of fleecing the people and crippling the Government.

It is hardly enough to say that such men are no better than traitors in open arms against their country; and if we had the power to deal with them, their chances for plunder would be very slim after first detection. We said "no better than traitors;" they are not half as honorable, for they are working to the same end by secret theft and robbery instead of openly and bravely opposing the Government at the peril of their lives. They are the Ju-

dases of the Republic, pretending friendship but selling its life for thirty pieces of silver, and it would be a blessing to the world if they would quickly follow his worthy example after the betrayal, and give to agriculture the benefit of their bowels at the earliest possible moment.

But the theme is one upon which we are loth to dwell. If the theory of special providences be correct, God may be treading us in the wine-press of his wrath, in order to make us a better people, worthy of the free and beneficent institutions bequeathed us by our fathers. But in this event, we of the present generation may hardly expect to see the work accomplished, for it's a bigger job than even the crushing out of the slaveholders' rebellion and like it may require almost the extinction of the American race. While, on the other hand, if the doctrine be *not* true, our case is still worse, and altogether more hopeless.

What then is the remedy? It is this: Let every man of pure and patriotic intentions and aspirations, after first making sure that he stands squarely upon the line of strict integrity, frown upon, contemn, and so far as possible bring to justice and condign punishment every one who attempts to defraud the Government. The evidences are that the public conscience of no people was ever more terribly debauched, and unless good men everywhere and in all stations arouse from their sleep and like sailors in a sinking ship go to work to put a stop to the flowing tide of venality and commercial corruption, history will write us, nay, we are already, a nation doomed and deservedly damned.

Have You an Ice-House?

It can be made very cheaply, and when the luxury of ice in summer is once enjoyed, it will not be readily given up. If no better structure can be erected, build an ice-room in one corner of the wood house, or any shed where room can be spared. The northeast corner is best.

Set a row of upright posts a foot apart one foot from the inner sides of a building, and two rows of posts a foot apart for the other two sides of the room; make the enclosure say 8 or 10 feet square. Cover these with rough boards or slabs, and fill the space between with spent tan bark.

Lay down a loose floor, and cover a foot deep with straw. When ice is formed, select that which is pure, clean and hard, cut it into pieces of convenient size, and pack it closely in the room. Leave six inches space between the ice and the sides of the room, and fill this with sawdust. Also cover with sawdust a foot thick and fill up to the roof with straw. Packed in this way, ice enough to supply a family of average size has been kept safely the season through.—*Maine Farmer.*

☞ Illinois now ranks as the foremost railroad State. From the recent very exhaustive message of Governor Yates, we learn that there are three thousand miles of railroad in operation within the bounds of the State, and that within ten years the capital invested in the construction of railroads has increased from $1,440,507 to $104,944,661.

SCIENCE, ART, STATISTICS.

Have Animals Reasoning Power?

Prof. Agassiz, in a recent lecture in Boston on the "elephant," said:

"It is a favorite saying that men are governed by reason and animals by instinct; but I believe that is all wrong. There is no distinction of kind between the two, but only of degree.

"As we come to the higher animals, we find the brain larger in proportion to the size of the body. But this does not prove a different kind of activity of these parts, but only different intensity.

"Now let us see if there is any difference in the mode of action of the brains of men and animals. Every sensation, to be felt, must produce a reaction. All animals see, hear, smell and taste as well as we do; therefore the reaction must be the same, and the operation, so far as the body is concerned, is the same. Next, our perceptions influence our actions, through the operations of the mind; and in the animals the same influence upon their action is to be seen; here again is perfect similarity. Although the difference of the intensity of these actions may be great in different animals, yet the principle is the same.

"The animals gratify their appetites, and so do we, and in the same manner. For instance, everybody has seen dogs playing only for the pleasure of playing, just as men do. And what right have we to assume that the motive which influences them is not the same as that influencing us? Again, animals have memory just as we have; and they can trace the connection between cause and effect; and this is reason.

"But I will go further; only mind can communicate with mind; and if animals had no

mind we could have no intercourse with them. Animals can be trained, and this proves the existence of reason; a connection seen between cause and effect. The means of training animals are the same as those employed for training chilren; certain sounds are used as signals. This supposes a perfect logical process, tracing the sequence of effect from its cause"

FLAX COTTON.—We are very glad to see that the Senate, in its appropriations for the Agricultural Department, provided $20,000 for experiments in preparing hemp and flax as a substitute for cotton. Invention has already reached a point where it seems to be on the very verge of complete success in the manufacture of flax on cotton machinery. Our most skillful manufacturers and machinists, in this part of the country, are very sanguine in their belief that the result will be accomplished, and those who have given most attention to the subject are the men who are most sanguine. But the requisite investigations and experiments need to be conducted on a scale which requires considerable outlay. If the problem shall be solved, and the vast quantities of materials that are now absolutely thrown away shall be used upon the spindles that are now spinning cotton that costs a dollar a pound, what a blessing it will be to the West, to the East, to the whole world!

EFFECT OF SHOT ON VESSELS.—A shot does not make a hole of its own size right through the wood, but indents it, the fibres springing back after the shock. Generally the course of the shot can only be traced with a wire, sometimes by a hole as large as a man's finger. The damage most often happens on the inside of a vessel, in splintering and breaking the wood, after the main force of the shot is spent. Forts Hamilton and Richmond, which are about a mile apart, with a vessel lying between them could not with their guns send a shot through two feet of its timbers. There is rarely an instance where a ship was sunk by a solid shot. Hot shot and shell do the mischief. The latter will sometimes make apertures of several feet through the sides of vessels.

AN IMPROVEMENT IN TELEGRAPHY.—The Viscount de Vougy, director general of the electric telegraph throughout France, has invited several scientific members of the National Institute and some of the chief clerks in the telegraph department to assist at experiments about to be made with the typo-telegraph invented by the Chevalier Bonnelli. The typo-telegraph of this scientific engineer can print 500 despatches of 25 words within an hour.—According to the system of Morse now in use, it would require not less than twenty wires and 50 clerks to accomplish a similar work. Should the experiments prove satisfactory, it is said that the Government will concede to the Chevalier Bonnelli the working of the line from Paris to Lyons and Marseilles.

A LARGE PEARL.—In the "Loan Collection" recently exhibited at South Kensington, London, was a pearl which is believed to be the largest now known. Its weight is three ounces; it is two inches in length, and four and a half in circumference; its sides are nearly straight, somewhat widening toward the lower part.

THE CRIME OF MURDER.—There are four murders committed in England for every million inhabitants; 17 in Belgium; 20 in Sardinia; 31 in France; 36 in Austria; 68 in Bavaria; 45 in Lombardy; 100 in Rome; 90 in Sicily; 200 in Naples. Murder is almost unknown in the valleys of the Vaudois.

EDUCATIONAL.

From the Journal of Education.

Letters to the Governor on our Educational Wants.

SCIENTIFIC SCHOOLS.

* * * Not only are civilized and barbarous states of society distinguished from each other by the presence of science in the former, and its absence in the latter, but the extent and influence of civilization may be measured by the degree to which science takes the place of mere empirical traditional knowledge, and that scientific processes underlie merely manual skill. And in nothing is the advancement of modern civilization more unequivocally indicated than in the multiplication of institutions for the promotion of applied science.—These institutions are partly a natural outgrowth of the general progress of science; partly a result of the pressure, so to speak, of human wants—a pressure arising from the very fact of the increase of population in given districts; and partly a necessity of the restless and inquiring spirit of the human mind, in those countries and states of society where the work of progress and improvement has once fairly commenced.

In the Old World special Scientific Schools of various kinds have become so common as to form a settled and prominent part of educational and industrial effort. France is especially distinguished for the number and variety

of its special schools of science, which have been established for the promotion of almost every department of human interest and inquiry. Not only are there numerous schools of law, medicine and theology, and of the various branches of natural and mathematical science, history, literature and the fine arts, but of agriculture, mining, navigation, naval and military science, and every important branch of industry. Similar statements might be made of the provision made in some other European countries, particularly some of the German States. In this country, beyond the establishment of schools of law, medicine and divinity, very little has been done, especially on any enlarged and adequate scale. We have one military and one naval school, each on a small scale. Several States have made a beginning towards the supply of Normal or Teachers' schools; but even in these States, a very small proportion of the teachers are trained in those schools. In a few of our oldest colleges or universities, some special provision has been made for scientific instruction, and at Harvard, Yale, and Dartmouth especially, "scientific schools," so called, have been established. Two or three incomplete "polytechnic schools," as they are termed, have been established in Philadelphia and elsewhere. A few of the States have done a very little for the encouragement of agriculture; and there the enumeration of efforts in this direction must end. That we as a nation have as yet done so little in comparison with European States, is attributable, partly to our newness as a national organization; partly to our scattered population—which being about equal to that of England, is spread over more than fifty times her geographical area; partly to the peculiar "pioneer" form that much of our industry therefore necessarily assumes, leading to the investment of capital in what seem to be more immediately urgent and remunerative enterprises; but partly also because, as says Prof. Gilman, of New Haven, "there still exists a lamentable ignorance as to the extent to which special schools, and particularly schools of science are established abroad; for it can hardly be doubted," he adds, "that if a knowledge of their number, character and influence were generally diffused among the people of this country, they would provide for themselves the same means of education which despotic governments have found contributing so much to the welfare and happiness of their subjects."

The two interests which most urgently and immediately demand the establishment of special schools in our State, are AGRICULTURE and TEACHING. Of the latter I will not now speak. Of the former it is obvious to remark, that as an occupation which engages the attention and absorbs the labor of much the larger part of our population, and upon the prosperity of which, that of all other operations so directly depends, it demands in a large and liberal measure the fostering regard of Government. That something has been done, by granting for some years past, an annual appropriation to the State Agricultural Society, is true; that the greater stimulus to agricultural improvement which this Society has thereby been able to lend, by its Transactions and their publication, and by its encouragement to County organizations, has shown the pecuniary aid rendered by the State to be a wise outlay, is also true; and by all means let this aid be continued. But such an agency, however useful in its place, is not enough. It rather serves to show that agricultural progress and success are practicable, and to excite a spirit of inquiry, than to diffuse that accurate elementary instruction which lies at the foundation of any systematic and general improvement and assured success in the processes of agriculture. Intelligent farmers are not slow to see, nor to wish to appropriate, an obvious improvement. But the attempt to do so may be quite unsuccessful, because they are unable to determine the conditions of success. These may involve a knowledge of facts in regard to the constitution and condition of soils, the effect of certain manures, or of the action of certain chemical changes, to which they can lay no claim—of which they have perhaps little conception. Following merely the outward mechanical part of a process indicated, they are disheartened

by failure, and not unnaturally, fall back with more pertinacity than ever, upon the usual routine of mere traditional and empirical farming.

What is the remedy? It is obviously the dissemination of more agricultural science. This cannot be done effectually by occasional lectures, nor yet by the circulation of books or periodicals. All this may do good. But in this matter as in all others requiring the aid of science, there must be systematic training and instruction; and all experience as well as analogy, serves to show, that Agricultural Schools alone, furnished with competent professors, and provided also with the illustrative apparatus, so to speak, of a model and an experimental farm, can effectually accomplish the desired result.

There are two classes of students who might be expected to resort to an Agricultural School:—First, those who coming with the preparation of a previous liberal culture, should wish to investigate the more recondite problems of agricultural science, as well as to study its ascertained principles and applications. Such men, though they might be few in number, would go forth not only to diffuse knowledge, and to advance the interests of agriculture, but to add new dignity to the occupation. Secondly, and a more numerous class at first, would be those who, coming principally perhaps from among the sons of our more intelligent farmers, and with less of preparation, would wish to pursue a less extended and more practical course of study, but some of whom it might be presumed would go on in an individual course of study and experiment, and take rank at length among scientific agriculturists. And it is not foreign to the subject to remark, that with such an addition to the number of intelligent and opulent farmers as a well endowed and successful institution for the promotion of agriculture would give us, a class of men would grow up from whom it might be hoped would be drawn those who would contribute to secure the State in time to come from imbecile and corrupt legislation.

Before leaving this branch of the subject, it may be observed, that in connection with those needful appendages of an Agricultural School, Model and Experimental Farms, a class of more than usually skilled and intelligent laborers might be produced, some of whom at least, would afterwards contribute to the work of improvement, as farmers on their own account.

To the usual and at this time seemingly formidable objection of expense, it is sufficient to reply, that even in an economic point of view, the State can better afford to make appropriations to encourage Agriculture than she can afford to neglect it. If, as the result of a vigorous movement in this direction, and of the systematic diffusion of valuable knowledge among our farmers, by scattering among them men who should present them palpable examples of improvement—if as the result of this, I say, a bushel were in the course of ten years added to the average yield per acre of our important crops, or a dollar to the average value of our larger domestic animals; or a new impetus given to successful fruit culture, or to the practice of under-draining and deep plowing, or to the production generally by our farmers of a larger variety of crops, with less dependence upon wheat as a staple; any one of these benefits—and all of them and more might be expected—would many times over return to the State all her expenditure. The large majority of our citizens are and will be farmers; and under an enlightened and improved agricultural system, they would far more easily meet a double or quadruple burden of taxation, than they have heretofore met ordinary burdens of that nature, out of the uncertain and frequently unremunerative returns of our present short-sighted system of farming. And while it is a mere truism to say that upon nothing will the future material prosperity of the State so directly depend as upon the improvement or neglect of her agricultural capabilities, it is equally true that without great change and improvement, many a farmer will be unable to meet his liabilities, or be obliged to struggle on with embarassments that might be avoided.

I close this letter with the remark that the

recent act of Congress, making a conditional grant to each of the States for the general purpose here advocated, invests the subject with an increased interest and opens the door to an extended plan of Agricultural improvement.

CIVIS.

Thoroughness in the Common Branches.

EDITOR WISCONSIN FARMER;—Having read your valuable journal for many years, and received so much benefit therefrom, I deem it no impropriety on my part to add a few lines to its columns.

My father has for years taken the FARMER, and, by its advice and his own prudent industry, has succeeded in procuring the necessary funds to send me to the Academy.

Yet here, as in all departments of life, we are apt to witness the defects and vain ideas of far too many of the present generation. Fathers who through years of experience have witnessed the sad fate of the uneducated, send their sons here to prepare them to enter upon the duties of future life. The son, with an ambitious desire and a heart thirsting for fame, procures the books and pursues those studies which his vain imagination points out to him to be essential.

As a natural consequence he will study Greek, Latin, Astronomy, and the like, little dreaming of the vast importance of being acquainted with the common branches of literature, which in after life form the heart and sinew of our daily transactions. Years may roll by before he observes his folly, yet there will dawn a morrow when the pictures of idle fancy will prove false, and he be compelled by the light of reason to retrace his steps, and enter anew upon the common yet necessary branches of education.

How many have been led astray in this manner, and still how many more are liable to pass at least two-thirds of the very prime of their lives in learning dead languages and the like, which in after life will be of comparatively little benefit to them.

Students, you who are about to pass the threshold of youth with bare notions of life, to you I say consider well what has been said on this subject, and improve your time to the best advantage, that in after years you may reap the harvest of your present industry.

S.

MILTON, Jan. 15, 1863.

TRUE CULTURE.—Alas! how many examples are now present to memory of young men the most anxiously and expensively be-school-mastered, be-tutored, be-lectured, anything but *educated*; who have received arms and ammunition, instead of skill, strength and courage; varnished, rather than polished; perilously over-civilized, and most pitably uncultivated! and all from inattention to the method dictated by Nature itself—to the simple truth that as the forms in all organized existence, so must all true and living knowledge proceed from within; that it may be trained, supported, fed, excited, but can never be infused or impressed.—*Coleridge.*

☞ Teach the ignorant as much as you can; society is culpable for not providing instruction for all, and it must answer for the sight it produces. If the soul is left in darkness, sins will be committed. The guilty one is not he who commits the sin, but he who causes or permits the darkness.

THE HOME.

Mrs. Hoyt in the Home Circle Again.

I wonder how it would seem to find myself in the Home Circle again—to talk, tell stories, and sing as of old! I wonder too, if there are not some I would find there who would be glad to meet me once more, even if I could not take my accustomed part in the entertainment.

I will believe this, and as the veriest delinquent make sure of the corner into which I slide by giving a little account of myself. You may call it apology, explanation, or a poor attempt at either, as pleases you best.

But you do not all look natural. Either I do not see very well, or some of the faces are new, while I miss familiar ones. True to the sage remark that a great man once made of woman, I think of three reasons why this should be so; and unlike some women, I think I can make them appear. It is a good while since I have seen many of you; then I never [illegible] very clearly when I did; and the cir-

cumstances of this almost entire year of absence have been such as to disturb, if not quite break up, the unity of things both small and great.

Almost a year! it is longer, since I have more than just spoken with you. Was I gone so long? Only eight months, reckoned by the calendar. But the darkness in which I sat previous to this lengthens out the time-keeping of my thought vastly. To those of you who have not experienced it, there is a difference you are not prepared to be good judges of, between seeing people a little through your fingers' ends, and in broad daylight with two good eyes. Have I had but one? My dear, I haven't had any. I suppose it will be easier for me to state than for you to realize, that with little to boast of before, for a year and a half, ere I dropped so almost entirely out of your circle, I read not one line, saw not the glory of the sun, or the budding of a leaf, and not very distinctly anything between these—not even the Old Flag, which meantime was being spit upon and buried. But I used to write a little still, sometimes? Certainly, feeling my way along the page with undotted i's and uncrossed t's whenever I made my way, thus dimly, to your precincts. Am I complaining? Not at all. I was as happy as any of you, happier, perhaps; only defrauded of accomplishing all that it was in my heart to do. Those who expect to live in this world and suffer no loss are born too soon, not by being born into this age, but by being born at all. How could I be very happy under such circumstances? For the reason that long ago, in the aforetime of my earliest experiences of life, I had made up my mind that I *would* be. This *willing*, and then holding it fast as pure WILL, has more than some folks have found out to do with the result we all seek, and in whatever form grasped, call by the common name, happiness.

Is my sight better now? Very much, and though not as strong and clear as yours, it is yet quite serviceable for many of the needs of hand and brain. How came this about? It's too long to tell. But being humane, and because I have a special interest in eyes that have need of healing, I will say that of the hosts of oculists who *try*, I know of one who *cures*. If you need to know more, ask and I will answer.

This occupied the first months of my absence from home, during which time, from the severest of necessities, only scraps of incident and song came back to you. But when in June, beautiful June, I opened my new eyes and turned my steps to Virginia, it was with a thrill of positive delight that I thought of how easily I could now report myself, and how glad you would be to hear from that land so full of old and new interest. A few days of rest; a few more days of planning how best to make much of the opportunities thus thrown in my way, a few weeks (less than three) of rambling, riding, climbing and observing, then the catastrophe of which you have long ago had particulars.

As I remarked about the eyes, those of you who have not had the experience needn't set yourselves up as judges of the effect of bringing one's head, somewhat more suddenly than in the nature of things has been contemplated, into juxtaposition with a bit of rock. That's all. It doesn't take a moment. It's such a little thing, how could it? Then if you only get up and say, "Now, Billy, that was hardly fair; I expected better things of you!" so smooth your dress, grasp your bridle, and taking your seat, take also, good-naturedly, the laughing rally of your companions and go right along, why, it is but the incident of the morning.

But if you don't get up. That's it. If you *don't* get up! The difference between these is that of everything and nothing. In the first instance you have behind you all the past, clear as a sunbeam; before you all the future, a little clearer, so believed in, that it seems more real than the other. Between these there lies a golden morning, the best of company and the paraphernalia of a certain pomp that accords so well with the majesty of the hills, the forests, the heavens, and the water-falls; add-

ed to which is the very complacent reflection that it was a fine thing you decided to take this journey, and especially fine that you had the good sense to choose a seat on the back of this loyal steed rather than in that slow old ambulance. In the second, there is no past, no future; no glorious morning stretching away over the magnificence of nature; neither country, war, friends, husband nor heaven; not even Billy and the me who, in the other case, so enthusiastically contemplated all these things. There is only a blank, in which not even darkness and pain are fairly recognized and, after a time, the vaguest of all vague phantasms gliding above and around the me that is not me. Of such days and nights words give no knowledge. Then when me is me, and husband is husband, and three thousand miles between; when country is country, and a war between, and death, ah! there is nothing between this and that save that death is still and life is not. You think of it; yes, that is it. Death is still. You are very sure you will never want to be anything but still.

Weeks after, there goes pealing through your brain something that sounds like Harmony of the Universe. No, it didn't sound at all. You only thought of an old book that stood, years ago, on a shelf, and this was the title you chanced to read, that sometime you happened to see it in that dim somewhere. The barest of a bare scrap of an idea floats in, asking by what association this old book, title, sometime, somewhere, come to you just now. There it is again; the concussion of brain and rock; for it is all one, this idea coming to you as veritable an assailant as if it were a sixty-four pounder—bang! Harmony indeed! In your chamber noiseless as the grave there is the turmoil of all time's great campaigns. You close your eyes and shudder as you reflect, or think you do, that you will never be well, or husband get safely home, or the war gloriously ended until people learn that the only way of attaining these, as of all desirable ends, is to keep very still.

This occupied the next three months of the time in which I was to have talked, seen, and written so much. About that time I thought of saying "Oh dear!" Happily, I reflected thus: "What good will it do?" so concluded to say, "What next?" Of this, hereafter.

"All's Well that Ends Well."

A friend of mine was married to a scold—
To me he came, and all his troubles told:
Says he, 'She's like a woman raving mad!'
'Alas!' said I, 'my friend, that's very bad.'
'No, not so bad,' said he, for with her, true,
I had both house and land, and money, too.'
'That was well,' said I.
'No, not so well,' said he;
'For I and her own brother
Went to law with one another.
I was cast, the suit was lost;
And every penny went to pay the cost.'
'That was bad,' said I.
'No, not so bad,' said he;
'For we agreed that he the house should keep,
And give to me fourscore of Yorkshire sheep—
All fat and fair and fine they were to be.'
'Well, then,' said I, 'sure, that was well for thee.'
'No, not so well,' said he;
'For when the sheep I got,
They every one died and were not.'
'That was bad,' said I.
'No, not so bad,' said he;
'For I had thought to scrape the fat,
And keep it in an open vat,
Then into tallow melt for winter's store.'
'Why, then,' said I, 'that's better than before.'
'No not so well,' said he;
'For having got a clumsy fellow
To scrape the fat, and make the tallow,
Into the melting fat the fire catches,
And, like brimstone matches,
Burnt my house to ashes!'
'That was bad,' said I.
'No, not so bad,' said he,
'For what is best,
My scolding wife is gone among the rest!'

☞ We should not forsake a good work because it does not advance with a rapid step.—Faith in virtue, truth, and Almighty goodness, will save us alike from rashness and despair.

☞ Cato said "he would rather people should inquire why he had not a statue erected to his memory, than why he had."

☞ Do not all that you can do; spend not all that you have; believe not all that you hear; and tell not all that you know.

☞ A word fitly spoken or written will often prove as a nail in a sure place.

☞ Counsel that favors our desires needs careful watching.

A Noble Sentiment.—If we work upon brass, time will efface it; if we rear temples, they will crumble into dust; but if we work upon immortal minds, if we imbue them with principles, with the just fear of God and our fellow men, we engrave on those tables something that will brighten through all eternity.—*Daniel Webster.*

Now and Then.

We had but a humble home,
With few and simple joys,
But my father's step was proud and firm,
And my brothers were laughing boys.

We have much that we longed for then,
Our hearth is broad and bright;
But my brothers now are saddened men,
And my father's hair is white.

—*Phoebe Cary.*

DOMESTIC ECONOMY.

A Recipe that Everybody should Have.

EDITOR WISCONSIN FARMER:—In compliance with your request, I herewith furnish for yourr eaders a recipe for making what is known as

"MOUNTAIN CAKE."

One pound of flour, one pound of sugar, one-half pound of butter, six eggs, one cup of sweet milk, one teaspoonful of cream-of-tartar, one-half teaspoonful of soda. Flavor with vanilla. Bake in four pans, and while a little warm, put the several cakes together as you would jelly cake, but with frosting.

Mrs. BRAD.

MADISON, Feb, 1863.

NOTE.—We have been favored with the frequent opportunity of testing the value of the above recipe, and the author will pardon us for thus publicly stating it as our opinion, that no better cake was ever made in America, or any where else.

TO COOK EGGS.—One way to cook eggs says a writer, is to drop them into boiling water, and let them remain there three minutes—the water all the time boiling. This hardens the white next the shell to almost leathergy toughness, while within it is still not cooked. Another and preferable mode is, to pour boiling water upon the eggs; let them stand in this five minutes; pour off this and add more boiling water and immediately bring them to the table in the water. Those taken out at once will be somewhat cooked through; and those left in five minutes will be "hard boiled," or nearly so, and thus the taste of every one may be suited and no toughness of the whites be observed."

TO BROIL MUTTON CHOPS.—Mutton-chops should not be broiled on to fierce a fire, otherwise the fat will cause the fire to flare, and the chops will be smoked and blackened. Pepper them the same as beefsteaks, but unlike those, mutton chops require constant turning. They should not be overdone. When they are done enough, lay them in a hot dish and sprinkle them with salt; they require no butter, the chops being sufficiently fat.

TO BROIL HAM.—Cut the ham about the third of an inch thick, and broil it very quickly over a brisk fire; lay it on a hot dish, pepper it, and put on it a little butter.

TO BROIL PORK CHOPS.—These should not be cut quite so thick as mutton-chops, and require more dressing; turn them frequently, and make them a nice light brown.

HEALTH AND DISEASE.

Dangers of Exposing the Limbs.

A distinguished physician, who died some years since in Paris, declared, "I believe that during the twenty-six years I have practiced my profession in this city, twenty thousand children have been carried to the cemeteries, a sacrifice to the absurd custom of exposing their arms naked." I have often thought if a mother were anxious to show the soft white skin of her baby, and would cut a round hole in the little thing's dress, just over the heart, and then carry it about for observation by the company, it would do very little harm. But to expose the baby's arms, members so far removed from the heart, and with such feeble circulation at best, is a most pernicious practice.—Put the bulb of a thermometer in a baby's mouth, and the mercury rises to 90 degrees.—Now carry the same to its little hand; if the arms be bare, and the evening cool, the mercury will sink to 40 degrees. Of course all the blood which flows through those arms, must fall to within 30 or 40 degrees below the temperature of the heart. Need I say, when these currents of blood flow back into the chest, the child's general vitality must be more or less compromised? And need I add that we ought not to be surprised at its frequent recurring affections of the tongue, throat, or stomach? I have seen more than one child with habitual cough and hoarseness, or choking with mucus, entirely or permanently relieved by simply keeping its arms and hands warm. Every observing and progressive physician has daily opportunity to witness the same cure.

A Wash for the Face.

A few years since a learned chemist and physician gave me a recipe for making a harmless, useful and cheap wash for the skin. As the March winds prevail, many fair daughters may be pleased to make so desirable an addition to their toilet.

A piece of gum tolu the size of a walnut, thrown into a wash bowl of soft water, half an hour before using, will soften the skin, and, after a few applications, will remove, to a great extent, tan, freckles and roughness.

The tolu imparts to the water an agreeable aromatic odor. Ten cents worth of this, with a cake of fine soap freely used, will be more effectual in beautifying a young lady's complexion than many costly and injurious cosmetics.

The tolu may be kept in a china cup, and when used, the cup can be placed in the bowl of water, thus avoiding the trouble of removing the gum.—*June Isle, in Prairie Farmer.*

YOUTH'S CORNER.

Wonders of the Sea.

All the children who read "About Icebergs" in the last number of the FARMER, have, no doubt, given them a prominent place among the wonders of the sea, and we have heard of a number of wide-awake little fellows who did wish they could just see one monstrous big ice-mountain away out upon the ocean.

Well, the Editor wishes it too, and is very sorry that all the little boys and girls who belong to the "Corner" family could not have been with him in the ship "Niagara" on the 21st of April last, away out on the wild Atlantic.

The 20th had been a cloudy and rather threatening day, and at night we learned from the First Officer that we were getting into the region of icebergs—"grand old fellows, but a little dangerous in a dark night!"

We accordingly sat up as long as we could be comfortable on deck, and at last retired to dream of shipwrecks and ruin. Providence dealt kindly with us, however, and the old Niagara bore us safely through all the perils of the night. At daybreak we were on deck again, watching for ships and icy monsters of the polar zone, when suddenly, on the larboard side, (the left as you look towards the prow), we heard the cry, "An iceberg! an iceberg!" Quick were our feet in responding to the cry, and in a moment we, too, were leaning against the railing of the deck and wondering and exclaiming with the rest.

We shall never forget how we were impressed with the serene majesty and jewelled glory of that first mountain of crystal as silently, slowly, yet grandly and mightily it floated southward on the bosom of the great ocean—at first in the early morning reflecting a soft and mellow light as of an opal, through the surrounding mist, and then, at the rising of the sun, glittering and flashing like a mountain of diamond.

It was not a berg of the largest size, and yet if it had stood upon dry land would not have been less than a thousand feet high. In form it was one of the finest ever seen on the ocean; consisting of three distinct peaks, each round and sharp. As said before, it was about five miles away, and it made the atmosphere so cold that we were compelled to wrap our coats and blankets close about us to keep from freezing. To have encountered the monster by day or night would have been sure destruction in a moment; but at our respectful distance we could gaze and wonder in safety. Many of the ships which go out on their voyages and neither ever return nor are heard of any more are supposed to have run against these vast masses of ice and to have gone down in the deep cold sea.

On our return, in the warm and sunny weather of early autumn, we had a fine view of another iceberg—his majesty having made his way as far south as the 44th parallel, in spite of the melting rays of the sun. This berg was some six or seven hundred feet thick and would probably have covered your father's farm over, could it have been taken up and set down upon it. Then there would have been a chance to slide down hill in a hurry! But only think of the cold fingers and the danger you would be in of having your heads smashed into jelly at the first grand dash! Think, too, of the multitude of cold brooks that would flow from his base from summer to summer, until he would be all changed to water and find his way to the ocean again!

In the next number we shall tell you something about a few of the animals that live in the sea, especially about some whales and sharks we saw and tried to capture.

Magic Music.

This is the name given to a most interesting and amusing modification of the old fashioned play, known as, *hot boiled beans and very good butter*. We were at an elegant party a few evenings since, when it was engaged in with great zeal by a large company of married ladies and gentlemen, including wise lawyers, doctors and judges. The game is played in the following manner:

"A player is sent out of the room, as heretofore; but instead of hiding a bean for him to find, the company think of a task to be performed by him. This task may be anything: to untie a ribbon, to sing a song, to displace all manner of articles of furniture—the more fantastic and out of the way, the better.—When they have decided what it is to be, the patient is summoned in, and has to set to work to discern and perform the work allotted to him. Instead of the *hot* and *cold* regulation, he is guided in his experiments by the sounds of a piano or other musical instrument, played softly, or the reverse, in proportion to his success, or the want of it.

Those who have never played at this game, can have no idea of the interest attached to it. The tasks that may be divined and accomplished, with no other clue than the threatening or encouraging tones of the music, would appear incredible. The complete bewilderment of the *guesser*, on first entering the room, as to what he is to do; his numerous experiments, all wide of the mark; his first catching at a hint, and gradually following of it up, with various intervening discouragements, till he has fulfilled his mission (as a player of ordinary intelligence usually does) furnish entertainment of a by no means unelevated description.

Forfeits may be exacted in case of non-success. Their assistance, however, is not required to make the game interesting."

Plays like this, which test and discipline your minds while they at the same time afford amusement, are much better than such games as "Button, button," "Blind man's buff," and others of this class which are merely funny.

WAR MISCELLANY.

Shakespeare on the Military Situation.

Is there any conceivable situation of human affairs, whether belonging to public or private life, which Shakespeare has not described? How apt to our own times, and the recent debatings in Congress and the press, is the following extract from the first scene in the first act of the first part of his "King Henry VI.:"

Messenger.—My honorable lords, health to you all!
Sad tidings bring I to you out of France,
Of loss, of slaughter, and discomfiture.
Guienne, Champaigne, Rheims, Orleans,
Paris, Guysors, Poictiers, all are quite lost.
Duke of Bedford.—What say'st thou, man, before dead Henry's corse?
Speak softly; or the loss of those great towns
Will make him burst his lead, and rise from death.
Duke of Gloster.—Is Paris lost? Is Rouen yielded up?
If Henry were recalled to life again.
These news would cause him once more yield the ghost.
Duke of Exeter.—How were they lost? What treachery was used?
Messenger.—No treachery; bu want of men and and money,
Among the soldiers this is muttered—
That here you maintain several factions;
And, whilst a field should be dispatched and fought,
You are disputing of your generals.
One would have ling'ring wars, with little cost;
Another would fly swift, but wanteth wings;
A third man thinks, without expense at all.
By guileful fair words peace may be obtained
Awake, awake, English nobility!
Let not sloth dim your honors, new begot:
Cropp'd are the flower-de-luces in your arms;
Of England's coat one half is cut away

Napoleon's Art of War.

Bonaparte recast the art of war. He made no secret of his system. Many of the details of it were set forth at the outset of his career. His pamphlet, styled "The Supper of Beaucaire," was published shortly after the capture of Toulon. In that little work, whilst striving to prove that the armies of the republic must triumph against their enemies, foreign and domestic, he explains how it should be brought about; fortified places were to be masked, not besieged; guns of heavy calibre were to be laid aside, and eight and four pounders were to be used in their stead; marches were to be

performed without baggage, which the Romans so appropriately styled *impedimenta;* masses were to be concentrated upon a given point. All this he himself faithfully put in practice afterwards. And for the glory of the Italian army and his own, he could add, as an historian,, Soldiers, you have made forced marches without shoes, you have bivouacked without brands, you have fought without bread. Again, in one of his newspaper contributions in defence of the first Italian campaign, he hesitates not to reduce his system to an abstract principle for the benefit of all who can avail themselves of it. He declares, "the art of war consists in having, with an inferior army, a force always greater than the enemy's on the point to be attacked, or on the point which is attacked."

A Kind Hearted Admiral.

Lord Nelson, when forced to see men whipped on board his ship, ascended to the deck precipitately, read rapidly and in an agitated voice, the rules of the service, and then cried, "Boatswain, do your duty." Often the man about to be flogged, cried—"Pardon, admiral, pardon!" Lord Nelson would then look round at his officers: all keeping silence, he would say, "What! not one of you, gentlemen, not one of you has pity upon that man or upon my sufferings? untie the man;" then he added, "my brave fellow, on the day of battle remember me!" It was very rare that the sailor thus rescued by his admiral did not distinguish himself at a later period.

One day a man was going to be whipped. It was a marine. A beautiful young girl sprang through the crowd of soldiers; she fell on her knees before Nelson and seized his hand. "Pardon, your honor," said she, "pardon, he will never be guilty again!" "Your face," said the admiral, "answers for his future good conduct. Untie that man; he who has such a beautiful creature as this for his friend, cannot be a bad man." This marine became a lieutenant.

NEWS SUMMARY.

STATE MATTERS.

State Fairs have been determined upon by Iowa, Illinois, Indiana and Ohio. New York will hold one of course. Hope the rebellion may be so nearly squelched by the coming of autumn as to render all such exhibitions a certain success.

Wisconsin will hold one, also, should the spring and summer open favorably. The Premium List is already printed and will be thrown out in time to insure the largest results should it be thought best to hold an exhibition.

Legislative.—But little of great importance has yet been done by the Legislature at the present session. Several important matters are pending, however; among them a bill introduced as we are informed by a Mr. Bates, of Rock Co., to repeal the law appropriating $100, to each of the Co. Ag. Societies of the State. Who this blind man is we are unable to say, except that he is the individual who has made it his hobby for several sessions to cut off the hand that feeds him. If Rock Co., has any claim to the tender mercies of the State we trust he will be permitted to enjoy the needed hospitalities of his former fellow citizen, Dr. Clement.

Judicial.—The Democratic State Convention held in this city Feb. 26th, nominated Hon. M. M. Cothren, of Minreal Point, as candidate for Chief Justice in place of Justice Dixon whose term of office soon expires.

The Republican party have made no nomination, but have signified their desire for the re-election of Judge Dixon.

NATIONAL AFFAIRS.

The war has stood still since the date of our last issue.—Congress has passed the Conscription Act, authorizing the President to call into the service of the country by draft all persons capable of bearing arms between the ages of 18 and 45 without regard to rank, profession, color, or any other circumstance.

It is also understood that Mr. Chase's policy in relation to the finances of the country has been adopted and made effective by law. In the next number we shall give a synopsis of both these acts.

FOREIGN NEWS.

England is opening her eyes, and sympathy for the cause of the Union has been warmly expressed through immense gatherings of the people in London and several other cities. Any unwarrantable interference on the part of John Bull may now be considered quite out of the question.

Napoleon seems a little disgusted (so report says) that England could not be induced to join him in attempts to mediate between this Government and the Rebellion.

The Prize Maps.—To those who are yet unsupplied with Maps we would say, that about six weeks since we ordered another large lot of Maps from New York, sending draft for full amount, so as to secure a prompt return. The delay in sending them to our subscribers may be explained by the following extract from a letter just received from the publisher:

"We fill your order except the Maps of the Southern States. We are entirely out of these at present, but have a new edition on press, which will be ready in ten or fifteen days.—We send the others so as not to delay you.

Would have sent sooner, but we were *burned out* a day or two after receiving your order.—We are now in operation again and there shall be no more delays." TRULY,

N. Y. Feb. 17. J. T. LLOYD.

We hope that this explanation will be satisfactory, and shall immediately forward the said Maps on receipt of them.

We shall continue our offer of Maps for a month longer. Let every friend of the FARMER consider himself authorized to get us 100 subscribers.

EDITORIAL MISCELLANY.

Editorial Notes of European Travel

—*Down the Rhone to Lake Geneva.*—VILLENEUVE, May 31st, 1862.—The gendarme at Fort du Triente, on the top of the mountain, had, at the same time, lied and told me the truth, for, at an ordinary and easy pace, it *would* have been three hours down to the town of Martigny; though stimulated, as I was, by a strong desire to take the train, the occasional puffing of whose locomotive I could distinctly hear, the descent was accomplished in an hour and a half. But such rolling and tumbling over the small boulders, which filled the steep mule-path the greater part of the way, were probably never before witnessed by the simple and astonished Swiss cottagers whose huts dot the slopes of the mountain.

I said *slope*, but this does not give the true idea; it *is* a slope and yet it is shut in on either side by cloud-piercing peaks. In a word, it is a narrow, trough-like valley, some twenty to thirty rods wide, pitching precipitously toward the deep, broad valley of the Rhone, below. The surface, however, has none of the roughness and ruggedness of the gorge, but is uniform and smooth, as though the Almighty, with a sharp mammoth gouge, had but recently scooped out a portion of the mountain from top to bottom and then promptly covered the inclining hollow with crops of grass and grain.

At one o'clock, leg-weary and hungry, I entered the hot and dusty streets of Martigny, bathed, dined, and, through the beautifully shaded avenue which connects the old and the new town, made my way to the R. R. depot, reaching it just in time to get my ticket and take the train.

A sharp shrill scream of the locomotive and we are out of sight of Martigny, and the long train, like a swift fiery serpent, is winding its way through the narrow and beautiful valley of the upper Rhone—now so close to the mountain, on the side where I sit, that nothing is visible but his rocky ribs—now farther away, so that I may glance upward to his towering peaks, and at the same moment enjoy the charming landscape and the beautiful water of the incomparable river. But I think less of all these than I otherwise would, because at Martigny I was not far from Mt. Cenis, the Pass of the Splugen, where Napoleon crossed with his army, and the border of sunny Italy, all of which are now behind me, and may never greet my wonder-loving eye. But rally, O weary, dreaming traveler! there are yet other years for thee in the future, and not only Italy, but Greece, and Egypt, and Holy Land, and grand old Russia, and many other countries shall yet be thine to enjoy!

Stop! another scream of the whistle—another village in sight—'tis Villeneuve! Sixty miles in so short a time? Verily these Swiss engines are not so slow, after all. I had thought to stop at Montreux, a league further on, but the sight of this pleasant little village and of beautiful Lake Leman (Geneva) so charms me that I cannot go on. Am out of the car in a jiffy, make for the gate, and show my ticket. "*Votre billet c'est a Montreux, Monsieur!*" I know my ticket is to Montreux, but I shall stop here. I deliver it up, enquire for the Hotel de Byron, and slowly wend my way thither. It is quite a little walk to the foot of the mountain, where it lies nestled amid shrubbery and flowers in the suburbs of the village, and I may sit down on this bridge and view the scenery, which for grandeur and beauty combined excels anything I have yet seen in Europe.

I enter the charming and ample grounds which surround the hotel that bears the name of the "noble poet." It is a beautiful

freestone mansion, with iron verandas, all covered over with climbing roses—the most delightful and inviting traveler's rest my weary feet have ever entered. I secure a large, handsome room, fronting the lake, enjoy a nice cold bath, and lie down to rest. My dreams shall be of the Alps and of Eden.

The call to supper startles me from sleep, and the gathering shadows of evening tell me how near I came to losing the glory of a sunset such as it may never be my good fortune to witness again. Possibly the few hours of sweet slumber from which I have just come, as from a life in elysium, may have so mellowed the senses and clarified the windows of the soul that I see nature as otherwise it could never be seen. Grant it; but is it not thus and thus only that we see nature as it is and as God sees it? Is not the eye of man ordinarily blind to that indescribable, all-pervading beauty with which God has so filled and clothed his nature here and everywhere in the universe.

I am seated by the window through which trailing vines and fragrant roses peep into my chamber, the air has been cooled and purified by the gentle shower of rain just fallen, and with head reclining against the casement, I look out with a delicious dreaminess upon the unrivalled scene.

At my left, in the beautiful valley through which flows the heaven-blue Rhone, lies the little town of Villeneuve, on the right, the villages of Montreux, Vevay and Morges, backed by far-reaching, terraced vineyards on the slope of the mountains. Before me is blue and placid Lake Leman, its deep waters girt in by the snow-clad Alps on the left and majestic Jura on the right, as a crystal mirror is bordered round with massive frame of bronze, nay, of gold, for the sun, just going down behind the Jura pours a flood of light all over the scene, crimsoning the water and covering the mountains with a flood of golden light.—Upon the bosom of the lake a fleet of

"White sails go skimming down,"

each making its goal the Isle de Byron, which seems to float therein as an emerald might float in molten silver; and then, almost at my feet—its ancient walls still, as of old, by Leman's waters blue—the old Prison of Chillon, so famed in the early times of Switzerland and evermore immortalized by that touching, matchless poem of the gifted Lord Byron.

The imagination could hardly conceive of a picture more grand and beautiful, or fraught with deeper historic interest. Oh, if I could only put it upon canvass as God is now engraving it for me on the tablet of memory!

There! the glory-beaming face of the sun is seen no more, and soon his fading beams that still linger upon the icy summit of the Alps will also have disappeared. How brimming full has been this wonder-crowded day of the convincing proofs of the Beauty and Power of the Infinite! Soul and self of the worshipper, too, are brimming with a new, extatic sense of His immeasurable Love, and as the shades of evening deepen I seem to myself half conscious that I am quietly passing with the day into the realm of glorious dreams.

Sheep and the Dog Law.—You very justly urge the importance of the farmers of Wisconsin giving more attention to sheep husbandry. I, too, appreciate the importance of this branch of farming, and for years have been doing my best to raise sheep, but like many of my neighbors am almost discouraged by the frequent depredations of miserable dogs.

Will our legislators never open their eyes to the importance of wool-growing, and the necessity which exists for a law sufficiently rigid to insure the protection of sheep? No matter what the price of wool, or how great, in other respects, the advantages of sheep husbandry in itself considered; unless the farmer can have some security that his flock will not be destroyed in a single night—as has happened in many instances within the past year—he cannot be expected to engage in the business.

The law of 1860 is of no value because it is impossible to get it enforced. Legislators of Wisconsin, if you would act for the interests of your constituents and of the State, have the goodness to give less time to Buncombe resolu-

tions and more to those great matters on which the prosperity of Wisconsin so depends.

DANIEL ARCHER.

SPRINGFIELD, Wis.

Life Insurance.—*A Sound and Reliable Home Company.*—The subject of Life Insurance is now attracting a large share of public attention, and we think not without justice, as in the workings of the system upon which most Life Insurance Companies are based, is a sure means of providing for our families and others dependent upon us, a fund that will guarantee them against want in the event of their natural protector being taken from them by death. In this connection we take pleasure in noting the workings of the Mutual Life Insurance Co. of Wisconsin—a Company indigenous to our own soil, which seems indeed to have proven a splendid success, and is rapidly assuming proportions as a Company which will attract the attention of older communities than our own. Its officers and trustees are selected from among and by the policy holders annually. Thus the management of the Company is in the hands of the insured, which seems to be the true basis of management of so great a trust. The following is a list of the Trustees and Officers of the Company for the present year, among whom we notice names of some of our best business men in the State—and they are as trustworthy and capable as an equal number of gentlemen in any State:

BOARD OF TRUSTEES.—Lester Sexton, H. L. Palmer, Dr. Geo. B. Miner, James Bonnell, Daniel Newhall, H. A. Nichols, M. S. Scott, J. H. Van Dyke, C. D. Nash, John A. Dutcher, Chas. F. Ilsley, John Rice, A. C. Wilmanns, O. Alexander, S. S. Daggett, Geo. Bremer, Dr. E. B. Wolcott, Dr. M. C. Darling, S. D. Hastings, Sam'l Marshall, Simeon Mills, Dr. James Cody, Anson P. Waterman, J. Case, Amasa Cobb, A. B. Alden, John S. Rockwell, John T. Hemphill, J. A. Bingham, John Lawler, Seth Doan, I. M. Bennett, J. G. Thorp, G. W. Mitchell, John H. Rountree, Henry S. Baird.

C. D. Nash, Treas: Dr. E. B. Wolcott, Vice-Pres. and Consulting Physician: H. L. Palmer, James Bonnell, Chas. F. Ilsley, Executive Committee: A. W. Kellogg, Sec'y: H. G. Wilson, Gen. Agent.

A Patriot Departed.

How true it is that the war, now raging, has left its dark shadow upon almost every hearth-stone in the land. Just as we are going to press, comes the intelligence of the death of the aged father of Mrs. Hoyt, John Sampson, late of the army of Kanzas. Mr. S. was a native of Mass., but in early manhood brought his family to Athens, Ohio, where he lived until the spring of 1860, when he removed to Bourbon county, Kanzas. It was here that the war found him, and though a feeble old man of 70 years, no argument could induce him to withhold from his country what of strength and days yet remained to him. He went into the three months service, as a private in the cavalry attached to the 2d Kanzas Regiment, and bore himself bravely through the fortunes of that early western campaign, and was a part of that grand rally and charge, at Springfield, where the gallant Lyon fell. Here, as always, in whatever cause he engaged, he was a most worthy incentive and example to younger men. He afterwards entered the army for the war, where death would no doubt have found him, faithful at his post, had not the failing health of his wife determined him to spend the winter with his children in Western Virginia.—There he sleeps in peace, making sacred, by the memory of his long life of integrity and usefulness, thus much of the soil which may the coming years make sacred indeed to the cause of truth.

Cordial and Neat Welcome.—I am glad to realize that our old friend the Dr. is at his home duties again, refreshed and invigorated by the relaxation and pleasurable excitement of foreign travel and sojourn; may he long experience the benefit of it. The assurance of Mrs. Hoyt's returning health, is very gratifying to us and our wish is that she may soon be enabled to resume all her duties, and thus experience the joy of those who labor in love for those about them. May your whole Corps Editorial and publishing, enjoy abundant success in all your efforts to advance the interests to which your talents and energies are devoted and a substantial appreciation of your exertions by all interested! Notwithstanding these times of war, inducing commercial and financial pressure all over our land and in fact all over the business world, we entertain the hope, and heartily express to you the wish that your "shadow many *never be less!*"

E. M. DANFORTH.

SUMMIT, Jan. 1863.

NOTICES OF NEW ADVERTISEMENTS.

Attention is called to the new advertisement of the Dodge Co, Mutual Fire Insurance Co. Of the principle upon which this and other mutual companies are based we can add nothing to what has already been said. It simply remains for us to say in this connection, that the company above named is one of the soundest in the country—taking no risks except upon country property or buildings far removed from each other, always promptly paying for all losses, and, in all respects, so far as we have been able to learn, conducting its business in a prudent and honorable manner. The report for 1862 shows the company to be in an excellent condition, and a personal acquaintance wtih some of the principal officers and directors induces the belief that this condition will continue so long as they have its affairs in charge.

The Madison Seed Store and Grocery is doing a fine business this spring in every department. The proprietors seem determined to deserve a universal patronage, and we have no doubt their commendable efforts will be largely rewarded.

The White Willow advertised by J. C. Plumb, is believed to be the genuine article, and as he offers the cutlings at but little more than half the price at which orders are taken by most of the traveling agents, purchasers in this State will of course find it to their interest to buy of him in preference.

The list of Agricultural works advertised in last and present numbers of FARMER is that from which we propose to supply our working friends with *prizes*. It embraces many books of great value and it is hoped that we shall have the opportunity to award large numbers to our agents. See advertisement and again look at the Prize list in Prospectus.

Madam Demorest's Sewing Machine has not yet been fairly tested by us; though one of them is in the hands of an ingenious lady whose verdict shall be published in next number. It should be understood at the outset that it is capable of making but one stitch—the running.

Mr. I. Gould, Nurseryman of Beaver Dam, whose stock is advertised in this number, has the reputation of being a careful and skilful cultivator, and on the endorsement of those who have dealt with him we have no hesitation in re-endorsing him to the public. His Descriptive Catalogue will be sent to any who desire it.

Comstock's Rotary Spader, advertised by Comstock & Gliddon, should have been illustrated in this number, but the cuts were delayed somewhere on their way from New York and have not reached us yet. The *Scientific American*, the best judge of implements and machinery in general, gives it a prominent place among the inventions designed for preparing the soil for seed, and we are ourself quite sanguine that it will, for soils favorable to its use, eventually supercede the plow. In the next number look out for the "Spader."

Twenty-acre farms near Philadelphia—See the advertisement of Chas E. Landis.

Garden seeds, Farm and Garden implements for sale by John Vanderbilt, New York.

See advertisement of Pittsburgh, Fort Wayne & Chicago R. R. This is one of the finest railways in the U. S. and we are glad to know that it is doing a fine business. The best route to northern Ohio, Philadelphia or Washington.

Milwaukee & Chicago R. R.—A good road and well conducted—officers and conductors generous and obliging.—See advertisement.

Racine & Mississippi R. R.—completed to the Mississippi river and in good condition throughout.

C. Raoux, of New York, offers Nursery stock.

Thos. Hislop of Milwaukee, keeps a fine stock of farm, garden and flower seeds. He is an enterprising and fair dealer and enjoys a large patronage,

J. F. Morrison has a valuable jack for sale. We are glad to see that there is a growing interest in this important branch of stock-raising.

A new Wisconsin Seedling Strawberry is introduced by Judson Prentice of Watertown. See advertisement.

STATEMENT

OF THE

Madison Mutual Insurance Company,

FOR THE YEAR ENDING

DECEMBER 31, A. D., 1862.

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,.....		$327,464 67

ASSETS.

Unimpaired premium notes of policy holders.....	$281,000 07	
Cash on hand and due from policy holders and agents, for cash premiums,.....	45,464 60	
Office furniture and fixtures,...	1,000 00	327,464 67
Whole No. policies issued.....		22,061
Am't of outstanding risks thereon.....		$15,962,000 00
Number of policies issued in 1862,.....		7,706
Am't of outstanding risks thereon.....		$6,069,813 00
Am't premium notes thereon,.....		108,323 93
Am't cash premiums thereon, less commissions to agents,.....		45,727 80
Am't interest received,.....		972 18
Total am't losses reported during 1862,....		$17,744 16
Total am't losses paid durihg 1862, 89 in number,.....		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due.....		none.
Losses adjusted and not due.....		none.
Losses unadjusted,.....		292 35
All other claims against the company,.....		97 50
Am't paid for advertising and postage,.....		1,763 66
Am't paid for printing,.....		540 50
Am't paid for policy stamps,.....		600 00
Am't paid taxes to Com'r Internal Revenue		82 02
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses,.....		7,290 98

Comparative Statement of the business of the Company for the years 1859, 1860, 1861 *and* 1862.

	1859.	1860.	1861.	1862.
Total amount of accumulations,				
ASSETS.				
Premium notes of policy holders,	$39,080 95	$110,389 49	$216,865 76	$327,464 67
Cash on hand and due from policy holders for cash premiums,	$35,403 46	$92,487 27	$180,124 63	$251,000 07
Amt secured by mortgage and judgment,	2,966 02	16,509 74	35,408 66	45,464 60
Office furniture and fixtures,	332 47	332 47	332 47	
Whole number of policies issued,	300 00	1,000 00	1,000 00	1,000 00
Amt of outstanding risks thereon,	30,000 00	110,389 49	216,865 76	327,464 67
Total amt of losses paid and settled,	4,807	8,679	14,357	22,061
Losses reported and awaiting further proof, *	$2,409,960 49	$5,451,115 49	10,320,760 00	15,962,000 00
Whole number of policies during the year,	2,409 46	5,903 31	8,460 01	21,413 97
Amt of outstanding risks thereon,	1,187	499 53	7,351 12	* 2,000 00
Amt of premium notes thereon,	$1,140,076 00	3,722	5,778	7,706
Amt of cash premiums thereon,	17,109 82	23,916,115 49	5,315,173 00	6,009,813 00
Amt of commissions paid to agents,	11,059 04	68,789 45	98,944 06	108,323 93
Amt of expenses paid, including all compensation of officers, printing, advertising, postage, and all other incidental expenses,	3,317 70	35,701 88	43,377 36	† 49,127 80
	3,317 71	10,389 18	7,460 84	
		5,847 44	9,071 89	7,290 98

* Resisted as fraudulent.

† Deducting agents' commissions.

DIRECTORS FOR THE YEAR 1863.

J. W. BOYD, Walworth Co.
D. WORTHINGTON, Waukesha Co.
DAVID ATWOOD, Dane Co.
G. R. MONTAGUE, La Crosse.
ASA KINNEY, Green Lake Co.
H. H. GILES, Dane Co.
LUTHER BASFORD, Grant Co.
B. F. HOPKINS, Dane Co.
ORRIN GUERNSEY, Rock Co.
FRANK H. ROPER, Dodge Co.
J. H. WARREN, Green Co.
TIM. BROWN, Dane &o.
S. D. HASTINGS, Trempeleau Co.
DAVID TAYLOR, Sheboygan Co.
S. R. McCLELLAN, Kenosha Co.
J. T. LEWIS, Columbia Co.
JOHN TOAY, Iowa Co.

OFFICERS.

JOHN W. BOYD, President.
B. F. HOPKINS, Vice President.
S. D. HASTINGS, Treasurer.
D. WORTHINGTON, Secretary.
G. F. HASTINGS, General Agent.

LOSSES PAID BY THE COMPANY IN 1859.

S H Coleman, Juneau, Dodge co	$10 00
J H Seaman, Richland, Richland co	10 00
Fanny Plummer, Mauston, Juneau co	15 00
Geo F Taylor, Madison, Dane co	15 00
Nelson Sickles, Waterloo, Jefferson co	690 00
A L Beebee, Dunn, Dane co	650 00
J H Barber, Juneau, Dodge co	68 00
Jas H Main, Juneau, Dodge co	403 57
Thos Mayhew, Merton, Waukesha co	27 00
W N Seymour, Madison, Dane co	20 00
Wm Edwards, Sugar Creek, Walworth co	400 00
Leonard Hatch, Kenosha	100 00
	$2,409 45

LOSSES PAID IN 1860.

J S Willmarth, Sun Prairie, Dane co.,	$314 50
Cyrus S Davis, Menominee Falls, Waukesha co.	5 00
J W. Cook, Dane co.,	15 35
Lewis Thompson, La Prairie, Rock co.,	174 52
Henry Johnson, Somers, Kenosha co.,	12 50
Pliny Putnam, Rubicon, Dodge co.,	5 00
E B Thurtell, Jamestown, Grant co.,	500 00
A A Anderson, Delafield, Waukesha co.,	7 00
James T Walklin, Eagle, Waukesha co.,	20 00
C Sutherland, Fitchburg, Dane co.,	10 00
Harrison Koonz, Concord, Jefferson co.,	400 00
Owen Garity, Sullivan, Jefferson co.,	6 00
C P Churchill, Waukesha co.,	5 58
Caleb Jewett, Town of Madison, Dane co.,	17 51
Mary La Follett, Primrose, Dane co ,	115 00
Wm A Stowell, Cottage Grove, Dane co.,	1,041 71
Samuel H Sabin, Windsor, Dane co.,	18 00
Abel Strong, Marcellon, Columbia co.,	382 71
Quartus Towry, Johnstown, Rock co.,	5 00
Robert Hornby, Fairfield, Sauk co.,	496 05
Thomas Stevens, Dane, Dane co.,	200 06
John Wightman, Berry, Dane co.,	751 80
Douglas Oliver, Glen Haven, Grant co	1,000 00
Josiah Pierce, Pardeeville, Columbia co.,	400 00
	$5,903 23

LOSSES PAID IN 1861.

L D Lateer, Janesville, Rock co.,	$499 53
Edward Welsh, Centre, La Fayette co.,	306 80
Nathan Kellogg, Madison, Dane co.,	15 00
Henry A Chapman, East Randolph, Col. co.,	20 00
Jared Bishop, Jamestown, Grant co.,	371 00
Allen Hoxie, Porter, Rock co.,	1,000 00
O. C. Burdick, Christiana, Dane co.,	2 00
Samuel Crossett, Juneau, Dodge co.,	13 50
Albert Gaston, Cottage Grove, Dane co.,	11 13
Stephen Young, Somerset, St. Croix co.,	380 00
A L Beebe, McFarland, Dane co.,	699 01
Alfred Taber, Delavan, Walworth co.,	350 00
Lydia D. Crocker, Lake Mills, Jefferson co.,	2 00
John Feller, Bear Creek, Sauk co.,	646 65

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : : : : : : EDITOR.

VOL. XV. MADISON, APRIL 1, 1863. No. 4.

Western Virginia—its Resources and Scenery.

BY MRS. HOYT.

Within the lifetime of most who read these lines we shall know so much more than we now do of that portion of the Old Dominion called Western Virginia, that it will seem to have added itself to the galaxy of States far more as a necessity of its individual character than as a fragment of a disrupted sovereignty, leaving it no other choice. And this may not be so dependent as might at first appear upon the approval or rejection of a final Judicial appeal. The fact that this comparatively unpopulated district, when in a most defenceless state, and with only an implied promise of help for any immediate sustainment, gave 20,000 majority against the mad revolt of the always insolent and dominant Eastern section has gone far in awakening for it a popular sentiment of approval in regard to this unprecedented demand for admission to the rank of a State. Nor is this all. So nobly and so persistently has this confederation of counties stood up for the supremacy of the Old Flag, that there is room for doubt if any State, or section of State, of equal extent and resource, has done more in furnishing the grand whole of that Federal force that has been so munificently outpoured. A generous impulse, as well as a selfish interest, now work together, ensuring it an attention it will not be in the nature of things to divert.

The forty-eight counties lying west of that most fantastic line, now dividing the sacred soil of the old regime, may seem to the indifferent observer a poorly chosen area upon which to work out the material and build the glory of a State. When this was first talked of, as a possibility, in the Wheeling Convention of 1861, I had the curiosity to look up information as to what were the resources of that portion of the State in case it were allowed to set up for itself. Go search out the genealogy and prospective fortune of the veriest foundling, and you would find yourself about as rich in gleanings as in this; the sum total, so far as the authorities went, being that Western Virginia was very full of rocks and very scarce of water, had large forests and small fields, not much school-house, not many to go in case it had, very little internal improvement and very little prospect of having any more, its principal railroad being there because Baltimore and Richmond were east of the Blue Ridge; in short, that in everything worth speaking of, it it was Western, not Eastern Virginia. Only in one particular did the authorities allow it to be at all worthy of comparison with the trans-Alleghanian of glorious history — what it had of improved land being worth more per acre than that on the other side of the mountains, it not having been so much subjected to the running-down cultivation of the "peculiar institution." From all this, it really seemed to be the least desirable, as a home, of any part of our great and varied Union. During the past summer a new volume upon this entire subject came in my way. Fresh, vigorous, and, without controversy, truthful in its representations, I gave it such attention as the health and circumstances of the time of its perusal rendered possible. This book can be found in but one place; it was Western Virginia itself.

Does any one expect elaborate statements in regard to the mining, manufactories and agri-

culture of the past of this new State, as an earnest of what it is to become? There is nothing, or almost nothing to be told. With but small claim to anything that could properly be styled agriculture, it has as yet produced but little outside of this, save these three staples of necessity, fire, light, and salt. Apropos of this, may not one be pardoned for balancing these almost vitalizing products against the figs and Don Quixote, which are so nearly the all that one of the so called Great Powers has given to the world?—also for quoting from the child's story of, "How big was Alexander, Pa?" these lines:

"'Twas not his stature made him great,
But greatness of his name."

Western Virginia can scarcely be said to have a name yet, either small or great, and while it has the audacity to have in contemplation the working out of one, coal is abundant and is extensively shipped by the N. W. V. R. R. to the Ohio. In the "to be or not to be" of various other highways of transportation, for like uses, lies the question of how much this single commodity has to do with the material greatness of the coming State. For, thanks to the unfolding science of the age, coal no longer stands simply, versus cold, as at first, nor versus inertia, as in its second grand impulse in the progress of the world; but now, as ton after ton is exhumed from the darkness where it has bided its time, every square foot seems to look up with the enquiry, "What will you have?" If the oil, manufactured so largely in its western counties, and by which nameless thousands are to-night reading the news of the day, may go for a prophecy of its future, encyclopædias of prospective generations will not fail to give it honorable mention.

Salt! For the benefit of those who do not remember the story, and because it illustrates the emphasis with which I wrote the above word, I will relate that on one occasion, that eloquent champion of the cause of the American Revolution, Lord Chatham, commenced a speech in the House of Commons with the words, "Sugar, Mr. Speaker." Observing a smile through the audience, he paused, looked fiercely around, and with a voice whose tone gave evidence of the most vehement anger, he pronounced again the word "Sugar!" three times, and having thus brought the house to an attitude in which there was no trace of mirth, or want of the most appreciative attention, he turned round disdainfully and asked, "Who will laugh at sugar now?"

This Kanahwa salt, of which such immense quantities are made in the valley of that name, or salt, wherever made, is not a thing to be laughed at. Several circumstances that came under my notice during the summer assured me of this; that one which made the deepest impression being the sight of men, some of them flushed with the hot blood of youth and war, others in the silver-gray of age, but all so persistent in their disloyalty that they had stood the test of every other want, coming at last to the headquarters of a Federal officer and volunteering the oath of allegiance to the Government they had contemned, because that was the only way of getting possession of a barrel of salt.

The primitive character of the people and civilization of the country is evidence that there has been very little effort to develop its resources beyond the demand for actual use. The mineral wealth of those deep-ribbed hills lies untouched of shaft or the miner's pick; the water-fall of almost the entire country, is tumbling about pretty much as God left it, applied to no useful purpose, and the fertility of those valleys that wind so gracefully away wherever rivers flow or hills lean, has never been tested. But on the face of the country lies evidence of wealth that waits but the hand of intelligent industry. In a journey either by public highway of railroad or pike, or through the rural districts north or south of these, you would scarcely find, from Parkersburg to Stanton, a farm which at the North would pass for respectable; and yet, nowhere in this land of all-bountifulness, have I seen a greater variety of things desirable for man and beast.

Nor is this much less so as you approach the more mountainous regions where both Union

and Confederate troops had, for the past eighteen months, left the red trail of war. The evident ease and slack-handedness with which these results were reached could not but lead the thoughtful observer to indulge in some picturings of the future of this portion of the old Union that seemed opening to us with all the freshness of a discovery. Many times, as such thoughts were aroused in my own mind, by a new prospect of the beauty and ungathered wealth that swept before my eyes, I have heard exclamations of delight from the lips of those who declared that Western Virginia was the only country for which a man could afford to forego the boundless blue, and broad acres of the West. Indeed it was no uncommon thing to hear even the New England soldier announce his intention, first to clear that fair land of the foul breath and footstep of treason, and then make it the New England of his adoption, admitting it to have every balance of advantage, save the Yankee and Plymouth Rock. If pressed to know how he, being the legitimate heir of the genius of the one and the prestige of the other, could afford to abandon the land of his fathers, I found no one so wanting in intelligent forecast but that he was ready to affirm that the Yankee would be with him and, wherever settled, by virtue of the principles he inherited, if true to them, he laid for the world a new Plymouth.

If the natural products of the soil may be taken as indicating its capabilities there is no good reason for the generally accepted, but I think mistaken idea, that it is not to be an agricultural State. Through valley, plain, upland, and over the crests of those magnificent ranges of hills that seem to say to the one side, "we are here for defence," and to the other, "for defiance," the flora, fruits, grasses and timbers that abound with such a prodigality of luxuriance, are witness that no man skilled in the science of husandry would here need to bury his preference in other occupation.

Though very little attention has been paid to the cultivation of garden or orchard fruits, the native products of all small fruits are so plentiful and so fine that the table of the humblest mountaineer does not remind you of the fact. As you approach what is now the southeastern boundary of the new State, and after you are fairly out of any valley through which you find your way to the more elevated lands, almost all traces of anything like small farms disappear, and instead you will see forests of deadened timber where the woodman's axe has never cleared a bough or felled a tree, and where the sod has never been broken or a seed sown, grasses as fine as those that are usually secured by years of expense and waiting.—Here, with only the care of an occasional salting, are pastured immense herds of cattle, and at intervals of miles you will find the shanty-looking homes of these natives whom you would not suspect of being called upon to pay taxes upon thousands of these acres. Find, did I say? You will find but few of these native Virginians or the homes of their former habitations; only the blackened chimneys and smouldering ruins that mark where they have been. The chivalry of this region are mostly engaged in the Quixotic enterprise of hunting up their rights, far away from the scenes where they had so long and so peaceably enjoyed them.

In strange contrast to the desolations of war spreads out the landscape which it has taken generous nature but one season to bring up to such surpassing freshness. Beneath the blue arch of heaven, and standing in its golden air, no country I have yet seen can compare in scenery with Western Wirginia. Leaving the bluffs of the beautiful Ohio, and progressing through an extent of most picturesque and varied, but comparatively level land, you will find yourself so beguiled by the enchantments of the way that, ere you are aware, you will have left days behind you, and with them left pictures you will not soon forget; a maze of loveliness and grace in the valleys and on the rivers below, great swells of sloping sunlight, thickets of evergreen, sudden brooks dashing across your way, the flowers and leaves of all woods that crown the summit of hills that with-

out weariness you have climbed, until you stand upon the topmost peak of some mountain range where stretched out a magnificence of prospect worthy the rapture of the enthusiast axd the hand of the artist.

When I hear said, or read, as I sometimes do, that there are parts of this region of country that will never be cleared up, but stand forever clothed in the depths of primeval forests, I thank God for such refuges in this world of mad improvement. It does me real good to be able to report that of a county I did not have an opportunity of visiting, a Federal officer, whom I know to be loyal and truthful, told me that the first time he camped in Webster he thought he would have to stand up all night, there not being level room enough for him to safely lie down! This is a county that does not appear on the maps, having been, within a quite recent date, made up of the southern part of Randolph, a bit of Pochahontas, Greenbrier and others adjacent. In justice to the county I ought, perhaps, to state that the person referred to is tall, requiring something over six feet to be altogether comfortable.

It is well, that in all parts of the world, there are visible and indestructible smybols, such as the Alps, Niagara and great Forests to remind us of the presence and brooding of the Infinite.

In regard to the climate, resources and scenery of Western Virginia we find many who have reached widely different conclusions from these so briefly sketched; the cause seeming to be that they have either not seen whereof they judge, or merely looked at it from the lines of public travel, of which, as before said, there are few, and, as is often the case, through the least inviting portions. The first decade of years, after the war is fairly over, will render it a juster verdict than could now secure a fair hearing. Of the people, and their institutions, a word hereafter.

Sow Flax.—Every farmer should sow a few acres of ground with flax-seed. Cotton is becoming so scarce that some article must be substituted for it. Our fathers and mothers formerly slept between linen sheets, used towels and table cloths, and we must do the same.—Besides, an immense quantity of bagging, ropes, &c. will also be wanted. An acre of good land will yield about ten bushels of seed, and a ton and a half to two tons of straw. The former is now selling at $3 25 per bushel, and we understand that it is in contemplation to erect machinery in our State that will make a market for the straw. The farmers threw away great quantities of straw the past season, thus making a great waste. The land should be prepared the same as for oats, and the seed should be sown about the first of April.

The Great International Exhibition.

NO. VII.

GREAT BRITAIN, CONTINUED.

With the view of studying the Exhibition in the most natural order, we have crossed the Gardens from the Eastern Annexe, where, at our last visit, we saw the vast collection of agricultural and horticultural implements and machines, to the Western Annexe, which includes all

HEAVY MACHINERY IN MOTION.

Standing at the entrance and looking down the length of this mighty hall, we behold a spectacle such as never before greeted the eye of man. This Annexe is two hundred feet wide and nine hundred and seventy-five feet long; thus affording a surface upon the floor of one hundred and ninety-five thousand square feet, economically packed with powerful and beautiful machinery adapted to every conceivable use, all moving at the top of their speed, and executing each its predetermined work for the inspection of thousands of curious admirers who throng the avenues, or crowd here and there, in wondering groups.

Listen a moment! Was there ever on earth such a blending of dissonances, making harmonious music of a ceaseless whirr, and hum, and hiss, and clank, and click, and rattle, and thundering roar, which would turn one's brain and fit him for a mad-house, were it not that they all speak so eloquently of the Progress of Man?

British machinery occupies that portion of the Annexe adjoining the main body of the Exhibition Palace, and fills about five-eighths of the entire space. Beyond Great Britain, France, Austria, Switzerland, Denmark, Bel-

gium, Prussia, Italy and Sweden are each well represented. But of these we propose an examination on some future occasion, when the special exhibitions of those several countries come to be considered. For to-day we may confine our hurried inspection to what is here shown by the British Kingdom, which, in this department, as in almost every other, is ahead of the rest of the world.

MARINE ENGINES

Come first in order. Some of them are not more remarkable for their massiveness and power than for the perfection and beauty of their finish. One—a representative of the best high and low pressure engine—presents a variety of improvements, and when provided with apparatus for super-heating the steam, feed-water heaters, &c., is said to consume but two pounds of coal per indicated horse power. There are, likewise, several other marine engines of improved and peculiar construction, two of them with direct-acting, inverted cylinders; that is, with the two cylinders working vertically over the crank-shaft, and thereby economizing width—a consideration of great importance in the narrow hold of a ship.

We find, also, an interesting collection of models illustrative of the history and present condition of screw steam navigation—among them models of the engines used in the Kingston and Holyhead mail service, so remarkable for the high speed and regularity with which the passages are performed across the Irish Channel. The contract time for making the passage is $3\frac{3}{4}$ hours, which requires a high degree of speed; and so far from ever failing to "come to time," in 1861 they made an aggregate gain of 41 hours, or about 4 minutes on each passage. The English are famous for this kind of regularity and reliability in all matters involving the public interest, while we Yankees are more of the *slam-ahead* sort without so much regard to that invariability which is essential to the comfort and convenience of the great public.

LAND ENGINES AND LOCOMOTIVES

Are numerous and equally interesting.—Those intended for agricultural use have already been referred to. It remains to take a look at the stationary engines for use in factories, mills, mines, and at the locomotive engines, of all of which there are several very interesting examples.

The road engines, or rather road steam-carriages, we briefly alluded to in an article on steam plowing. It would not be correct to say that they are common in England, though several of them have been constructed and used with considerable satisfaction. They resemble in general appearance, the ordinary portable agricultural steam engines, and are usually constructed with disconnecting gear, so that the power may be used, when desired, for driving threshing, grinding, and other machinery.

"The Aveliug or Porter engine," which we saw at Farningham making its way along the road, and through the fields, and up and down steep hills with all the facility with which a well trained mule could have traversed the same paths, was driven by an endless chain, which transmits the power from the engine to the driving wheels; the steering being effected by a single small wheel in front.

Bray's engine for roads is peculiar in that it has a series of apertures in the driving wheel tires, through which, by means of an eccentric, a series of blades or teeth may be protruded, in order to gain additional hold on steep inclines or soft roads. The power is transmitted by pinions on the crank-shaft, gearing into large toothed wheels in the driving wheels; steering effected by a screw worm and sector.

There would seem to be no sufficient reason why locomotive engines for road use should not succeed, and, from what we have seen in England, it is onr opinion that they will ultimately come into extensive use for certain purposes.

GREW'S ICE LOCOMOTIVE

is a novelty, and we must look at it. It differs in construction from the Yankee invention by Norman Wiard. but may meet with a like fate.

It looks like an ordinary tank engine with

only one pair of wheels, five feet in diameter and studded with steel spikes to insure a hold upon the ice. The fore part of the boiler is supported on a frame with sled runners, the frame being adjustable by means of a hand-steering wheel on the driver's platform.

THE RAILWAY LOCOMOTIVES

Are most of them splendid examples of the superior skill of the English workers in iron. In external appearance they are not so showy as the American Engines, but some of them are more powerful than any we remember to have seen in the United States. Here is one that weighs 27 tons, and has repeatedly made 60 to 70 miles per hour. It is supported upon eight wheels, the driving wheels being 8 feet 6 inches in diameter. The cylinders are 17½ inches in diameter, with two feet stroke, and are placed outside the wheels. Centre of gravity lowered by suspending the boiler under the driving axle.

Here is another whose weight is 35 tons; effective power, as measured by a dynamometer, equal to 743 horses. It is said to be capable of drawing a train with a gross weight of 120 tons at the rate of 60 miles an hour on fair gradients. The boiler will bear a pressure of 120 pounds to the square inch, and when employed in the mail service, with a train of 90 tons, is accustomed to make the moderate speed of 29 miles per hour, including stoppages, with the consumption of but 21 lbs. of coke per mile.

But the most novel feature of any railway locomotive is that which characterizes an express engine exhibited by the London & Northwestern Railway Company. The tender of this engine is provided with an apparatus for replenishing the supply of water while the train is in motion; this is effected by a curved tube of rectangular section, which is capable of being lowered so as to dip into a trough of water placed between the rails; the impulse imparted to the water by the train in motion causes it to rise in the tube and flow into the tender tank. In actual practice, the troughs are used in lengths of a quarter of a mile, and a speed greater than 15 miles per hour is requisite to make the scoop act. At 22 miles an hour 1080 gallons can be picked up out of one trough, and 1180 gallons at 35 miles per hour, at which speed the maximum effect is produced.

MILLS

Of various kinds are on exhibition—flouring mills, mills for the manufacture of linseed oil, and mills for the manufacture of sugar from the cane.

One of the last of these is remarkable for its massiveness and immense power, on which account it constitutes a marked feature of this branch of the Exhibition. It consists of three horizontal iron rollers, having their surface slightly roughened by shallow grooving. The juice expressed by these rollers is lifted by a pump worked by a crank attached to one of the rollers.

This mill is driven by a powerful beam steam engine. Total weight of mill, 140 tons.

Hydraulic presses, centrifugal pumps, blowing engines, ventilators, and many other machines for as many purposes crowd this part of the building and challenge our attention, but "must wait another day."

ICE-MAKING BY STEAM!

If the East India monarch, who had never seen ice, felt himself trifled with and insulted by the foreign visitor who attempted to convince him that in the country from which he came, the water became so hard in the winter that an elephant could walk upon it, what would he have said had he been told that it was capable of being reduced to that condition by steam?

Fifty years ago the possibility of this would not have been believed by even an enlightened Anglo-Saxon philosopher. And yet this very thing is being done here to-day, with the thermometer up to 90° in the shade!

Let us elbow our way through the wondering crowd and see the *masheen* that does it. That it is actually made by it none will doubt, for at one end the water goes in, and at the other, cakes of beautiful ice, two inches thick, come out almost without ceasing. "But is it *ice?*" Look at the thirsty, melting multitude who eagerly catch at the broken fragments so

cleverly dealt out by the wizard who presides at the box—nay, take a piece into your own hands and believe.

"But how is the ice made?" Very simply indeed. This is the principle: evaporation is a cooling process. This theory is recognized every time we sprinkle water upon the floor of our apartments in summer. The water evaporates, and in becoming vapor takes with it a portion of the heat of the apartment. So now, if we could find something which would act in the same manner upon water as it acts upon the floor, only more rapidly, the temperature of the water might be so diminished as that it would be frozen. Sulphuric ether is a liquid which vaporizes very rapidly, and is hence very cooling. Put a drop upon your hand and see how cool it makes it at once.

But ether would not naturally vaporize so rapidly as to freeze water in contact with it. Is there no way by which the rapidity of that process might be increased sufficiently to accomplish that object? Yes, by simply removing the air which presses upon the surface of the ether with a weight of 15 pounds to the square inch and thus retards the formation of vapor. This may be readily done by means of an air pump; and this is what is now being done before our eyes.

The ether is contained in a tight vessel surrounded by a quantity of salt water in another larger vessel; and the air is exhausted from the ether vessel by a pump working with a piston air-tight. This vaporizes the ether so fast that the salt water is suddenly reduced to a temperature below the freezing point. It is then compelled to flow through a long close box containing tin moulds of pure water, which is thereby frozen and delivered in beautiful cakes by the traveling frame which moves in a direction contrary to the refrigerating current.

The ether vapor removed at every stroke of the pump is passed over to a condenser where it reassumes the ether form and is then returned to the evaporating vessel to be used again and again.

"But what has steam to do with all this?" It works the pump and drives the other machinery. The process is, therefore, literally the making of ice by steam.

This one machine is capable of supplying all the ice required in the Exhibition.

Glancing hurriedly at a vast number of machines for making brick, for preparing peat, brewing machines and coolers, bottling and corking machines, washing machines, crushing machines, wire-rope and telegraphic cable-making machinery, automaton mint weighing machines, electro-magnetic engines, and a thousand others, we come finally to the magnificent display of

SPINNING AND WEAVING MACHINERY.

Of these, another day.

Winter Evening Thoughts—Farming not the Meanest Occupation after all.

EDITOR WIS. FARMER:—The remarks of Adolphus, in the February No. of the FARMER, were read with interest by the undersigned, and for his encouragement, I would say that farmers do not acquire riches and independence because they are always and uniformly successful in each and all of their various projects and undertakings, but it is through eternal vigilance and patient, untiring perseverance, that a competence through farming is usually attained.

Planting and tending fruit trees, the fruits of which they will, perhaps, never eat, sowing and planting grain from which they do not realize a paying crop; digging and gathering unsound potatoes; picking mildewed gooseberries, and losing now and then a favorite tree or shrub, is nothing more than falls to the lot of all mortal farmers.

It is said that whatever has been done can, under the same circumstances, be done again; therefore, by observing, as we may, the successes which have attended the efforts of some farmers in this State, in the way of raising fruit and other farm products, *all* who choose may reasonably hope to eat fruit plucked from their own vines and trees, even in this "variable and inhospitable clime." We may also usually expect to raise an overplus, and, now

and then, under favorable circumstances, a remarkable crop of wheat, oats, corn &c.; and if we properly plant and cultivate our potatoes we may hope to be successful in securing an abundance of them also. But if, in consequence of unfavorable weather, or some other circumstance not under our control, as appears to have been the case with Adolphus, "our potatoes nearly all rot," we may perhaps gather enough sound ones for the use of our own families, while the compensation which the mechanic receives for his day's work is altogether too insufficient to buy them, and his family are obliged to go without.

If people who usually handle the most money could be said to live under the most favorable circumstances for obtaining a comfortable livelihood, and at the same time be, in the same proportion, less subject to disappointments "depending on circumstances not under their control," then might it be said that the occupation of a mechanic, merchant, or lawyer is more desirable than that of a farmer; but so long as the farmer holds the staff of life in his own hands, so long as the provisions, and the material for clothing of the professional man, are produced solely through the exertions and skill of the farmer; so long as the mechanic is dependent on the farmer for employment, may we not with truth say that the farmer is of all men the most independent, and the least liable to encounter misfortunes arising from "circumstances not under his control?"

Nor is it an argument against the superior occupation of the farmer to say that he does not pocket as much money during the year as the mechanic or merchant. He does not need it; he lives upon his farm, and though he meets with many losses and disappointments, his expenses are less than his income, and he is, in consequence, as rich as any one need desire to be.

It is essential for the farmer, in order to success, to cultivate and *possess* a patient, hopeful disposition, and to obtain which he should study his relative condition and importance among men, and learn to prize his own independence. If, as is sometimes the case, his crops fail, in consequence of an untimely frost, the "bug," or "blight," it is almost always within his power, (and that, too, without any material inconvenience), to postpone his building, buying cabinet ware, or painting and decorating his buildings, as the case may be, to a more convenient season; but the mechanic at such times finds himself out of employment, provisions high, and his little ones wanting for bread.

If there is a young man who wishes to engage in a business that will be sure to bring him the greatest amount of leisure at middle age, there is nothing better than farming and horticulture. And while he is thus engaged in tilling the soil, he will be sure to be employed in a healthy occupation. In short, if he would be independent, let him procure a piece of land, go to work upon it, keep within his means, shun the lawyer, avoid the doctor, be temperate and honest that he may possess a clear conscience, improve his spot of earth that he may leave the world better than he found it, and then if he cannot "live happily, and die contented, there is no hope for him."

GEO. H. ADAMS.

DANVILLE, Wis., Feb. 1863.

KEEP OUT OF CITIES.—Farmers' sons often go to New York, or to some other large city, with a few hundred dollars, "to start business." What simpletons! Why, not one in a hundred who "starts business" in our cities gets rich, while the most of them drag out the most miserable of lives in care and anxiety. These are facts, young men, and we advise you to stay at home, or strike a "bee line" for the cheap lands of the West.—*Miner.*

POPLAR RAILS.—Joseph Roberts, of Ridgeway, Wisconsin, writes the Wisconsin *Farmer*: "I can produce poplar rails, made in the month of April, in the year 1846, that are sound this day, free from rot, and better than any oak rail I have in my fence, made at the same date. The trees were felled after the leaf had come out, and in splitting the trees the bark came off, and every rail being free from bark, the timber seasoned at once—hence the durability."—*Journal of Agriculture.*

REMARKS.—We have now upon our premises common cedar posts planted in the spring of 1847, which have done their work, and will be removed next spring, after a service of sixteen years.—*Ex.*

The Guide Post.

Translated by Bayard Taylor from the Allemannic-German dialect of John Peter Hebel, for the Atlantic Monthly.

D'ye know the road to th' bar'l of flour?
At break o' day let down the bars,
And plow your wheat field hour by hour
Till sundown—yes, till shine of stars.

You peg away the live-long day,
Nor loaf about, nor gape around;
And that's the road to the thrashin' floor,
And into the kitchen, I'll be bound!

D'ye know the road where dollars are?
Follow the red cents here and there,
For if a man leaves them, I guess
He won't find dollars anywhere.

D'ye know the road to Sunday's rest?
Jist don't of week days be afeard;
In field and workshop do y'r best,
And Sunday comes itself, I've heerd.

On Saturdays it's not fur off,
And brings a basketful o' cheer—
A roast, and lots of garden stuff,
And, like as not, a jug of beer.

D'ye know the road to poverty?
Turn in at any tavern sign;
Turn in—it's temptin' as can be,
There's bran'-new cards and liquor fine,

In the last tavern there's a sack,
And when the cash y'r pocket quits,
Jist hand the wallet on y'r back—
You vagabond! see how it fits!

D'ye know what road to honor leads?
And good old age?—a lovely sight!
By way o' temperance, honest deeds,
And tryin' to do y'r dooty right.

And when the road forks ary side,
And you're in doubt which one it is,
Stand still and let y'r conscience guide;
Thank God, it can't lead much amiss!

And now, the road to church-yard gate
You needn't ask. Go anywhere!
For whether roundabout or straight,
All roads at last will bring you there.

Go, fearin' God, but lovin' more!
I've tried to be an honest guide,—
You'll find the grave has got a door,
And somethin' for you t'other side.

Covering Grass Seed.

I most heartily approve of your views as to the importance of farmers giving more attention to the growing of the tame grasses. Am intending to set some of my neighbors an example in this respect. Is there anything better than the old fashioned bush to cover with?

H. W.

WAUKESHA Co. Wis.

[Glad some of our readers are waking up to the importance of grass and stock growing. The bush does very well; but we have lately seen notice of a simple contrivance which may answer still better, as it will more easily crumble the lumps and smooth down the surface. It consists of a mill slab, a foot or more wide, and 8 to 10 feet long, with holes bored at each end about two feet from the extremities. Into these two holes two chains are fastened, their ends being attached to the whiffletree. The slab thus arranged is drawn with the rounded side down, and may bear any weight deemed necessary.—ED.]

The Culture of Flax.

In the times long ago, when our grandmothers plied the spinning wheel and skillfully twirled the distaff, flax was an important product of American agriculture—at least, no farmer felt that he properly provided against the nakedness of his own immediate flock, unless the flax patch had its appropriate place on the farm. But Eli Whitney was born with a spinning-jenny in his head, and the music of the old-fashioned wheel ceased. For fifty years Cotton has been supreme. Just now his reign is suspended by the existing blockade of the Southern coast, and the ancestral wheel or something better must take its place again, for a time, in the home of the American farmer.

But the working of flax will not be confined to the simple machinery and processes employed by the last generation. The Genius of Mechanics, who forgets none of the world's industries, has not labored for cotton and silk and wool alone. There is machinery now for seeding, pulling, scutching and dressing, spinning and weaving flax. Nor has the Genius of Chemistry been asleep. Processes have been invented by which the rotting may be expedited, by which the fibre may be so "cottonized" as to be worked upon cotton machinery, while the bleaching, which a few years ago required exposure on the grass for many weeks is now completed in a very few hours.

But it is in the *production* that farmers are chiefly interested, and we hear them asking the all-important question, "Can it be made to pay?" We think it can. Why not? Let us look at the figures:

The preparation of the soil and the seeding are not more expensive or laborious than for

most crops. Suppose, then, that you receive only a fair average crop, say 15 bushels of seed and one ton of straw. In ordinary times the seed will sell for $1 per bushel, and the crude fibre for $10. If the straw is pulled, the harvesting will cost more than the harvesting of grain. But pulling is not necessary. It may be cut by machinery; in which case the extra expense will be a mere trifle. According to this estimate, the aggregate income would be $25 per acre per annum.

But suppose the seed is worth $1.50 per bushel, (it is now worth $4,) and the straw $15 per ton, and that you raise 25 bushels and 1½ tons to the acre—figures but moderate in view of the demand for the next several years, and entirely within the possibility of good soil and good culture. In that case your crop would be worth $60 per acre—a result certainly more profitable than even 30 bushels of wheat at the unusual price of one dollar per bushel.

"But is flax not a hard crop on the soil?" They say so; and when it was the fashion to pull it up root and branch, and never to manure the soil, it is not unreasonable to conclude that it did prove an exhaustive crop. But that it must necessarily be more exhaustive than many others in common cultivation, we have no conclusive evidence.

THE SOIL AND ITS PREPARATION.

As the desirable portions of the flax plant are the fibre and oil—substances rich in carbon—it is apparent that the soil on which it is to be grown should also be rich in carbonaceous materials. Good, dark, rich, alluvial soils are the best, therefore, although successful crops may be grown upon *well manured* soils of a poorer quality. In this regard it does not materially differ from corn or root crops. No crop will succeed, in the best sense of the word, without proper rotation, and it is probably true of flax that so far from being an exception to the rule, it is believed by those who have had most experience that it is more exacting than many others. The farmers of the Netherlands and of Flanders are more particular than any others in the world, perhaps, in regard to the matter of rotation and manuring, and it is there that flax of the best quality is produced—flax fit for the finest work in linen produced in any country.

During our travels last summer in Flanders, we had frequent occasion to observe this. Everything that could be made to contribute to the fertility of the soil was put upon it, while the cultivation was as thorough as the best garden culture we ever saw in America. The crops which flax is made to follow in those countries, especially in light soils, are rye and barley with turnips after them the same year. In Ireland it is sown after potatoes.

SEEDING.

The seed is usually sown broadcast, though it may also be sown in drills, like wheat, with corresponding advantage. The quantity will vary according to the object of its planting.—If for the seed, one bushel will be ample—especially if drilled—but if for fibre, then the quantity should be about one half more, as the straws will, in that case, require to be smaller and more numerous.

It should be sown about the last of April or first of May—in other words, after the frosty nights are passed—on well pulverized soil, and either lightly harrowed in with a wooden-toothed harrow, or "brushed" in with the bushy bough of a tree. This is because it will not bear deep covering. Moist weather is desirable.

If sown in drills the same caution must be observed relative to deep covering—it should not be covered more than about half an inch deep.

In the old countries the crop, when two or three inches high, is carefully weeded. In this country, it is hardly supposable that our impatient, unreasonable farmers will do anything of that sort.

[TO BE CONTINUED.]

How to Cultivate Peanuts.

MR. EDITOR:—I see by the February No. one of your correspondents wishes to cultivate the peanut. I have raised them two years and will give him my mode. They are raised in

every respect like the sweet potato. Plant the peanut in a hot bed, or box in the house, about the first of April, where they will germinate and get a good start for early transplanting in your field or garden. Then cultivate like the tomato or potato. The vine of the peanut is similar to the myrtle, and bears a yellow blossom, very fragrant. The soil should be sandy, as you can get a quicker growth, for they need a long season to ripen. C. B. CHURCH.

OAKFIELD, Wis.

Cultivation of Tobacco in Wisconsin.—Preparation of the Soil.—Planting and Transplanting.

Tobacco has so strong a hold upon the craving appetite of the semi-civilized man of today, that we have pretty much despaired of success in convincing the agriculturists of America that it ought not to be grown. Demand is pretty sure to create a supply. no matter how vile the thing demanded. Men will chew and smoke and snuff the abominable weed, and hence we may expect that it will continue to be produced *somewhere*, if not everywhere. Statisticians tell us that no less than one billion two hundred and fifty millions dollars worth are consumed every year! Think of how many schools might be munificently endowed with this annual waste!

The whole amount of bread consumed in New York city in one year is valued at $3,000,000. Total value of cigars consumed, three *and a half* millions! And yet the Gothamites claim to be civilized people, and are, as the world now understands civilization.

But we have set it down as a sure thing that the tyrant Tobacco will still reign on for at least a hundred years; and the question now comes, who will attend to the succession, so that the family become not extinct? Not we. But we are told that there are farmers in Wisconsin who, stimulated by the hope of gain, now that the Southern supply is cut off, are anxious to try what can be done with it in this State, and at the solicitation of such we have consented to so far compromise the christian character of our journal as to give them the benefit of such practical information as we have at hand.

Several gentlemen have already turned their attention to this crop, and a few have been cultivating it with profit for years. As a State, however, we have done almost nothing in this direction. On the other hand, Iowa, our next door neighbor, has made it quite an important branch of her husbandry, producing, according to the last U. S. census, three hundred and twelve thousand, nine hundred and nineteen pounds of tobacco—"an amount," says Mr. Klippart, of Ohio, "greater than was produced by California, Delaware, Kansas, Louisiana, Maine, Rhode Island, Vermont, Texas, Minnesota, and Wisconsin, all together, in that year." As a whole, Iowa is undoubtedly better adapted for the production of tobacco than this State; at the same time the results of experiments made here show conclusively that it may be made an important crop with us.

PROPAGATION.

The tobacco plant has a luxuriant growth, and requires a good, rich soil, in order to the best results, though we have seen very good crops upon what would be called a light and rather weak soil. In this northern climate, it is our conviction that a considerable admixture of sand would the better insure its proper growth and early maturity.

The more common way of propagating is to sow the seed in a hot-bed, or cold frame, very much after the method employed for tomatoes or cabbages. Pulverize the soil thoroughly, rake off smoothly, sow on the seed at the rate of about one ounce to the square rod, roll with a hand-roller, not covering the seed, and cover over with a glass frame. In two to three weeks the plants will be up, after which care must be taken to keep the frames well ventilated. As the plants progress, they will require frequent watering, and, if too thick, must be thinned out. If the weather should be warm and sunny, the cover may be taken off during the middle of the day to give the plants a preparatory hardening for transplanting; which may be attended to as soon as they are about three inches high. But, unless very late in starting, a hot-bed will not be essential.

PREPARATION OF FIELD SOIL FOR PLANTING.

If the ground you intend to devote to this crop was plowed last autumn, all the better. You will have a stronger growth, and be less likely to suffer from the depredations of the cut worm and other enemies of the crop. But if not, then it should be manured well, and plowed as early in the spring as the soil will admit of. Then, in May, plow again, and harrow, so as to mix the manure thoroughly with the soil; mark off both ways, as for corn, and with the hoe draw up a little hill in the centre of each square, spatting it down with the blade of the hoe.

THE PLANTING OUT

Should be performed, if possible, in moist weather, and the plants should be drawn with caution so as not to break the tender rootlets. If the weather should be dry when it is required to plant out, it will be important to wet the hill with a pint or so of water a half hour previous to setting. Farther directions for cultivating, and for gathering and curing the crop will be published with illustrations, in subsequent numbers.

Seeds of the "Ambalema" Tobacco Plant, from Hon. A. A. Burton, Minister to New Grenada.

The following communication from Judge Burton, late of Kentucky, and present Minister to the Government of New Grenada, was accompanied by the seeds to which it refers. The Judge will please receive our grateful acknowledgements for them, and our assurances that they shall be promptly placed in the hands of careful cultivators of Tobacco, for the trial of the adaptability of the plant which they represent to the climate of Wisconsin.—EDITOR FARMER.]

LEGATION OF THE UNITED STATES,
BOGOTA, Dec. 5, 1862.

SIR:—The enclosed seeds are of the variety known here as the "Ambalema" tobacco plant. The leaf produces a cigar inferior in some respects and superior in others, to the Havana. I send it for experiment in Wisconsin.

The plant flourishes, in this vicinity, under a temperature of 70° to 80° Fahr., with frequent showers. Soil, a well drained gravelly or sandy loam, with clayey and gravelly subsoil. It is not topped here, as in the United States: but the leaves are taken from the stalk as they ripen.

I am, Sir, very respectfully,
Your obedient Servant,
ALLAN A. BURTON.

To DR. J. W. HOYT, Madison, Wisconsin.

Comments and Suggestions touching the interests of the Farmer.

[The following letter, though not intended for publication, contains a number of suggestions worthy of a place in the FARMER, and the author will therefore pardon the liberty we have taken in laying it before our readers.—ED.]

FRIEND HOYT:—I should have sent you the money for the FARMER before this, had not I wanted to write you for information, and suggest something to you for my old friend the FARMER.

I have lived in Wisconsin over ten years, have taken the FARMER over nine. The times are hard with me, the chinch bugs having destroyed my corn, and most of my wheat; but the FARMER is indispensible. My wife, children and friends read it with interest. We are very glad that we are to hear from Mrs. Hoyt again. We have all missed her in the Youth's Corner. My little boy wanted to know if she meant him in "Suppose so." * * * *

I wish for information with regard to the gray willow; have you any knowledge of it for a hedge? whether the scions are to be set horizontal or perpendicular? It is highly recommended in the *Tribune* and *Prairie Farmer*. I intend to try it; it will be beautiful if not useful. I do not confine myself to corn and potatoes alone; I take real pleasure in planting trees of various kinds, shrubbery, &c.

When I commenced farming, I bought different kinds of plum trees, cultivated them with care for years, had fine trees but no plums. I went to the woods in the season of plums and marked the best I could find, and transplanted them in the spring, and now have as good a

variety as I wish for, and shall go to no more nurseries for better.

I believe there has not been recommended a better article for hedge than the Osage orange, unless it is the gray willow, and I have no experience in that. Six years past I set out about 120 rods; most of it lived. I pruned it according to the recommendations, it did not do as well as I expected, and I left it to live or die, as it was everywhere spoken against. It lived through the hard winters. I then cultivated 20 rods of it as I would corn, without pruning. It is now a beautiful and good hedge, wtih some exceptions where I neglected to transplant. If I had cultivated it properly I should have had at this time a hedge that would have been useful and ornamental.

I would suggest to you to describe the symptoms and remedies for the various diseases of horses, cattle, sheep, hogs, &c. We frequently see cures for different diseases of stock, and the symptoms are not given. How shall we know what the disease is unless we know the symptoms? Perhaps you will say, buy a book that treats of the various diseases of stock. Some of us are not able to take the FARMER, and buy the book besides; besides, we want the authority of the FARMER.

I have not written this for publication, and have written more than I intended when I commenced, but if there is anything you think is worthy of notice, you can do as you please. I esteem you as a friend to the farmer, and therefore a friend of mine; thus I have written. I shall do the best I can for the FARMER. I have paid subscriptions for individuals years ago and have never been refunded.

S. M. HUMES.

SYLVESTER, Feb. 10, 1863.

Trapping Gophers.

MR. EDITOR:—As the season of corn planting is approaching and also the season for the striped gopher's depredations, I propose to tell the boys how I trap them, although I suppose the method is already known to many.

First, then, I take a line about 15 or 20 feet long, made of stout material; then make a slip-noose on one end and tie the other to a stick. When you see a gopher, follow him to his hole, then set the slip-noose end of your line in the mouth of the hole about two inches from the top of the ground; then place yourself at the other end of the line in such a position that the gopher will come up with his back toward you, which position you can determine by the slant of the hole, and you won't have long to wait before Mr. Gopher will be dangling in your line. This will make sport for the boys, and at the same time help to rid these smiling prairies of quite a nuisance to the farmers.

E. N. C.

CHARLES CITY, Iowa, Feb 12, 1863.

A Good use to make of Straw.

MR. EDITOR:—Though I do firmly believe the WISCONSIN FARMER to be the best Agricultural Journal in the Northwest, yet I would not speak lightly of more eastern journals. They have their mission, the leading feature of which is the renovation of worn out land. And some of them labor with great ability to accomplish it.

One great part of the WIS. FARMER's present mission is to *prevent land from becoming worn out.* But if the farmers of the West should to any great extent adopt the policy of burning their straw, of course you will have to advertise and recommend patent manures. I noticed in the November No. of the FARMER an article on the folly of burning straw, with the good advice to convert it into manure.

I have no idea that I can tell the best use to be made of straw,—that I leave for an abler pen—but I do know by experience a *good* use to be made of it. Farmers who have much stock and little straw find no difficulty in turning it into manure. But where they have much straw and but little stock, the case is quite different.

How often we see piles of straw one, two, three, and sometimes more, years old, part rotted and part sound! The farmer gets out of patience, burns the old stuff, and makes a melon patch. Or, if he is a Jobite, and waits un-

til it is rotted, he has a small pile of almost worthless manure.

The mode that I wish to submit for the consideration of my brother farmers is this: Stack your grain where you can use the ground the next summer for a cattle yard. Put up a large shed with crotches and rails or some other cheap convenient material, near to the stacks, allowing for a good body of straw where the chaff falls. When you thrash, have hands enough to stack the straw real good, covering the shed all but the south end. This will afford a better shelter than half the stables in the country.

During the winter, spread a little clean straw round inside the shed as needed. So far it is food and shelter. In the summer it is hardly less useful.

We have all noticed the injurious effects of the cold rains upon cattle yarded in an open yard, and felt how uncomfortable it was to sit milking in a shower. Through the summer, spread clean straw around occasionally. The straw absorbs and preserves the droppings and they enrich and help to rot the straw. Together they make good manure, ready for use in the fall. I say *good manure*, though I confess I am not chemist enough to tell what percentage of dragon's blood or shark's teeth it contains; but it has a very beneficial effect upon all crops on which I have tried it.

J. Bold.

Orange, Feb. 9, 1863.

Hungarian Grass.

What about Hungarian grass? Shall we cultivate or not? Give us your opinion, Mr. Editor. M. Lee.

Milwaukee Co.

[The verdicts upon its advantages are various and conflicting—some maintaining that it is very valuable indeed, and others declaring it a humbug. Some have even declared that it is liable to kill the horse that feeds upon it. Our own conviction is that the Hungarian grass, though it answers a very good purpose for wintering cattle and horses, has nevertheless been somewhat over-rated. On a good soil it unquestionably yields largely, but it is equally true that it is correspondingly exhaustive of the fertility of the soil. Its chief advantages, in our opinion, are its adaptability to soils and climate less favorable to clover and the other ordinary grasses, and its ability to perfect itself when sown after the other grasses have given unquestionable evidences of failure.—Ed.]

The Chinch Bug and Deep Plowing.

The above is the heading of a communication in the January No. of the Farmer for 1862, by Lewis Clark, of Beloit, giving some of his experiences with the enemy of our wheat crop and its relation to deep plowing.

I wish now to ask Mr. Clark, through the Farmer, a few questions with regard to the effect of the double plowing on other crops than the one of which he speaks.

In the first place, what was your object in following the breaking plow with the stirring plow?

I have 30 acres of prairie land which I thought of plowing in the same manner, for the sake of raising a crop of corn the first season. Will it pay for the first crop alone? What effect will it have on the following crops, leaving the chinch bugs out of the question?—What was your first crop on the ground? and how did it yield compared to the crop by its side?

I would like also to hear answers from others than Mr. Clark who may have experimented in the foregoing manner.

So far as my observation has extended, deep and shallow plowing, previous to the last season's crop, made no difference with the ravages of the chinch bug. If this winter, with so little snow, giving the ground a chance to freeze deep, does not diminish their number, we will be obliged to adopt a greater variety of productions in farming. L. R. Bingham.

Tafton, Feb'y 25, 1863.

Indiana Cotton.—A correspondent writes to the Cleveland *Herald*, from Mount Vernon, Indiana, as follows:

I am happy to inform you that southern Indiana is in earnest on the cotton question. I am informed by a reliable man that the pros-

pects are good for this county raising enough cotton for the whole State of Indiana this season. I saw a farmer who raised cotton twenty-five years ago, took the cotton twenty-five miles on horseback to a gin, and paid $2 per bushel for Pennsylvania wheat, and thinks he certainly ought to be able to raise cotton *this* year. I saw one gentleman who will put in ten acres; another twenty acres, and so on. I enclose to you two samples of cotton grown in this State; the small sample in Jennings county, and the large in this county. I hope to hear that Ohio will do her share in flax.

STOCK REGISTER.

Stock-raising versus Grain-growing.

I think if our farmers would pay more attention to stock, and less to raising wheat, our State would be very much benefitted by the change. It is an erroneous notion that nothing can be made in raising beef cattle. It is no difficult matter to make a "grade" steer weigh twelve hundred the fall after he is three years old. This, at two dollars and a quarter a hundred, which I think is the average price for *such* beef, would amount to twenty-seven dollars, which will leave a good profit above the cost of raising; besides the manure that can be made with a stock of cattle is no small item.

My plan in raising calves is to let them run with a cow, the first season, until the middle or last of September, then wean them, and give them good feed until such time as they should be taken up for winter; then I feed them hay and grain or roots, and give them good shelter until the next spring when it is time to turn to pasture; this is the last grain they will need. The next winter give them a plenty of straw and hay and the third winter they will do well on *good* straw until nearly spring, when feed hay until grass gets well started. By this method our farmers will make more money with less labor than by raising so much wheat, and at the end of ten years the *stock* farm will be worth fifty per cent more than the *grain* farm.

Should it be urged that our prairie farms are not adapted to raising stock, in consequence of having no surface water, we would say, build cisterns and save the water from the roof of the barn, if you have one; if not, make a cistern in a ravine, and fill it in the spring while the ground is frozen and the water is pure. We can also raise sheep without any water in summer, and but little in winter, and there is no better climate than that of Wisconsin for sheep.

We would urge upon our farmers to change their method of farming before the wheat crop *entirely* fails and they are obliged to have stock at whatever cost. J. B. DWINELL.

LODI, Feb. 19, 1863.

"Sore-headed Calves," Sorghum and Peanuts.

FRIEND HOYT:—Our "sore headed calves" are better. I touched some of their heads with turpentine; it cleansed them and started the new hair. I think the disease is contagious. It was brought among ours by a stray calf. In the course of four or five weeks, I noticed two or three of them had it, then another, and another, till fourteen had it. We had sent one three miles from home to be weaned; late in the fall he was brought home, and had no symptoms of it, but after he had been home about the same length of time, he, too, suffered an attack. That one spoken of in my last lost its eye. I had fed them all some sulphur before I received your recipe, which was a damage to them; one took cold, and it will be as much as we can do to keep him alive till grass; he has a bad cough.

I see an inquiry about the culture of peanuts, in the last FARMER. We raised some on the prairie once. They grew finely, but did not mature. I think we got them in too late. We planted in hills. I intend trying them again this year on sandy land.

I understand a number of our neighbors are going into the culture of sorghum. If we can get seed, we will cultivate some, but not on a large scale. N. M.

LODI, Feb. 23, 1863.

"Give us more about Sheep."

I wish more was said in the FARMER about sheep, as this is my hobby in stock-raising. What is the best work now being published,

aside from the FARMER, on wool and sheep raising? as I wish to post myself particularly on that branch of farming. I have taken the *Wool-Grower*, but now learn from my *Rural* that the former is merged in the latter. The *Prairie Farmer* I have taken but do not now.

I have purchased the celebrated stock buck "Roberson Rich," of H. Hemenway, of Whitewater, a notice of which you gave in the September No. of 1860. For four years previous I had used the stock of the old "Matchless," and bought ewes also of H. Hemenway; and have, in my estimation, a flock of 180 *good* sheep—shearing a little less than six lbs. on an average. But still there are flocks far ahead of mine. C. K. STEWART.

REMARKS.—We have, in the years past, said so much about sheep-raising in Wisconsin, that there has seemed to be no need of making it a point to urge its importance further. There is much, however, that should be published in the way of information, and it is our purpose, henceforth, to publish at least one article on some branch of sheep husbandry in each number. Mutton is bringing fabulous prices and wool has advanced nearly one hundred per cent. within the past year. The "Wool Grower" is still published at Cleveland, and is a good paper.—ED.

THE BEE-KEEPER.

Honey-Bee Culture.

Allow me to make a few suggestive hints to your numerous readers, pertaining to the culture of the honey-bee. It has long since been considered a branch of agriculture, although it has been seriously neglected. Having been exclusively engaged for several years past in their study and culture, I have become fully convinced that there is no kind of business, with the same amount of capital invested, that will pay half as well. The success of the business depends upon three great points: the man, the hive, and the season.

If the bee-keeper is skilled in the management of his bees, and has a hive that is rightly constructed, and the season is a favorable one, it is not an uncommon thing for him to realize ten, and in many instances, fifteen and twenty dollars profit from each prosperous hive yearly, thus paying three and four hundred per cent. on the investment. According to ancient history, honey at one time was the only sweet known. In Aristotle's and Pliny's day, who flourished over two thousand years ago, we learn that bees were then cultivated to some extent, although, like many other things, perfected and improved very much since. Within the past ten or fifteen years, there has been more progress made in their culture and management, than for centuries previous.

There seems to have never been a time since our earliest history, when bee-culture should demand our attention more than at the present when war and heavy taxation, the great scarcity and high price of sugar is staring us in the face; I say, why should we not encourage the culture of the bee upon a more extended scale and raise honey by the quantity, as some few now do, thus enabling us to meet the heavy taxes, and affording us a handsome income besides? With right care and management, and a favorable season, it will require but a few swarms of bees to raise a ton of honey. If a colony of bees come out strong in the spring, (as they will if properly wintered,) it is an easy matter to realize fifty and seventy-five lbs. and sometimes much more; besides a young swarm or two, which will be thrown off, if properly attended to.

Good honey readily commands a high price in market, and probably will for years to come. Under the present condition of our country, and the high price of sugar, it certainly behooves us to live as much as possible within ourselves, independent of the South. There is honey enough wasted every year to supply us with all the sweet we need. If we had the bees to collect it, there could be more honey produced north of Mason's and Dixon's line than there ever was sugar south of it, and not cost the producer one half what sugar now costs the southern planter. There is no place in the world so well adapted to a large yield of honey as the northern portion of the United States, with its fertile hills, valleys, and broad-spread prairies of the West. Certainly, for amount and quality of honey, we stand at the head of every other country in the world, if we would but improve it.

There is no danger of overstocking our market with honey, as the consumers increase faster than the producers.

There is no danger of overstocking our country with bees, as some persons have imagined, especially the fertile portions of it, as all honey-producing plants yield their sweets days together and sometimes weeks, depending much upon the state of the weather and the species of flower.

Those about to engage in the culture of this delightful little insect should first get posted by consulting some scientific bee-keeper, or be guided by some good book upon the subject, to insure success in the business.—*D. P. Kidder.*

THE HORTICULTURIST.

A. G. HANFORD, : : CORRESPONDING EDITOR.

Seasonable Hints for the Garden and Orchard.

Among the most important and interesting operations of the garden early this month, are the preparations for growing early vegetables.

The Hotbed is now supposed to be in successful operation, or at least the box of plants growing in the window; and, by the way, this simple manner of starting early plants is not to be despised, being within reach of the humblest cottager, whereby in the small space of one half a common sash, he can start sufficient plants of a good variety of vegetables for the early use of his family, provided he has prepared a very necessary adjunct, styled the

COLD FRAME.

This is easily constructed by enclosing about double the space of the hotbed, in a similar manner, except the filling to be of good composted earth, or rich garden mold, *free from foul seeds.*

This should be well pulverized, shoveled over several times, to thoroughly air it, on a dry day, and raked down smooth. The covering can be similar to the hotbed, or of cotton cloth stretched on frames, and well whitewashed to fill up the spaces between the threads.

Presuming the earth to be quite dry when about to plant, a good soaking with warm water will prepare it for the reception of the tender plants from the hotbed.

The plants are to be "pricked" or dibbled in with the fingers or light dibble in regular order, at intervals, so that the plants can have ten days or two weeks to grow before the final planting out.

The advantages of this very necessary adjunct will be apparent when we consider the great change from the even, tropical atmosphere of the hotbed to the cold and changeable garden plat. The cold frame gives the plant opportunity to gradually harden, and produce a good system of roots besides the immunity from spring frost gained by the few days growth therein.

As an almost indefinite number of plants can be started in a small space of hotbed, the size of the frames should correspond with the wants of the garden. The earlier the season, the greater breadth of cold frame will be required to hold the successive "pullings" from the hotbed.

Cold frames, as well as hot, should be watered with warm rains, or *warm water*, protected during all cold winds and frost by a covering of mats or sacks. and be well banked around with manure from the first. The hotbed will require daily ventilation as the plants increase in size, but especially look out for the too great heat during the first stages of growth.

A HOTBED AND COLD FRAME COMBINED,

Answering all the purposes of both, for medium early propagation, is easily constructed by having the bottom of the bed raised six inches from the ground, by placing poles, the length of the frame, a few inches apart, resting upon blocks of wood the width of the bed long, and two feet apart. Cover with a layer of stalks, hay or straw. Set on the frame, and fill with the compost or garden mold, rake down and settle, for the reception of seed or plants.

The sash or cloth covering can be used; the first for the seed bed. Small bundles of straw should be kept in readiness for banking in cold nights, and the usual covering of mats. During the warm days of April and May, the air should have free circulation under the bed, but *closed up at night.* The temperature of the bed will thus be raised to the growing point, a month before the garden is fit for the reception of seeds and plants.

Among the plants suitable for early growing in the hotbed are tomatoes, lettuce, peppergrass, cabbage, cauliflower, and radishes. The first named it is specially desirable to start under glass, and no plant will better pay to grow in the house window than the tomato.

The early blooming annuals for the flower garden can be started in the window or hotbed very successfully, and for all these plants the cold frame will be found a necessity when once in use.

Do not plow the garden too early, unless you want extra labor in disposing of the extra crop of weeds, and the hard lumps of earth on the approach of hot weather. If the garden can be arranged so as to plow in strips successively, as the season advances, the full growing season will show the advantage to be very great.

Early potatoes are easily started in the frame; or select some dry, sheltered spot, spread the seed very thick upon a good compost soil, cover one half inch with soil and two inches with old hay. After two or three weeks they can easily be transplanted to the garden.

FRUIT-GARDEN AND ORCHARD

Should now be looked to, and the variety and extent of planting fully and early decided upon. Early planting of gooseberries, currants, pie-plant and asparagus is essential to complete success. Cuttings and scions of all kinds if not before made, should be, *early*. They will not bear one half the exposure to wind and weather they would if cut in autumn; plant immediately on the opening of spring, using plenty of rich compost around them and mulch with rotten straw, or its equal. Cut back raspberries and blackberries nearly to the ground before planting, and indeed leave but little wood above ground on any of the shrubby fruits. Hill up and mulch after planting. Thin out all the old canes and cut back about one-third the new ones for fruiting.

Pruning of grape vines had better be postponed until June. The same with the orchard, and nursery except a cement be immediately applied, and if hot, all the better, but cements will not always prevent the bleeding of fresh wounds in the early sap-flowing season, before the leaves appear. In case of taking up trees and vines, they can be pruned safely, as they usually remain dormant long enough for the fresh cut to harden before the flow of sap.

Evergreens, especially if large, are best transplanted early, notwithstanding the prevailing idea. The truth is, there is not as much to choose in the time of the year, as in the condition of the ground and state of the atmosphere. Undoubtedly, so far as the tree is concerned, late spring is the worst possible time to transplant them, as the greatest circulation is then in progress. They can be transplanted almost any time, by carefully preserving the small roots, or spongioles, from sun and wind. Cutting back the tops is as beneficial to an evergreen as an apple tree.

Fruit Trees of all kinds should be lifted early, even if not planted out until late. One tree dug early and well kept is worth two dug just as the buds burst.

Do not rely upon the lists of eastern nurserymen for safe planting in the west. Ten tender trees out of a hundred planted will give the orchard an unsightly appearance, and take off the profit and satisfaction of planting. The experience of Western fruit growers has fully established a successful list.

Select trees with good roots; and as you are far more likely to get these on young trees, order them by all means, unless you can go to the nursery with your team. Generally the balance of account will, at the end of five years, be largely in favor of the two or three year old trees, against two years older.

Cut back before planting most of the last year's growth, more or less according to the amount of root.

In case the trees are much shriveled from exposure, they can usually be restored by burying completely under ground for a week or ten days. The moist earth will gradually bring them back to the original state; lift and plant during a moist time; cut such trees back severely.

Planting.—On this subject we offer a few brief but "golden hints."

1st. Select the *highest and best drained situation for an orchard*, and of a cool aspect if possible.

2d. Prepare the ground by deep plowing, subsoiling or trenching the whole ground to the depth of one foot or more, and where the soil is anyways retentive of water, or sticky when wet, plow the ground into ridges, one foot or more in height, and *plant apon the ridge.*

3d. Do not dig holes for the trees, *but plant on the surface;* mound up to support the tree, and heavily mulch.

J. C. PLUMB.

Dianthus Heddewigi.

As the season approaches for making flower gardens, the question will naturally arise, Have you anything new? To this we answer, There are some new and very beautiful flowering plants just recently introduced from foreign countries, a few of which we shall present from time to time to the readers of the Farmer, and first of all the *Dianthus Heddewigi*, or Japan Pink.

This beautiful plant was introduced a short time since from Japan, and has attracted much attention on account of its large size and bright and varied colors. The Dianthus Laciniatus is more fringed, but in other respects they are strikingly alike.

"The plants are perennial or biennial, but seeds sown in the spring will blossom profusely from August until winter." Color, all shades from white to dark marbled maroon.

Climbing and Trailing Shrubs.

In ornamental planting these are especially valuable for covering walls, unsightly buildings, arbors, trellises, &c.

A post, an old cedar or other tree set in the ground form simple, inexpensive supports, and when well covered are very ornamental; while nothing can add more to the beauty of the stately mansion, the cosy cottage or more humble log cabin, than vines and roses clambering over the supports of the porch and veranda, or trained about the windows and doorway.

Ampelopsis.—(*American Ivy.*)—A native plant of rapid growth, clinging by rootlets which proceed from its tendrils. Foliage rich and luxuriant, changing in autumn to all shades of scarlet, crimson and purple. It thrives best in a deep, rich soil, and is extremely hardy.

Bignonia (*radicans*).—*Trumpet Flower.*—A rapid climber, with large, trumpet-shaped, brilliant scarlet flowers, very showy. We doubt if it can be made to bloom in Wisconsin without careful and very thorough winter protection.

Celastrus Scandens.—*Climbing Staff Tree, Bitter Sweet.*—A handsome twining shrub with orange scarlet berries in clusters, attains the height of fifteen or twenty feet, found growing wild in the woods of Wisconsin.

Clematis or Virgin's Bower.—An interesting family of elegant, slender branched shrubs of rapid growth; flowers of various colors, some of them quite fragrant. Excepting *Virginica* and possibly *flamula* they will require some protection in winter.

Flamula—flowers white, very fragrant.; *viticella*—flowers bluish-purple; *Sophia*—very large, light blue, beautiful, new; *Virginica*—white flowers in great profusion, growth very rapid; *Helene*—large, white, beautiful.

Glycine, Wistaria.—(*Sinensis.*)—An elegant, rapid growing vine, with long, pinnate foliage and racemes of pale lilac flowers; this will need a sheltered position and some protection in winter.

Honeysuckles, (*Lonicera.*)—*Belgian, Monthly Fragrant,*—flowers orange, or red and yellow, sweet scented, blooms all summer, should be covered in winter. *Scarlet Trumpet*—very rapid grower, in bloom all summer, showy and handsome. *Yellow Trumpet*—flowers bright yellow, very pretty, and contrasts finely with the last named, continues long in bloom. *Chinese Twining*—foliage dark green which it holds nearly all winter, in bloom from July until frost, exceedingly sweet; it will require protection in winter. *English Woodbine*—showy buff and red flowers, continues long in bloom, fragrant, requires a sheltered position and then may fail after a severe winter. *Pallida*—white and straw colored, beautiful, rather new yet, one of the finest.

Passiflora Incarnata.—*New hardy Passion Vine.*—One of the most vigorous growers when well established. It dies to the ground in winter but during summer makes shoots 20 to 30 feet long, covered with a profusion of beautiful purple flowers. It should have deep rich soil, and a covering of dry leaves or litter over the roots late in autumn.

Grape Vines.—The strong growing, hardy native varieties, as Clinton, Vermont, Northern Muscadine and Concord are well adapted to arbors or for covering unsightly buildings, &c.

Ivy.—(*English, Irish, Giant.*)—These thrive admirably here, but will not endure the cold of a Wisconsin winter; they make fine pot plants for house culture.

Periploca or *Virginian Silk.*—A rapid growing, pretty, twining vine with small glossy leaves and curious brown flowers.

Climbing Roses—among which the *Prairie Rose*, in its varieties, takes the lead. The rapid growth, luxuriant foliage, immense clusters of beautiful flowers, and hardiness, commend these to every one. The following are all fine varieties.

Anna Maria.—Blush tinged with flesh in the centre, well formed, cluster large.

Baltimore Belle.—White, often with a pale

waxy blush, very compact and double, in large clusters, contrasts finely with

Beauty, or *Queen of the Prairie.*—Bright rosy red, compact, globular, in large clusters, one of the best.

Caradora Allan.—Bright pink, semi-double, well cupped, distinct, fine.

Mrs. Hovey.—Pale delicate blush, almost white.

Mt. Joy. (*Multiflora.*)—Blush, with pink center, beautiful, blooms late.

Queen of the Belgians, (*Ayreshire.*)—Pure white, small, very double, delicate, fine, rather tender.

A. G. HANFORD.

COLUMBUS, O.

Fruit and Shade Trees, &c.

MR. EDITOR:—Among farmers in general but few have fruit or shade trees or shrubbery of any kind. My farmer friends, why are you so negligent of your duty? By the labor of a few hours, or at the expense of a few dollars, you can make your farm worth hundreds of dollars more in a few years. If you cannot spend time and money to go to the woods or nursery and yet your trees, you can raise them from seeds and cuttings.

A few years ago I got a few poplar and balm of Gilead cuttings; they flourished, and now I have plenty and some to give away. Three years ago one of my neighbors gave me some currant and gooseberry cuttings, and now I have all the currants and gooseberries needed for our family. Three years ago a friend of mine gave me six strawberry plants; now I have a bed 16x30. So, with a few odd hours, I have plenty of currants, gooseberries, strawberries, and some shade trees.

Stock farmers in this vicinity generally keep cattle. I think they would do better to keep sheep. Wheat has averaged for the last five years about 20 bushels to the acre in this town. I should like to know if this can be beat by any other part of the State.

J. CURTIS.

HAMMOND, St. Croix Co., Feb. 1863.

NOTE.—All right; only we hope others will not take license to wait for seeds, cuttings and plants until some one chooses to *donate* them. They will prove a good investment even at high cost.—ED.

Horticultural Scraps.

April is the nurseryman's harvest month; and not only so, but it may be called his seed-time, as well as the farmer's, for he now scatters to the world his products, precious gems, earth's trophies, nurtured with much carefulness; and by the "sweat of his brow," he now casts them all upon the unprejudiced hopes and desires of an ever changing populace, vainly flattered that by the above mentioned "sweat" he is climbing upon the galaxy of popular opinion, eventually to reap for himself some great reward. A busy season this; seed-time and harvest—all hopes that are built resting upon every effort put forth in distributing their choice gems for Pomona's wealth, but may be easily destroyed if built upon a tottering foundation, or the start is not correct and the after treatment not all right.

This study of nature and her laws demands our attention; and we would that every tree-planter in the Northwest might give it a full and comprehensive view. The nurseryman, as he lifts his choice products from Mother Earth, admires their comeliness, bright, smooth bark, perfect top, branched "just right," its roots,—a beautiful mass of well grown fibrous feeders, which show conclusively that they have been well cared for, soil selected with much pains to perfect its growth as adapted to the demands of various sorts. And how he wishes, as he bids his "pets" "God speed," that he might follow them all to their "last resting place," or rather that he might know in what peculiar state their life was to be consigned to Mother Earth. How changed might and should be the condition of all things then! But no; that "ignorance which is bliss" to some doth not so appear to him, and he only wishes the more for that light hid so closely "under a bushel," that it might reveal to him the true aspect and soil of the proposed orchard, which a single stroke of the orchardist's pen could tell. Tell them if your site is a valley and underdrained; or elevated, with thorough sur-

face drainage, with perhaps an extra rich soil, or high, to an almost gravel knoll, or, worse than all, the level, rich prairie, unprotected, with no surface drainage, and a stiff clay subsoil.

With such knowledge as this before him, and which should be attached to every order, no honest nurseryman will send out such sorts as Early Harvest, Early Joe, Primate, Fall Pippin, Rambo, Twenty Ounce, Dominie, Swaar, Sweet Gillflower, and this class of but half hardy and tender sorts, and which only succeed in special localities and with excellent treatment; but would, unless distinctly preferred, gladly substitute Golden and Perry Russets, Talman Sweet, Red Astrachan, St. Lawrence, Fameuse, Cider, Northern Spy, Red Romanite, Sweet Wine, Pomme Grise, Colvert, W. Seeknofurther, and some others. There are localities where the first list is equally desirable with the last, but without some direct knowledge of location and exposure, many otherwise choice locations are almost lost in value to the orchardist.

Before planting, examine closely your trees, see those fine feeding roots, nature's choice, precious gift; now don't smother them in kindness, by planting too deeply, or by digging so *deep* a hole, far below its surroundings, that you have a sink hole waiting the reception of all the surface water. No tree will thrive in such a condition. It is only making a low, wet and unnatural position out of what might have been otherwise a well drained position.

All the large fruits are equally sensitive. Plant dwarf pears especially shallow. If the quince stock has been worked high, with a sharp knife remove the lower tier of roots, cutting away the entire stock below the first well formed roots below the union. A great fault with this class of trees has been long stock plants and high working, rendering it absolutely necessary to plant very deep to cover the union, or else leave it far above the surface, exposed to weather changes to which it is sensitive.

Remember the small fruits. How many pleasant associations cluster around the old strawberry bed! And the long row of Dutch currants, trim them up, manure around them, dig it in, and see, some of you who have been neglectful of these little things, if it "don't pay;" and report progress, of course, through the FARMER.

O. S. WILLEY.

The Wild Plum.

MR. EDITOR:—I wish to call the attention of your readers to our native fruit commonly known as the wild plum. I have had some experience in its cultivation, and offer the following remarks for your consideration.

A few years ago I went to a grove or thicket and selected some of the best plums I could find; from these I took the stones and placed them in the ground before they became dry. Early in the following spring I planted the stones in rows four feet apart, the stones being placed about six inches apart in the rows.—When the trees were two years old I tranplanted some of them, setting them eight feet apart each way. I planted a row of potatoes or other vegetables between the rows of trees one way, and still had room to work between the rows with a horse and plow. In this way I kept the ground under cultivation and free from weeds two or three years; afterwards I cultivated the ground without trying to raise any crop between the trees.

The following is the result of my experiment. When my trees were four years old, some of them blossomed, but the frost killed the fruit; the fifth year I had some very good fruit; the sixth and seventh years I had an abundance of excellent fruit, not only for my own family, but bushels for my neighbors, who think some of my plums as good as any they ever tasted. My trees are now seven years old, and I think some of them bore a peck of plums each the last season.

The largest trees are nearly ten feet high, three inches in diameter, and the branches spread so far that they cover nearly all of the space between the trees. I have more than a hundred trees which have borne fruit. On many of them the fruit was *extra;* on a large

majority it was very good, and on none was it very poor.

I consider the wild plum better than the eastern varieties, for the following reasons: It is very hardy, or *extra hardy*, as the nurserymen say. I have never known it to winter-kill. It grows much faster, forms a fine shaped top, and is a beautiful tree when cultivated. It commences bearing four or five years sooner than the eastern varieties raised in the same manner, and it is a better bearer.

In conclusion I would say, that if any of the readers of the FARMER desire an abundance of good wholesome fruit, at least one month in each year, let them read the above remarks, and "go and do likewise, and they shall have like reward." A.

Madison Horticultural Society.

Dwarf Fruit Trees.—The meetings of this Society are often very interesting. At the meeting March 14th, the subject of Dwarf Fruit Trees was discussed, with a unanimity of opinion as to the practicability of their culture in this State, but a decided difference of opinion as to *how* they should be planted.

Mr. Chandler, of Rock Terrace Nursery, maintained that the dwarf pear on quince should be planted with the junction two or three inches below the surface, because, the junction not being firm, the tree was liable to be broken off by strong winds, but that the dwarf apple should have the junction above the ground.

Mr J. C. Plumb took the ground that the only way to keep dwarf trees dwarfs in reality was to plant them in all cases with the junction above the surface of the ground. He furthermore asserted, with good reasons therefor, that very many orchards are ruined by deep planting.

As to the varieties of dwarf apples, Mr. Chandler recommends the Red Astrachan, Tompkins' King, the Duchess of Oldenburg, (this is of Prussian origin and very hardy,) the Early Joe, Sops of Wine, Sweet June, Keswic Codling, Hawthornden, Hawling, Porter, Autumn Strawberry, Fameuse, and Wagener.

As varieties of dwarf pears; for summer, Osborne's Summer and Tyson; for autumn, White Doyenne and Flemish Beauty; and for winter, the Lawrence, Glout Morceau and the Bartlett. These varieties are best suited to this climate, and have been tried in different parts of the State.

Pear Blight.

FRIEND HOYT:—I wish to enquire if you or any of your numerous readers of the FARMER have discovered the cause, or discovered any remedy for the blight that has affected the Pear tree the past season. Is it something new or is it a disease that is peculiar to the pear alone? Is the blight that affects the pear tree the same as the blight upon the apple? They appear the same at first, but they result differently. One year ago last fall I had some 12 or 15 bushels of the most beautiful and delicious pears. Then I looked forward with high anticipations that the day was not far distant when we might sit down under our own roof, and enjoy the pleasure of a feast of luscious pears of our own right hand's planting. The fruit and trees were much admired by all who saw them. But alas! our hopes, like those splendid trees, were soon blighted. Those beautiful Flemish Beauties and Bartletts that yielded so luxuriantly have blighted and died almost root and branch.

The first appearance of the blight would be upon the extreme ends of the limbs; then it appeared to follow down the branches to the trunk, and then down the body to the roots—death marking its course. Many of the trees were not affected until the fruit was nearly one-half grown. Now, what can be the cause? Is it lack of cultivation, or is it because they have been too highly cultivated? Is it the effect of an insect, or is it a virus in the atmosphere? Pray tell us, if you can; if not, let these hints stimulate investigation, for I intend to adopt as my motto "Try again." H. W. WOLCOTT.

ROSENDALE, March 1, 1863.

[Either the Editor of the Horticultural Department, or somebody else, will undoubtedly

make some response to this important inquiry. But would it not be well for the questioner to specify more in detail the circumstances connected with the trees thus affected? The situation, the nature of the soil, the season when the blight commenced, &c., &c., are important data.—Ed. Farmer.]

Siberian Arborvitae.

American Arborvitæ—Often, though incorrectly called *White Cedar*.—A fine, bushy, small tree or large shrub, with pyramidal habit, with horizontal branches and handsome flat foliage of a bright, pleasing green color. Excellent for screens and hedges; may be clipped into any desired shape. It transplants easily and grows quite rapidly.

There is one objection to the Arborvitæ; at the approach of cold weather it turns brownish. The Siberian Arborvitæ is free from this defect and is much to be preferred, retaining its dark green color in winter. It is of slower growth and more compact habit, having the appearance of being neatly clipped. It makes an elegant lawn tree and is superb for ornamental hedges.

The American is sold very cheaply compared with which the Siberian is yet somewhat expensive; 50 cents will usually pay for only a small specimen. A. G. H.

Columbus, O.

A New Way to Protect Fruit Trees.

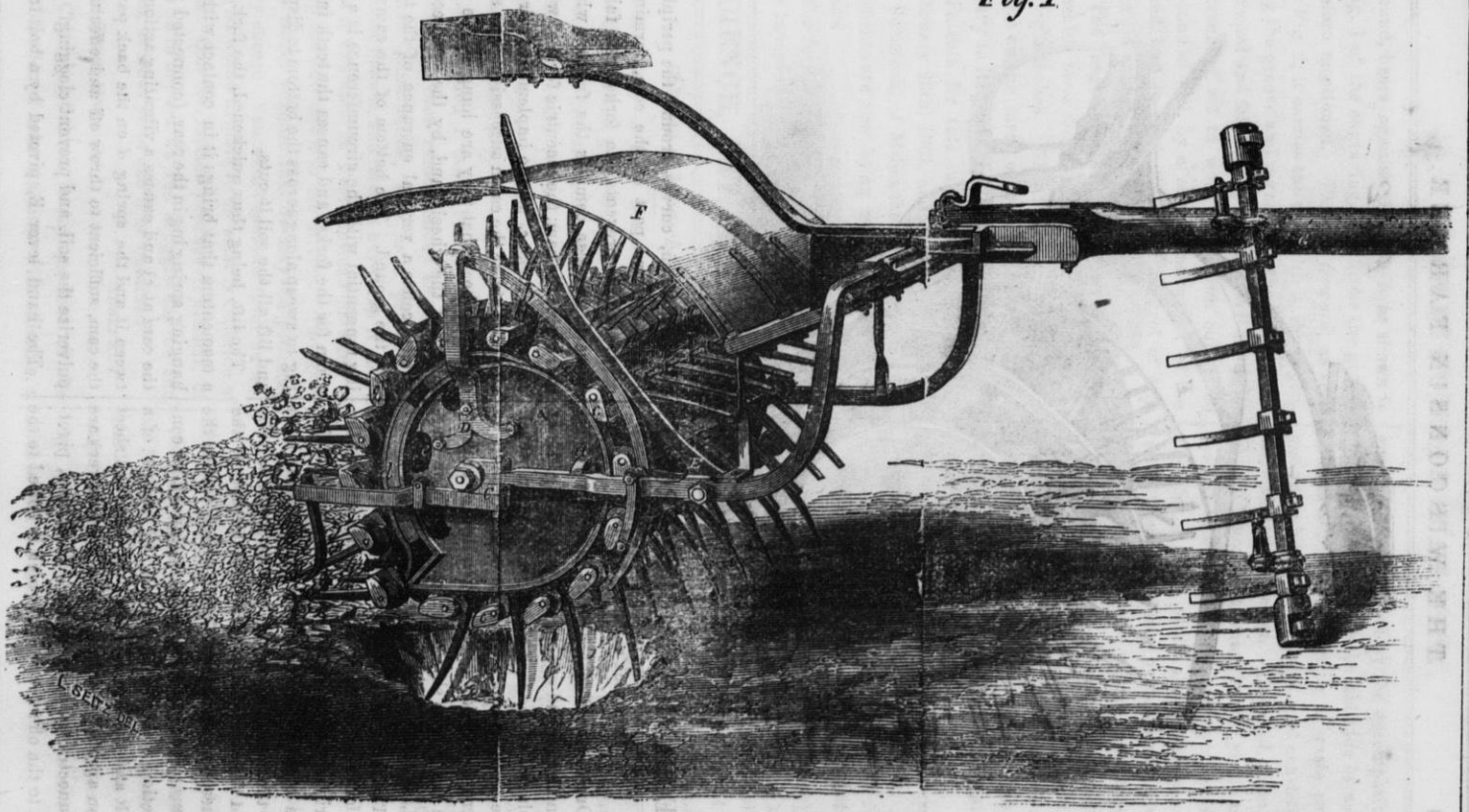
Mr. Editor:—In your February No., 1863, I saw a short sketch headed "The Orchard—Seasonable Hints, Sun Scald," which says "Protection is readily afforded by tying on south side of tree lath, strips of bark, long straw, or by tacking a board on the south side with small nails." Now my advice to those who are setting new orchards would be to set the tree leaning to the southwest, and thereby sheltering the body or trunk in two ways—by the branches, and again, the trunk, standing obliquely to the sun, will never suffer by sunscald as those that lean the other way. And again, by setting young trees leaning to the southwest, the most of our hard winds coming from that direction tend to straighten the trunk up, so that when it is matured it will stand nearly erect. I would advise low training, as the top or branches protect the trunk. If the former method is advised, after many years of care and labor, it might be neglected, and the orchard all be killed, and thereby discourage and dishearten a whole neighborhood, while it would take years of persuasion to establish confidence again. Wm. Farnum, Jr.

Tomah, Feb. 1863.

The First American Nursery.

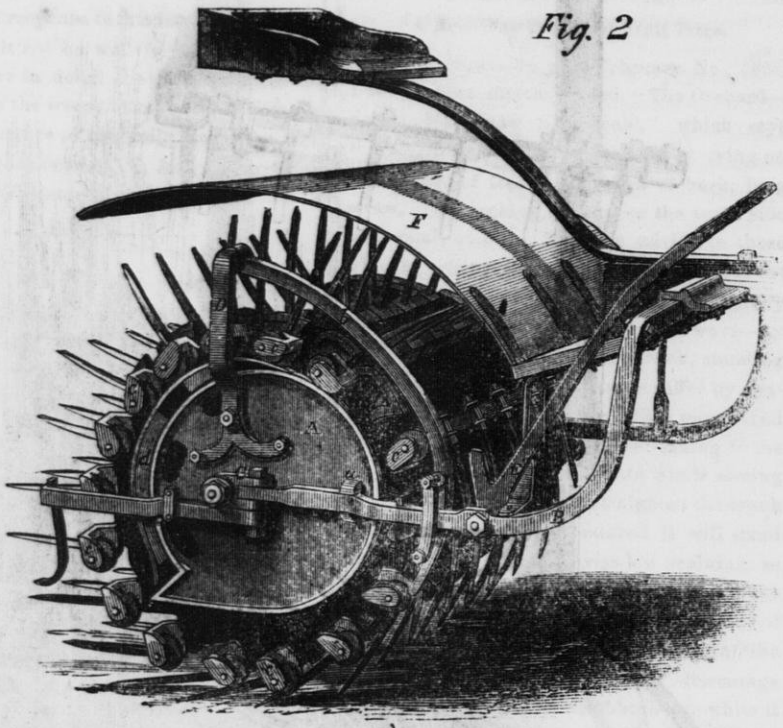
The earlier American Nurseries were few in number, and, compared with some now existing, of quite limited extent,—though equal, perhaps, in proportion to population. The first of which there is any record, and probably the earliest established, was that of John Bertram, near Philadelphia, about the year 1730. Here were congregated many of the prominent native plants and trees, preparatory to exportation to Europe—also the fruits and plants of the other hemisphere, obtained in exchange for American productions. The specimen trees planted by the elder Bertram and his descendants still adorn the grounds, classic to the botanist and the lover of nature; long may they stand, living memorials of generations passed away, our earliest evidence of a taste for horticulture!—*Atlantic for April.*

Fig. 1



Comstock's Rotary Spader at Work.

Fig. 2



MECHANICAL & COMMERCIAL.

Comstock's Rotary Spader.

One of the Forks of this machine is seen standing on end against the pole in Fig. 1. At each end of the fork shaft is a friction wheel. The teeth or tines are secured to the shaft by stirrups and keys. Two handles (or cranks) are cast on the shaft with each a pin or journal, as seen in the engraving.

The forks are hung by these pins or journals, in holes at equal distances apart around the periphery of cast iron slotted wheels, which are keyed to an axle which works in the hubs of the cams, A, on the outside of the wheels, and the fork shafts drop into the slots of the wheels, so that their friction wheels rest on the cams. The cams are made stationary by connection with the hounds, B, by means of a bolt and the lugs *a*. The pole, seat, and sheet iron apron F (for the protection of driver) are connected to these hounds. The arm *b*, pivoted to the offset arm D, which is bolted to the side of the cam, curves around the periphery of the forward part of the cam, forming a groove which prevents the forks from falling forward, and also compels the friction wheels to traverse the cam, the eccentric form of which causes the forks *c*, as the implement is drawn along, to strike the earth successively the same distance ahead that they are hung on the periphery of the wheels, and, by the same eccentricity, cause a vertical entrance of the teeth into the ground. The bottom of the cams being tangential with the circumference is a fulcrum for the forks, and causes the teeth in lifting to sweep along across the bottom to displace and lift all the soil it cuts.

The lift, being thus quickened, the fork gets a momentum that brings it in contact with the hanging spring lug in the rear, (connected with the cam at *c*) and causes a vibrating action between it and the spring *d* on the back part of the cam, sufficient to throw off and effectually pulverize the soil, and prevent clogging.

The hand lever E, pivoted by a bolt to the

hound, bears against the arm *b*, as shown in Fig. 1 of the engraving, and forms the groove before mentioned. *Thrown forward*, as seen in Fig. 2, it carries the arm with it, thus opening the groove and permitting the forks to fall forward and fold up. By this means it is, while advancing, set to work or thrown out of the ground at will, by a simple movement of the hand, and is perfectly under control of any one old enough to drive the team.

The engraving represents an implement working *three feet* in width, and a depth of six to eight inches. When folded it may be drawn about on the farm or common roads without injury to its parts.

Patents for this invention were procured February 26th, 1861, and May 13th, 1862, by C. Comstock, of Milwaukee, Wis., and the implements are now being manufactured at that place.

For further information or circulars address the inventor.

SCIENCE, ART, STATISTICS.

Chloride of Lime.—A Query.

DEAR SIR:—I have noticed with pleasure that the FARMER gains friends. If the FARMER could be transformed into a weekly paper, I think it would replace nearly every other paper and be welcomed at every fireside of the farming community.

One question I would like to ask: Chloride of lime has been recommended as an agent to hasten germination, also as a preventative against insects, and lately I have seen it stated that it was used in Paris instead of water to keep the dust down in the streets. The latter use would suggest that it may be produced very cheap. You would confer a favor on me, if you would explain to us what is Chloride of lime. Can the farmer produce it himself, or has he to depend on the druggist for it? and if so, at what price can it be obtained?

ADOLPHUS.

MT. PISGAH, Monroe Co.

[Chloride of Lime is the product of the combination of common lime with chlorine, a greenish gas obtained by the decomposition of common salt, which is the chloride of sodium. In soda-ash works there is a waste product known as hydrochloric acid, and consisting of chlorine and hydrogen. This acid, when heated with binoxide of manganese, yields up the gaseous chlorine; and in order to manufacture chloride of lime, it is simply necessary to spread fresh slaked lime upon shelves in leaden or stone chambers and expose it to the action of the chlorine thus obtained. The lime absorbs the gas, and is then put up in tight boxes or casks for sale. If it is desired to use it in liquid form, the powder must be dissolved in water. Price at the druggists 11 cents per pound.—EDITOR.]

EDUCATIONAL.

The State University—A Step Forward.

Hitherto the Wisconsin State University has not had a very prosperous career. As to grade and quality it has ranked with the best colleges in the West, but financially, and as to that popularity which secures a large attendance, it has fallen far short of the high mark which its friends set for it at the date of incorporation.

As it appears to us, this partial failure is due to three principal causes:

1. The absence of the best possible financial management, as evidenced in large and needless expenditures for buildings.

2. A persistent disregard, on the part of the Regents of the University, of the rights of one entire half of the youth of the State.

3. A narrow, illiberal and unjust policy on the part of the State.

The first of these evils is now beyond the power of correction: the second is in process of correction, and the third, it is believed, will not much longer remain a reproach to the State.

Section 2 of the Act of Incorporation reads as follows: "The object of the University shall be to provide *the inhabitants* of this State with the means of acquiring a thorough knowledge of the various branches of literature, science and the arts."

Hitherto the Regents of the University have assumed to say that inhabitants meant *male* inhabitants, and accordingly the doors have been closed against any and all young ladies. Recently the impolicy and injustice of this exclusion has been more fairly considered, and as the result, an ordinance has been passed for the establishment of a Normal Department, to which gentlemen and ladies are received on precisely equal terms. This, in effect, opens the doors of the University to all who may wish to avail themselves of its facilities without regard to sex; and we are informed that a number of young ladies are already making arrangements to take a complete University course.

The world moves! let all the people rejoice!

The Normal Department has already commenced its spring session, under the immediate charge of Prof. Chas. A. Allen, late Agent of the Normal School Board, and promises finely.

Boys and Girls.—Speaking of the plan of separating the sexes in school, Mr. Stowe, the celebrated Glasgow teacher, says:

"The separation has been found injurious. It is impossible to raise the girls as high, intellectually, without the boys as with them—and it is impossible to raise boys, morally, as high without the girls. The girls morally elevate the boys, and the boys intellectually elevate the girls.

"But more than this—girls themselves are morally elevated by the presence of boys, and boys are intellectually elevated by the presence of girls. Boys brought up with girls are made more positively intellectual by the softening influence of the female character."

True Culture.—Alas! how many examples are now present to memory of young men the most anxiously and expensively be-schoolmastered, be-tutored, be-lectured, anything but *educated;* who have received arms and ammunition, instead of skill, strength, and courage; varnished, rather than polished; perilously over-civilized, and most pitiably uncultivated! and all from inattention to the method dictated by Nature herself—to the simple truth that as the forms in all organized existence, so must all true and living knowledge proceed from within; that it may be trained, supported, fed, excited, but can never be infused or impressed. —*Coleridge.*

THE HOME.

To the Lady Readers of the "Farmer."

The subjoined Preamble and Constitution are those recently adopted by "The Ladies' Union League of Madison," and which, in pursuance of a generally expressed wish of many of our ladies, and with the consent of the Editor, I submit for your consideration. My faith in your loyal devotion to the best interests of our country leads me to believe that it will be of more interest to you than any of the several articles in which I had proposed to greet you this month. The entirely non-partizan character of this League asks for it the endorsement and co-working of every patriotic woman without reference to the "party" of husband, brother or son. Let us, of Madison, be encouraged by hearing of similar associations in all of the rural portions of our noble State.

Mrs. Hoyt.

Madison, March 23, 1863.

PREAMBLE.

In the history of every nation crises are liable to arise wherein the patriotic services and sacrifices of the whole people, without regard to condition or circumstance, are essential to the perpetuity of the Government—wherein ability should be recognized as the sole measure of duty.

It is our conviction that the American Republic is to-day passing through such a crisis, and that upon the success of the Government in putting down the rebellion, which so disturbs the peace and threatens the liberties of the country, depends not only the future existence of the Republic under which we live, but likewise the progress of liberal ideas and the growth of free institutions in all the nations of the world.

In this condition of our national affairs the women of America, not less than the heroic men who are fighting our battles, are most imperatively called upon for all such services and sacrifices as are consistent with their position and relations as women, and as may in any degree subserve the cause of our beloved country.

In addition to, and in no wise interfering with the "Aid Societies" already widely established, and doing much toward alleviating the physical hardships and sufferings incident to a state of war, there appear three ways in which earnest and judicious efforts may promote this desired end:

1. By retrenchment in household and personal expenses, to the end that the material resources of the Government may, so far as possible, be devoted to the entire and thorough vindication of its authority.

2. By stimulating and strengthening in the hearts of all citizens at home the loyal sentiment of love and reverence for the National Government and of establishing in them an unwavering determination that the war, so wickedly urged against the Union of these States, shall not cease until the rebellion shall have been utterly crushed out and the integrity of the Republic re-established upon a sure and enduring basis.

3. By keeping before our soldiers, now engaged or hereafter to be called into the service of the country, indubitable evidences of the earnest sympathy and untiring co-operation of all true American women.

Now, therefore, we, ladies of Madison, recognizing the value of united effort, in order that our duties, as above indicated, may the more efficiently be performed, do hereby associate ourselves together under the name and style of "The Ladies' Union League of the City of Madison," and in our associated proceedings agree to be governed by the following Constitution, together with such rules and regulations as the "League" may, in its wisdom, from time to time adopt.

CONSTITUTION.

ARTICLE I.—The name and style of this association shall be "The Ladies' Union League of the City of Madison."

ART. II.—All ladies who shall subscribe to the Preamble and Constitution hereby ordained, and wear such badge as the League may prescribe, shall be the members thereof.

ART. III.—The Officers of this League shall consist of a President, two Vice Presidents, a Secretary, a Treasurer, and an Executive Committee of three; all of whom, except the Executive Committee, shall be elected by ballot, and hold their respective offices for a term of three months and until their successors are elected. The Executive Committee shall be appointed by the Presidext and hold their office during the term of the President so appointing them.

ART. IV.—The President shall preside at the meetings of the League and may call special meetings thereof when, with the concurrence of two members of the Executive Committee, it may be deemed expedient. In the absence of the President, the Vice Presidents respectively, in the order of their rank, shall exercise the prerogatives and perform all the duties of the President. The duties of the Secretary and Treasurer shall be such as are common to those officers in all like associations. The Executive Committee shall act in connection with the President, and, with her, shall constitute the standing business committee of the League. All duties of officers, committees and members of the League, not herein defined, shall be prescribed from time to time by vote or resolution.

ART. V.—The proceedings of this League shall be conducted according to parliamentary usage.

ART. VI.—Any member of this League who shall violate the pledges and provisions of this Constitution and the Preamble thereto may be expelled by a vote of a majority of its members; *Provided*, that no member shall be expelled until written charges have been preferred and notice given to the person so charged, who shall have the privilege of a fair and impartial hearing.

ART. VII.—No money shall be drawn from the treasury except upon an order authorized by the Executive Committee, which order shall be signed by the President and countersigned by the Secretary.

ART. VIII.—The regular meetings of the League shall be held on Saturday of each week unless otherwise directed by a vote of the majority of the members, and at such place as may be determined by the Executive Committee. A majority of the members present at any meeting shall constitute a quorum for business.

ART. IX.—This Constitution may be amended by a vote of two-thirds of the members in attendance upon any regular meeting, notice of proposed amendments having been given specifically, in writing, two weeks previous and recorded in the minutes of th e proceedings.

How to Write to the Soldiers.

First. Direct your letter plainly, putting on it the name of the soldier in full, of his captain also in full, the letter of his company, the name and number of his regiment, as well as the locality of the regiment. A man is known by his company, and there is no certainty of an epistle reaching its destination without the letter of the company being placed on it.

Direct your letter not only to the General Hospital of any place, but also to the Branch Hospital, where the patient may be; and following, also, fully the foregoing suggestions.

Second. Write frequently; letters from home every few days are better than medicine.—They not only afford sympathy and hope, but they call off attention from loneliness and sickness.

Third. Write cheerfully; don't write of your troubles and annoyances, and all the unpleasant things of the neighborhood. Write to cheer the soldier amid his trials, sufferings and isolation.

If your letters are not answered, write to the Chaplain, and thus learn the cause.

Bridals and Baths of Arab Ladies.

On subsequent and persevering inquiry among Arab ladies, I found out how it was that the bride's face looked so lustrous. I learned that girls are prepared for marriage with a very great deal of ceremony. There are women who make the beautifying of brides their especial profession.

A widow woman, named Angelina, is the chief artist in this department of art in Haifa. She uses her scissors and tweezers freely and skillfully to remove superfluous hair, and trains the eyebrows to an arched line, perfecting it with black pigments. She prepares an adhesive plaster of very strong sweet gum, and applies it by degrees all over the body, letting it remain on for a minute or more, then she tears it off quickly, and it brings away with it all the soft down or hair, leaving the skin quite bare, with an unusually bright and polished appearance, much admired by Orientals. The face requires very careful manipulation. When women have once submitted to this process, they look frightful if from time to time they do not repeat it; for the hair never grows as soft and fine again. Perhaps this is one of the reasons why aged Arab women, who have quite given up all these arts of adornment, look so haggard and witch-like. In some instances, this ordeal slightly irritates the skin, and perfumed sesame or olive oil is applied, or cooling lotions of elder-flower water are used.

The bride invites her friends to accompany her to the public bath previous to the wedding day, and sends to each one a packet of henna, two or three pieces of soap, and two wax candles. Angelina is generally the bearer of the message and of these articles, which are always to be paid for. I have now and then accepted such invitations.

Bridal parties assemble and sometimes pass three successive days in the luxury of the Turkish bath. Pipes, sherbet, coffee, and other refreshments are served, and songs are sung in honor of the bride, who is, of course, attended by Angelina, and forms the centre of attraction. Her hair is unbraided, she is slowly disrobed, and then, with her loins slightly girded with crimson silk, she is mounted on high clogs, and led through halls and passages gradually increasing in temperature, with fountains overflowing their marble floors; she is placed on a marble platform, near to a jet of hot water; fuller's earth is rubbed on her head, and she is lathered with soap and brushed with a handful of tow; then hot water is poured over her freely, she is swathed in long towels and by slow degrees conducted back to a more moderate temperature, and lastly to a fountain of cool water—her companions in the meantime undergoing the same process. Then, shrouded in muslin, crape, or linen, they sit together, smoking, until they are rested and refreshed. —*Miss Rogers.*

The Religious Element essential to Completeness.

Theodore Parker, in a sermon on Revivals, says:

"No man is complete without the culture of the religious element; no high faculty is perfect without help from that. I see great naturalists without it, great politicians, great artists; not great *men*. Nay, their special science, politics, art, is less philosophic, statesmanlike, æsthetic, for lack of this wholeness and thorough health within the man's interior. The notes of music, ground out on a hand organ in the street, tell me if their composer had ever listened to the choiring of these birds of Paradise.

"When I see a man, else grand and beautiful, with transcendent mind and conscience and affections too, but lacking this ultimate finish of religion, I long to plant therein the soul of piety, which shall complete the whole and so make perfect every part—mastering the world of time but not disdaining it."

WIT AND WISDOM.

A Practical Philosopher.—Many a glorious speculation has failed for the same good reason that the old Texan ranger gave when he was asked why he didn't buy land when it was dog cheap. "Well, I did come nigh onto taking eight thousand acres one'st," said old Joe, mournfully. "You see, two of the boys came in one day from an Indian hunt, without any shoes, and offered me their titles to the two leagues just below here for a pair of boots." "For a pair of boots!" we exclaimed. "Yes, for a pair of boots for each league." "But why on earth did you not take it? It'd be worth one hundred thousand dollars to-day. Why didn't you give them the boots?" "Jest because I didn't have the boots to give," said old Joe, as he took another chew of tobacco, quite as contented as if he owned two hundred leagues of land.

☞ Somebody says that the oldest husbandry he knows of is the marrying a widower in clover with a widow in weeds.

☞ Favorites are like sun-dials; no one looks at them if they are in the shade.

☞ A man might frame and let loose a star to roll in its orbit, and yet not have done so memorable a thing before God as he who lets go a golden-orbed thought to roll through the generations of time.

☞ No man can leave a better legacy to the world than a well educated family.

☞ The proper education of children is a far better endowment for them than the largest material estate.

HEALTH AND DISEASE.

Life Prolonged by Care.

The longevity of the human race is steadily increasing in civilized nations, if statistical tables can be trusted, and the following item from the *Methodist* shows the influence of good keeping on long life:

"Few men take better care of themselves than the better class of British noblemen. They aim to make life as perfect as possible—to have as little jarring of the wheels and cogs as may be. They are, many of them, the hardest workers, and the healthiest men in the world; and it may be truly said, that while part of mankind develops muscle at the expense of brain, and the other develops brain at the expense of muscle, the British nobleman is the only man now living who succeeds in cultivating at once brain and muscle. That their efforts are successful, here is pretty good proof. Twenty-four members of the British peerage died within the year 1860; and these twenty-four have exactly completed, on the average, the full measure of the allotted span of human life, the threescore years and ten. They were as follows:—Viscount Arbuthnot, 82; Lord Londesborough, 54; Viscount Southwell, 83; Viscount Germanston, 84; Lord Oranmore, 72; Bishop of Rochester, 84; Earl of Lonford, 42; Baroness Stratheden, 63; Lord Fitzgerald, 60; Viscount Guillamore, 87; Baroness Wentworth, 67; Earl of Strafford, 82; Lord Helesbury, 80; Archbishop of York, 72; Lord Sandys, 68; Lord Elphinstone, 53; Bishop of Worcester, 77; Earl of Lauderdale, 76; Earl of Cawdor, 70; Lord French, 74; Earl of Leven and Melville, 75; Duke of Richmond, 69; Earl of Manvers, 82; Earl of Dundoland, 85. Total of ages, 1,680 years; which being divided by 24 gives exactly 70 years to each. It would be difficult to find a parallel to this in any class of any country in the world."

It is not care, but *useless worry* that shortens life. Legitimate care increases the desire and necessity for life, and thus virtually prolongs it.

From the Little Pilgrim.

About Health.—Children, Read and Remember.

Dear children, listen while I tell you something which deeply concerns you welfare. The subject is the shape of your bodies. God knew the best shape. He created us upright, in His own image.

None of the inferior animals walk upright. God fitted all the great vital organs in your bodies to an erect spine. Do your shoulders ever stoop forward? If they do, the lungs, heart, liver and stomach, fall down out of their natural places. Of course, they can't do their work well. To show how this is, I will tell you that when you bend forward you can take only about half as much air into the lungs as you can when you stand up straight. As I have said, God has so arranged the great organs in the body, that they can't do their duty well except when the body is straight. Oh, how it distresses me to see the dear children, whom I love so much, bending over their school desks, and walking with their heads and shoulders drooping. My dear ones, if you would have a strong spine and vigorous lungs, heart, liver and stomach, you must now, while you are young, learn to walk erect.

If a boy were about to leave this country for Japan, never to return, and were to come to me and ask for rules to preserve his health, I should say—"I am glad to see you, and will give you four rules, which, carefully observed, will be pretty sure to preserve your health." He might say to me—"Four is a good many; I fear that I may forget some of them; give me *one*—the most important one, and I promise not to forget it." I should reply—"Well, my dear boy, if I can give you but one, it is this: "*Keep yourself straight*, that is, *sit up straight, stand up straight, walk up straight;* and when in bed at night, don't put two or three pillows under your head, as though intent on watching your toes all night." And I believe that in this I should give the most important rule that can be given for the preservation of health and long life. My dear children, don't forget it. —*Dio Lewis, M. D.*

Overdosing.

Dr. Holmes, in his lecture on "Currents and Counter Currents," uttered the following wholesome truths, which startled some of the faculty:

Invalidism is the normal state of many organisms. It can be changed to disease, but never to absolute health by medicinal appliances. There are many ladies, ancient and recent, who are perpetually taking remedies for irremediable pains and aches. They ought to have headaches and backaches and stomachaches; they are not well if they do not have them. To expect them to live without frequent twinges, is like expecting a doctor's old chaise

to go without creaking; if it did, we might be sure the springs were broken. There is no doubt that the constant demand for medicinal remedies from patients of this class leads to their overuse; often in the case of cathartics, sometimes in that of opiates.

I will venture to say this, that if every specific were to fail utterly; if the cinchona trees all died out, and the arsenic mines were exhausted, the sulphur regions burned up; if every drug from the vegetable, animal and mineral kingdoms were to disappear from the market; a body of enlightened men, organized as a distinct profession, would be required just as much as now, and respected and trusted as now, whose province should be to guard against the causes of disease; to eliminate them, if possible, when still present; to order all the conditions of the patient so as to favor the efforts of the system to right itself, and to give those predictions of the course of disease which only experience can warrant, and which, in so many cases, relieve the exaggerated fears of sufferers and their friends, or warn them in season of impending danger. Great as the loss would would be, if certain active remedies could no longer be obtained, it would leave the medical profession the most essential part of its duties, and all, and more than all its present share of honors; for it would be the deathblow to charlatanism, which depends for its success almost entirely on drugs, or at least on a nomenclature that suggests them.

There is no offence, then, or danger, in expressing the opinion that, after all that has been said, the community is still overdosed. The best proof of it is that no families take so little medicine as those of doctors, except those of apothecaries, and that old practitioners are more sparing of active medicines than younger ones.

DOMESTIC ECONOMY.

Leg of Mutton Roasted.

A leg of mutton intended for roasting should be kept longer than for boiling; it should be carefully attended to during the time it is hung up, constantly wiped to prevent any mustiness gathering on the top and below the flap, and in hot weather lightly dusted with flour or pepper to keep off the flies. The kernel in the fat on the thick part of the leg should be taken out by the butcher, for it taints first there; and the bloody part of the neck should also be cut off when first brought in.

Remove the thick skin very carefully; trim off the piece of flank that adheres to the fat, and flatten the fat with a cutlet-beater or chopper; cut off the knuckle, and nick the cramp bone, to allow it to become more plump, as in haunch. Put a little salt and water into the dripping-pan to baste the meat at first; but then use only its own gravy. Serve with jelly.

A leg of mutton is usually roasted whole, but can be divided advantageously for a small family. Cut the knuckle into a good sized joint, and boil it until tender; but put a coarse paste over the lower part of the thick end to keep in the gravy, and roast it; or if the skin be raised gently from the outside of the leg, to about six or seven inches wide, two or three good slices may be cut off for steaks, and the skin then fastened down with skewers.—*Cook Book.*

Steamed Brown Bread.

Take two quarts of sweet skim milk, one tablespoonful of saleratus, one of salt, half a cup of molasses; put in equal quantities of rye and Indian meal until the dough is as stiff as can be conveniently stirred with a spoon, then put it in two two-quart tins. Place sticks across the bottom of the kettle to keep the water from the bread; place one of the tins on these, and the other in a tin steamer on the top of the same kettle, and let it steam three hours. Care should be taken to keep the water boiling, while the bread is cooking. When done, put it in a warm oven long enough to dry the top of it, not bake it. Yeast can be used instead of saleratus, if any prefer it, but the bread must rise well before putting it in the kettle.

How to Save Lamp Chimneys.—It is said that by putting the chimneys into lukewarm water, heating the water to boiling, and then cooling slowly, the glass will be so toughened as to render it stronger and less liable to breakage. In cold weather lamp chimneys are liable to break on first lighting the lamp. To avoid this, raise the wick slowly, which will heat the chimney gradually, and when extinguishing the light, turn the wick down slowly, so that the chimney will cool off gradually. By observing these hints, you will save quite an item in lamp chimneys in the course of a year.

Washing Flannel without Shrinking.—Make a strong suds and put in your flannel or white woolen stockings while the water is boiling hot. Then squeeze and pound them with a pestle till the water is cool enough to put your hands to the work. You will find there is little need of rubbing. Rinse in water as hot as the hands will bear. If there is a little soap remaining in the rinsing water, it is all the better. The sooner they are dried the less they will shrink. This method, from an old housekeeper, is sure to prove just *the right way*, if strictly followed.—*Plowman.*

Rose Salve.—Four ounces best olive oil; one ounce spermaceti; one ounce white wax; eight drops attar of roses. Melt over a slow fire.

CLEANING DISH COVERS.—Dish covers should always be wiped and polished as soon as they are removed from the table. If this is done while they are warm, it will be but little trouble; but if the steam is allowed to dry on them, you will find much difficulty in getting the tarnish off from the inside. When they are wiped and polished, hang them up in their places immediately.

COURT PLASTER.—Never having seen in print an excellent substitute for court plaster, for cuts and bruises upon the hands in cold weather, I give you the following: Take half a dozen pig's feet, well cleaned for cooking, and boil to a jelly of say about half a pint or less, then spread with a brush on any waste scraps of silk, and we find it equal to any adhesive plaster we have ever used. Any fatty matter in the boiling of the feet rises to the surface, and when cold can easily be removed.

☞ If you would avoid waste in your family, attend to the following rules, and do not despise them because they appear so unimportant—"many a little makes a mickle."

When ivory handled knives turn yellow, rub them with nice sandpaper or emery; it will take off spots and restore whiteness.

Silk pocket handkerchiefs and deep blue factory will not fade if dipped in salt water while new.

Lamps will have a less disagreeable smell if you dip the wick yarn in strong hot vinegar and let it dry.

If you wish to preserve fine teeth, always clean them thoroughly after eating your last meal at night.

Cotton, wet with sweet oil and paregoric, relieves the ear-ache very soon.

WINE JELLY.—Soak half an ounce of gelatine in half a pint of water fifteen minutes, then add half a pint of boiling water, set it on the fire, keep stirring it till the gelatine is dissolved, add the juice of two lemons, sugar to your taste, and Madeira wine enough to make a quart in all; strain it and set it to cool.

LEMON PIE.—Take 4 lemons, grate the rind, squeeze the juice, chop the pulp very fine, 4 teacups of sugar, the yolks of 6 eggs, 2 teacups of milk, 4 tablespoonsful of corn starch; beat well together and bake; beat the white of the eggs with 6 tablespoonsful of white sugar to a froth; when the pies are baked, put the froth over them, and set them in the oven for 5 minutes.

YOUTH'S CORNER.

A Pretty Experiment.

Professor Rogers gives the following in a recent scientific paper: "Take a sheet of foolscap or letter paper; roll it up so that the opening at one end shall be large enough to take in the full size of the eye, and at the other end let the opening be not half so large. Take it in the right hand, holding it between the thumb and fore finger; place the large end to the right eye, look through it with both eyes open, towards the light. *You will see a hole through your hand.* If you take it in your left hand and hold it to your left eye, it will be the same. You will, in both cases, be astonished to see that you have a hole in your hand."

An Indian Story.

There is an Eastern story, which has its version in many languages, of a beautiful damsel, to whom a genius of surpassing power desired to give a talisman. He enjoined her to take herself across a field of standing corn; she was to pluck the tallest and largest ear she could find, but she was to gather it as she went forward, and never pause in her path, or to step backward in quest of her object. In proportion to the size and ripeness of the ear she gathered, so would be its power as a talisman. She went out upon her quest, says the legend, and entered upon the field. Many a tall stalk of surpassing excellence met her glance, but she still walked onward, expecting always to find one more excellent still. At last she reached a portion of the field where the crops were thinner and the ears more stunted. She regretted the tall and graceful stalks she had left behind, but disdained to pick those which fell so far below what her ideas were of a perfect ear. But, alas! the stems grew more ragged and more scanty as she trod onward; on the margin of the field they were mildewed, and when she had accomplished her walk through the waving grain, she emerged on the other side without having gathered any ear whatever. The genius rebuked her for her folly; but we are told that he gave her a opportunity of retrieving her error. We may apply this mystic little Indian fable to the realities of daily life. Children if you would succeed in life form the habit of *doing the most and the best each moment.*

AN APOLOGY.—Several articles intended for this Department are unavoidably crowded out this month. We shall try to make amends hereafter.

NEWS SUMMARY.

STATE MATTERS.

The Sorghum Convention, a call for which was published in the February No. of the FARMER, met in the basement of the Capitol, on Wednesday, the 4th of March.

The number of persons in attendance, at first only about 20, afterwards increased to some 40 - a very small number, certainly, in view of the important interests to be considered, and of the large number of urgent appeals for such a convention from different parts of the State. Illinois was almost better represented than Wisconsin, and there were, likewise, a few gentlemen from Iowa.

The few who did convene were zealous workers, however, and, under the fitting presidency of Mr. O. S. Willey, succeeded in accomplishing a good deal in the way of a discussion of the questions of Soil, Seed, Cultivation, Manufacture and Machinery. Some interesting examples of machinery &c. were on exhibition.

We regret that the proceedings could not have been furnished us in time for publication in full, in this No., especially since circumstances prevented a regular attendance on our part. As it is, we shall content ourself with reporting the pith of what was said on Soil and Seed, leaving the publication of that portion which may be deferred without damage to the May number.

REPORT OF COMMITTEE ON SEED.

The Committee to whom was referred the subject of seed ask leave to report:

That we recognize but two species, the Chinese and the African. There are, however, of the African or Imphee several subdivisions or varieties—some say as high as sixteen—among which the Boom-se-a-na and Oom-se-a-na are said by practical men to be preferable for the production of sugar.

The Chinese makes a very light colored, handsome syrup. The reason assigned for this difference of production is that in the Chinese variety, or Sorghum, grape sugar predominates over the *cane* sugar, and that the reverse is the case with most of the African or Imphee varieties.

Your committee are of the opinion that most varieties of either species may be matured sufficiently for the manufacture of syrup, and in some cases sugar, in any region where Indian corn will mature.

The well ripened specimens before us of sorghum and and the several varieties of Imphee, from some of which sugar has been made and is on exhibition, is a conclusive proof of its adaptation to the climate of Wisconsin.

The *cane* sugar is all that can be retained in the cleansing process to which raw sugar is usually subjected.

CHAS. W MURTFELT, Chm'n.

The report was adopted, as also the following resolution, offered by J. C. Plumb:

Resolved, That for general and extensive cultivation we require, at least, two varieties of cane, for early and late planting, to accommodate early and late manufacture; but that we must rely mainly on the early varieties, with small rich canes, for syrup and sugar in Wisconsin, and the North generally.

Touching the above report we have only to say, in this connection, that we cannot entirely credit the authority cited by the committee as to the crystalizability of the syrup of Sorghum or Chinese sugar cane. In the first place, the statement bears the stamp of improbability, and, secondly, the actual experimental tests made by chemists, such as Mr. J. S. Lovering, of Philadelphia, and Dr. C. A. Goessmann, of Syracuse, show conclusively that the Chinese sugar cane *does* contain cane sugar—Mr. Lovering having obtained it therefrom in large proportion.

The "Oom-se-a-na" *may* be the best variety in the world, or it may be a humbug. For our own part it would be easier to believe, were it not that those who recommend it so warmly have quantities of the seed to sell at extravagant prices.

Situation and Soil.—A majority recommended a high situation, not subject to frosts, and a warm, sandy soil; though all agreed that in a reasonably good season it will succeed upon any soil fit for Indian corn.

The Preparation of Soil should be as thorough as possible. Newly plowing and harrowing or rolling down smooth just before planting will more than pay for the extra labor.

The Planting must not be done too early—ordinarily not before about the 20th of May. Plant in the same manner as corn—either in hills 3 to 4 feet apart, or in drills; the rows being 3 to 4 feet apart and the seed-droppings 1 to 2 feet in the row. Plant about twice as much seed as you wish to stand.

Some were in favor of soaking the seed, others of planting dry. Probably the advantage of soaking and sprouting would depend largely on the lateness of the season. Seed should be covered lightly—half an inch deep is sufficient.

All agreed that the chinch bug is a trouble-

some pest, and that a crop of late planted oats, or corn between the sorghum and any neighboring crop liable to their attacks, is advantageous. Several persons asserted that buckwheat so planted is a sure barrier.

The Legislature still "drags its slow length along," but ere the issue of this present number of the FARMER will, probably, have coiled up for the season. Altogether it has been rather a harmless session.

Some things that needed doing have been well and faithfully done—among which, as most interesting to farmers, may be mentioned the passage of an "Act to carry into execution certain provisions of a trust conferred upon the State of Wisconsin by an act of Congress, entitled 'An Act donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts,' approved July 2d, 1862."

This act secures the foundation for an institution which must be made of incalculable value to this State; and ere the next session of the Legislature a plan of organization will have been perfected that will early ensure the further and entire fulfillment of the obligations of the State as involved in the contract thus made with the constituted authorities of the General Government.

In the next number we shall furnish a summary of the most important measures adopted.

NATIONAL AFFAIRS.

The war is still in *statu quo*. There has been some small fighting on and near the Mississippi, but further than this nothtng. The army of the Union is believed to be in good condition, however, and "prepared to move upon the enemy's works" at the earliest practicable moment. Fighting Joe Hooker is daily becoming more popular with the army of the Potomac, and it is currently reported that the rebels are *hauling off* to regions further south.

Richmond is believed to be in a most desperate condition, Vicksburg ditto, Charleston also badly off. Let the Government be inspirited. A vigorous spring and summer campaign may suffice to drive the traitor devils to the wall.

FOREIGN NEWS.

The Polish insurrection is assuming so great importance as to have quite turned the attention of foreign powers from this continent. The Prussian king has taken sides with Russia, and is in danger of getting himself into hot water by the means. France and England object.

It would not be surprising if a half dozen of these jealous, ambitious powers should get by the ears and so have enough to do without interfering with our affairs. The sentiment of the people of England is waxing warmer and warmer on behalf of the North.

France is having enough to do in conquering the Mexicans.

EDITORIAL MISCELLANY.

☞ *Further extension of time is granted to* ☜
☞ *those of our agents and friends who* ☜
☞ *may wish to avail themselves of the lib-* ☜
☞ *eral offers made on the cover of last* ☜
☞ *No This is done to enable our friends* ☜
☞ *to work to advantage on election day.* ☜

Editorial Notes of European Travel are necessarily laid over for one month, in consequence of an unexpected press of important advertisements just before going to press.

Vote for the "Farmer" *at the town elections!* It is vastly more important to the State that its sole agricultural journal be well sustained than that Peter Snooks should beat Tim Muggins in a race for the office of Justice of the Peace.

The Hamburg Exhibition.—The International Agricultural Exhibition to be held at Hamburg, next summer, is constantly giving new promise of success. Several of the State Societies in this country have determined to send delegates—among whom we are pleased to notice Hon. Chas. L. Flint, of Mass., Hon. Daniel Needham, of Vt., and Hon. M. Cornell,

of New York. As an *agricultural* exhibition this will, probably, excel any hitherto held.

A Fitting Testimonial.—It will appear by the correspondence subjoined, that the Officers, Directors and Agents of the Madison Mutual Insurance Company have a high appreciation of the valuable services, on their behalf, of the able and energetic General Superintendent, Col. G. F. Hastings, and of his amiable and excellent family.

Four years ago, when Col. H. was called to the important and responsible position he has since held, the M. M. I. Co. had, comparatively, but little capital, either financial or reputational. Now, in both these respects, it ranks before all other institutions of its class in the Western States; and it is no injustice to the other able and honorable gentlemen who have been its officers and directors to say, that to his peculiar talent, indomitable energy, unflagging perseverance, integrity and large experience as an insurance man, are due more than to any other cause, the unparalleled growth and extraordinary prosperity of this Company.

In our opinion, it would not be a word too much to say, that for a position such as he occupies, he is probably without a peer in this or any other country. Such men are of great value to any important enterprise and large contributors to the prosperity of the State.

Nor is Mrs. H., who so meritoriously and gracefully receives the magnificent silver service presented, less worthy of the compliment which it confers, or the high esteem of the Company which so splendid a testimonial implies. From first to last, she has, with commendable zeal, devoted herself to the interests of the Company, and under these circumstances it is a source of high pleasure to her numerous friends that her many hospitalities and services have met with this fitting and graceful recognition.

January 1st, 1863.

To Mrs. Geo. F. Hastings:

Dear Madam:—The undersigned Directors and Agents of the Madison Mutual Insurance Company, fully appreciating your generous sympathy and kindness of heart, your high and noble standing in community, desirous of expressing to you our kind regards, and our heart-felt appreciation of your goodness, do present to you this small token, which we beg of you to accept at our hands in confirmation of our high esteem of yourself. Ever wishing your future life to be strewn with the choicest of Heaven's blessings, we remain

Respectfully and truly yours.

J. W. Boyd, B. F. Hopkins, D. Worthington, S. D. Hastings, David Atwood, Jas. T. Lewis, Timothy Brown, Asa Kinney, Orrin Guernsey, Giles R. Montague, Frank H. Roper, David Taylor, Luther Basford, W. T. Bonnewell, J. Toay, H. H. Giles, S. R. McClellan, Albert Wood, N S. Averill, S P. Clark, P H. Snow, A. M. Seymour, J. F. Gilman, R. J. Taylor, John Clark, W A. Stowell, Andrew Higby, W. B. Davis, J. F. Bridges.

Hon. John W. Boyd, and Others:

Gents:—I will not attempt to give expression to the feelings of gratitude which I experience, and ever shall when beholding the beautiful silver tea set so kindly presented to me by you and your associate Directors and Agents of the Madison Mutual Insurance Company.

As highly as I value your present for its beauty and intrinsic worth, it will be a thousand times more cherished as an evidence of the esteem of those who have thus manifested their regard toward me.

Rest assured, dear Sir, that your kindness and that of your associates will ever be held in grateful remembrance by your undeserving friend. Mrs. G. F. Hastings.

Sorghum in Ohio.—It is estimated that 12,000,000 gallons of syrup were made in Ohio alone last year; value over *seven millions of dollars!* There are in that State 11,000 mills, 5000 of which were sold last summer. The coming season there will be twice as much sorghum produced as ever before. Illinois and Iowa are making large preparations for the coming season. Let not Wisconsin be too far behind.

Ohio Sorghum Convention.—*Report of the Committee on Seed, Soil and Culture.*—Your Committee on Seed, Soil and Cultivation report that in their view the best variety of seed for all purposes is the Sorghum or Chinese cane, especially for syrup. For granulation, they recommend the Imphee called Oom-see-a-na, which they think identical with that which is now mis-called Otaheitan. As a very early variety, they propose the kind of Imphee called Nee-a-za-na, though this last variety is not generally desirable.

Soil.—Good wheat land is considered the best soil for this cane. The particular composition of the soil should be sandy, inclined to limestone, with a sufficiency of clay to hold the soil tolerably compact.

CULTIVATION.—The soil should be worked deep, thoroughly pulverized and rolled firm. Plant in check-rows the same distance apart as corn. Cultivate flat and thoroughly, till the plants are three feet high, and not afterwards. Plant as early as practicable.—*Ohio Farmer.*

Pomological Acknowledgments.—Whatever view may be taken of such a confession, we are frank to acknowledge that we always have been, are, and expect to be, exceedingly and incorrigibly fond of good apples. And the best of it is, our friends appreciate this partiality and are constantly sending us liberal tithes of what they produce, as though we were some heathen god, entitled to fruit offerings of all that is produced.

The last arrival was from our esteemed pomological friend, A. G. Hanford, Esq., Corresponding Editor of the Horticultural Department. Specimens beautiful, delicious, and strongly suggestive of his comparative independence, as a fruit-grower, of latitude or longitude, or other circumstance.

A recent visit to Columbus, Ohio, enabled us to make another and more careful inspection of the fine nurseries wherein these apples were produced. They occupy some hundred acres of rich land, within one mile of the Court House, are heavily stocked with every variety of trees, shrubs and plants, that are grown or ought to be in the Western United States, and are certainly in as fine a condition as any nursery we have ever seen in this or any other country.

Mr. Bateham, the senior member of the firm, and a proprietor from the first, was formerly the popular editor of the Ohio *Cultivator*, and has since traveled extensively in Europe, on horticultural missions. So that, probably, no nurserymen in the United States have had better opportunities to thoroughly qualify themselves for the business in which they have so long zealously and successfully devoted themselves.

Whoever deals with Bateham, Hanford & Co., may be morally certain of satisfactory results, in so far as they should be held responsible.

We are likewise indebted to M. Finch, for several varieties of apples, forwarded for naming. Most of them were handsome enough and sufficiently palatable to entitle them to very long and euphonious titles; it was, nevertheless, our own opinion and that of others more competent to judge that they should be classed with the great nameless family of *seedlings.*

Mutual Life Insurance Co—*A Correction.*—MILWAUKE, March 17, 1863. EDITOR WIS. FARMER:—In the March No. of your excellent magazine, you speak of the Mutual Life Insurance Company of Wis., of which the writer of this has the honor of being one of the "working men," and yourself one of the fortunate members, in so complimentary a way as to attract my attention. And I notice that you omit stating that the Company has a President, although all the other officers are named correctly. Of course, we suppose that the omission was unintentional, but we think too much of our venerable President to allow the fact that S. S. Daggett, Esq., is that officer, to remain unknown to your readers.

I would like to add, that we who know him well have the utmost confidence in the safe management of the sacred trust confided to him as supervising officer. We thank you for introducing the subject of Life Insurance to your readers, for we believe it to be one of very great importance

If you will allow me, in some future No. of the FARMER, I will give your readers some statistics on Life Insurance in general, and the rise and growth of *Mutual* Life Insurance in particular.

H. G. WILSON,
General Agent.

NOTE.—It was certainly not our intention to leave out the name of our esteemed friend and long-time agricultural colleague, S. S. Daggett, Esq., the popular President of the Wis. Life Insurance Co. No better man could be found in the State for that important and responsible position, and inasmuch as we have a life interest in the integrity and success of the corporation which he so ably and faithfully repre-

sents, it is our will that he be and remain just in the position he now holds, at least until the millennium.

As to statistical information on the subject of Life Insurance, we think it would be interesting and profitable. Let us have it.—EDITOR.

CONDENSED CORRESPONDENCE.

Beware of Bark Lice—PRAIRIE DU SAC March 19.—You will confer a favor upon many of your readers if, in your April No., you will caution persons in buying apple trees to beware of *bark lice*. I purchased of a nurseryman, near Madison, last spring, trees that he said were clear of lice, but after getting home, on close examination, I found two-thirds of them lousy. The man's reputation was good, but the sequel proved that nurserymen are not any more honest now than twenty years ago. People are somewhat encouraged in fruit culture, and if they get bad trees now, it will be a serious drawback. Tell them to examine well before buying. GEO. W. WATERBURY.

Queries.—EAU CLAIRE, March 13.—Will you be good enough to respond through the FARMER to the following enquiries?

1. Is Hungarian grass found by those who have tried it in Wisconsin to be a profitable crop for horned cattle? Where can *genuine* seed be found, and what is the price of it?

2. What kind of machinery is used for pressing the sap out of sugar beets? Have they to be washed before pressing? Where, and at what price can seed be obtained?

ROBT. COBBAN.

ANSWER.—(1) See Agricultural Department, and await answers. May be sown as late as June, if it should be thought best to do so. Seed may be had here at $1.25 per bushel.

(2) Beets designed for sugar *do* require washing, which may be done by hand or by machinery. They then require to be *grated*, which may also be done on a small scale by hand. The juice is pressed out of the pulp, in beet-sugar factories, by hydraulic presses. Seed may be obtained here at $1 per lb. In our next No. we shall treat of this whole subject more at length.—ED.

How to use the "Farmer"—Enclosed please find $16.50 and list of 22 subscribers for the FARMER. Can additions be made to this club to be delivered at other offices? I hope to add many to this list. We shall have a County Fair this fall, and will expect Mr. Hoyt to give us an address. In our list of premiums the FARMER shall be remembered to your reasonable satisfaction. H. H. POTTER,

Sec'y Sauk Co. Ag. Soc.

[Certainly, friend Potter. The more names you add the better we shall like it.]

Eminently Sound.—OMRO, Dec. 1862.—I have taken the FARMER since it has been published, and it has come to be one of the *must-haves*. It has paid the cost with larger interest than the hard-faced broker dare ask. But it is hard to make many of the farmers believe it. Many of them take no agricultural paper; others must have an Eastern paper, which may, perhaps, be a damage to them. A good Wisconsin farmer's journal ought to be worth a dozen good Eastern journals for the Wisconsin farmer's practical use, as it knows our climate, soil, circumstances and wants—important things which an Eastern editor can only *guess* at. M. C. BUSHNELL.

Which is the best Reaper?—SUSSEX, March 13.—Will you have the kindness to give your opinion as to which is the best Reaper and Mower for a farmer having from 80 to 160 acres of land. TWO SUBSCRIBERS.

ANSWER.—Our opinion is that any one of the mowers and reapers we advertise would give good satisfaction. We intend to advertise none other. We are not so well acquainted, personally, with the Ohio machine, but have full faith in its endorsements. The Kirby machine we believe has no superior, in respect to those things which would adapt it to a small farm, viz: lightness, durability, cheapness.

About Bees.—GARDEN VALLEY.—Will some of your readers who are writing upon Bees let us know the best mode of getting the bees from a tree so as to save the bees; as the tree is almost wholly decayed. E. S. CLARK.

Flax.—La Villa, Minn., March 18.—I should like some information in regard to flax, whether there are any machines in the west for dressing and manufacturing, and what the common price is per ton Also if there is any Chicory seed so far west yet. Perhaps I can get all this from the former numbers of the Farmer. E. Gould.

Note.—We are told that there flax-dressing mills at Fond du Lac and at Platteville, but what they pay per ton for the straw we are unable to say.—Ed.

Ahead in raising Buckwheat.—Pine River, Waushara Co.—On page 55 of the Feb. No. of the Farmer J. A. Mapes says he raised 71½ bushels of buckwheat from 22 quarts of seed, and asks "who can beat this?"

I raised 35 bushels from 8 quarts of seed sown. It was sown on the "Indian land."

Baldwin Sears.

NOTICES OF NEW ADVERTISEMENTS.

Our readers will find a new advertisement of the Kirby Harvester and Mower in this No. This is one of the best reaping and mowing machines in the world, and we have especial pleasure in recomending it to the farmers of Wisconsin. Of all the hand-rakers now before the public we know of none we prefer to it, and we are informed that it now has a raker attachment which, in every respect, gives it a place in the front rank. In our next No. we shall publish illustrations and descriptions of it as a mower, reaper, and self-raking harvester.

The Ohio Mower and Reaper is further advertised by L. J. Bush & Co., the enterprising Western agents. We have already warmly endorsed this agency and their valuable machines. Illustration in next No.

See advertisement of "Saxton's Handbook of Tobacco Culture.

Chas. Boles, Jr., of West Eau Claire, advertises seedling evergeeens and moss for packing.

J. Wesley Jones, of Chatham, New York, advertises flower and garden seeds of the latest and most approved varieties. He is well endorsed to us, and the extent of business done by him warrants the belief that purchasers may order of him with an assurance of entire satisfaction.

H. B. Lum, of Sandusky, Ohio, is one of the most popular of dealers in flower seeds, cuttings, &c. He has forwarded some thirty to forty copies of his catalogue for gratuitous distribution to those who wish to order. He is not a mere dealer, however, but himself *produces* the seed he offers to the public, and therefore is able to warrant their germination.

See advertisement of Costar's Rat Exterminator. Rats have no rivals as destroyers of grain in shock or granary, and there is no nuisance that can compare with them in most cellars. Dr. Costar is said by credible testimony to have prepared a dose which will thoroughly *ratify* the wish of even the most vindictive hater of the *mus* race.

The Bloomington (Ill.) Nurseries are advertised by F. K. Phœnix, proprietor. His nurseries are among the largest and best in the Western States, and as he has had an experience of more than twenty years in the business, more than half of which time was spent in this State, it is presumed that his judgment may be relied on as to what varieties are best adapted to this climate, and also as to the most successful methods of culture. He is cordially endorsed by the leading citizens of Walworth Co., among whom he formerly lived. Mr. James L. Tubbs, of Elkhorn Walworth Co , has the agency for this State.

J. C. Plumb, Esq., whose interesting and valuable articles on horticultural subjects have been so often read with pleasure and profit by our numerous readers, is preparing to do a large business the coming season. He is a skillful culturist and a conscientious dealer. Don't forget J. C. Plumb, in your canvass of the nurserymen of the West.

See editorial notice of Columbus Nurseries, on the foregoing page, under "Pomological Acknowledgments"

STATEMENT
OF THE
Madison Mutual Insurance Company,
FOR THE YEAR ENDING
DECEMBER 31, A. D., 1862.

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,	$327,464 67

ASSETS.

Unimpaired premium notes of policy holders	$281,000 07	
Cash on hand and due from policy holders and agents, for cash premiums,	45,464 60	
Office furniture and fixtures,	1,000 00	327,464 67
Whole No. policies issued		22,061
Am't of outstanding risks thereon		$15,962.000 00
Number of policies issued in 1862,		7,706
Am't of outstanding risks thereon		$6,069,813 00
Am't premium notes thereon,		108,323 93
Am't cash premiums thereon, less commissions to agents,		45,727 80
Am't interest received,		972 18
Total am't losses reported during 1862,		$17,744 16
Total am't losses paid durihg 1862, 89 in number,		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due		none.
Losses adjusted and not due		none.
Losses unadjusted,		292 35
All other claims against the company,		97 50
Am't paid for advertising and postage,		1,763 66
Am't paid for printing,		540 50
Am't paid for policy stamps,		600 00
Am't paid taxes to Com'r Internal Revenue		82 02
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses,		7,290 98

Comparative Statement of the business of the Company for the years 1859, 1860, 1861 and 1862.

	1859.	1860.	1861.	1862.
Total amount of accumulations,	$39,080 16	$110,389 49	$216,565 76	$327,464 67
ASSETS.				
Premium notes and due from policy holders,	$35,462 46	$92,487 27	$180,124 63	$231,900 07
Cash on hand and due from policy holders for cash premiums,	2,956 02	16,509 74	35,408 66	45,464 60
Am't secured by mortgage and judgment,	332 47	332 47	332 47	1,000 00
Office furniture and fixtures,	300 00	1,000 00	1,000 00	1,000 00
Whole number of policies issued,	4,807	110,389 49	216,565 76	327,464 67
Am't of outstanding risks thereon,	$2,499,950 49	8,579	14,357	22,061
Total am't of losses paid and settled,	2,409 45	$5,431,115 49	10,320,709 00	15,962,000 00
Losses reported and awaiting further proof,		5,903 31	8,460 01	21,413 97
Whole number of policies during the year,	1,187	499 53	7,351 12	* 2,000 00
Am't of outstanding risks thereon,	$1,140,076 00	3,722	5,778	7,706
Am't of premium notes thereon,	17,109 82	$3,916,115 49	$5,315,173 00	6,069 813 00
Am't of cash premiums thereon,	11,059 04	68,789 45	93,944 06	108,328 93
Am't of expenses paid, including all compensation of officers, printing, advertising, postage, and all other incidental expenses,	3,317 70	35,761 84	43,377 36	† 45,727 80
	3,317 71	19,383 18	7,460 84	
		5,847 44	9,071 89	27,290 98

* Reckoned as fraudulent.

† Deducting agents' commissions.

DIRECTORS FOR THE YEAR 1863.

J. W. BOYD, Walworth Co.
D. WORTHINGTON, Waukesha Co.
DAVID ATWOOD, Dane Co.
G R. MONTAGUE, La Crosse.
ASA KINNEY, Green Lake Co.
H. H. GILES, Dane Co.
LUTHER BASFORD, Grant Co.
B. F. HOPKINS, Dane Co.
ORRIN GUERNSEY, Rock Co.
FRANK H. ROPER, Dodge Co.
J. H. WARREN, Green Co.
TIM. BROWN, Dane &o.
S. D. HASTINGS, Trempeleau Co.
DAVID TAYLOR, Sheboygan Co.
S. R. McCLELLAN, Kenosha Co.
J. T. LEWIS, Columbia Co.
JOHN TOAY, Iowa Co.

OFFICERS.

JOHN W. BOYD, President.
B. F. HOPKINS, Vice President.
S. D. HASTINGS, Treasurer.
D. WORTHINGTON, Secretary.
G. F. HASTINGS, General Agent.

LOSSES PAID BY THE COMPANY IN 1859.

S H Coleman, Juneau, Dodge co.,	$10 00
J H Seaman, Richland, Richland co.,	10 00
Fanny Plummer, Mauston, Juneau co.,	15 00
Geo F Taylor, Madison, Dane co.,	15 00
Nelson Sickles, Waterloo, Jefferson co.,	690 00
A L Beebee, Dunn, Dane co.,	650 00
J H Barber, Juneau, Dodge co.,	68 00
Jas H Main, Juneau, Dodge co.,	401 87
Thos Mayhew, Merton, Waukesha co.,	27 00
W N Seymour, Madison, Dane co.,	2 00
Wm Edwards, Sugar Creek, Walworth co.,	400 00
Leonard Hatch, Kenosha,	100 00
	$2,409 45

LOSSES PAID IN 1860.

J S Willmarth, Sun Prairie, Dane co,	$314 50
Cyrus S Davis, Menominee Falls, Waukesha co.	5 00
J W. Cook, Dane co.,	15 35
Lewis Thompson, La Prairie, Rock co,	174 52
Henry Johnson, Somers, Kenosha co.,	12 50
Pliny Putnam, Rubicon, Dodge co.,	5 00
E B Thurtell, Jamestown, Grant co,	500 00
A A Anderson, Delafield, Waukesha co.,	7 00
James T Walklin, Eagle, Waukesha co.,	20 00
C Sutherland, Fitchburg, Dane co.,	10 00
Harrison Koonz, Concord, Jefferson co.,	400 00
Owen Garity, Sullivan, Jefferson co.,	6 00
C P Churchill, Waukesha co.,	5 58
Caleb Jewett, Town of Madison, Dane co.,	17 51
Mary La Follett, Primrose, Dane co,	115 00
Wm A Stowell, Cottage Grove, Dane co.,	1,041 71
Samuel H Sabin, Windsor, Dane co.,	18 00
Abel Strong, Marcellon, Columbia co.,	382 71
Quartus Towry, Johnstown, Rock co.,	5 00
Robert Hornby, Fairfield, Sauk co.,	496 05
Thomas Stevens, Dane, Dane co.,	200 06
John Wightman, Berry, Dane co.,	751 80
Douglas Oliver, Glen Haven, Grant co.,	1,000 00
Josiah Pierce, Pardeeville, Columbia co.,	400 00
	$5,903 23

LOSSES PAID IN 1861.

L D Lateer, Janesville, Rock co.,	$499 53
Edward Welsh, Centre, La Fayette co.,	306 80
Nathan Kellogg, Madison, Dane co.,	15 00
Henry A Chapman, East Randolph, Col. co.,	20 00
Jared Bishop, Jamestown, Grant co.,	371 00
Allen Hoxie, Porter, Rock co.,	1,000 00
O. C. Burdick, Christiana, Dane co.,	2 00
Samuel Crossett, Juneau, Dodge co.,	13 50
Albert Gaston, Cottage Grove, Dane co.,	11 13
Stephen Young, Somerset, St. Croix co.,	380 00
A L Beebe, McFarland, Dane co.,	699 01
Alfred Taber, Delavan, Walworth co.,	350 00
Lydia D. Crocker, Lake Mills Jefferson co.,	2 00
John Feller, Bear Creek, Sauk co.,	646 65

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : : : : : : : EDITOR.

VOL. XV. MADISON, MAY 1, 1863. No. 5.

Western Virginia—its People and Institutions.

BY MRS HOYT.

In speaking of the people of Western Virginia I wish to be understood. I mean that large majority included in the term natives. Perhaps I should draw the line a little closer and say, that, by natives I do not mean all who, with parentage from other States and other lands, have just happened to be born there; but that still large majority who are the lineal descendants of thorough born, thorough bred Virginians.

These people are a proud people. Pride is a good thing. I would not give a raveling from the carpet under my feet for a person who is not proud. In this the child of a New England lineage, and the anybody and everybody of the Old Dominion would certainly agree. But if I should ask them, as you will ask me, "Of what are they proud?" I should probably not receive a more satisfactory answer than I am able to give. Observations upon this general subject lead me to conclude that pride bases itself upon one of these things: something done, something not done, or something possessed. To-day, Eastern Virginia is proud of the fact of secession, Western Virginia just as proud of its position under the old flag, while the pride referred to, as the striking characteristic of *all* Virginians, is something lying far back of the events of the day and, when traced to its source, seems to rest upon the name itself—Virginia.

We have evidence of this in that the name Kanawha, selected and approved by the people of forty-eight counties as that under which they would ask to be known as a State, comes to be changed to West Virginia. Thus the pride of a possession, in that particular name, is stronger with this people than the self-respect and indignation which, one would have judged, would have led them to seek to obliterate, from their future records, every vestige of a name that is, henceforth, to stand a synonym of infamy. Pride of possession may be the noblest, or it may be the most unworthy of all justifications of the same. If time and scope permitted, it would be interesting to trace back the history of this commonwealth, and place in array the events and the men by virtue of which this name seems to have been anchored in their affections.

These people are an ignorant people. There is a sense in which the most enlightened and learned may properly be called ignorant. Compared with the wants of humanity and the possibilities of attainment, the races of man are yet very far off from that very good time when knowledge and christianity shall stand on either side of every human need. But the people of Western Virginia are a remove further from this desirable condition than some others. To state the case strongly, and with strict justice, they are so ignorant that they do not know they *are* ignorant. To state the case moderately, and with large charity, they are so ignorant that they do not care to be made the subjects of enlightenment. Here I must be pardoned for speaking in more general terms of Virginians, since the two sections of the State have so recently divided lot, that, in educational and legislative matters, they have a common glory and shame.

If it would be interesting to pass in review the individuals and circumstances, upon which

they base their pride of State and personality, how much more to ascertain how many of their nearly one and a half millions of inhabitants know that Washington was a native, or the locality where he sleeps the sleep of his great life's ending; to ascertain how many of the multitudes who voted "yea" in the east, and "nay" in the west upon the Ordinance of Secession know one word of the history of their champion of 1774, when Patrick Henry was the first orator of the first colonial Congress; to ascertain how many of the children of those seceding and non-seceding thousands, between the ages of ten and twenty can repeat the first line of the Declaration of Independence, or say how many of the Chief Magistrates of the nation were born upon the "sacred soil." That I may not seem to abuse the children, I will ask, how could they be expected to know, when nearly one-third of the adult population are not able to read? Thus stands the census of 1850: 82,520 unable to read, being about one-third of the free population over twenty years of age. Statistics of tho same year give the number of volumes in public libraries as about in the proportion of one to seventeen persons, the number of daily newspapers as one to each 129,242. This was in 1850. The improvement in educational appliances through the decade of years, between that date and the returns of 1860, may be inferred from the general aspect of public and private affairs; the lightness, and wholesale abandon with which they have broken oaths, thrown up bonds, and trampled upon the best forms of civilization the struggling race has ever been able to work out.

If I were talking in a newspaper I would repeat what some journals have said, and some Virginians glory in crediting, that, between the statistics of 1850 and 1860, they had one governor who did not forget to give God thanks that in his district no newspaper was published. If I were sure it would be in good taste, I would, also, relate a little circumstance that came under my observation a few days since. I went with a friend to the house of an emigrated F. F. V., and finding the mistress absent, a package of engaged work was left with a few lines of written directions. The cavalier husband, who had kicked the children and ordered chairs upon our arrival, remarked to my friend that she had better leave word instead of note, as "many women, educated in Virginia, had not been teached to read." I had been there, and I believed him.

But of far better authority than your judgment, or mine, and more reliable even than governmental reports, are the records that a proud and complacent people have kept of themselves. Such would, at least, not be depreciatory. I have before me copies of "Acts concerning Education," from the Code of Virginia, and School Commissioners' Reports, running back a great number of years. I will leave it to any one who takes time to look over these records, to say if the ignorance imputed to the mass of the people is not also evidenced as gross in the enactments of these law-makers. Here are hundreds of pages devoted to the work of authorizing something that will operate in the place of a common school system—system it cannot be called—every section of which is expressed in language unworthy the subject discussed, and directly calculated to prevent the acceptance of such provisions as are made by those for whom they are intended. Virginia legislators sitting in state, to enact certain privileges for "the children of the poor and indigent," and repeating these offensive words so often, especially "the indigent," that it would seem to have been devised for that special end! What but ignorance, on their part, of the influence of such language, in such legislation, can be urged as an apology? And yet the great complaint is, and has always been, that the great body of the people, for whom these provisions are made, refuse to avail themselves thereof. No wonder that the parents of these "indigent children," for whom the scanty morsels of education have been thus doled out, do not very eagerly seize the opportunity to identify themselves and their progeny with the scum of slaveholding communities—"Poor white trash." Poor enough; but have they not all come down in a pile from a race of cavaliers? Rich or poor,

are they not all Virginians, in whose most "indigent" veins flows the best blood of the chivalry of the old world? I don't know whether you will credit it or not, but I am quoting the language of the Commissioners and Superintendent of the schools of Washington county, Virginia, who, to the number of ten, report to the Auditor of State: "The board feel no hesitation in saying that the schools are well conducted; that the children progress in learning as fast as could be expected, and that the poor children make as much progress in learning as the others." These schools are partly supported from the income of the "Literary Fund," devoted to the general cause of education; and from that portion of it applied to the specific purpose of bringing schools within the reach of "the indigent," each county, upon requisition, draws its quota. In some counties these are the only schools, so that parents of moderate competence, whose children are too young, or who have not the means of sending them away from home, have come to patronize them, paying tuition, while the poor are supplied with instruction, by the State, at the expense of from four to seven cents a head, paid to the teacher in their behalf, spelling books thrown in. With this explanation will be seen who are the class referred to when reporting the astonishing fact that "The poor children make as much progress in learning as the others."

In justice to Western Virginia I must say, and beg the reader not to forget, that for this School Code, and its results, Eastern Virginia is mainly responsible, having the balance of politicians and wealth that has controlled state legislation. It is my individual opinion that the people of Western Virginia are more intelligent than those of the eastern part of the old State; in evidence of which, besides some knowledge of those of whom I judge, stand these important facts: 1st. The proportion of slaves to the free population has always been larger in the East than in the West. 2d. The school fund apportionment has been more generally drawn and used by Western than by Eastern counties, lists before me showing that these undrawn quotas are against the Eastern counties in the proportion of from three to five, to one of the Western. 3d. More convincing than all, while the Eastern section of the State was plunging itself into the fire and sword of civil war, Western Virginia knew enough to stay in the Union.

These people are a lazy people. I don't ask any one to take my word for this. The history of

"Old Virginny never tire."

has been so well written, and so attests the statement, that an attempt to prove it anew would be weakness. Go to the records since, one of the original Thirteen, it set up housekeeping for itself. In Western Virginia, particularly, see that great, rich area waiting for the hand of intelligent industry. But you might multiply books to the end of time and fail to give a fair representation of this characteristic of the people. To have a realizing sense of it you must see them in their homes, and follow them in the ways they have devised for carrying out their idea of "living." Everything, from the management of a thousand acre farm to the cut of a youngster's dress, indicates the essential quality of the word, shiftlessness. Does the Yankee farmer tidy up fence corners, straighten dividing lines, rotate crops, hang up his scythe, and keep a nail box? the Yankee housewife have regular mending-days, wash-days, bake-days, sweep-days, with ventilations and scrubbings out, and times to read the papers? Western Virginian farmers and housewives do not pattern after these, but it is not so much the result of that negative condition indicated by a want of thrift and management, as a consequence of keeping upon their hands an abundance of "elegant leisure." Just as the dignitaries of English oratory are supposed to have a born right to be so deliberate in their enunciations that the clock may tick between their stammering syllables, so their descendants of "the best blood" find guaranteed in their constitutions the prerogatives of ease, taking all day to-day, and as many of the to-morrows of life as seem fit, to do anything, or nothing. I take it that this is

an indication of aristocratic birth. So do they. Necessity has been called the mother of invention. Write industry, in the place of invention, and these people could justify their indolence by showing that they have need of nothing. If my life depended upon proving laziness one of their characteristics, and I were an artist, I would bring back from Western Virginia pictures, reproducing such spots as Beverly, the county seat of Randolph, Phillippa, of Barbour, Clarksburg, and specimens from the rural districts between and thereabouts. I would put the improvements in, and not leave the people out. I was thinking to describe some of these, but have the good sense to know that language has no words adequate to such portraitures.

A cleverer people I never saw. Take things as they are, be one of them, and you are welcome to their best as long as you choose. This article will be read by many Western Virginians to whom I owe the debt of a large hospitality, and kindness I shall never forget. If I have, or if I have not spoken truth of that majority referred to in my first paragraph, judge ye.

Of the institutions of the country I had intended speaking, but, looking over the gleanings, find that the greed of the Eastern section has so monopolized those of State importance, that I should have to come down to about "Apple-jack" and Slavery. In the course of time, under the new State Constitution, the last becomes extinct, and so will the first, as improved qualities of fruit take the place of that next of kin to the crab. I believe in a people who send one-twentieth of their loyal citizens to fight the battles of their country, and will do myself the pleasure to write up their institutions, when they have had an independent position long enough to show their hand in building.

Wool.—At no previous time since 1836 have the prices of wool ruled so high as at the present date. Sales were made in New York, last week, to manufacturers, at seventy and seventy-five cents, and some extra fine brought as high as seventy-nine cents. It would not be surprising if wool commanded one dollar per pound by mid-summer. Very limited quantities now remain in the Western States unsold, and the growers must feel encouraged at future prospects.

Suggestions for May.

A stirring month is May. Nature is busy, righting up the world, that the sun may the more efficiently warm it, brooding over the earth for the quickening of its myriad germs of latent life, and clothing the woods, the fields and the orchards with verdure and flowers.

The husbandman must not be less active, for it is only a part of his work which nature will do for him. If he will not sow, neither shall he reap And, again, just *as* he soweth, *so* shall he reap. Remember that. There is nothing made by attempting to cheat God.—His laws are as immutable as they are beneficent. He will neither suspend them nor bend them a hair to accommodate the ignorant, the self-willed or the ignorant husbandman.

Hear, then, oh ye farmers, the words of wisdom as revealed for your special benefit!

Fences all in order—implements the best and all ready.

Wheat is not the only crop that may be grown with profit. Perhaps you've heard something of that sort before!

The increase of stock will demand more *corn*. Plant early and well, and *keep ahead of the weeds*.

Beans will succeed on a poorer soil, and will find good market while the war lasts. Good for sheep.

Flax.—Give it a trial. Seed and fibre will bear a good price. See articles in last No. and this.

Roots.—Grow more of these, especially of carrots and ruta-bagas for stock. Don't be stupid.

Look to the grass fields. Allow no stock on the meadows. Top-dressing with fine compost, ashes or plaster will pay. Plaster is cheap at all the railroad stations. Try it on your clover fields at least. Half a bushel to the acre will produce a marked effect on most lands.

Sorghum.—Go into its production more large-

ly than heretofore. Mills will be more abundant. Let there be one provided for every neighborhood at least. See continuation of report of Sorghum Convention in this No.

Tobacco.—Abominable but profitable. See article in last No.

The Garden.—Let it no longer reproach your enterprise and good sense. If you have neglected it to this late day in the season and in life, neglect it no longer. Gather all your forces from field and house, take off your coat and *pitch in.* Nature will reward you with that best luxury of country living, an abundance of fresh vegetables, fruits and flowers.

Live Stock.—The most profitable, for the time to come, will be sheep, mules, and horses. Select the best breeds and the best animals for breeding. The man who can't see that this is economy is—a fool, and should, at once, leave farming, and go into some of the "*learned professions!*"

The Great International Exhibition.

NO. VIII.

BRITISH DEPARTMENT—OPERATIVE MACHINERY CONCLUDED.

Passing by a multitude of machines for working in wood, in metals and in precious stones, we stand, at last, before a vast array of complex, beautiful, and wonderfully ingenious machinery for the manufacture of textile fabrics—machinery so demonstrative of the remarkable powers of the human mind, that I am sure our first parents, Adam and Eve, could they stand here to-day, in all their nude simplicity, would repent them of all their repentings. For what would the race have been at this day, had nothing been left us to do but to bask in the sunshine and to luxuriate amid the flowers and fruits of the Garden of Paradise—had there been nothing in the stubborn inertia and the fierce battlings of the material world to develop the powers of the intellect, to rouse the manhood that is in us?

Nay, to work and to win, to subdue the elements, and to make himself master of the forces of nature and of the vaster powers of the soul—that is the province of man.

Just when the human family began the manufacture of cloth for garments we are unable to determine. The skins of animals were undoubtedly their first wearing apparel. But now we know that a very large share of the working energies of man are expended in spinning and weaving, to the end that he may be clothed.

MACHINERY FOR MANUFACTURING COTTON YARN.

Woolen, linen and silk fabrics are believed to have been in use long before the introduction of cotton, but inasmuch as most of the improvements in the requisite machinery for cleaning, carding and spinning were first invented for the manufacture of cotton, and afterwards adapted to working in other textile fibres, it will be proper to look at the cotton machinery first.

In the early history of cotton manufacture, the cleaning of the cotton from the seed was done with the fingers. One person occupied a whole day in cleaning one pound, and then it was imperfectly done. The spinning was done by women known as "spinsters," whose method was to wind a portion of the fibre about the twigs of a forked branch, (distaff) which was held under the left arm, while with thumb and finger of the right hand the fine thread was drawn out. This was practiced in England up to the reign of Henry VIII, when the spinning wheel, which had long been in use in India, was introduced. It differed in no important particular from the wheel with which the last generation of women were familiar; but instead of having the fibre in rolls as more lately, the working dames of that period used the distaff, twirling it with the left hand, while the wheel was turned with the right. This is followed to this day in many parts of the Southern United States, where the light of civilization has scarcely yet penetrated.

But the spinning wheel of King Henry's time was unequal to supplying the demands of the weavers, and, besides, the thread was so knotty that its use was limited to warp. Something better must come. And it did come, in the form of the "spinning-jenny," invented by James Hargreaves, in 1764.

This machine had eight spindles, and the threads, after being drawn out, were passed through a fluted wooden clasp, which had the effect to render them smoother. Quite a step! But why not have more spindles? The number *was* increased to 80. Then the world wondered, and Hargreaves' fellow spinners grew jealous and compelled him to leave town. But he realized that he had hold of a lever which was to effect an important revolution, and was not in the least discouraged. He established a factory at Nottingham and continued to flourish.

Soon another genius came to his aid. It was Richard Arkwright, with an invention for drawing out the slivers of cotton as they came from the carding rollers into ribbons, uniting several of these in one and again drawing it out; the process being repeated until the fibres are most perfectly straightened and the sliver prepared for spinning. He also contrived a cylindrical cup revolving upon a pivot within which the sliver was twisted into a "roving," and thus still better prepared for the spindle. Arkwright lived to enjoy his success, and in 1782 had 5,000 men in his employ.

And then came Samuel Crompton with his "mule," first provided with 20 or 30 spindles, the whole frame moving back and forth like a regular spinster of the olden time by the side of her wheel. This did splendidly at once, and, in the course of time, increased its spindles to 2,200, all managed by one attendant! This is substantially the "mule" of to-day—of the original of which the many here about us are but so many modifications. Crompton's invention dates back to 1779, and to-day we have in Great Britain alone 21,000,000 spindles in almost unceasing operation, many of them making 5,000 revolutions a minute!

The fineness of the thread which may be spun on one of these machines is really surprising. A single "hank" or skein consists of 840 yards in length of thread. What then must be the tenuity of that thread of which two thousand five hundred hanks are required to make one pound! A thread so fine that a single pound of it, drawn out in a straight line, would extend over one thousand one hundred and ninety-two miles! Such a thread could scarcely be woven, and if it could the tissue would hardly be visible.

At this rate of manufacture, the amount of cotton that could be worked up was almost unlimited, and there was need that some more expeditious method should be adopted for cleaning the raw material. The fingers, up to this time, had alone been employed in picking out the seeds, and one pound per diem would answer no longer. Eli Whitney, of Massachusetts, came to the rescue in 1703, and the "cotton gin" stood in the place of 336 men! It was this invention that stimulated cotton-growing in the Southern States, and made them the most important cotton district of the world.

The cotton gin was a very simple machine, consisting of longitudinal metallic bars so close together as to barely allow circular wheels armed with saw teeth to pass between them, and it seems strange that it should not have been invented before. Machines of this sort are here in operation. The machines next in order for preparing the cotton for spinning are known as scutching machines.

FLAX MACHINERY

Is also here. After being "rotted" by high-pressure steam, until the gum and extractive matter combined with the fibre is decomposed, the stems are subjected to the action of the "scutching mill," where the woody fibre is bruised off by toothed rollers. The long fibres are then put into the "cutting machine," and so cut into lengths as to equalize their quality. They are next subjected to the operation of "hackling," which is accomplished by revolving cylinders or endless belts surface-covered with metallic points. The "drawing," "roving," and spinning are performed by machinery similar in principle to that used for cotton.

Linen has been in use from the earliest times. The Scriptures abound in references to it, and scientific investigations have lately demonstrated that the cloths with which the mummies of Egypt were wrapped, thousands of years ago,

were of this material. Some of these lately examined in the British Museum surprised me with their extreme fineness of thread and perfection of tissue.

The first mills in England were erected in the latter part of the last century. Linen yarns are rated by the number of "leas" of 300 yards each to the pound. Two hundred and forty leas to the pound is about as fine as it can well be spun by machinery. But yarn of this fineness is only fit for the coarser lawns and cambrics. The finer lawns and valenciennes require handspun yarn.

We likewise have here a splendid show of

WOOL PICKING, CARDING AND SPINNING MACHINERY

All in active operation, and doing the work of thousands of human hands. A detailed description will be unnecessary, since the carding and spinning are processes so similai to those employed in the manufacture of cotton, and are, moreover, familiar to almost every one who has ever entered a woolen factory.

SILK SPINNING

Is more simply accomplished than any of the several processes just witnessed, because of the great length and uniformity of the fibre as it comes from the cocoon. It is imported from the countries where produced, in the form of skeins of "raw silk," being wound off and skeined before going into the market.

The first operation consists in winding the skeins of raw silk on to bobbins by means of an engine called the "throwing frame;" the second consists of winding the threads of two or three of the bobbins on to one reel; the third in twisting these two or three threads into one, by means of spindles, as in the case of cotton, flax, and wool.

Silk fabrics were formerly almost altogether imported from France, Italy, and other foreign countries. Now, the plainer and heavier kinds are extensively manufactured in various parts of the British kingdom.

WEAVING MACHINES AND LOOMS

Of some sort have been in use from time immemorial. Homer speaks of one by means of which a figure-woven pattern was wrought, in which were gorgons and dragons. In modern times the use of the loom was for a long while confined to Italy and the Netherlands; then it found its way into France and England, about the time of Edward III.

At first, it was a rude concern, carried about by the weaver, and set up under any tree where he chose to abide for a time.

The fly shuttle was invented about 100 years ago by John Kay, of England, and the first successful power loom in 1785, by Rev. Edward Cartwright. The best looms now in use are here in the Exhibition. How wonderful is their working! how various, and seemingly impossible, the complicated and beautiful patterns wrought as by magic before our eyes!

Certain parts are essential to the construction of every loom. Mr. Hunt describes them as follows:

1. The warp beam, a horizontal roller, on to which the parallel horizontal threads to form the warp are wound. 2. The reed, a narrow grating of fine steel bars, mounted on a vibrating frame, for the purpose of drawing up the weft; each warp thread passes through one of the fine apertures between the dents. 3. The shuttle, a small, boat-shaped instrument, carrying the weft thread, which is prepelled backwards and forwards across the warp by a pair of wooden arms, called "picking sticks." 4. The healds, or heddles, a series of cords provided for the purpose of lifting or dividing the warp threads. 5. The taking-up roller, placed in front of the loom, on to which the finished cloth is wound.

In weaving plain cloth or simple patterns, the process is very easy, and but little preparation is necessary. But the weaving of patterns involving the figures of flowers and animals, has always been very difficult, tedious and expensive, since every heddle must be worked by an independent lifter. Since 1801, when Marie Joseph Jacquard, of Lyons, gave to France the since world-famed method which has borne his name and is still practised in all countries, this kind of work has been done

with more despatch and less expense. In this arrangement the division of the warp is effected by means of a series of perforated cards of pasteboard, one being provided for each shoot of the woof necessary to form the pattern. The cards are all linked together as an endless chain, which passes over a hollow box at the top of the loom, in such a manner that the blank portions operate upon the levers which work the warp threads required to be lifted, while the levers opposite the holes pass into them without being worked at all.

Twenty thousand cards are necessary to the weaving of some patterns, and one year's time of one man is required to make them ready, notwithstanding the perforations are all made by machinery!

Wheat-Growing Doesn't Pay.

EDITOR FARMER:—The experience of the past two years has probably brought over many converts to the doctrine that wheat-growing is not to be relied upon exclusively as a source of prosperity among farmers. Still, there are many who cling to it as the safest way to gain a livelihood, and are, at the same time, on the brink of poverty from this very cause; this is but a legitimate result. Most farmers know that to sow wheat for a number of years in succession will exhaust the best of land for that crop, even if the straw be returned as manure. But this is too seldom the case, as many still burn their straw as a matter of economy, to save drawing manure.

We admit that it is hard for one whose mind has continually run on wheat-raising to be compelled to seek some other means of sustenance, but Nature's laws are inexorable, and the unsuccessful farmer reluctantly turns his thoughts to something else.

Oats would be a change, but they are sometimes salable and sometimes not. Corn, if properly attended to, is good for cleaning and invigorating soils, but is seldom worth the labor it costs and the trouble of drawing it to market. The same may be said of potatoes. And live stock, why, the *critters* are always jumping over fences, breaking into crops and breeding trouble among neighbors, generally, besides looking very thin and dying off as much as possible in winter. But hold! This reasoning won't do. We would here wish to say, that it is folly for our farming friends to try to shove along with poor fences. The fence which will not keep in our own cattle will not keep out our neighbors'. One poor fence has frequently spoiled a whole neighborhood, and such things generally go by neighborhoods. So do breachy cattle, for they are inseparable.

Our advice is, keep good fences, and cattle will learn to respect them. But farmers must keep stock, were it for nothing else but to produce manure, and the idea we would wish to convey is that it will pay. Experience is generally better than theory; we give you ours. One hundred and seventeen sheep require about 40 acres to keep them one year.] [The wool, sold at 45½ cents a pound, and the increase, at two dollars per head, amounts to a little over $400. We know of flocks which have done better, but quote this to show it will pay. We had also about 50 acres of wheat, which, after deducting seed, threshing, and drawing to market, might be worth half that sum; while the labor of plowing, sowing and reaping, might, and probably would, cost double that of attending to the 117 head of sheep.

We would further say that raising good horses will pay nearly as well as sheep. A good four year old colt, for instance, will generally bring about a hundred dollars in any civilized community, and it is as easy to raise good ones as poor ones. Farmers and others may figure for themselves, for we have no room, but we think they will agree with us that raising horses is still a lucrative business.

As for horned cattle, they have not been very high of late. Yet few have lost much, even at them, except through carelessness. And we would say, in conclusion, that, without care and attention as regards shelter from inclement weather, and plenty of food at all times of the year, live stock never will pay.

JOHN RHODES.

BRIGHTON, March, 1863.

Farmers, Grow more Roots.

If any of the farmers of the West have wearied of wheat-growing, we would now avail ourselves of the opportunity to say, Neighbor, suppose you try what virtue there is in root crops and stock. In the best farmed districts in the world this is the system most in favor. Would it be out of character in us, who furnish the rest of the world with labor-saving inventions, to borrow, in turn, some of those things wherein they excel?

We have natural advantages which should make us the most successful agricultural nation of the world. Shall we continue to be the most regardless of all the principles of farming?

The economy of root-growing, if one has the stock to consume the crop, is no longer a problem. The only question is, whether the humdrum, pattern-after-grandfather farmers of this country will have sense enough to look at the evidence and prove it in their practice.

Concerning some of the crops and varieties most approved, the editor of the *Rural American* thus remarks:

Long Orange Carrot.—Conceded to be the most nutritious for stock, and bad for general cultivation.

Red Altringham Carrot.—A variety that yields abundantly; long like the Orange, a deeper reddish color, and largely valued.

Large White Belgian.—Grows one-third out of the ground; roots pure white, green above ground, with red tops. It grows on light soil better than the Orange or Altringham, and may be gathered with much less labor, but is less nutritious.

Large Lemon.—Grows to a very large size at the top, is very productive, early gathered, but is short, suitable for stock only. Sow all kinds early in May, in drills 15 to 18 inches apart.

Long Red Mangel Wurtzel.—Stands about one foot out of the ground, required a rich soil, sow May 20th, in drills two feet apart.

Yellow Globe Mangel Wurtzel.—A large round orange-colored variety, grows in light soil, keeps better than the Long Red. Sow as above.

The following varieties of turnips are all grown for feeding to stock, and should be sown about the time that corn is planted:

Red Top Strap Leaf, White Top Strap Leaf, Long White Cow Horn, Red Tankard, Red Globe, Green Tankard, Green Globe, Sweet Gorman, Yellow Swedish Ruta Baga, White Ruta Baga.

Besides these varieties, there are several quick growing flat kinds, which may be sown in July. Sometimes good crops are grown among corn, by sowing the seed immediately after the last hoeing, and breaking it in by hand.

The "Farmer," Enquiries &c.

EDITOR FARMER:—I hope to see the "Bee-Keeper" enlarged. Why do not those that have experience write for it?

I am but a novice in farming, having commenced only one year ago, and I find the FARMER invaluable. I have been clearing off some of the Wisconsin river bottom, and wish to get it into a better quality of grass than the wild. What kind of seed will do the best? It overflows every year in June and sometimes in May. And when is the best time to sow it.? By answering these questions through your paper it may prove very valuable to many of your readers, as there are hundreds of thousands of acres in this valley on which the grass might and ought to be improved. Also state the quantity of seed per acre. J. C. HALL.

PRAIRIE DU CHIEN, March 23, 1863.

[Would sow in autumn 44 lbs. of the following mixture: English Bent, 6; Timothy, 8; Red top, 8; Fowle Meadow Grass, 12; Rough Stalked Meadow Grass, 4; White Clover, 6.—ED.]

Noxious Weeds—See that the Law is Obeyed.

EDITOR FARMER:—I see on page 279 of the FARMER for 1862 an article by Geo. H. Adams. He says the law of the State requires overseers of highways to destroy horse sorrel, burdock, and Canada thistles, in the highway, and calls on the farmers to see to it that the law is universally enforced to the letter. The question is how to do it.

I have killed burdock and Canada thistles, and what has been done can be done again. I will state first how I kill burdock: I let them stand until they are in blossom, then cut them close to the ground. The roots should not be disturbed. I have destroyed Canada thistles as follows: Seeded down with timothy, mowed them, when in blossom, close to the ground, being sure that the seed will not grow; mowed them four years in succession. I have plowed

the ground five times since and not a thistle has been seen yet. Z. A. MERRELL.

LEBANON, March 11, 1863.

STOCK REGISTER.

Diseases of the Horse's Eye.

MR. EDITOR:—Allow me a few words of introduction to your readers. I am a reader of the FARMER and other agricultural journals, and am much pleased to find among the farmers a growing disposition to write for your (their) paper. To them I would say, I am a plain man that has had sixteen years experience as a Veterinary Surgeon and practical horse-shoer. I know but little of diseases in horses, my attention having been turned almost exclusively to the diseases of the eyes and feet. On account of my health, I am now trying to become a farmer, and have received considerable help in that line from those who have written for the FARMER. I propose to write, for the benefit of those whom it may concern, on the above subjects, and shall be happy to answer, through the FARMER, any question on points that I may overlook.

Diseases of the eye require to be treated with care and attention. Some of them proceed from external, while others arise from internal causes; others are hereditary. We all know that a blow will hurt the eye, but we don't all consider that the ammonia arising from the urine decomposing in the litter of the stable is very injurious to both eyes and lungs.

Wolves' teeth—by some called eye teeth—are small teeth appearing on the upper jaw at the distance of half an inch or an inch from the grinders; sometimes on one side only, at other times on both sides. They affect the eyes and must be removed. If you have not proper tools, take a long chisel, (an old file or piece of iron will do) not very sharp, with a small notch for the tooth to set in. Put a twist (twitch) on the horse's nose, raise up his head, set the chisel firmly against the tooth close to the gum, take your hammer, don't be afraid, strike a moderate blow, hard enough to punch the tooth out.

Thousands of valuable horses lose their sight by that disease commonly called "hooks and moon-eyes." This disease is sometimes hereditary. Care should be taken not to breed from those animals which have or have had this disease. But it is oftener caused by dark, dusty, foul stables. It is an established fact that animals kept constantly in the dark will soon become blind This disease first makes its appearance with a dim cloud over the eye, the eyelids are much swollen and inflamed, and in general shut; a sharp, corrosive, and watery humor is constantly running from it, which scalds the cheek and sometimes takes off the hair as far as it goes. The *haw* covers from one-third to nearly one-half of the surface of the eye.

Now for the cure. It requires two men, (it is not necessary for either of them to be nervous), one to hold the horse, while the other operates a pair of very sharp shears, a crooked needle, and a twitch for the nose. The twitch is made as follows: Bore a hole through a stick about the size of a fork handle, one inch from the end. Take a piece of bedcord and pass it through the hole; tie a loop, pass your hand through the loop, and take hold of the horse's nose with your thumb and finger. Now pass the cord over your hand on to the nose and twist it so that it will not slip off. Never cast a horse to perform this operation. Be sure that your shears are sharp.

Now, if you are ready, let us commence, say, on the near side first. Mr. Holder, put on your twist, take hold with your right hand, step on the off side, and take a firm hold of the ear with your left hand. And you, Mr. Surgeon, take your crooked needle and thread in your right hand; press your left thumb and first finger into the corner of the eyelids, to make the *haw* part from the eye. Now thread your needle right through the *haw*, take both ends of the thread in your left hand, pull gently forward and hold the haw outside the eyelids—shears in right hand, with the haw betwixt the blades; press the hand lightly against the head, so that, when he dodges, your hand will go with the head; cut the haw close to

the eyelids. If you should not cut it clear the first time, try again.

On the off side, take the needle in the left hand, or else the point will be towards the eye. The haw will bleed a little for ten or fifteen minutes. After it has stopped, bathe the eye in clean cold water.

The best eye water, or wash, that I have tried, for inflamed eyes of either man or beast is made by adding half an ounce of copperas to a pint of soft water. For a film on the eye, use one ounce of copperas to a pint of soft water.

JAMES BOLD.

ORANGE, Juneau Co. Wis.

A Plea for Certain Jackasses.

The word "certain" in our caption is intended simply to encourage the hope that we are not about to espouse the cause of jackasses in general. In other words, it stands as an assurance that we do not mean to be *personal!*

The ass! of what innumerable, perpetual sneers and jeers, curses, kicks, and merciless starvation, has he not been the object and subject! Venerable for his antiquity, for individual longevity, for the sagacity of his mind, and for unequalled sageness of physiognomy, —circumstances and endowments which one would naturally suppose would have secured to him the respectful consideration of the world—he nevertheless, somehow, and most strangely, stands the symbol of the utmost obstinacy, stupidity and meanness!

In our opinion, he has suffered this unmeasured abuse quite too long, and, however unseemly it may appear in us to do so, we hereby declare our purpose, now and henceforth, to champion his cause.

We shall begin by setting up for him, or more properly for his hybrid progeny, the mule, the following claims:

1. He is much more easily and cheaply reared than his cousin, the horse.

2. He eats but little more than half as much when matured.

3. He is satisfied with and thrives upon a coarser and less expensive class of provender.

4. It costs less to keep him in harness and shoes.

5. He is proportionally stronger.

6. He is very much tougher.

7. He is less liable to disease.

8. He has more sense and docility.

9. He is better adapted to some important kinds of work.

10. He is a truer puller and, when loaded, a quicker traveler.

11. He sells for a better price.

12. He lives more than twice as long.

13. He is better looking!

In nothing but fleetness is he excelled by the horse.

Farmers, if the above propositions be true, why not go into the business of mule-raising? If not true, you are at liberty to take up the glove we have thrown down, and show wherein we are at fault. Friends of the horse, to the rescue!

Essay Wanted.

That will answer the following questions: Do cattle ruminate *all* the food taken into their stomach in a natural state, or only a *part?* If only a part, which part? Do they ruminate the part last eaten *first?* Do they ruminate a larger portion of their food in a state of rest than when worked or driven a part of the time?

If you will publish an essay in the FARMER that will give light on the above queries you will much oblige

A STOCK FEEDER.

TO TEST THE QUALITY OF WOOL.—Take a lock of wool from the sheep's back, and place it upon an inch rule. If you can count from thirty to thirty-three of the spirals or folds in a space of an inch, it equals in quality the finest Electoral or Saxony wool grown. Of course, when the number of spirals to the inch diminishes, the quality of the wool becomes relatively inferior. Many tests have been tried but this is considered the simplest and best. Cotswold wool and and some other inferior wools do not measure nine spirals to the inch. With this test, every farmer has in his possession a knowledge which will enable him to form a correct judgment of the quality of all kinds of wool. There are some coarse wools which experienced wool growers do not rank as wool, but as hair, on account of the hardness and straigtness of the fibre.

Sheep and the Dog Law.

MR. EDITOR:—The communication of Daniel Archer, in the March No. of the FARMER, on the above subject contains thoughts of sufficient general interest to require a few words in reply.

Men cannot expect to receive the full benefit of our legislative enactments without taking pains to inform themselves as to what these enactments are. Nor can farmers hope to be benefitted by the laws which are placed upon the statute books for the purpose of promoting their particular interests, unless they make diligent and vigorous efforts to secure the enforcement of such laws and enactments.

Mr. Archer complains of the impossibility of getting the dog law of 1860 enforced. Does he not know that the legislature of 1862 abrogated that statute and passed a dog law which can be easily enforced, and which is equally as effectual in preventing "the frequent depredations of miserable dogs" as the law of 1860 could be, had it been universally enforced? If he does not, I think he should look up these things and see if the fault does not lie, in part, at least, at his own door, before he murmurs *too much* about the laws of the land, and the proceedings of the legislature.

Nor can farmers expect to receive the full benefit of the laws so long as they leave the entire control of the town elections in the hands of a few office seekers who care for the interests of no one in particular but themselves. It is a lamentable fact that many substantial farmers pride themselves upon meddling so little in politics as scarcely ever to take the trouble of voting.

But let them awake to a realizing sense of their own obligations; attend the town meetings, and see to it that our town offices are filled by men who possess sufficient executive ability to see that the laws are lived up to in their respective towns, and we shall hear no more of the impossibility of enforcing the dog law.

A few resolute, energetic men in a town who are willing to put shoulder to the wheel can, without any serious difficulty, enforce the dog law of 1862. It has been done this year in this town, notwithstanding a majority were opposed to it. The assessor commenced with a full determination to secure, if possible, a perfect list, and succeeded well enough for all practical purposes. The town treasurer, upon receiving the list, commenced the business of collecting the license money, with a resolution to perform his part of the programme to the letter of the law, confident that he would receive the support of his fellow town officers; and he collected it. Some stood out about paying, but after the treasurer forced one of them, by a hotly contested lawsuit, to pay his dog tax and twenty dollars costs, the remainder shelled out quite freely.

I think the legislature of 1862 gave us a good dog law, and if we farmers do our part as well, I hope that in a few years the complaints of "frequent depredations of miserable dogs" will be few and far between.

GEO. H. ADAMS.

ELBA, Dodge Co.

GRUB IN THE HEAD OF SHEEP.—Dr. Dadd, in a communication to the Prairie *Farmer*, says the only way to prevent grub in the head of sheep, is to put plenty of "grub" into the stomach of the animal—and that it is a well known fact that sheep properly attended to, well fed, and housed, are never troubled with the parasite known as the grub.

THE FRENCH MERINO SHEEP.—The Rambouillet flock of sheep was formed in 1786, by Louis XVI, with the finest Merino specimens, chosen in the most renowned sheep-folds of Spain—in other words, among the Leonese breeds, principally that of Cavagne and Negrete. The animals comprising the flock were originally small, as are also the Merinoes of Saxony, which are drawn from the same sources. But under the mode of treatment followed at the Rambouillet sheep-fold, the flock, while preserving an absolute purity, and propagating itself without the least *mesalliance*, has acquired a shape which renders its specimens the largest among the unmixed Merino breeds.—The animals have remained thick and short, but they have great size and abundant wool. It appears to be generally understood that the sheep with "cravats" and very marked dewlaps are the greatest bearers of wool, but they are also the most difficult to fatten.—*Mark Lane Express.*

Washing Sheep.

Mr. Editor:—Much is being said in favor of abandoning the practice of washing sheep, also on the great contrast between the condition of the wool before and after washing. Would something adverse to a change be out of place? If not, let any one who has often indulged in this exciting recreation, call to mind the amount of filth and dirt oozing from the fleece, discoloring the water as the expert operator keeps it in motion about the carcass of the subject under treatment.

Many a sheep-shearer has discovered that water alone will remove the gum or grease from his hands quite as well as with the addition of soap. Always a participator, when my little flock has been through the renovating process I have carefully watched its effect upon both parties. The biped party generally think the dinner late, which may be set down as a favorable symptom, and never take cold with suitable exercise. The quadrupeds being in the water not more than four minutes each, find it cool and refreshing, on a hot summer day, rather than otherwise, cleansing the skin and opening the pores, giving a chance for the escape of extraneous and effete matter, thus adding to their health instead of endangering it. Carefully handled sheep never need be hurt in washing. One who will not catch and handle properly should not be allowed to touch them.

Never should a sheep be caught by the fore leg or the wool on its sides or back. They are not likely to be injured if caught by the hind leg or the wool on the neck near the head.

Washing the wool on sheep is said to be "unnatural." But there are other unnatural practices in connection with sheep husbandry which are universally approved. Never having known a sheep to take cold or show any signs of cold or chilliness in consequence of being washed, I apprehend no danger in that direction. Have frequently known them drop their lambs within an hour or two after being washed, without bad results.

In crowding several hundred sheep and lambs into one small yard, the smaller lambs are in danger of being trodden under; but there is no necessity of doing business in that way. If one escapes unwashed, as now and then one will, it is not always agreeable to hear the complaints of the shearer, as he tugs away upon the dingy fleece, with unmistakable signs of extra labor, while his shears grow less inclined at each succeeding clip to separate the wool from the mutton, requiring increased manual labor to accomplish the desired result, or else a frequent use of the whetstone.

Then the one who buys the wool says "that is unwashed," the moment he sees it; nor need he see it to detect its condition, for the sense of feeling is sufficient to reveal its *soggy* and lifeless state, feeling no more like a washed fleece than a dead lamb feels like a live one. Again, we may save freight on the dirt by keeping it at home.

Nor is there any more need of a jug of whisky to suck at, or some stupifying weed to chew because a man spends an hour in washing sheep, than there would be of taking a dose of pills because he has taken a bath.

S. L. Miller.

Fulton, March 24, 1863.

Stock-Raising vs. Wheat-Growing.

Editor Farmer:—About three years ago I inquired through the Farmer about Chester White pigs, their qualities as compared with the Suffolk, &c. Mr. Edward M. Danforth, of Summit, replied to my inquiries by saying that he had lately procured some of the Chesters, and intended crossing them with Suffolks, and also to raise them side by side that he might test the respective breeds under like circumstances. Mr. Danforth said that, at some future time, he would speak more positively of the comparative merits of the two breeds. And now, after so long a time, I would be glad to hear from him through the Farmer. No doubt many others will be able to give information on the respective value of different breeds of hogs, and such information will be gladly received by many who, like myself, have not had much experience in such matters.

Many of our Wisconsin farmers have experimented with nothing but wheat, until now many have scarcely the means to experiment on anything else, and some even have not the seed left to go into another experiment with wheat. As has been often suggested in the FARMER, I believe we should go into a greater variety in our farming operations. Just now it would seem that the whole attention might be very profitably directed to the production of any one article of farm produce, with good prospect of ample remuneration. All kinds of grain are now commanding a good price, equally so are pork, sheep, wool, &c. Now is not that a good reason why we should have some of each article for sale? Some one article of grain may fail and not produce a good crop. Disease or dogs may attack the sheep, or the hogs may be destroyed by some, now unknown to us, distemper.

Undoubtedly the aggregate sales from a farm, yielding a variety of produce, will foot up as large, for a term of years, as one producing for market only one or two articles, and without doubt the farm will be in better condition and of enhanced value.

Brother farmers, was not the February No. of the FARMER an interesting one? If so, then let us write for our paper more frequently. I am always very much interested in the communications of others, and like to read the FARMER when its patrons take hold and help the editor, not only with the *very necessary* dollar, but with the pen. L. R. BINGHAM.

TAFTON, Grant Co., Feb. 25, 1863.

TYING UP WOOL.—A correspondent of the Albany *Cultivator* furnishes the following description of his method of tying wool fleeces, and of the box used for that purpose. It is nothing new, but may be of service to some:

Make a square box, say two feet high—eighteen inches square at the bottom, with a gradual sloping increase to the top, making it twenty-two by twenty-four inches at the latter—have it well dove-tailed together—no top or bottom. On the top midway of each side, saw down three or four inches; in these cuts place two strings reaching to the bottom (which should sit on a smooth surface), crossing each other at right angles on the bottom, the ends hanging over on the outside sufficiently to tie. When the fleece is completely rolled up, place it in the box, step into it with your feet, pressing it down; then bring out of the cuts the ends of the twine and fasten across the fleece each way. Turn the box upside down and press out the fleece. It will come out square and compact, and will not need more winding to keep it in shape, if properly handled.

THE HORTICULTURIST.

A. G. HANFORD, : : CORRESPONDING EDITOR.

The "Wisconsin Seedling" Strawberry.—Description by Hon. Emil Rothe, of Watertown, the Original Producer.

ASSEMBLY CHAMBER,
Madison, March 25, 1862.

EDITOR WISCONSIN FARMER:—To comply with your request, expressed to me by Hon. O. F. Jones, I give you the following description of the new variety of strawberry, which I have raised. Allow me to suggest to you that I am merely an amateur gardener, and that this description is not intended to be an advertisement.

I am Yours, Very Respectfully,

EMIL ROTHE.

HISTORY AND DESCRIPTION.

The Wisconsin Seedling, as I have named this new and excellent variety of strawberry, was raised by me from the seed, by hybridization of the Triomphe de Gant, the Austrian Giant, and a very splendid French variety, the name of which I do not recollect. The plant grows larger than any other strawberry plant. The leaves are rather roundish, dark green and hairy. The pollen of the blossom is extraordinarily large, and is under all circumstances of joint sex, so that each blossom is sure to bring fruit. There grow no separate pistillates and staminates of this variety.

The stem is generally thick, and strong enough to bear the fruit without bending down. The blossoms form a kind of grape cluster, not a flat umbrella like those of the Wilson's Seedling, and while some fruit ripens, blossoms and green buds may be seen on the same cluster. The variety is very prolific. Two years old plants yield from 150 to 250 berries; 287 have have been counted on one single stalk. It is

from eight to ten days later than the Wilson's Seedling, and when properly treated and kept free from runners, it is sure to bear during the the whole of the months of June, July, and a part of August.

The fruit is much larger than that of any other variety. I have raised berries measuring 5¾ inches in circumference, and 1½ inches in diameter. The berries first ripening are generally the largest, and are of very irregular form, very often of the cockscomb shape; by-and-by their form becomes more regular, nearly heart-shaped, but more elongated.

The flesh of the berry is white and very substantial; the flavor delicious, pineapple-like and subacid. On the side exposed to the sun, the upper part of the berry is crimson red, the other side and the top is light red, sometimes nearly white. It wants almost twice as much time to ripen as the Wilson's. The berries keep good in the basket for several days after picking.

The plant is as hardy as any other strawberry, and, while taking it for granted, that strawberries should be protected during the winter, I know that this variety will stand the Wisconsin winter unprotected, if left in the cold by a negligent gardener.

Seeds—How to Insure their Germination.

The complaint that seeds will not germinate is very common, and, in a great many cases, just. In the present state of the seed trade, where seeds are packed up by the grower, carried over the country by agents and left in grocery stores for sale, where they remain often several years, and the seed-grower loses all control over them, it cannot be otherwise expected than that they often are worthless. But it is not always true that seeds are not good because they are several years old; there are some kinds which improve by age, others not. I think the Act passed by Congress that small packages of seeds may be sent by mail for one cent postage per oz. will create quite a revolution in the seed trade. This law will enable seed-growers and regular seed dealers to send seeds by mail, postage prepaid, for the same price to their customers as they can be bought at the country stores; and those men who know, or ought to know, of what age their seeds are, will be able to sell only good seeds.

But sometimes seeds may be good and still not grow; what is the reason? They are often planted at the wrong time, either too early or too late, often too deep, or, if not taken care of, the bugs will eat them before the planter knows that they are coming up.

As the culture of garden seeds is more generally understood, I will offer a few remarks about flower seeds. It is a very common way with some people to plant all the flower seeds purchased, on the first pleasant day in April, broadcast over a small flower bed, without regard if they are tender or hardy, if they are of large or small sized plants. Here they are left to struggle with the weeds and be trod under foot by the chickens. Perhaps some kinds, of a strong growth, will work their way through; the most will die.

Flower seeds ought to be planted each kind by itself, in hills about three feet apart, and the finer seeds only slightly covered. Put a little stick in each hill, so that you may know the spot, and when they come up watch against bugs and weeds. Early in May you ought to plant Coreopsis, Delphinium, Elichrysum, Eutosa, Lavatera, Lathinus, Papaver, Petunia, Phlox, Polygonum, Scabiosa, Reseda, Nemophila, Colinsia, and Iberis. If you do not watch the last two kinds closely, they will surely be eaten by the insects. Double German Aster and Large Flowering Pansy should also be planted early and afterwards transplanted. A paper of seed of each kind will make a beautiful flower bed. Convolvolus, Helianthus, Balsamina, Tagetes, Tropæolum, and other tender kinds have to be sheltered, or planted late when there is no danger of frost.

Wishing each of the fair readers of the FARMER the pleasure of a neat flower garden, it will afford me pleasure to show all who should happen to come this way, and favor me with a call, my own efforts in this branch of gardening.

F. A. MEISSNER.

MOUNT PISGAH, Wis.

The Malope Grandiflora.

Among the thousands of fairy flowers with which God has so adorned the earth and so greatly administered to the pleasures and happiness of man, there are not many whose showiness and beauty exceed those of the *Malope grandiflora*, illustrated above. The plant is very spreading, the flowers large, crimson-purple. Seeds may be had of most florists.

About Cranberries.

MR. EDITOR:—Having heard many inquiries about the culture of the cranberry, and whether they can be grown on dry uplands, I will answer; 1st, that they will *not* pay on dry upland, although they will grow for a time. 2d. To grow them on very wet marsh land will not pay, because they are too small and far between. It is only the Cherry variety that lives on such land.

In order to make them grow with profit, the land should be drained or ditched, and the surface cleared of all wild grass and roots for about one foot in depth. Then plant in hills or drills about 18 or 20 inches apart, with vines of the bell-shaped variety, and *bearing* vines. There are vines of the male sex that do not bear. Make your selection when you can see the fruit on them in the fall, or mark the spot where you find bearing plants. I got mine in a cranberry marsh, near the edge where there was considerable soil or sandy loam washed on them, and no wild grass. The plants were quite strong, and they bore some the first year after planting. They should be planted three or four inches deep in the muck or soil, and if they are one foot or eighteen inches above water, as a general rule, they are at home.

A good way is to stop up the ditches or outlet to the marsh in the fall before freezing weather, so as to set them in water over winter, on account of the meadow mouse, which is very troublesome, and has destroyed my first patch.

Some years ago, some Eastern cranberry culturists recommended covering the surface some three or four inches deep with sea sand. I have tried some clear sand on them, but do not see any benefit from it. On the contrary, grass and weeds grow better with sand on it than where only planted in muck; and the plants will cover the surface sooner on muck than when sand is added. Moreover it is a great deal less expensive.

In order to get the plants, or rather cuttings, (they grow with roots or without) they should be pulled off or cut off as near the surface as possible, and selected in handfuls of fifty or a hundred in a bunch, and tied up, and kept in wet moss or water to keep them from drying up, until you are ready to plant them. One or two stems in a hill or place is enough.

They can be planted with a dibble, or sharp-pointed stick. Early in May, or as soon as the leaves are starting, is the best time to plant them out. After-culture is simply to keep them clean for two years. As a general result, the third year they will cover the ground, and give weeds and grass no room. They then take care of themselves.

GEO. P. PEFFER.

PEWAUKEE, Wis.

Apple Orchards---Planting new Trees between the Rows.

MR. EDITOR:—Permit me to trespass on your time and patience for a little advice. I ask your opinion because I have followed you through the pages of the FARMER, and know that you are interested in fruit-raising, and that you have traveled much through the State, and believe you have been as much interested in observing the growth of fruit trees as in eating the fruit.

I have an orchard planted to trees in squares of thirty feet apart. I wish to plant more trees, but I have no more land that I wish to occupy as an orchard. I came from Vermont, where apple trees grow very large; but I have been told that trees bear earlier here and are more dwarfish in their habits. Now, will it be profitable or advisable to plant as many more trees on the ground, so that they shall stand in squares fifteen feet apart? I have been told to do so, but I wish to appeal to your large observation and good judgment in the matter.

JOHN L. SEXTON.

RUSSEL, Sheb. Co., Wis.

ANSWER.—Fifteen feet apart would be rather close for apple trees. If in your stead, would plant one tree in the centre of each square of four trees. This would give you half as many more trees than you now have, and leave no two nearer than 20 feet apart. The rows will be diagonal in their direction across the field, or, in other words, they will stand in what is known as the *quincunx* arrangement.—EDITOR.

The Pear Blight.

MR. EDITOR:—I think the best response you could make to the enquiries of H. W. Wolcott, on Pear Blight, would be to publish the remarks of Chas. Downing, in Downing's new edition of "Fruit Trees of America."

The subject seems to be very imperfectly understood by most of our Western Horticulturists, and a great deal has been written and circulated in our Western agricultural papers by men who have evidently noticed but one form of blight.

Your correspondent's trees, probably, suffered from Frozen Sap Blight. It was very prevalent last season, owing, in a great measure, to the wet summer, for I have known the summer pass without blighting at all, when the sapwood was quite as much injured from late growth of the previous fall and injury from the previous winter, as our pear trees were last spring.

Pear trees planted on high, dry land, where the wood will ripen up early in the season, are rarely affected, even in the worst seasons.

I notice in the discussions of your Horticultural Society that one of you recommends planting dwarf pears with the junction of pear and quince above ground. This is a dangerous practice, as the quince roots are liable to freeze, I may say *sure to freeze*, and thousands of dwarf pear trees have been lost to the West for this sole reason. R. DOUGLAS.

WAUKEGAN, April 3, 1863.

TOO OLD TO PLANT TREES.—This is the complaint of many a man in middle life, or when rounding over the hill of his pilgrimage. He thinks he shall never live to eat their fruit, so it will be of no use to plant. He's too old!

What if you *don't* live, dear man, that is no reason for not planting. Suppose your predecessors had refused to plant those orchards from which you annually gather apples and pears, what would have been your lot now? Would you bless or curse their memories, for their selfishness? If you indulge such a churlish disposition, it is doubtful whether you will live very long to enjoy anything: such a spirit sucks the fountain of life dry quite early. Each generation receives a dowry from the preceding, and should hand over the inheritance, much enlarged, to the following.

THE BEE-KEEPER.

The Bee.

Many-colored, sunshine-loving,
Spring-betokening bee!
Yellow bee, so mad for love
Of early-blooming flowers,
Till thy waxen cell be full;
Fair fall thy work and thee,
Buzzing round the sweetly smelling
Garden plats and bowers.

[*From the Greek of Nicias*, 280 B. C.

Which is the best Bee-Hive?

MR. EDITOR:—In the December No. of the FARMER I find the Langstroth hive highly recommended; but what I miss is the *why?*

You would very much oblige me and others if you would be so kind as to give a description of the hive, and the reason why it is so superior. I use Burlebs & Co.'s hives, which cost me $5 each, and if I could get better ones for $1.50, I should be very thankful for the opportunity.

Please give us the answer as soon as possible, for now is the time to look for hives. When the swarm is on the tree it is a little too late.

Which is the best work on Sheep-keeping? I would like to buy me one, and don't know which. DIONIS SCHAEFER.

SPRINGFIELD, Feb. 15, 1863.

ANSWER.—We are not perfectly sure that the Langstroth hive is absolutely the best, though it is the choice of many good judges. The chief argument in its favor is that it gives better control of the bees and of their enemies.

Youatt's work on Sheep is probably the best. Price not to exceed $1.—EDITOR.

Improved Straw Hives—How Made.

Having succeeded in constructing a hive of straw, adapted to improved bee-culture, making it take and retain a shape suitable for movable frames and surplus honey boxes, I announced it in the *Farmer* some months since, and at the same time an invitation was given for some one to give us a better form, as I did not suppose that I had the best one. Since that time, two straw hives have been patented, but whether they are sufficiently superior to mine to pay patent expenses, is not for me to say. Both of them have movable frames. One patented by Mr. M. Stilwell, Manlius, N. Y., is very much like mine; the material difference is in the manner of securing the straw. Mr.

S. Ide, East Shelby, Orleans County, N. Y., has one with double walls, with an air space between; the inner one of straw, the outer of wood, which serves to protect the straw from the weather, and as far as the sides of the hive are concerned, would do a great deal to protect the bees and keep out the frost. It is well made, durable and somewhat costly. The one I have is more simple, easier made, and probably may answer just as well. It is made to correspond in respect to height, length and breadth, to a wood hive that I have, with movable combs, so that the combs, bees, &c., may be transferred at any time. I would suggest that any one disposed to make the straw hive who already has the movable combs, that they make it the same size of the wood hive, inside measure of course, as the straw will be much thicker than boards. It will be unnecessary for me to describe the frames, manner of supporting them, or size of the hive.

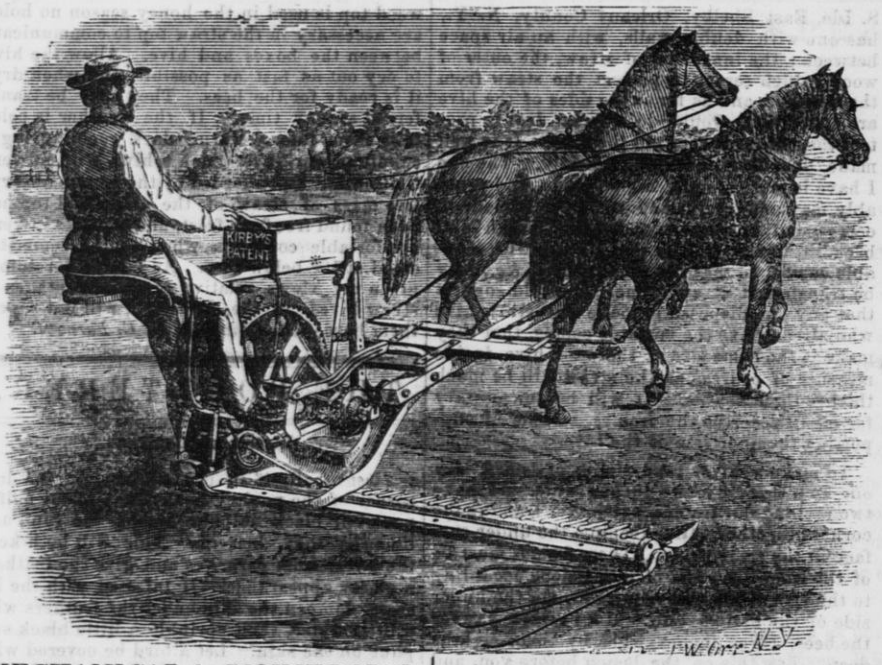
To make a hive, take strips of board, say one inch thick by two inches wide, and make two rectangular frames, halving or framing the corners together, and keeping the under surface in the same plane. These frames must be of the same size, and of dimensions according to the size of the hive required. On the under side of the bottom one, cut a passage way for the bees, three inches wide by three-eighths deep. Lay this on the bench before you, and nail to it upright strips of lath—let them be an inch wide by one-fourth inch thick—the length corresponding to the height of the hive. the lower ends being even with the lower surface of the frame. If very smooth work is desired, these laths may be let into the frames just their thickness. When to be painted, it should be done before filling in the straw. These laths should be about four inches apart, inside and out, the two at the corners joining together. Now take long, clean straw. Rye straw is the smoothest, if unthreshed the better; get it even, and cut off the head, wet it and lay it between the upright pieces of lath, bending it round the corners in such a way as to make the walls of the hive, and press it close. When half full, if the hive is a deep one, pass some small annealed wire around the inner and outer lath to keep them from spreading. Having pressed the space full, lay the second frame upon the straw directly over the first, nail the upper ends of the lath to it and the hive, with the exception of the tops, movable, of course, as in all movable comb hives; one of wood, to be used during the gathering of surplus honey, and the other of straw, for winter and spring. The straw top may be made on the same principle as the hive. Make a frame of the proper size and two inches deep; nail pieces of lath on the under side, sinking them in so as to leave a level surface, fill in above them with straw and bind it down with lath nailed above. It will be unnecessary to leave any passages for ventilation, and as the wood top is used in the honey season no holes are necessary in the straw top to communicate between the boxes and hive. Allow the hive to dry out as fast as possible, and when dry, it is ready for the bees. They may be transferred at any time. If the weather is cold, take them into a warm, dark room, using a candle to work by. Such a hive, with no ventilation but that afforded by the porous absorptive mass of straw of the sides and top has been found free from frost, and the bees in very comfortable condition when the thermometer stood at 10° below zero. As I have heretofore given my views relative to the advantages of straw hives, in the *Farmer*, I will not repeat them here.—*M. Quinby in N. E. Farmer.*

THE POULTERER.

Insects on Chickens.

First of all, if in confinement, in the dust corner of the poultry-house, mix about half a pound of black sulphur among the sand and lime that they dust in. This will both keep them free from parasites and give the feathers a glossy appearance. If infested with the insects, dampen the skin under the feathers with a little water, then sprinkle a little black sulphur on the skin. Let a bird be covered with the insects, and they will disappear in the course of twelve hours. Also, previous to setting a hen, if the nest be slightly sprinkled with the sulphur, there is no fear of the hen being annoyed during incubation, neither will the chickens be annoyed by them. Many a fine hatched brood pines away and dies through nothing else, and no one knows the cause. Having had an ostrich under my care that was pining, I looked into his feathers, and observed thousands of parasites. I employed tobacco-water, also lime-water, under my then master's orders, to no effect. In his absence, I well dampened him, and sprinkled him under the feathers with black sulphur, when next day they were examined with a microscope, and every one was dead. Having had some macaws, also parrots that were addicted to biting off their feathers, I employed the black sulphur by well syringing them with water, then sprinkling the sulphur over their skins. If tame, sponge the skin, then rub gently, with the points of the fingers, with the sulphur every other day for about a fortnight, when the parrot or macaw will cease to destroy his plumage. It is not a remedy which has not been proved, for I have used it these two years with success.—*The Field.*

☞ To save your gardens from the ruinous scratchings of old hens with chickens, put them in coops. The chickens will do better, and the hens full as well.



MECHANICAL & COMMERCIAL.

Improved Harvesters.

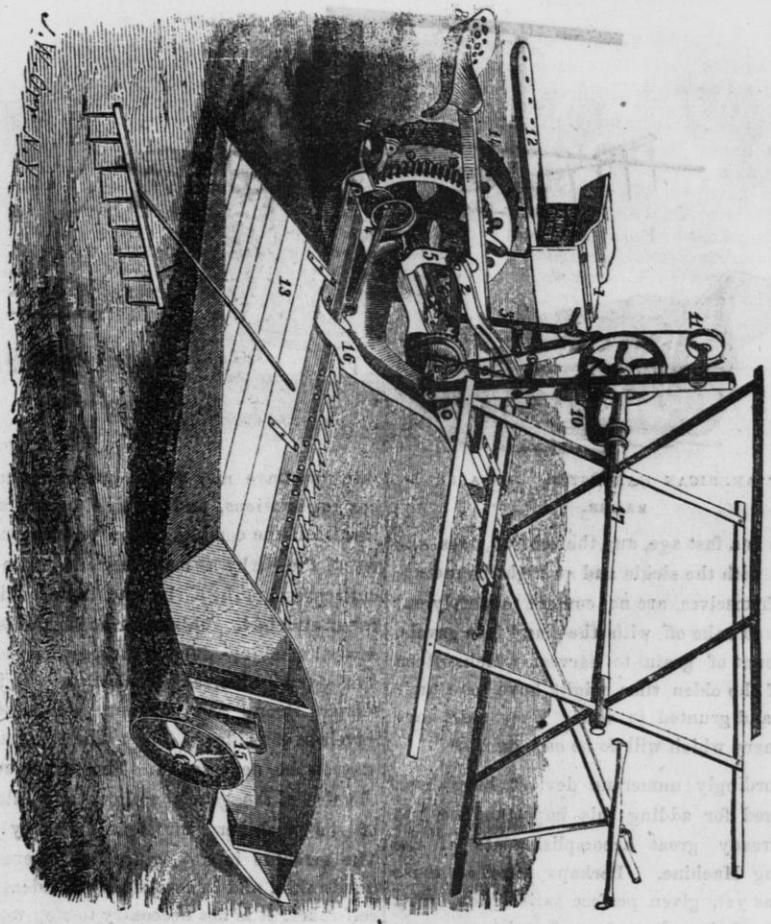
In 1851, when Cyrus W. McCormick presented his harvester to the wondering world at the first Exhibition of the Industry of all nations, in London, its trial was so complete a success, that there were multitudes ready to declare it "the very perfection of a harvester." Even Cyrus and not a few other geniuses of the Yankee persuasion were inclined to believe it about all that Agriculture would ever think of asking.

Not so, however. Progress is the watchword of the age, and there is nothing so perfect now-a-days but that we may reasonably expect it to be improved after a time, if not very soon.

Prominent among the improvers of the harvester in many respects, was William A. Kirby, of New York. His machines were introduced in 1855, and have since been improved from year to year, until they have gained a great popularity in all parts of the country. It is because we have faith in them as among the very best tried and most successful machines of the day that we have adopted the Kirby Reaper as the Prize for the largest list of subscribers.

KIRBY'S AMERICAN HARVESTER AS A MOWER.

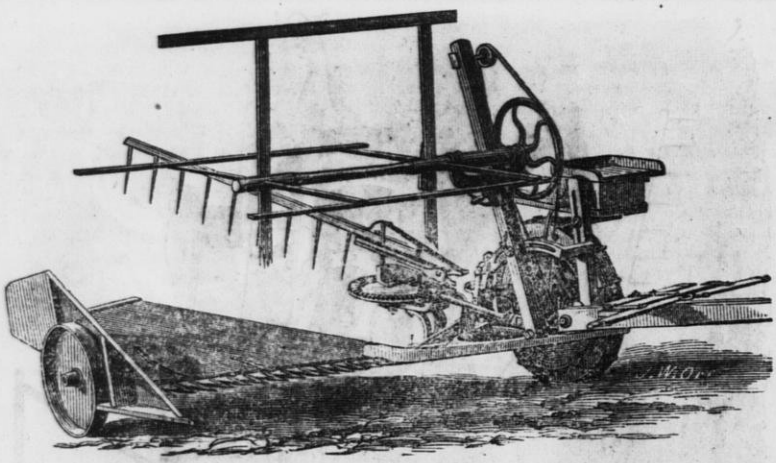
The above cut represents the American Harvester as a Mower. It cuts a swath 4 feet 10 inches wide, and is capable of cutting 10 to 15 acres per diem. The driver's seat is remarkably safe, convenient and easy. It also acts as a lever, whereby the weight of the driver balances the weight of the frame and throws the whole upon the driving wheel, adding to the power of the wheel, taking all the pressure from the horses' necks, and lessening the draft of the machine. By means of the lever in front of the driver, he can throw the machine out and in gear at will. With the lever at his side he can raise either end or both ends of the finger-bar to pass over obstructions, carry his swath, or move from field to field. When the machine is working, the independent action of the finger-bar enables it to play freely up and down, and follow the inequalities of the ground. Whatever may be the position of the cutters, the connecting rod is always in line.



KIRBY'S AMERICAN HARVESTER AS A REAPER.

The second engraving represents Kirby's American Harvester set up as a Reaper. The Mower is converted into a Reaper simply by bolting on the platform, reel, and raker's seat, which can be done in a few minutes in the field. The width of cut in reaping is 5 feet, and the machine will reap from 12 to 18 acres per day. The platform is covered with zinc, and is light and durable. The reel is perfectly adjustable in any direction, without altering the length of belt, and is thought by many to be the most perfect and convenient reel that has yet been devised. The raker's seat is very easy, and his position the most convenient possible for raking off the grain. By a natural and easy quarter-turn sweep of his arms, the raker delivers the gavels in good shape for binding at the side of the machine, out of its track on the next round; this position of the raker is secured by patent. When a driver is employed in reaping, he sits upon a seat made for that purpose on the top of the tool box, but it is very common with the Kirby machine for the raker to drive, his position enabling him to do so without difficulty, thus dispensing with the services of one person necessary on other reapers.

The cutters can be set at any desired height, and the machine is peculiarly adapted to reaping lodged and tangled grain, and gathering clover seed.



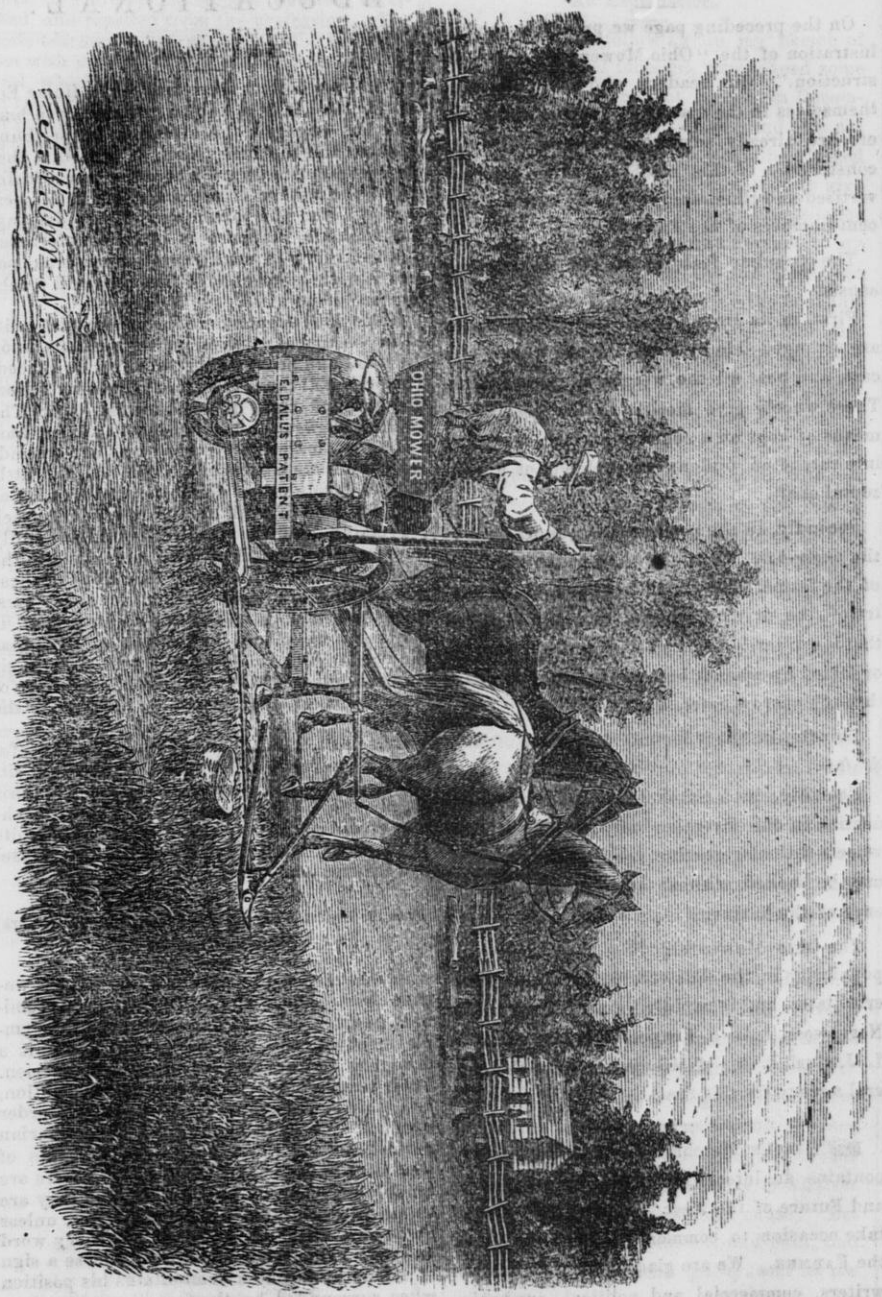
THE "AMERICAN HARVESTER" AS A SELF-RAKER.

This is a fast age, and the sons of sires who reaped with the sickle and at night bound up, after themselves, are not content to merely cut down and rake off with the hand into gavels, an amount of grain to harvest which fifteen men of the olden time might have bent their backs and grunted in vain. They must have machinery which will *do its own raking.*

Accordingly numerous devices have been contrived for adding this important work to the already great accomplishments of the Reaping Machine. Perhaps none of these have, as yet, given perfect satisfaction, but a number of them have been found to answer a good purpose, and are highly esteemed by those who use them.

In relation to the rake adopted by the proprietors of the Kirby Reaper, we know but little from personal observation, and, therefore, allow them to speak of it in their own terms, which are at once modest and sensible.

"There are many difficulties to be overcome in making a successful self-raker, and it will, perhaps, be impossible to produce one that will do good work in all places. We have for the past three years been experimenting and examining rakes, with a view of attaching one to the Kirby as soon as we could find one which we could confidently recommend. We think we have now found one which answers our expectations, and we shall be prepared to furnish it the coming season to such purchasers of the Kirby as may desire it. The above cut represents the Kirby machine with the self-raker attached. This raker has been tested on several machines during the past harvest, and has given universal satisfaction. It is very simple, strong and efficient. It delivers the gavels at the side of the machine, out of its way on the next round. The driver controls the size of the gavels without any alteration of the machinery for light or heavy grain. The machine is not injured or altered as a hand-raker, and in case of any accident to the self-raker, it is not necessary to stop work until it can be repaired, as is the case with all other self-rakers, but it may be detached by taking out three bolts, and the work go on with a hand rake, which is furnished with every machine. We consider this a very essential feature in a self-raker, for all machines are liable to accident, and there are some cases in which no self-raker can work well, and in such cases it is almost indispensable to be able to detach the raker and substitute a hand rake. While we have no desire to urge our self-raking attachment upon any purchaser of the Kirby, we feel that we can recommend it as the best one that has yet been devised, and we are willing to allow every purchaser a fair trial of the rake before he decides to keep it."



THE OHIO MOWER PASSING AN OBSTRUCTION.

The Ohio Mower.

On the preceding page we present a good illustration of the "Ohio Mower passing an obstruction." Our readers who have interested themselves in the matter of reapers and mowers are already somewhat familiar with the construction of this machine, as we have advertised and illustrated it to some extent in recent numbers of the FARMER.

The peculiar features of the Ohio Mower consist

First, in its having *two driving wheels*, which are arranged side by side, like the wheels of a cart, and bear all the weight of the machine. These wheels give motion to the gearing by means of cogs on a concave surface, matching into ratcheted pinions on each end of a horizontal shaft.

Secondly, in the position and connections of the *finger-bar*, which is hung at the hind end of the frame, about 22 inches back of the centre of the driving wheels, and is so hinged that it can easily be lifted over stones or stumps, or folded up when it becomes necessary to pass through narrow gates, &c.

Thirdly, in the effectual avoidance of *side-draft*.

Fourthly, in a ratcheted connection (connection in one direction only) of the driving wheels with the gearing, so that the machine may be backed without any special interference of the bearer.

The Ohio Mower enjoys a high degree of popularity in the Eastern, Middle, and Western States, and is rapidly gaining favor in the Northwest. As a Reaper it is also popular. L. J. Bush & Co., of Milwaukee, have the general agency for this State.

☞ Hunt's Merchant's Magazine for May contains an interesting article on "The Past and Future of the West," upon which we shall take occasion to comment in the June No. of the FARMER. We are glad to see that Eastern writers, commercial and political, are beginning to appreciate the Great West, and to recognize it as a power in the nation.

EDUCATIONAL.

Home Education.

Whatever defects there may be in Home Education, and it is a subject which for a long time has engaged the attention of profound thinkers and the benevolent, it is certain that the exceptions are rare where the moral training of the mother is not according to her best capacity, for the advantage of her offspring. The mother's influence is often counteracted by the father; in such cases the maternal parent is not responsible if her care and teachings are of no avail.

Home education, where the parents are united in sentiment, leaves its impressions upon the mind and heart which can never be effaced. The principal cause of so many departures from the path of right is evil associations. The mother, engaged in her household affairs, has, among the majority of those who are dependent upon their labors for a livelihood, but little time to devote to her children; and as soon as they are able to walk by themselves they seek playmates, and the youthful mind is readily impressed for good or evil, according to the character of its associates. The effect of these impressions are most lasting, in most cases, than the influence and example of parents. If mothers were placed in circumstances so that they could give the proper attention to their children, and if they had the co-operation of their husbands, there would be less vice in the world.

Home education is the best for the youthful mind. The most determined man in every situation in life will, to the latest period of his pilgrimage, be influenced by the early teachings of his mother, if the example and habits of the father were in unison with her counsel and instruction.—*Noel.*

[From the Report of the City Superintendent of New York]

Female Teachers.

In this responsible sphere of usefulness woman claims, and with propriety holds a prominent position. There is something in the employment of the teacher which makes it a drudgery in the eyes of many young men. Their temperament, their mental constitution, and their moral impress are not of that order which fits them to endure the disciplinarian perplexities of the school room. Points of weakness in the characteristics of teachers are quickly detected by the pupils, and they are as quickly exhibited by the instructor, unless he be on a watchful guard of his every word and act. This self control is of course a sign of strength, and he who maintains his position when surrounded by the frequent temptations of the school room, has achieved his triumph. But all men are not so constituted, and though well qualified as regards their literary attain-

ments, they are apt to become wearied, disaffected, and repelled from the profession. The female teacher, however, goes into the school room with a natural fitness, both mental and moral, which adapts her to control the tempers and the affections of the young. The levity and rudeness which would delight in a school-boy triumph over the master, is disarmed and subdued by the presence of the female teacher, while the gentleness and quietness of the other sex wins the homage of kind and respectful deportment and attention.

It is in this sphere, where the power of the domestic affections calls so earnestly upon the sympathies of both teachers and taught, that the female is so well adapted to labor and to distribute her influence. In the school room, distilling the gentlest and most valuable influences over thousands of minds, leaving salutary impressions upon the young hearts of those who are taking their active part in the strife on the great stage of action offered by American citizenship—in answering the inquiries and directing the thoughts of the future arbiters of our destiny,—in inspiring the young hopes and implanting the purposes of nobility, virtue and honor; in such labors thousands of our daughters must sooner or later be employed.

[Yes, and at a rate of compensation more commensurate with the importance of their work and their ability to perform it than now. —Ed. Farmer.]

THE HOME.

Nearer Home.

One sweetly-solemn thought
Comes to me o'er and o'er;
I'm nearer home to-day
Than I have ever been before.

Nearer my Father's house,
Where the many mansions be;
Nearer the great white throne,
Nearer the jasper sea.

Nearer the bound of life
Where we lay our burdens down;
Nearer leaving my cross,
Nearer wearing my crown.

But lying darkly between,
Winding down through the night,
Is the dark and shadowy stream,
That bursts at last into light.

Closer and closer my steps
Come to the dark abysm;
Closer death to my lips
Presses the awful chrism.

Father, perfect my love,
Strengthen the might of my faith;
Let me feel as I would when I stand
On the rock of the shore of death—

Feel as I would when my feet
Are slipping over the brink;
For it may be I'm nearer home—
Nearer now than I think. [*Phoebe Cary.*

An Explanation.

I had intended following up my sketch of personal travel and incident, commenced some time back, until I brought myself, in December last, safely to my home in M.; and this not more because I thought you would be pleased to hear from me of these things, than to give such an account of myself that my long silence might not be construed into indifference to my duties. This morning, as the sun beams out upon a prospect glowing with all the enchantments of spring time, I open my eyes and find, to my great mortification, that the winter I had planned to beguile with such entertainment is gone. Looking back does no good. I count the advance and number by months the time it would consume to take you with me through my sojourn in Virginia, the rest in Ohio, the long journey to Kansas, back to Virginia, and finally to Wisconsin, and I hesitate. Then I have just recently made the discovery that I have deen the subject of much fuller report than I had imagined. You must bear in mind that while I have not been able to write for the Farmer I have not been reading it, therefore was not aware how abundant in labors the pen of the Editor, my special friend and near kin, Dr. Hoyt! So, what with the time I have lost in restoring myself back to substantial health, and the opportunity of reporting much of interest that came in my way, I find I shall have to start anew, creating, as of old, that which I set forth.

Creating did I say? Is there not enough in the circumstance of this fresh life of God's beauty and love outspread upon the earth and sky, contrasting, as it does, with the desolation and strife that, over uncounted leagues of shore and inland of man's work, now spoils the face of our own prosperous land,—enough to arouse us all to a new energy and industry to whatever end may subserve the common cause? Let the past of travel, and pleasure, and pain, and incident, save as incident, go by, and let the earnest effort be to do, with all the faithfulness in our power, the great work that Providence has laid down in our path. Mrs. Hoyt.

The Seasons.

Spring lends us buds and beauty,
And Summer foliage lends
Which Autumn paints in duty,
But Winter rudely ends.

'Tis so with Life's gay morning;
All bright and seeming fair
Soon passes into riper years,
Then rests with untold care.

Then gather each in order,
That when your course is done
Each season may one beauty yield
More lasting than the sun.

Moving.

People who live in cities and move regularly every year from one good, furnished, right-side-up house to another, will think I give a very small reason for a very broad fact; but they do not know what they are talking about. They have fallen into a way of looking at a house as a sort of exaggerated trunk, into which they pack themselves annually with as much nonchalance as if it were only their preparation for a summer trip to the sea-shore. They don't strike root anywhere. They don't have to tear up anything. A man comes with a cart and horse. There is a stir in the one house—they are gone; there is a stir in the other—they are settled; and everything is wound up and set going for another year.

We do these things differently in the country. We don't build a house by way of experiment and live in it a few years, then tear it down and build another. We live in a house till it cracks, and then plaster it over; then it totters, and we prop it up; then it rocks, and we rope it down; then it sprawls, and we clamp it; then it crumbles, and we have a new underpinning, but keep living in it all the time. To know what moving really means, you must move from just such a rickety-rackety old farm house, where you have clung and grown like a fungus, ever since there was anything to grow—where your life and luggage have crept into all the crevices and corners, and every wall is festooned with associations thicker than cobwebs that are pretty thick—where the furniture and the pictures and the knicknacks are so become a part and parcel of the house, so grown with it and into it that you do not know they are chiefly rubbish till you begin to move them and they fall to pieces, and don't know it then, but persist in packing them up and carrying them away for the sake of auld lang syne, till, set up again in your new abode, you suddenly find that their sacredess is gone, their dignity has degraded into dinginess, and the faded, patched, chintz sofa, that was not only comfortable, but respectable, in the old wainscotted sitting-room, has suddenly turned into an "object," when lang synes go by the board, and the heir-loom is incontinently set adrift.

Undertake to move from this tumble-down old house, strewn thick with the *debris* of many generations, into a tumble-up, peaky, perky, plastery, shingly, stary, new one, that is not finished, and never will be, and good enough for it, and you will perhaps comprehend how it is that I find a great crack in my life. On the further side are prosperity, science, literature, philosophy, religion, society, and all the refinements, and amenities, and benevolences, and purities of life—in short, all the arts of peace and civilization and Christianity,—and on this side—moving.—*Atlantic Monthly.*

One Way for Women to Help.

A cause of complaint ond source of discouragement among the loyal women of the country has been that there seems to be so little that they can do to help on this great conflict. Of the thousands whose hearts and nerves are strong enough for such service, only now and then one is so situated as to become an efficient nurse of the sick and wounded. A still smaller number have, or will have, the opportunity to exhibit the heroism of woman in the face of real danger, or to what lengths of sacrifice and work it leads when aid or cheer to our cause is the result. Unwonted and comparatively unnoticed the women of the North have given themselves to the work of preparing lint and jellies for the hospitals, saying prayers for the army and still, with imploring faces they are asking "*What can we do?*"

Retrench! This is the first thing, and an imperative duty. Retrench! This is the second thing, and every day becoming more imperative. Retrench! This is the third thing that women can do, and in the end will be found the most imperative of all.

I know how the small retrenchment possible to your means and mine will look when we think of the enormous expenditures of the Government, running up to millions daily. I know, too, how, in spite of our most earnest enthusiasm for the cause, a just indignation at some of the seemingly reckless expenses of the war service makes us feel how insignificant a good our little savings may accomplish. But, my friend, consider where these millions, that are piling up to tens and thousands of them, came from. I need not tell you they are but

representatives of an aggregation of your pennies and mine. Primarily, as the result of industry, secondly, through economy comes the possibility of wealth. The men of the North, save some exceptional few, are certainly not making more money than in the past, while the expenses of almost everything brought into the family are largely increased; to which is added a large amount of direct tax and general charity.

Those who find themselves thus situated are a large proportion of the men still at home, and upon whom the burden of the war fairly rests. Most of these may, by extraordinary efforts, meet the unusual expenditures and keep up family luxuries and style as of old. But does a true woman wish to see husband, father or son putting forth such effort? Would she not rather have all the time and energy that may be spared from the regular duties of business life given to an intelligent acquaintance with the condition of our affairs as a people? There is not a more mortifying sight to me, than to observe how the time and energies of many really good men and women are so absorbed in the business of just living, getting along, that scarcely scraps are left to read about, or think of, the great issues of the day. By retrenchment women can, at least, lift from the hands of their natural protectors much of the goading burthen of those expenses that may be curtailed, leaving them more at ease in the meeting of those that cannot.

MRS. HOYT.

THE DINNER HOUR.—There are few changes in social customs more interesting than those relating to the hours of repast. In an old manuscript, treating of Henry VIII's household, dinner is ordered at ten o'clock, A. M., and supper at four o'clock, P. M. The Duke of Northumberland's household book shows that the dinner hour, in the middle of the 17th century, was eleven o'clock. A hundred years later, we find the members of the Royal Society Club dining at one o'clock, and the hour was subsequently periodically altered to two, three, four and five o'clock. This last hour continued in force from 1818 to 1853, when it was ordered that dinner be put on the table at six o'clock precisely, without waiting for further orders.—*Notes and Queries.*

Be Gentle with thy Wife.

Be gentle! for you little know
How many trials rise;
Although to thee they may be small,
To her of giant size.

Be gentle! though perchance that lip
May speak a murmuring tone,
The heart may beat with kindness yet,
And joy to be thine own.

Be gentle! weary hours of pain
'Tis woman's lot to bear;
Then yield her what support thou canst
And all her sorrows share.

Be gentle! for the noblest hearts
At times may have some grief,
And even in a pettish word
May seek to find relief.

Be gentle! for unkindness now
May rouse an angry storm,
That all the after years of life
In vain may strive to calm.

Be gentle! none are peefect—
Thou'rt dearer far than life;
Then, husband, bear and still forbear—
Be gentle to thy wife.

The Bachelor's Warning.

A friend, who for some ten years has endured with great fortitude the reproaches and sorrows incident to bachelor existence, was at last admitted to the joys of wedded life, on the 13th of last October, and now, like a true friend to his former forlorn associates, lifts up this voice in solemn warning. Hear him, ye wayward, blind young men!

"Be careful, young man, in the prime of your life,
Not to fool your existence away:
The best thing for you is to hunt you a wife,
And marry her right away!
A bachelor's life is a horrible strife,
Of earthly existence alone,
And when he is dead, and all has been said,
There's no one can tell where he's gone."

American Babies.

I must protest that American Babies are an unhappy race. They eat and drink just as they please; they are never punished; they are never banished, snubbed and kept in the back ground as children are kept with us; and yet are wretched and uncomfortable. My heart has bled for them as I have heard them squalling by the hour together in agonies of discontent and dyspepsia. Can it be, I wonder, that children are happier when they are made to obey orders, and are sent to bed at six o'clock, than when allowed to regulate their own conduct? that bread and milk is more favorable to laughter and soft, childish ways, than beefsteak and pickles three times a day; that an occasional whipping, even, will conduce to rosy cheeks? It is an idea which I should never dare to broach to an American mother, but I

must confess that after my travels on the western continent my opinions have a tendency in that direction. Beef-steak and pickles certainly produce smart little men and women. Let that be taken for granted. But rosy laughter and winning childish ways are, I fancy, the produce of bread and milk.—*Trollope.*

HEALTH AND DISEASE.

Excessive Eating.

Many a man has the courage to march to the cannon's mouth, and yet fails to resist over indulgence in eating. He who has an intellect peerless among the generation in which he lives becomes an imbecile at the dinner table. The great Jonathan Edwards endeavored for two years to eat only as much as would meet the wants of the system; but day after day he found himself conquered; day after day he made the same record of these attempts—failure. For two years he went to his meals each day resolving he would not eat too much; for two years he came away from the table forced to confess his convictions that he had "exceeded." When he had eaten a decent dinner, his common sense told him to desist; but then his uncommon sense would step in and say: "I shall be somewhat faint if I leave off now." So he would not leave off, and "in three minutes afterwards I am convinced of excess."

If such great minds have so little control over their appetites, it cannot be wondered at that the less gifted, the masses, should abandon themselves to over-indulgence in all their propensities. Excess in eating may be avoided by taking three regular meals a day (nothing between) in a private room—having such an amount sent as observation shows can be eaten and still leave a desire for more. For fifteen years that was the practice of that beautiful character and eminent philanthropist, Amos Lawrence, of Boston. There is wisdom and health in the practice of some who habitually avoid eating meat of any kind every Friday.—*Hall's Journal of Health.*

Recipe for Killing Babies.—The *Water-Cure World*, for July, gives "eleven modes of committing infanticide," one of which is the following:

"Keeping children quiet by giving paregoric and cordials, by teaching them to suck candy, and by supplying them with raisins, nuts, and rich cake. When they are sick, by giving mercury, tartar-emetic, and arsenic, under the mistaken notion that they are medicines and not irritant poisons."

If the other ways are as certain as this, alas for the next generation.

DOMESTIC ECONOMY.

How to Outwit the Moth.

Most of our insects are very hardy, caring little for wind or weather, and will never "die of aromatic pain." We once packed some small skins in the centre of a cask of tobacco leaves and stems, but the miller went there, deposited her eggs and the furs were ruined. This shows that they are not at all delicate and care nothing for tobacco. Expensive cedar closets are frequently constructed, with the idea that the rather pleasant odor of the cedar is sufficiently disagreeable to the moth to keep her away from articles of clothing deposited there. This is a mistake. The strongest instinct prompts the miller to seek the means of perpetuating its kind, and no trifling impediment will prevent it.

But the preservation of furs, or articles of clothing, is perfectly simple, cheap and easy. Shake them well and tie them up in a cotton or linen bag, so that the miller cannot possibly enter, and the articles will not be injured, though the bag is hung in a wood-house or garret. This is cheaper than to build cedar closets, and better than to fill the bed clothes and garments with the sickening odor of camphor, tobacco, or any other drug.—*N. E. Farm.*

To Prevent Skippers in Hams.—There is, according to my experience, nothing easier than to avoid the skipper, and all bugs and worms that usually infest, and often destroy so much bacon. It is simply to keep your smoke house dark, and the moth that deposits the egg will never enter it. For the past twenty-five years, I have attended to this, and never had my bacon troubled by any insect. I have now hanging in my smoke house hams one, two, and three years old, and the oldest are as free from insects as when first hung up. I am not aware of other causes for the exemption of my bacon from insects, but simply from the fact that my smoke house is always kept dark. Before adopting this plan, I had tried many experiments, but always without success, or with injury to the flavor of my bacon. I smoke with green hickory. This is important, as the flavor of bacon is often utterly destroyed by smoking it with improper wood.—*Cotton Plant.*

Cottage Pudding.—Stir well together one pint of flour, one teaspoonful of butter, two eggs, ond teaspoonful of soda, two teaspoonfuls cream tartar, and one teacupful of sweet milk. Put in a deep pan, and bake half an hour. Serve up with sauce made to the taste.

To take Ink Stains out of Mahogany.—Put half a teaspoonful of oil of vitriol into a large spoonful of water, and touch the part with a feather. Rub it quickly, and repeat if not quite removed; if it remains on too long it will leave a white mark.

HORSE-RADISH SAUCE.—Grate a small stick of young horse-radish; then with a couple of teaspoonfuls of it mix a small teaspoonful of salt and four tablespoonsful of cream; stir it briskly, and add by degrees a wine glass full of vinegar. Excellent to serve with cold roast beef.

YOUTH'S CORNER.

Some of the Monsters of the Deep.

Our young readers were promised, in the March No., some account of two or three of the living monsters of the Sea, and now we are about to fulfill that promise.

On our journey to Europe last summer, we were hardly out of harbor at Boston when we plowed our way right into a large troop of

PORPOISES.

It was raining a little, and the landward breeze ruffled the surface of the water into what, at that time, were very considerable waves, and which but for the white-caps here and there would have looked very dark and threatening. But the jolly porpoises had no thought of being afraid. Indeed they appeared to rejoice in the heaving of the deep waters, and amused themselves and us by tumbling over and over and by plunging and blowing as though the sea had been made on purpose for them to sport in.

The black body of the porpoise is very thick next the head, and many of the children on board were sure they were monstrous big black pigs that had been turned out of Johnny Bull's sty and were emigrating to America on their own hook!

The entire animal is 6 or 7 feet long. There are two *spout-holes* in the top of the head through which he blows on coming up to the surface, after being under water for some time. The jaws are pretty large, and each is armed with about 50 sharp-pointed teeth.

Porpoises are hardly ever found alone; oftener in large companies of thirty or forty. They are fierce devourers of fresh water fish, which they often pursue up the mouths of rivers emptying into the sea. And then they are sometimes caught themselves. We saw a great chase after some of them, one day, in the river Thames, near London. At last one of the number was shot by a good marksman in one of the boats, and drawn ashore. When stewed up he made nearly a hogshead of oil!

THE SHARK.

Every boy has heard of that terrible sea-monster the shark. May be some of you have seen the fierce looking jaws of one in some museum, armed, as they are, with six rows of cruel teeth—seventy-two in each jaw, or one hundred and forty-four in all!

There are five or six species of the shark, but they all agree in the general characteristics. Some of them have an average length, when full grown, of thirty to forty feet.

The white shark is the swiftest fish of the sea; and being provided with a mouth of great capacity, and a gullet so large that he can readily swallow an animal as large as a man, and being covered with a thick skin almost as hard as shell, and armed with the horrible rows of interlocking teeth already referred to, he would be the most dangerous monster of the deep, were it not that his upper jaw is so much longer than the lower, that the only way of taking his prey is to turn on his side. And while he is turning over, it often happens that the fish or other creature pursued escapes.

Whenever a ship passes where there are sharks, they seem to understand that there is a chance for food—either the refuse thrown out from the cook room, or perhaps some sailor or passenger who may unluckily fall overboard.

On our way out to England, in the early spring, we saw no sharks at all; but when we returned, late in the summer, we saw them repeatedly swimming about the ship, hungrily waiting for a chance to devour us. Sometimes several would appear at once, either very close to the ship or several rods away. At a distance they were known by the long dark fin on the top of the back, which protruded above the surface of the water, reminding us of the coulter which sticks up from the nose of some plows.

Next month a story of trying to catch a shark.

WAR MISCELLANY.

Now.

Arise, for the day is passing
While you lie dreaming on;
Your brothers are cased in armor,
And forth to the fight are gone;
Your place in the ranks awaits you,
Each man has a part to play;
The past and the future are nothing
In the face of the stern to-day.

Arise from your dreams of the future—
Of gaining a hard fought field,
Of storming the airy fortress,
Of bidding the giant yield!
Your life may have deeds of glory,
Of honor, God grant it may,
But your arm will never be stronger
Or needed as now to-day.

Arise! If the past detain you,
Her sunshine and storms forget;
No chains so unworthy to hold you
As those of a vain regret;
Sad or bright, she is lifeless ever,
Cast her phantom arms away,
Nor look back save to learn the lesson
Of a noble strife to-day.

Arise! for the hour is passing;
The sound that you dimly hear
Is your enemy marching to battle;
Rise! rise! for the foe is near!
Stay not to brighten your weapons,
Or the hour will strike at last,
And from dreams of a coming battle
You will wake and find it past.

[*Household Words.*

MILITARY RESOURCES OF FRANCE.—The military strength of France is always a subject of apprehension in Europe. The cost of maintaining it constitutes the largest item in the annual expenditure, and is nearly double the whole naval and colonial outlay. The usual peace establishment consists of 404,192 infantry and 86,368 cavalry; in war, these numbers may be augmented to 757,725 infantry and 143,238 cavalry, making a total of 913,489 soldiers, or very nearly one in forty of the whole population, adult and otherwise. The establishment for the year 1863 is counted and distributed as follows: Interior, 338,562; Algeria, 55,285; Italy, 16,950; China, 915; Cochin China, 1,179; Mexico, 27,945. Total 440,836.

The Patriot's Grave.

BY S. G. W. BENJAMIN.

Sweet is the breath of summer flowers
Where sleeps the hero young and brave;
His fate is wept by passing showers,
The west wind sighs about his grave.
The warbling thrush there builds her nest
And soothes the warrior's dreamless rest.
And stately pines mount guard around him,
And mourn the slumber that hath bound him,
For he shall wake no more
To hear the world's wild roar,
To struggle or to win,—
The fair-haired youth, his mother's pride,
Who sought the battle's din,
And for his country fought and died.

The clarion blast of Liberty
Fell not unheeded on his ear;
A pure ambition lit his eye,
A firm resolve unmixed with fear.
He lingered not to question why,
But at his country's urgent cry
Forsook the friends his heart most cherished,
For Freedom fought, for Freedom perished.
And here, his young life past,
He lies in peace at last,
Where grasses softly wave,
And holy rest and quiet reign;
And, standing by his grave,
Oh, who shall say he died in vain?

How many noble hearts like his
Lie moldering in the silent tomb,
How many homes their voices miss,
How many a fond eye weeps their doom.
But all this land is sacred now
Where freemen smote the rebel foe,
And made themselves a name for ever
For patriot worth and high endeavor.
And if their glorious fate
Shall teach us burning hate
Of tyranny and wrong,
And bid us wipe away the stain
Our country's borne so long,
Oh, then they have not died in vain.

NEWS SUMMARY.

STATE MATTERS.

Industrial.—In pusuance of the authority vested in him by the Act of the Legislature already referred to, the Governor has appointed W. N. Reed, Esq., of Grant Co., and——— Hammond, Esq., of Winnebago Co., Commissioners to locate the lands donated by Congress for the endowment of an Agricultural College. Both of these gentlemen have had large experience in surveying and selecting lands, and both are familiar with the localities where it will be necessary to locate the particular lands in question. The work will undoubtedly be promptly and faithfully performed. The following is a copy of the Act accepting the lands and constituting the commission:

The people of the State of Wisconsin represented in Senate and Assembly do enact as follows:

Section 1. The lands, rights, powers and privileges granted to and conferred upon the state of Wisconsin by an Act of Congress, entitled "An Act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and the mechanic arts," approved July 2, 1862, are hereby accepted by the state of Wisconsin upon the terms, conditions and restrictions contained in said act of Congress.

Sec. 2. The governor is hereby authorized and required to appoint two commissioners, whose duty it shall be, under the direction of the governor, to enter upon and carefully view the lands subject to entry under the provisions of the aforesaid act of Congress, and to select and locate of said lands an amount not less than two hundred and forty thousand acres The said commissioners shall likewise make and preserve such description notes, and collect and forward to the executive office of the state such specimens of minerals, soils, timber, &c., illustrative of the general resources and especially of the agricultural capacity of the said selected lands, as the governor may require.

Sec. 3. The commissioners so appointed shall, before entering upon the duties required of them by this act, make oath or affirmation that they will faithfully and to the best of their ability discharge the duties devolving upon them as such commissioners, so as to best promote the objects of the said grant, to the exclusion of every other interest whatsoever; and the said commissioners shall, at such time as he may designate, report to the governor a full and complete list and description of the lands by them selected, which list the governor shall lay before the commissioners of school and university lands and the board of regents or trustees of the institution contemplated by the act of Congress before mentioned, should such board have been created and organized at the date of the return of said list by said commissioners, for their approval; and when so approved the governor shall immediately take measures to have the said selection of lands approved by the Secretary of the Interior and certified to this state.

Sec. 4. Upon receipt by the governor of the confimation of the said selection of lands from the Secretary of the Interior, the governor shall cause the said list to be recorded with a description thereof, in a book or books to be kept for that purpose, in the office of such board of commissioners, regents, or trustees, as shall be instrusted with the management and sale of the said lands.

Sec. 5. The commissioners appointed under this act shall [each] receive five dollars per diem for the time actually employed in selecting and locating said lands and for all expenses thereby incurred, in full compensation therefor.

Sec. 6. Bills allowed under this act, if sanctioned by the governor as correct, shall be paid by the state treasurer out of the general fund, upon the audit and warrant of the secretary of state.

Sec. 7. The sum of thirteen hundred dollars, or so much thereof as may be necessary, is hereby appropriated, to carry out the proyisions of this act.

Sec. 8. This act shall take effect and be in force from and after its passage.

Legislative.—The following is a list of the acts of general interest passed at the late session of the Legislature:

Memorial to Congress in relation to the enlargement of the Erie Canal and of the Fox and Wisconsin River Improvement to admit of the passage of gunboats.

To provide for the assistance of volunteers in the service of the U. S. Government.

Relative to the commencement and prosecution of civil actions against persons in the military service of the country.

Relating to the sale of lands for the unpaid taxes of the year 1861 in certain cases.

Relative to the trial of offenses committed against joint stock companies.

To provide for the sale of lands for unpaid taxes in certain cases.

To extend the time for the expiration of the charter of the Wisconsin Central Railroad Company as limited by the act of incorporation, approved March 4, 1853.

To legalize the sale of the Beloit & Madison Railroad, and to reorganize the Beloit & Madison Railroad Company.

To revive and continue in force the charter of the Green Bay & Minnesota Railroad Company.

To appropriate to the Wisconsin Institute for the education of the Blind, and to the trustees thereof, the sum of $14,000.

To appropriate to the Wisconsin State Hospital for the Insane, and to the trustees thereof, the sum of $31,000.

To appropriate to the Wisconsin State Reform School the sum of $4,000

To authorize the governor to furnish tourniquets for the use of volunteers.

To appropriate to the governor from the war fund the sum of $3,000, to be used as a military contingent fund.

To appropriate to the governor the sum of $5,000 for contingent expenditures.

To provide for levying a state tax for the year 1863 for the support of families of volunteers.

To provide for levying a state tax for the year 1863.

To authorize the borrowing money to repel invasion, suppress invasion, and defend the state in time of war.

To graduate and reduce the minimum amounts for which the swamp and overflowed lands belonging to the state may be sold.

To appropriate to the St. Mary's Hospital in the city of Milwaukee the sum of $3,000.

Authorizing the governor to take care of the sick and wounded soldiers of the Wisconsin volunteers, and appropriating money out of the treasury for that purpose.

To provide for compensating parties whose property may be injured or destroyed in consequence of mobs or riots.

To authorize towns to assess and collect additional school moneys in certain cases, and the town clerk to certify thereto.

To authorize the entry of judgments in actions brought against persons charged as jointly liable.

To authorize certain parties to be sworn and examined as witnesses in their own behalf.

To provide for the purchase of certain copies of Webster's Dictionary for the supply of deficient school districts of the state.

Memorial to the President of the United States, asking for the establishment of a Military Hospital within the limits of the State of Wisconsin for the sick and wounded soldiers of said State.

To amend section 77 of chayter 19 of the Revised Statutes, entitled "of highways and bridges."

Authorizing the borrowing of money on the faith and credit of the state, to defray extraordinary expenditures.

To provide for continuing the work on the state capitol.

To provide for the collection of subscriptions made to pay bounties to volunteers, and subscriptions to support families of volunteers.

To authorize the state treasurer and secretary of state to omit from their annual reports detailed statements of the receipts and disbursements of the war fund, the allotment fund and the fund in aid of the families of volunteers.

To provide for printing an additional number of the report of the superintendent of public instruction.

To appropriate the sum of $6,000 for the purchase of stationery for the use of the state officers and the next legislature.

To amend an act entitled "of the sale of lands for the payment of debts by executors, administrators and guardians."

To incorporate the Penokee Iron Mining and Railroad company.

To require the superintendent of public property and trustees or superintendent of the Insane Hospital to purchase certain furniture from the state prison commissioner.

Commercial.—Early in June a meeting is to be held in Chicago for the purpose of devising plans to secure the enlargement of the Erie canal. Gov. Salomon has appointed several delegates to represent this State.

The markets are now quite favorable to those who have anything to sell, and prices must still continue to rise.

NATIONAL AFFAIRS.

The Army and Navy.—Something is once more being done towards treading down the rebellion. Several iron-clads at successive times have run the blockade at Vicksburg. The ram Queen of the West has been recaptured from the enemy, with the entire crew, numbering 90, on board. Gen. Dodge, in command at Corinth, has made an attack upon the enemy near that city and defeated them with considerable slaughter. Affairs on the Mississippi are looking hopeful.

In the East something has likewise been done to indicate a lingering vitality on the part of the army and navy. The attack on Charleston, April 2, under Admiral Dupont, though not successful in taking the city, demonstrated the great power of the Monitor fleet, which with only 30 guns all told, entered the harbor, moved up directly between forts Sumter and Moultrie, for some time endured a concentrated fire from 300 guns, with only the loss of one boat, and finally withdrew, after knocking a few holes in Sumter, and dismantling some of the guns in Moultrie.

It is now believed that this attack was only a preliminary trial—a reconnoisance—and that the real attack is yet to be made.

In Florida, Col. Montgomery has made some gratifying demonstrations with his negro regiment, sacking one or two considerable towns and taking a number of prisoners.

The Army of the Potomac shews signs of activity, and as soon as the roads harden sufficiently for the moving of heavy artillery, will "move upon the enemy's works."

The report of the Congressional Committee of Investigation has been published in full. It is a squelcher on McClellan, and unmasks a sickening amount of rascality and treason in almost every department of the service.

Reliable accounts from the rebellious States indicate a very serious exhaustion of the resources of the would-be confederacy and great distress among the people.

Financial.—The national debt on the 1st of April amounted to $929,186,147.72—scarcely more than half the amount currently reported among the people—and as yet the country has scarcely begun to feel the drain upon its resources.

FOREIGN NEWS.

England still persists in the unfriendly and unjust policy of secretly aiding the Southern Rebellion and of winking at the still more active and open sympathy of individual subjects. It has been known for some time that the iron-clad ships building for the "Emperor of China," were intended to be handed over to Jeff. Davis, and yet the British Government has allowed their construction, and will doubtless permit them to escape from the ports without anything more than a mere show of disapproval after it becomes too late to prevent it. This is *neutrality* with a vengeance. Such neutrality has earned for England the reprobation of all civilized nations, and if she shall escape a retribution in the future, she will only present another example of a damnable sinner apparently escaping the just judgments of Heaven. The Prince of Wales was married on the 10th of March to Alexandra, daughter of Prince Christian, of Denmark, with great parade and immense enthusiasm.

The insurrection in Poland, which under the leadership of Langewicz blazed forth like a meteor and was then suddenly quenched, has again broken out with redoubled force, and promises, just now, a large gain to Polish freedom, so long down-trodden. The whole civilized world is in sympathy with the Poles, and France, England, Italy, and Germany proper unite in asking for them new privileges of the Russian Czar, if not indeed their virtual independence.

Poor begging Greece has at last found a king in the person of Prince William Orange, second son of Prince Christian of Denmark, and brother of the new wife of the Prince of Wales, who was proclaimed on the 1st of April under the title of "George I, King of the Greeks." How are the mighty fallen!

EDITORIAL MISCELLANY.

New Prizes!—Being determined to outdo all other agricultural journals in the matter of inducements, primary and extra, which, in these times of distraction, are offered to secure an increase in their lists of subscribers, the Publishers of the FARMER, in addition to the multitude of valuable prizes heretofore offered with highly gratifying results, *now propose to give to each subscriber who shall send his dollar to this office direct, with red stamp to prepay postage, 6 plants of the new and very superior Wisconsin Seedling Strawberry, or of any other available strawberry which they may prefer!* Plants to be delivered at the proper time for planting, in autumn.

Or, if preferred, we will forward to the value of said strawberries, or of the maps hitherto offered, *cuttings of rare and valuable Grapes.*

OUR MAP PRIZES are so popular, and continue to be in such good demand, that we shall not yet shut down the gate. Friends, let the tide flow! There is scarcely anything of greater value in these war times than the splendid and exceedingly accurate steel plate maps of J. T. Lloyd. The only trouble is that the demand has been so extraordinary that the publisher has not been able, in all cases, to promptly fill the cash orders with which he has been literally flooded since the beginning of the war. He has added to his facilities, however, and we shall hope, ourselves, to be more prompt hereafter. Send in your orders.

All Delinquent Subscribers are politely reminded that the expense of publication of every number of the FARMER has been paid by us before it reaches their hands—and that, too, at an almost ruinous rate. Even with our present large and constantly increasing list of subscribers, owing to the extravagant prices of paper and everything we are obliged to use, the FARMER costs us every cent we get for it, and we only keep it up, in such trying times, because we are too plucky to let so important an enterprise fail. Will not our delinquent friends look these facts honestly in the face, and then ask themselves the question whether they cannot better afford to make an extra effort to pay us than we can afford to wait?

The Tribune Strawberries are not distributed until fall. Those who have subscribed with a view to said strawberries will please take notice.

Editorial Notes of European Travel.—CHILLON—VILLENEUVE TO LAUSANNE, June 1st, 1862.—At nine o'clock, when I awoke from delicious slumber, saying "Blessed be the man who invented sleep," the scene before me was changed but none the less enchanting. The moon had arisen in all her glory, shedding a mild and mellow radiance upon town and castle prison, sheening the lake with silver, and crowning the tops of the mountains with a pure and holy light. All nature was hushed and still, save the gentlest ripples of water upon the pebbly shore and the music of muffled oars lazily plied by lovers on the lake.

Nature seen at night, when there is nothing to distract the thought or divide the attention, and when everything has a degree of indefiniteness, leaving a little more play for the imagination, seems to me always more deeply impressive than as seen in the clear light of day. For this reason, I doubt not that this moonlight view of Villeneuve and its unequalled surroundings will live the longer in my memory.

The morning is here, fresh, fragrant and glorious. I have ordered an early breakfast and meantime must visit the old prison of Chillon, which stands upon an isolated rock in the edge of the lake, at a distance of not more than five minutes from the hotel.

Already I have passed the bridge which connects the castle with the mainland, and ring for admission. A guard appears, tells me it is too early to view the interior, but kindly permits the use of the handsome light skiff which lies moored at the beach. I take my place, grasp the oars, and in a few moments am gliding over the deep, blue Leman,

"Whose massy waters meet and flow
A thousand feet in depth below."

Having compassed the castle walls, I return to that portion which fronts the lake, fasten my boat to the rocks which lie underneath the narrow window of the cell of heroic Bonnivard, and gather a few of the flowers which are growing so beautifully thereon. Roses, bluebells and the Roman ivy—how came they here? Are they not the fruit of tears—the blossom-breath of Bonnivard? If not, they might have been, for every true life lived for the good of man is a plant whose beautiful blossoms shall have endless succession on earth, with perennial fruit in heaven.

Bonnivard, whose confinement here made the history of this castle immortal, was born in 1496. In 1510 he received from his uncle the priory of St. Victor, adjacent to Geneva, of which city he thenceforth became an ardent supporter, fearing no danger, forgetting his own ease, despising riches, and laboring with all the zeal of a patriot and the intrepidity of a hero to insure its independence as a free republic.

While yet but a youth he boldly declared himself a defender of his adopted city against the Duke of Savoy, and in 1519 became a martyr to his principles, being driven from the city by an armed force in command of the Duke, betrayed into the hands of his enemies, and sent to Grolee, where he was held a prisoner two years.

In 1531 Bonnivard was again seized and confined within these very walls, whose grateful shadow protects and refreshes me this morning. For long and weary years, chained, unquestioned and uncheered, he breathed the dungeon damps nor saw the face of nature, until at length

"A kind of change came in his fate,
His keepers grew compassionate,"

and broke his fetters, so that he might tread the chambers of his cell and clamber up the wall to where the few dear rays of golden light had been wont to straggle in upon his night.

"I made a footing in the wall,
It was not therefrom to escape,
For I had buried one and all
Who loved me in a human shape;
And the whole earth would henceforth be
A wider prison unto me.
No child—no sire—no kin had I,
No partner in my misery;
I thought of this and I was glad,
For thought of them had made me mad;
But I was anxious to ascend
To my barr'd window and to bend
Once more upon the mountains high,
The quiet of a loving eye."

At length Geneva triumphed and Bonnivard was free.

"It might be months, or years, or days,
I kept no count—I took no note,
I had no hope my eyes to raise,
And clear them of their dreary mote;
At last men came to set me free,
I ask'd not why, and reck'd not where,
It was at length the same to me,
Fettered or fetterless to be,
I learned to love despair."

As an evidence of their gratitude for his efforts and sacrifices on their behalf, the citizens of Geneva received him as a citizen, gave to him the house formerly occupied by the Vicar General, settled upon him an annual pension of 200 crowns of gold, and the following year admitted him to the Council of the Two Hundred. The remainder of his useful and eventful life was devoted to a history of Geneva from the time of the Romans down to 1510, and to the writing of various other historical and theological works, most of which are still in manuscript in the *Bibliotheque Publique*, of which he was the founder. In 1570 Bonnivard died, lamented by the literati of the day and by all lovers of the Republic.

Such is the story of Bonnivard, as told me by the Genevans. Would that the life of every noble man who consecrates himself to Liberty might have as peaceful and beautiful an end. And yet peacefulness is not necessary to the heroic soul. The final triumph of the cause for which he strives and suffers is, to him, of infinitely more worth than the peace and applause of the present. It is such souls that win immortality and the right to heaven.

But the morning passes; let me return and enter within the castle wall. I have entered, and stand

"On Chillon's snow-white battlements."

On my left, as I look southward, are the entrances of the Rhone between Villeneuve and the Alpine heights of Meillerie overshadowing the little villages Boveret and St Gingo, and the railroad to Geneva, for which there is

scarcely room along the water's edge; then the lake, with

"——a little isle,
Which in my very face did smile,
The only one in view;
A small green isle, it seemed no more
Scarce broader than a dungeon floor,
But in it there were three tall trees,
And o'er it blew the mountain breeze,
And by it there were waters flowing,
And on it there were young flowers growing
Of gentle breath and hue."

The floating, white-winged sails, the miniature steamers plying back and forth between the bordering towns, the sublime Jura, the everlasting hills behind me, with a foaming torrent dashing down—this is the picture, now a third time seen, yet still more glorious than before.

Now I stand

"In Chillon's dungeons deep and old,"

note the age-blackened beam whereon condemned reformers and political martyrs have been, in the dark past, so often executed, mark the

"——seven pillars of gothic mold,"

each with ring and chain, and trace the footprints of desolate prisoners in the pavement stone.

"Chillon! thy prison is a holy place,
And thy sad floor an altar—for 'twas trod
Until his very steps have left a trace,
Worn, as if thy cold pavement were a sod,
By Bonnivard!—May none those marks efface,
For they appeal from tyranny to God."

At the Hotel de Byron again. A delicious breakfast of trout from the lake completes my high admiration of this delightful mansion, which, I incidentally learn, is a favorite resort for invalids, in both summer and winter. There are invalid guests here now from various parts of the continent and from Great Britain,—and very properly, I think, for if I were incapacitated for labor and were in need of a quiet nook somewhere, I know of no place outside "my own, my native land," where I would prefer to live and die.

It is now half past seven, and I stand in the depot, waiting for the train that is to bear me to Lausanne. The train comes, I waive an adieu to Villeneuve, dash past the chateau of Chillon, and am winding my swift way around the curve of the lake, On my right is the continuous slope of the mountain, clothed almost to the summit with terraced vineyards, beautifully green and still fresh with the dew of the morning; on my left, between railway and lake, a succession of charming little cottages, trellised with vines, and each entered through an arched gateway all covered with roses. Nothing could be more beautiful.

Montreux, Clarens, and the larger town of Vevay—population 5,000—are passed, and I am so soon in view of Ouchy and Lausanne, lake port and capital of the canton of Vaud. Here I shall spend a few hours, and then turn my face northward for Basle, where I am to have my first view of the glorious Rhine.

The Pleasantest Summer Route to New York.—Now that the season has again arrived when a water link in the chain of travel cannot be other than agreeable to most persons, we have pleasure in calling the attention of the northwestern traveling public to the route to New York and the New England states via Milwaukee, Grand Haven, Detroit, Suspension Bridge and the Hudson.

We have repeatedly passed over all the roads connecting the northwest with the east, and feel no hesitation in pronouncing this one the most pleasing and satisfactory of them all in summer. The passage of Lake Michigan on the splendid ocean steamers of the D. & M. R. W. Co. is not only perfectly safe, but after a weary ride of hundreds of miles on the railway, comes as a real pleasure and relief. To be able to throw off one's dusty garments, take a refreshing bath and an excellent repast and then lie down to rest, while the ship bears him on with safety and with railway speed—what can be more grateful to the bejolted, sleepy, way-worn traveler?

And then there is grand old Niagara, itself, alone, worth a journey of a thousand miles! and the beautiful and majestic Hudson, more glorious, by nature, than Rhone or Rhine, or any of the rivers of the old world! These great natural objects appear to grow in grandeur with each successive beholding and ever constitute a new and increased reward for the journey which includes them.

The Detroit & Milwaukee, the Great Western, and the N. Y. Central, moreover, rank among the very best of American railways for that

thorough and careful management which guarantees safety, comfort and despatch; besides which they constitute the most natural outlet for Wisconsin and Minnesota exportations and travel, and should, therefore, practically be regarded as, in a peculiar sense, *our own* roads.

For time table &c., see railroad column in advertising department.

The Pittsburg, Ft. Wayne & Chicago Railway is deservedly popular. Being the route which naturally connects the northwest with Indiana, Ohio, the great Middle and the more eastern Southern States, it has required from the first nothing more than thorough construction and able management to secure it an immense patronage.

We have repeatedly passed over it on our way to various points on, and east of, the Cleveland, Columbus & Cincinnati R. R., to Pittsburg, Harrisburg, Philadelphia and New York, and always when we have visited Baltimore and Washington; and never have we left its elegant and convenient cars, nor parted company with its polite and obliging conductors, without saying within ourselves, This is one of the very best railroads in this country.

So far as to Pittsburg, going eastward, there is nothing in the scenery particularly to delight the eye; but from Pittsburg all the way to Philadelphia, there is scarcely a mile that does not present objects remarkable and memorable for either beauty or sublimity or both—beautiful rivers winding through fertile valleys, and grand old mountains peaked with barren rock or crowned with cedar and laurel. In these respects it is only rivalled by one or two roads in the extreme north.

See advertisement, and don't fail on the first occasion to give this road a trial.

Sample of our Endorsements.—Pewaukee, Wis.— * * Your articles on Agriculture and its kindred subjects are so sensible and so eminently practical that their perusal always gives me, although no great farmer, both pleasure and profit. The spirit of patriotism which your journal breathes is at once so intelligent and pure, the morality so liberal, yet high toned and christian, that I hope, for the honor of Wisconsin, the journal will not only be sustained, but *most liberally* sustained. I shall feel it a pleasure at all times to recommend it to my neighbors. Alex. F. North.

Who has Received Seeds?—We trust all to whom we have sent during the past month. These seeds have cost us much money, as well as a good deal of labor, and we trust they will prove acceptable to the host of working friends of the Farmer to whom they have been mailed. Of course, only enough of each kind to secure to each receiver the seed has been sent. Don't neglect to make the most of them, and then report.

CONDENSED CORRESPONDENCE.

Bilious Colic in Sheep.—Wautoma, Wis., March 20, 1863.—I wish to inquire through the Farmer for a remedy or cure for the disorder called bilious colic, or stretches, in sheep. I have lost one very fine ewe and have another like to be among the dead in a day or two. No medicine, as yet, has been of the least service. My flock have been troubled very much this winter, more than for years back. Their feed has been good hay, cut early, and wheat bran or wheat screenings daily. Can any one tell me what is the cause of the complaint, and a sure cure?

I had thought salt a sure remedy, but it has failed this season.

Will you or some of your readers inform me where I can obtain the Black Spanish fowl, of pure blood, the price per pair, and the price per dozen for eggs? Seth Rowley.

Public Spirited and Plucky.—Fairfield, Wis.—I would not take a good many dollars for what the Farmer has taught me the past year. I have tried several of my neighbors to join me, but have not prevailed on many of them yet. I am not going to give them up, however, for I think they ought to have the Farmer, if they don't have any other publication on their farms. O. L. Glazier.

Washing Sheep.—WEELAUNEE, WIS.—Will you, or some of the contributors to the FARMER give the information whether it would be loss or gain, as to the price of wool, to shear sheep without washing? I am already satisfied that it would be highly beneficial to the health of the sheep, if they could be kept out of the water, besides relieving the men that wash them of great hardship and exposure of health.

Tobacco is a sovereign remedy for ticks on sheep, but as tobacco is so very high and its administration is so apt to be neglected, I fear many sheep will suffer for want of being cleansed of ticks, and the owners suffer loss, unless some other cheaper and easier remedy is pointed out. It undoubtedly would be better for all owning sheep to apply the tobacco, if no better or cheaper remedy is found. But a great many know the right and approve it too, and know the wrong and still the wrong pursue. A. PICKETT.

The Milking Machine.—Some time since, I applied to you for information regarding a milking machine; at that time, however, you had no acquaintance with it. I have since seen that it was exhibited in Great Britain, where possibly you may have observed it. I would feel obliged if, in your estimation, they are worth anything, for information where they may be purchased. G. H. MARKHAM.

ANSWER.—Don't know. Proprietors have'nt enterprise enough to advertise.—ED.

A Voice from the North.—ODANAH, WIS.—We like your paper much. We regard it as among the most valuable of our agricultural journals. We are not doing much in the farming line in the Lake Superior district; but with some good land for cultivation, we have a rich and vast deposit of iron near by, which Wisconsin capitalists, I trust, will soon look after. L. H. WHEELER.

"Gets Better and Better."—COLUMBUS, Wis.—I feel that the FARMER is worth the money. It gets better and better. The social feature is a good one. The book ought to be twice as large at double the money.

A. A. HUNTINGTON.

Aiken's Knitting Machine—MONTICELLO, Wis.—If you please you may say in the FARMER that we have had one of Aiken's Family Knitting Machines in use in our family for one year, and it really seems that we could hardly keep house without it. We would not be without one for double the cost.

D. SEARS.

NOTICES OF NEW ADVERTISEMENTS.

Attention is called to John Ferrey's advertisement of "Flying Cloud." We have several times seen this fine stallion and have frequently spoken of him in terms of high commendation in the FARMER. He is a noble specimen of the popular breed which he represents, and the sire of some of the most promising stock in the State.

W. W. & H. M. Burson advertise their Grain Binder. Some two years since, we had the pleasure of working this Binder in a grain field near Madison, and although it then gave good satisfaction, we learn that it has since been considerably improved. As pioneers in this field of invention the Messrs. Burson deserve much credit, and we doubt not will eventually *reap and bind up* a large reward.

The Craig Microscope appears, after a hasty examination, to be all that it claims. See advertisement.

See new advertisement of "American Harvester," and of the "Cream City Agricultural Warehouse," by L. J, Bush & Co. We are pleased to learn that this company are doing a fine business this spring.

STATEMENT
OF THE
Madison Mutual Insurance Company,
FOR THE YEAR ENDING
DECEMBER 31, A. D., 1862.

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,.....		$327,464 67

ASSETS.

Unimpaired premium notes of policy holders.....	$281,000 07	
Cash on hand and due from policy holders and agents, for cash premiums,.....	45,464 60	
Office furniture and fixtures,...	1,000 00	327,464 67
Whole No. policies issued.....		22,061
Am't of outstanding risks thereon.....		$15,962,000 00
Number of policies issued in 1862,.....		7,706
Am't of outstanding risks thereon.....		$6,069,813 00
Am't premium notes thereon,.....		108,323 93
Am't cash premiums thereon, less commissions to agents,.....		45,727 80
Am't interest received,.....		972 18
Total am't losses reported during 1862,....		$17,744 16
Total am't losses paid durihg 1862, 89 in number,.....		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due.....		none.
Losses adjusted and not due.....		none.
Losses unadjusted,.....		292 35
All other claims against the company,.....		97 50
Am't paid for advertising and postage,....		1,763 66
Am't paid for printing,.....		540 50
Am't paid for policy stamps,.....		600 00
Am't paid taxes to Com'r Internal Revenue		82 02
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses,.....		7,290 93

DIRECTORS FOR THE YEAR 1863.

J. W. BOYD, Walworth Co.
D. WORTHINGTON, Waukesha Co.
DAVID ATWOOD, Dane Co.
G. R. MONTAGUE, La Crosse.
ASA KINNEY, Green Lake Co.
H. H. GILES, Dane Co.
LUTHER BASFORD, Grant Co.
B. F. HOPKINS, Dane Co.
ORRIN GUERNSEY, Rock Co.
FRANK H. ROPER, Dodge Co.
J. H. WARREN, Green Co.
TIM. BROWN, Dane &o.
S. D. HASTINGS, Trempeleau Co.
DAVID TAYLOR, Sheboygan Co.
S. R. McCLELLAN, Kenosha Co.
J. T. LEWIS, Columbia Co.
JOHN TOAY, Iowa Co.

OFFICERS.

JOHN W. BOYD, President.
B. F. HOPKINS, Vice President.
S. D. HASTINGS, Treasurer.
D. WORTHINGTON, Secretary.
G. F. HASTINGS, General Agent.

LOSSES PAID BY THE COMPANY IN 1859.

S H Coleman, Juneau, Dodge co	$10 00
J H Seaman, Richland, Richland co	10 00
Fanny Plummer, Mauston, Juneau co	15 00
Geo F Taylor, Madison, Dane co	15 00
Nelson Sickles, Waterloo, Jefferson co	690 00
A L Beebee, Dunn, Dane co	650 00
J H Barber, Juneau, Dodge co	68 00
Jas H Main, Juneau, Dodge co	403 57
Thos Mayhew, Merton, Waukesha co	27 00
W N Seymour, Madison, Dane co	20 00
Wm Edwards, Sugar Creek, Walworth co	400 00
Leonard Hatch, Kenosha	100 00
	$2,409 45

LOSSES PAID IN 1860.

J S Willmarth, Sun Prairie, Dane co.,	$314 50
Cyrus S Davis, Menominee Falls, Waukesha co.	5 00
J W. Cook, Dane co.,	15 35
Lewis Thompson, La Prairie, Rock co.,	174 52
Henry Johnson, Somers, Kenosha co.,	12 50
Pliny Putnam, Rubicon, Dodge co.,	5 00
E B Thurtell, Jamestown, Grant co.,	500 00
A A Anderson, Delafield, Waukesha co.,	7 00
James T Walklin, Eagle, Waukesha co.,	20 00
C Sutherland, Fitchburg, Dane co.,	10 00
Harrison Koonz, Concord, Jefferson co.,	400 00
Owen Garity, Sullivan, Jefferson co.,	6 00
C P Churchill, Waukesha co.,	5 58
Caleb Jewett, Town of Madison, Dane co.,	17 51
Mary La Follett, Primrose, Dane co	115 00
Wm A Stowell, Cottage Grove, Dane co.,	1,041 71
Samuel H Sabin, Windsor, Dane co.,	18 00
Abel Strong, Marcellon, Columbia co.,	382 71
Quartus Towry, Johnstown, Rock co.,	5 00
Robert Hornby, Fairfield, Sauk co.,	496 05
Thomas Stevens, Dane, Dane co.,	200 06
John Wightman, Berry, Dane co.,	751 80
Douglas Oliver, Glen Haven, Grant co	1,000 00
Josiah Pierce, Pardeeville, Columbia co.,	400 00
	$5,903 23

LOSSES PAID IN 1861.

L D Lateer, Janesville, Rock co.,	$499 53
Edward Walsh, Centre, La Fayette co.,	306 80
Nathan Kellogg, Madison, Dane co.,	15 00
Henry A Chapman, East Randolph, Col. co.,	20 00
Jared Bishop, Jamestown, Grant co.,	371 00
Allen Hoxie, Porter, Rock co.,	1,000 00
O. C. Burdick, Christiana, Dane co.,	2 00
Samuel Crossett, Juneau, Dodge co.,	13 50
Albert Gaston, Cottage Grove, Dane co.,	11 13
Stephen Young, Somerset, St. Croix co.,	380 00
A L Beebe, McFarland, Dane co.,	699 01
Alfred Taber, Delavan, Walworth co.,	350 00
Lydia D. Crocker, Lake Mills Jefferson co.,	2 00
John Feller, Bear Creek, Sauk co.,	646 65

Comparative Statement of the business of the Company for the years 1859, 1860, 1861 and 1862.

	1859.	1860.	1861.	1862.
Total amount of accumulations,	$39,080 96	$110,389 49	$216,865 76	$327,464 67
ASSETS.				
Premium notes of policy holders,		$92,487 27	$180,124 63	$231,000 07
Cash on hand and due from policy holders for cash premiums,	$35,462 46	16,509 74	35,408 00	45,464 60
Am't secured by mortgage and judgment,	2,956 02	332 47	332 47	1,000 00
Office furniture and fixtures,	332 47	1,000 00	1,000 00	1,000 00
Whole number of policies issued,	300 00	110,389 49	216,865 76	327,464 67
Am't of outstanding risks thereon,	30,080 96	8,679	14,357	22,061
Total am't of losses paid and settled,	4,807	$5,421,115 49	10,320,789 00	15,962,000 00
Losses reported and awaiting further proof, *	$2,409,950 49	5,903 31	8,450 01	21,413 97
Whole number of policies during the year	2,409 45	499 53	7,351 12	* 2,000 00
Am't of outstanding risks thereon.	1,187	3,722	5,778	7,706
Am't of premium notes thereon,	$1,140,076 00	$3,916,115 49	5,315,173 00	6,009 813 00
Am't of cash premiums thereon,	17,109 82	65,789 43	83,944 06	108,328 93
Am't of commissions paid to agents	11,059 04	38,761 88	43,377 36	† 45,727 80
Am't of expenses paid, including all compensation of officers, printing, advertising, postage, and all other incidental expenses,	8,317 70	10,339 18	7,450 84	7,290 98
	8,317 71	5,847 44	9,071 89	

* Resisted as fraudulent.

† Deducting agents' commissions.

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : : : : : : : EDITOR.

VOL. XV. MADISON, JUNE 1, 1863. No. 6.

The East and the West.

[From the Atlantic Monthly for April.]

[This poem was written by Theodore Winthrop several years ago, and after his death was found among his unpublished papers.]

We of the East spread our sails to the sea,
You of the West stride over the land;
Both are to scatter the hopes of the free,
As the sower sheds golden grain from his hand.

'Tis ours to circle the stormy bends
Of a continent, yours its ridge to cross;
We must double the capes where a long world ends,
Lone cliffs where two limitless oceans cross.

They meet and are baffled 'mid tempest and wrath,
Breezes are skirmishing, angry winds roar,
While poised on some desperate plunge of our path,
We count up the blackening wrecks on the shore.

And you through dreary and thirsty ways,
Where rivers are sand and winds are dust,
Through sultry nights and feverish days,
Move westward still as the sunsets must:

Where the scorched air quivers along the slopes,
Where the slow-footed cattle lie down and die,
Where horizons draw backward till baffled hopes
Are weary of measureless waste and sky.

Yes, ours to battle relentless gales,
And yours the brave and the patient way;
But we hold the storms in our trusty sails,
And for you the life-giving fountains play.

There are stars above us, and stars for you—
Rest on the path and calm on the main:
Storms are but zephyrs when hearts are true;
We are no weaklings, quick to complain.

When lightnings flash bivouac-fires into gloom,
And with crashing of forests the rains sheet down—
Or when ships plunge onward where night-clouds loom,
Defiant of darkness and meeting its frown.

These are days of motion and march;
Now we are ardent and young and brave;
Let them that come after us build the arch
Of our triumph, and plant with the laurel our grave.

Time enough to rear temples when heroes are dead;
Time enough to sing pæans after the fight;
Prophets urge onward the future's tread;
We—*we* are to kindle its beacon light.

Our sires lit torches of quenchless flame
To illumine our darkness, if night should be;
But day is a friend to our standards, and shame
Be ours if we win not a victory!

Man is nobler than men have been,
Souls are vaster than souls have dreamed;
There are broader oceans than eyes have seen,
Noons more glowing than yet have beamed.

Creeping shadows cower low on our land;
These shall not dim our grander day;
Stainless knights must be those who stand
Full in the van of a world's array!

When shall we cease our meagre distrust?
When to each other our true hearts yield?
To make this world an Eden, we must
Fling away each weapon and shield,

And meet each man as a friend and mate,
Trample and spurn and forget our pride,
Glad to accept an equal fate,
Laboring, conquering side by side.

Don't Omit the County Fairs.

In times like the present, it is, of course, more difficult to keep up the interest of the people in matters so purely of a peace character as are industrial exhibitions. It is, nevertheless, true, and none will deny it, that the industry of the country was never so much in need of the stimulation and encouragement which come of such exhibitions.

Last year, as well as the year previous, on account of the excitements and distractions incident to the war, several of the State, and many of the County Societies omitted their accustomed fairs; and this year there will, doubtless, be a like disposition on the part of many societies, which, either because of the lukewarmness incident to successive neglects, or on account of only partial success the past season, may have become somewhat disheartened. Our own State Fair omission has seemed to be a necessity, and circumstances may again compel a further postponement. We trust not, however; as we believe that, in spite of the difficulties which seem to lie in the way, a vigorous and united effort on the part of all the friends of the Society and of the cause, would ensure its success.

But there are reasons in the case of State

exhibitions which do not apply to County Fairs, where there is not so much at stake; and if the State Fair should be again postponed, we sincerely hope it will not operate as a discouragement to the Counties. If it will so determine, every County Society in the State may hold a successful Exhibition the coming fall. We exhort them every one to make the resolve and a determined effort.

A Night on Cheat Mountain.

BY MRS. HOYT.

One day out from Post, and all day in the magnificence of Nature's best. The last dozen miles had left the valley further and further off, and in the clearer light of our ascent spread it as a lake behind us.

A more winning day I had not seen. Occasional gleams of sunlight had flashed in, hot and glowing, but the deep shade of overhanging rocks and foliage had been most of the way just tempered into a delightful softness, tempting us to ride for hours together hats in hand Cheat Mountain Summit was in the programme for a night's lodging, and "Col., remember we want to sleep on the very top of it!" was echoed more than once from our really tired, but enthusiastic company.

Talk about enthusiasm in relation to a great principle or a great man! Many of that party will remember to oldest age the enthusiasm for whose outburst Nature had piled up that grand mountain. I shall not describe it to you; so, unless you have the good fortune to have the same sight with the same experience, I shall have one possession, artistic and eternal, that you have not.

It was in the deepening twilight when, between some stars that were not yet lighted and some torches that were, I heard the sharp and sudden order "Halt!" and realized, rather than saw, that we had gained the summit. At that moment, as my eye took in that vast, wild, awe-inspiring prospect, I supposed that, in the weird light in which it was wrapped, I saw more than was to be seen; but, in the clear sunrising of the following morning, I found I had not seen it at all. Thus is night, and such is day.

But the hotel at which we were to stop.—Perhaps some of you think there was one, or some sort of a house there. You are right. Old man White had settled on this summit many years before, and though he had exchanged this home, some months previous, for a berth in Camp Chase, the tenement of his former habitation remained, being occupied by a remnant of his household. Within these narrow and dilapidated walls, scarce fit for any sort of use, we stowed the rebel ladies, children and lackeys, for whose safe arrival in Dixie our Col. was responsible—they preferring the atmosphere of this old guerrilla haunt to the pure air without. Did we leave them without a guard? No, indeed. A sentry was stationed wherever a sentry should be, the countersign given, and every picket at his assigned post, quietly and promptly, making our camp safe as such preparations could for miles around.

If any one thinks the courtesies and refined graces of life are confined to the best clothes and parlors of civilized homes, that person ought to have been where Zaccheus was, overlooking that night scene on the top of Cheat.

Here were some sixty or seventy persons, each one or two, or in small companies, lighting fires and getting together such conveniences as camp utensils afforded to prepare supper. Of this number there were two ladies and one bright seven year old little girl,—my sister, the wife of the Col., their daughter, and myself. Just as the fires were nicely lighted, a fine rain began to fall, more like mist than rain, and yet enough to interfere with the cooking operations. It would have been a good place for young ladies to become acquainted with the tempers of prospective husbands. But, in justice to those brave young soldiers, most of whom belonged to the Ringgold Cavalry, I can recommend the amiability with which they bore the mishaps of pot and pan, taking with good-nature what they could get, in the place of what they wanted.

Sitting at home at our nicely laid and boun-

tiful tables, it seems of little consequence whether a slice of pork is boiled, fried, or raw; but when a soldier is camping out, with the prospect of sleeping in the rain, and has set his heart upon a bit of broiled meat to eat with his hard bread, there is a real difference between a smudge and a nice bed of coals. We ladies did all we could, and none more than the happy child, to see each soldier had some little aid and attention, and added from our own huge provision basket such nick-nacks as made the rations seem quite a luxury, despite the smoke in the pork, the ashes in the tea, and no cream for coffee.

Supper being over, the preparations for bed were far less embarassing. It is as easy as anything can be for a real soldier to wrap himself in his blanket and find a place to lie down, and if easy anywhere, how admirable an arrangement here where the greensward was so fresh and the forest trees so convenient with their drapery of boughs.

I was amused to see the disposition these young gallants made of their horses. Instead of leaving them one side, or further out, they were brought, one might say, within the lines. The ambulance in which we ladies slept, with the Col. wrapped in his blanket camped on the ground underneath, being counted headquarters, a guard took up position at a respectable distance, next in order being the horses, which were of the best blood, and owned by their young masters whose love for the noble steeds that had served them in so many battles would have prompted this care, had not the fact that we were in a country infested with guerilla hordes dictated it as a matter of prudence. Outside of all, with only a picket guard between them and the rebellion of Eastern Virginia, our little army slept upon its arms.

The morning broke with unclouded skies; and during the preparations for breakfast, which were more efficient and less temper-trying than those of the previous night, we had leisure to take a general survey of the country upon which Cheat Mountain looks down as might a monarch, to investigate to our satisfaction the fact, so often stated, that Cheat river, quite a large and deep stream, runs very nearly along the summit, and to examine the fortifications where, the winter before, a portion of our grand army gave proof to the world that a soldier may suffer as well as fight with right good cheer.

A little time had been allowed us to make ourselves, we who had not been there before, familiar with a place which, besides being in itself grandly picturesque, had become historic in the military history of the country, and to allow our lady prisoners to prepare themselves and children, about twenty in all, for the day's journey, of which every roll of wheel and tramp of horse would take us farther into the land of the rebellion.

And fain would I have lingered longer, but the Colonel's promptness of character was substantial as the New England granite of which he came; so, at 8 o'clock, precisely, all things were in readiness, and our faithful guide, Sleyton, with a small advance guard, took position upon the only plank left on the Cheat river bridge and some distance ahead; then, two and two, the cavalry, in midst of which was a mountain howitzer, ammunition, and gunners; next the ambulance, followed by the Col., myself, and several aids on horseback; after these, our prisoners, in sundry vehicles, which with baggage wagons and a special guard of both foot and cavalry brought up the rear.

To my eyes that had never seen even thus much of the circumstance of war, this very small cavalcade of less than one hundred soldiers with the paraphernalia of all appropriate outfit, and, standing in the glory of that morning sun waiting orders, was a novelty I shall not soon forget. A moment after, and just as my impatience was asking of the Col. "Why don't they start?" I was again reminded that army regulations are realities, and order here, as in heaven, a first law, as the word "Advance!" went down the line, and, in an instant up went the colors, and through that mountain swept the bugle blast, and every hoof and every wheel moved onward.

The Great International Exhibition.

NO. IX.

BRITISH DEPARTMENT CONTINUED.

We have at last finished our hurried inspection of the multitude of natural, agricultural and chemical products, and of implements and machinery, displayed within the "Annexes," and are now prepared to take a glance at what Great Britain has done in the department of Manufactures proper. Articles of this class are found within the main portion of the Exhibition PALACE, which, now, for the first time since our examination of the American Court, we are supposed to enter.

We have been ushered in from the Exhibition Road, and, passing the great Gold Pyramid from Victoria, 40 feet high, and the wonderful Fountain whence issue perpetual jets of perfume, we stand bewildered and dumb under the lofty pinnacle of the grand Eastern Dome! Before us, stretching far away to the Western Dome, a distance of a quarter of a mile, is the Grand Nave, eighty-five feet in width, one hundred feet high, filled with the most magnificent and brilliant works of the mechanic and fine arts, and decorated with the flags and trophies of all the nations. On either side of this nave are the open courts and alcoves of Great Britain and her numerous colonies, of France, Italy, Rome, Spain, Portugal, Saxony, Holland, Belgium, Switzerland, Denmark, Sweden, Norway, Russia, Turkey, China and Japan, Egypt, and the numerous nations of Central and South America.

Across each extremity of this nave, and extending to the extreme sides of the Palace, right and left, is a transept of the same width and height as the nave. They are known as the Eastern and the Western Transept. We are now in the centre of the Eastern; facing the extremities of which, we behold first, on looking southward, a magnificent display of English hardware—lofty screens, gates, trophies of steel, chimes of great bells, lamps, grates, mantels, brilliant works in brass, and grand cathedral organs. While to the northward are organs, trophies of coal from Nova Scotia, of wood from Tasmania and Canada, and of wool and gold from Victoria.

The galleries, too, on every side, are filled with showy articles of lighter weight, such as silks, cloths, laces, philosophical instruments, and a thousand other articles of use and luxury. The arrangement of everything in the Palace is such as to secure the most marked effect from the display of forms and colors, and the splendid array of glass cases of gold and silver ware, of jewelry and of precious stones, flashing with a matchless brilliancy in the flood of light which pours in upon them from roof and domes of glass, wonderfully adds to the richness and indescribable magnificence of the whole vast collection.

All this to the eye. But the ear is also enchanted. Bells are chiming, musical instruments of every description are flooding the air with unreserved notes of sweetness, grand old organs are pealing forth their heaven-piercing anthems, until the mighty domes of crystal and the whole Palace quaver ceaselessly, while in the distance are heard the hum of wonder-working machinery and the footfalls and varying voices of a hundred thousand delighted spectators.

Never, on earth, was there a spectacle so glorious, and it is almost an abuse of one's faith to demand the hope that even the future shall be able to surpass it!

But we are first to complete our examination of the British Department, which, although volumes would be required to do it full justice, must, nevertheless, be summarily despatched, lest some of our numerous company weary of so protracted an inspection.

As we stand looking westward down the nave, the greater part of what is shown by Great Britain, in the Palace proper, lies on our left, and extends westward as far as to the great Central Avenue which divides the Palace transversely into two equal parts. To the right of the nave there is, however, a very large and fine display of furniture of every description.

BRITISH HARDWARE

Considered as an entire class, undoubtedly

excels, not only in respect of strength and durability, but likewise in artistic form and finish. There are exceptions, now and then, in favor of France and the United States, but as a general statement the above is correct. Indeed, if to the thoroughness and mechanical honesty of the English manufacturer could be added the superior ingenuity and aptness of the Yankee and the exquisite taste of the French mechanic, the product of his workmanship would be about as perfect as the present condition of the sciences would allow.

Good material and good honest workmanship characterize the hardware on exhibition.

Warner's chime of steel bells attracted great attention and were possessed of high merit. They are so arranged in connection with a cylinder armed with points, like the cylinder of a music-box, that any ordinary workman could chime them as perfectly as the most skillful musician.

The show of marbleized mantles is very fine; of steel implements and cutlery of all kinds, the finest I ever saw. Here are likewise immense quantities of other articles of hardware —steel pens, pins, needles, hooks, crinolines, files, springs, disc wheels, saws, iron safes, despatch boxes, lightning conductors, metallic cords, woven wires, wire ropes, hinges, locks, anchors, cables, railway fastenings, gates, (cast and wrought) bird cages, kitchen ranges, scales, hollow ware, anvils, axletrees, horseshoes, ice-chests, traps, handcuffs, metallic bedsteads, gas meters, brass chandeliers, candelabras, and ten thousand other things—enough in all to set up a hundred princely wholesale establishments with stock enough to last till the end of the American War!

Sheffield, as of old, excels in cutlery, Birmingham in heavy iron, steel and brass work, and in electro-plated ware. Iron and brass bedsteads are popular everywhere in England, and seem bound, in time, to entirely supercede wooden ones. Some of the brass bedsteads were massive and could not have cost less than two or three thousand dollars!

MILITARY ENGINEERING, ARMOR AND ACCOUTREMENTS, ORDNANCE AND SMALL ARMS.

Under the head of Military Engineering, the most interesting works are a "Military Model of London and adjacent country," and a model of a "Battery for the protection of River mouths and Harbors."

The Model of London illustrates a projected line of defences round London, consisting of nine forts connected by redoubts and earthworks, enclosing an area of 22 by 14 miles—the forts and lines to mount 2,151 guns, at an expense of over $20,000,000.

England having an insular position, so long as she was mistress of the seas by virtue of her powerful navy, she was safe from all foreign aggression, and had no need, therefore, to plant defences about her capital. Her "wooden walls" were sufficient. But now that other nations, our own particularly, seem destined to wrest from her hand the trident of the seas, it may be well enough for her to hedge old London round about with forts and bristling cannon.

The Battery for the Protection of River mouths and Harbors is somewhat after the "Monitor" idea. It consists of a round iron tower within a tank—the latter hidden below the waterline and filled with water, the tower floating in part within this tank and kept in its position by rollers at the sides and the axis upon which it revolves in the centre. The roof is conical. The tower is to revolve as fast as the guns are fired.

Heavy Ordnance is here in all its superiority —Armstrong guns, Whitworth guns, and others. Both of the guns named have a world-wide reputation.

The gun invented by Sir William Armstrong and now manufactured by him on an immense scale at Woolwich and at Newcastle-on-Tyne, combines length of range, lightness of metal, and extraordinary projectile force. The *coil* principle is a distinctive feature, the application of which is thus explained: A bar of iron is twisted round an iron roller spirally, and then welded down solid into a continuous cyl-

inder. Then another bar is coiled around this coil and welded down in like manner; and so the process is repeated until the required thickness of wall is attained. By this means he gets a maximum strength with minimum weight.

"When completed, the Armstrong gun consists of three distinct pieces—the barrel, the breech-screw, and the vent-piece. The vent-piece is entirely detached from the gun, lifts in and out of the breech, and contains the vent. The breech-screw is worked by a handle and serves to wedge the vent-piece against the side of the chamber, thereby preventing its being blown out by the explosion of the charge."

The comparative lightness of this gun is apparent from the fact that a 110-pounder Armstrong gun weighs only 56 cwt., while the cast iron 68-pounder service gun weighs 95 cwt.

The conical-pointed shot and shell used in these guns with so much effect are likewise inventions of Sir William Armstrong. A slab of solid wrought iron several inches thick, but with a terrible looking hole directly through it, is exhibited here in evidence of their resistless power.

The Whitworth gun differs from the Armstrong gun in the following particulars:

1. The bore of the barrel is hexagonal, instead of round.

2. It is not made on the *coil* principle, but forged in one piece.

3. The breech opens sidewise, on a hinge, after the breech-screw is loosened.

The shot have the six-sided form to correspond with the barrel, and are not coated with lead, which last circumstance is thought to constitute an important objection. The charge is enclosed in a tin case, instead of flannel, as ordinarily, so as to prevent the escape of gas. Amount of charge, one-quarter of the weight of projectile. Few guns have superior power. The one here exhibited, with an elevation of three degrees, threw a ball a distance of five miles, three thousand six hundred yards!

The Mersey Steel and Iron Co., Liverpool, exhibit very powerful breech-loading guns which were cast hollow—the inside and outside of metal thus being allowed to cool equally. This one, called the "Prince Alfred," has a 10 inch bore and throws a projectile of 500 to 600 pounds weight. Demolished targets of thick wrought iron, backed by 18 inches of solid teak (hardest kind of ship timber) are proof of its power. Indeed, guns of smaller calibre made on this principle have been repeatedly discharged with the barrel nearly full of solid shot, a solid cylinder of iron rammed down upon them, and the projecting end placed against a solid rock, so that the gun itself was fired from the shot—and yet without bursting!

In the class of *Shot, Shell, Fuses, etc.*, the Secretary of State for War makes a very extensive and interesting exhibition.

One of the shells, "Mallett's Monster," is 3 feet in diameter and weighs 1 ton and 2 cwt A monster of this class, recently fired at Woolwich, described a magnificent circle about three-quarters of a mile high and penetrated the earth, when it fell, to the depth of eighteen feet! If Uncle Sam could only get the Southern Rebellion concentrated in one small point and then let a few of these shells fall upon it, the country would probably be quiet for at least thirty years longer.

NAVAL ARCHITECTURE.

In this branch of the British Department we find a most interesting series of models illustrative of the progress of shipbuilding from the earliest times to the present—including the famous iron-clads "Warrior," "Minotaur," and "Northumberland." Ten years ago this display would have been worth the careful examination of the naval architects of the world, but since the building of our own matchless Yankee iron-clads, there is but little in the *war* part of it that is of more than mere historic interest. The merchant ships are represented by some of the finest models of the world.

In the yacht line, America is confessedly ahead, and her models are being everywhere copied.

Maize and Tobacco.

The Indian Corn looked over the fence,
And what do you think he spied?
A field of Tobacco just ready to bloom,
And stretching in lordly pride.

To the broad-leaved neighbor at once he called,
In accents loud and clear,
"I thought you belonged to a summer clime,
Pray, what are you doing here?"

So then with a haughty air replied
That plant of power and pelf:
"You are pleased to ask of my business, Sir,
What do you do yourself?"

"I feed the muscles, and blood and bone,
That make our farmers strong,
And furnish bread for the little ones
That round their tables throng."

"I move in a somewhat loftier sphere,"
The foreign guest rejoined;
"As the chosen friend and companion dear
Of men of wealth and mind.

"I'm the chief delight of the gay young spark
O'er the wise my sway I hold;
I lurk in the book-worm student's cell—
In the dowager's box of gold.

"Thousands of hands at my bidding work,
Millions of Corn I raise"—
He ceased to speak, and in angry mood
Responded the tassled Maize:

"You're in secret league with dyspeptic ills—
A merciless traitor band;
With clouds of smoke you pollute the air,
With pools of slime the land.

"You tax the needy laborer sore;
You quicken the drunkard's thirst;
You exhaust the soil—and I wish you'd go
To the the place whence you came at first."

Suggestions for June.

Planting trees &c., and sowing grain and grass are branches of farm-work which, with a few exceptions, are supposed to have been completed ere the ushering in of June. But the farmer will, nevertheless, never find more to occupy him than now.

The most pressing work in hand is to take good care of crops already in. The plow, the cultivator, and the hoe are the implements which must have no rest.

Corn.—Don't be afraid of cultivating it too vigorously. Thoroughly stirring the soil between the rows with the shovel plow, and careful cultivation in and near the row itself, can not be too strongly urged. The destruction of the weeds is only a part of the object to be gained; the stirring of the soil also makes it a better absorbent of moisture and ammonia.

Hungarian Grass.—Those who intend sowing should do so from the 1st to the 10th. If for hay, one-third of a bushel per acre; if for seed, one-fourth bushel.

Buckwheat.—Prepare for it by thoroughly plowing early this month, and again at the close, just before the time to sow, or about July 1st. A light, porous soil is the best; one bushel to the acre.

The Harvest of Hay and Grain.—Get ready for it. See that mowers and reapers, rakes and racks are all in prime order, nor forget to engage all needed help so as to cut *in time.* Your barns also—don't forget them. Clear out old rubbish; feed all uncertain seeds that may have accumulated in the bottom of hay-mow, on the barn-floor, or in the feed-boxes, to the fowls, or destroy them, so as not to seed your farms with noxious weeds. A clean, sweet barn is an important matter. Don't neglect it.

All Outhouses, Piggeries, Henneries, &c.—Clean them out often in hot weather, and sweeten with lime. Dry muck will answer an excellent purpose in the hog pen, absorbing manurial liquids and gases, and relieving it of foul odors.

The Garden.—Don't let the weeds over-run it. It's easy enough to keep it clean if you have a system for doing your work. A few minutes each day will keep it in good order and insure you a nice crop of vegetables and fruits.

The Orchard.—If your fruit trees should be too heavily loaded for the good of both fruit and tree, pinch off as soon as the sets are well formed.

Stock.—This is the season for the necessary preliminaries in stock-breeding. In the selection of males to breed from, be governed by a wiser policy than often heretofore. There can be no economy in raising *scrubs*, simply because the getting costs a little less. Any blunderhead must be able to understand that, and yet three-fourths of our farmers are foolish enough to practice upon that principle. It's time to stop.

Reality against Imagination.

In the February No. of the FARMER, I related some of my experience in farming in this part of Wisconsin. One Adams, who seems to have been offended by my statements, gives, in the April No., my article a severe overhauling, headed "Farming not the Meanest Occupation after all."

I never thought or said that farming was a mean occupation. If I grumbled about anything, it was about the climate. The experience I had and stated will be endorsed, and has been had by all my neighbors. One of them, who occupies the first settled and largest farm in this town, has, in about ten successive years, planted hundreds of apple trees, of which only a few remain; and, I believe, of these there is not one entirely sound tree. A few dozen apples is all that ever has been raised.

But Mr. Adams thinks if we have bread and some half-rotten potatoes, we ought to be satisfied. This will not satisfy me. I want a little more; I want some food for my mind. I do not raise fruit trees only for the profit they will bring to my pocket; I raise them for my pleasure. One apple raised on a tree that I have planted is worth more to me than a bushel I buy in the store. I also want some flewers, ornamental trees and shrubs. I care but little about costly furniture.

I cannot see what use it is to rate farming above all other occupations. Does, perhaps, Mr. Adams think if mechanics and lawyers read his article they will all become farmers? I don't fear very much that, on this account, the trade will be overstocked to our own discomfort.

In the primitive state of society, I suppose the farmer's wife had to spin, and weave into cloth the flax and wool her husband raised, and make it up into garments, he himself depending very much upon his own industry for his rude implements of husbandry. But in present times the farmer depends as much on the mechanic for his necessities and comforts, as the mechanic for his bread on the farmer.

Who made this pen I am writing with? who made this paper? who made this lamp? who prepared this kerosene which gives this beautiful light? Who made the stage coach which will carry this letter to the next railroad station? who made the magnificent engine that will further it to its destination? and who would be able to pervert the laws like a smart lawyer? I think the calling of a mechanic, a lawyer, a Physician or an artist is as honorable as the calling of a farmer, and in point of profit and comfort.

I know more than one mechanic who tried farming, and after he had spent two or three years' hard labor and the money saved previously, went back to his former vocation.

I have also some imagination; I can imagine how Mr. Adams sits in his easy chair, surrounded by comforts, and dictates how we poor mortals in our log cabins ought to feel. But I will make one proposition: I want Mr. Adams to come here, with about $200 in his pocket, and settle on a piece of Government land; or I will let him have 80 acres of my own uncultivated land for five years without rent. Next I want him to take the grubbing hoe and ax in his own hands. Fourteen days' hard work will clear one acre of land and make it fit for breaking. In about three or four years, if he works hard, he may have cleared some 25 to 30 acres, and his money will all be spent, for breaking, the support of himself and family, a cow, a pair of oxen, and a plow; a wagon he will not have been able to buy.

Now, suppose it should happen that his crops failed, and some cold winter morning he should find himself surrounded by a dozen childreu destitute of clothing and food! Then I would like him to sit down and write an article on farming. I fear the poetry of farming would have been lost in the naked reality.

ADOLPHUS.

MT. PISGAH, Wis., April, 1863.

ALTERNATE HUSBANDRY.—It is a great advantage in the convertable system of cultivation that the whole of the manure is employed, and that those parts of it which are not fitted for one crop remain as nourishment for another.

Disposition of Straw.

My plan for more than twenty-five years has been this, viz:—to get it all into my stock yards in some way. For the last six years, I have stacked all my grain in a yard of sufficient size, adjoining my other stock yards. In threshing, I am not particular where I run the straw, provided there is a good place to stack it well. The latter is a job I seldom trust to boys or careless, awkward men. I aim to have the stack no wider than can be topped out well, and any length, according to the amount to be put in it. Make the middle wider than the bottom. Clean away in some manner all the chaff and straw that falls between the machine and stack. Keep a good hay-knife, and that in good order. Cut down about ten feet at a time. There will be few, if any, frozen portions to hinder, or break forks.

With my horses and sled I aim to haul a load every day through the winter, (large or small according to circumstances) into my yards. I have gates leading from my stack yard through the stock yards. As the team goes through the yards, the straw is rolled off by the sides of the sled. It is loaded and unloaded in less time than pitching off from a stack adjoining a yard, and then carrying it about with a fork, as dry straw is slippery to handle, after being moved from where it is pressed in the stack. In this way the straw comes clean and fresh every day to the horses, cattle and sheep. In addition to the other feed they get, they work this over through the day. At night, a portion of this straw that is left, which is in front of the sheds, is moved under them for bedding. In this way it is all eaten over before horses, hogs, sheep, or anything else are bedded.

It pays me three times for moving it into my yards. First, for feed; second, for bedding; and lastly, for manure. I am an out and out anti straw burner,—a practice which is robbing rising generations of their daily bread. So much crowds upon my mind upon this subject of straw saving that it difficult to stop.

If this is deemed worthy a place in the FARMER, I may, at some future time call up the subject.

C. K. Stewart in the last No. of the FARMER, says "Give us more about sheep." I am now keeping a flock of fine sheep, the increase of a flock I purchased in Ontario Co., N. Y., about 30 years ago. I may hereafter say something on this subject. LEWIS CLARK.

BELOIT, April 7, 1863.

Double Plowing.

Mr. L. Bingham, of Tafton, on page 138 of the April No. of the FARMER, asks me some questions in relation to this subject.

My object was to raise a better crop that year, and by deep plowing prepare my ground for better crops in succeeding years, both of which I succeeded in, except the year mentioned, when the chinch bug worked in that ground more than that adjoining it.

I raised beans, millet and peas on it that year, and sod corn adjoining, where the prairie sod was broken the usual depth. I think the crop was enough better to pay for the extra or second plowing.

My opinion is that Mr. Bingham will get a fair crop of corn if he will get it in in good season, by planting and thoroughly tilling with cultivator the same as old land, although it will come forward more slowly at first.

If Mr. B. does not need the corn for feeding purposes, I would recommend him to put in a portion of it to white beans, by planting very thick and not cultivating them. One of my neighbors succeeded very well in that way the past season. LEWIS CLARK.

BELOIT, April 7, 1863.

Buckwheat vs. the Chinch Bug.

MR. EDITOR:—I find in the short sketch about Sorghum on page 152 of the April number a recommendation for keeping the chinch bug from destroying the Sorghum. The first recommendation is to sow late corn and oats. The buckwheat I know from actual experiment to be of no value, for I have seen the last green leaf taken all round the buckwheat and that not touched at all; and, thinking that many might depend on that, in other parts, as they had here, and find themselves mistaken, I con-

cluded to notify you of the result of my experiment.

So far as my experience goes, anything that will keep green will retard the bug better than buckwheat. J. P. LINCOLN.

BRISTOL, April 21, 1863.

Tobacco Again.—Cultivation, &c.

The following extracts are from an article in a pamphlet published by Orange Judd. The author is William A. White, Esq., a tobacco grower in Connecticut of many years experience. What he says of the "worms" will not be so applicable here, as thus far they have not troubled the crop much in this State. We shall continue to give information on the subject from time to time as the season progresses, until all are thoroughly posted in cultivating, curing and *using*.

CUT-WORMS.—The next, or at farthest the second morning after having set your plants, go over to see that the worms do not eat up one-half of them. You can tell where they are and have been, by seeing a plant with a single leaf, and sometimes the whole plant eaten off and drawn down into the hole occupied by a large brown or black worm; you will see little ant-hills like, and round holes in the ground; by poking around a little in the dirt, you will find a worm very near the mouth of these little holes. Destroy it, and all you can find, and thus save your crop. This searching for worms must be kept up till they cease to do mischief. All plants missing in the field should be renewed from the bed at the first opportunity. The morning is the best time to find the worms, as they are near the surface of the ground; later they retire into the ground to appear again near sundown, and work during the night and early morning.

CULTIVATION.—Having got your plants all set, the next in order is, in a few days to hoe out the same. Take a cultivator narrowed up, with a boy to guide the horse, go through; once to a row is sufficient for the first hoeing. Then with a common hand-hoe cut up all weeds and grass, brush the dirt down level around the plant; stir it but very slightly close to the plant; leave the stirring and hauling dirt up to the plant to a future dressing. Go over the whole in like manner; then again in ten days or a fortnight, keeping the worms off in the mean time. With your cultivator go twice to a row. This time you can stir the dirt pretty freely around the plants, and renew it, being careful not to leave any leaves covered up, or partially so, as it will spoil them. As the leaves are what tobacco is grown for, be sure in all the different processes you go through with, to save them from anything that will injure them. Should any plant have its centre bud broken or eaten off, it will come up with several suckers or sprouts, and will not amount to much; better replace such, if not too late. It is better to do the rest of the hoeing without the use of the cultivator: stir the ground and keep it free from weeds by going through as often as necessary with the hoe.

WORMS.—The tobacco having got up from ten to twelve inches high, look out for the green worm that eats the leaves. They are often found earlier. You will see a small round hole, oftentimes no larger than a large pin-hole, in the leaf; if you turn it up you will be very apt to discover on the under side a small worm no larger round than a common thread needle, and half an inch in length. *Kill him* and all his kind, for if left, he will grow to the size and length of your finger, and would not make much of a breakfast off a third of a full-grown leaf; keep the growing plants free from all such by going through the field often, and picking them off. Well-trained turkeys will oftentimes assist in destroying them. All other fowls should be kept off, as they often do more damage than good by scratching, and otherwise injuring the leaves.

TOPPING AND SUCKERING.—The plants having grown to the height of two feet, will generally begin to run up to blossom; let them get up pretty generally even; then go through and break off the stems about two and a half feet from the ground; have the whole even on top. A few plants will not be quite ready to top; let such remain, and in a few days go over the field and top those left. This will be about the middle or twentieth of August. If any plants are later, they should be topped before the first of September, that they may have a few days for their leaves to fill out and ripen. Leave three or four of your earliest and best plants to go up to seed without topping. The suckers will now begin to grow, at first near the top, and then further down; these should be broken off as they make their appearance, that the whole growth may go into the leaves. Also, if any branches come out on your plants left for seed, break them off, and only leave those close to the top; look out at all times for the green worm, for they will work as long as the crop stands, and frequently, if not shaken off, after it is hung in the shed, as long as it remains green.

SUNLIGHT AND AIR.—Shrubs and trees which are too much sheltered, too much secluded from the sun and wind, extend exceedingly in height, but present at the same time slender and feeble branches, their leaves are pale and sickly, and in extreme cases they do not bear fruit. The exclusion of light alone is sufficient to produce this species of disease, as would appear from the experiments of Bonnet.

The Tobacco Question.

FRIEND HOYT:—For the first time in my life I sit down to address the editor of a periodical on any subject whatever. But since reading your article on the "Cultivation of Tobacco," in the April No., I have felt that I could not do my own feelings and conscience, or yourself, justice without saying a word in approbation of your article, in so boldly and honorably standing up for the truth against the popular tide, of your readers even, in saying the right thing in the right place—in not only washing your own hands in innocency, but in raising the warning voice to all those "semi-civilized men" to beware what they are doing in resorting to means for relieving not only themselves but a land groaning to be delivered.

I feel more constrained to write this to you than I otherwise would, had I not felt that I was one of the first to ask you to give us something on the best mode of cultivating tobacco; and at the same time witnessing my earnestness by rolling some of the stuff as a "sweet morsel under my tongue." Will you forever forgive me, dear friend, for contributing one morsel of influence in asking you to come down, in the least, from the high calling of a christian character, and compromise yourself or journal in pointing out the way for any farmer to damage not only himself but our land, which I feel is yet to take the lead in bringing about the day which shall be the joy of the whole earth—when the vices that degrade and lessen the power of man shall all have been put under his feet.

I had contemplated raising what I conveniently could of tobacco, procured seed of the choicest kind I could find, and was calculating you would give us some light on the subject, and then I would "pitch in." The light which the few statistics mentioned in your article has brought, and the suggestions of a better use, is the light I prefer to profit by, leaving it to those to choose the other course who have no conscience to smother.

I am sorry I have ever consented to its use, the habit of which has been as the tyrannical power of a strong man armed, which, I feel, nothing but the grace of the stronger than he will enable me to overcome. But, as you have a duty to perform to the *whole* people, I trust your superior wisdom will guide you in a better path than I could suggest.

I have acted as a voluntary agent a little, and obtained a few subscribers for the FARMER; one of the main reasons for which was the high moral standing it held, and teachings it sent forth into every house, being a missionary for good in a moral as well as a temporal point of view. A. M. S.

PRAIRIE DU SAC, April 24, 1863.

Haymaking.

This interesting branch of farm labor is properly divisible into two parts—the cutting and the curing. A few words under each of these heads:

THE CUTTING involves the *when* and the *how;* in respect to both of which points the practice has too often been erroneous.

As a general rule, all grasses intended for hay should be cut before the seed is ripened—clover while yet in the blossom. If allowed to become dead ripe, some of the most valuable nutritious substances are transformed into hard woody fibre, and become comparatively worthless.

The question of mode may refer to either the height above the surface of the ground, or to the implements employed.

Concerning the first we would say, There is injury done sometimes by cutting so close as to expose the first joint of the roots to the scorching sun. If the grass be soft and fine, covering the earth as a mat, there is not this danger; but if coarse and sparse, and the weather be dry and hot, it would be economy to cut a little higher.

As to the implements, that question must be decided by the nature of the ground and the amount to be cut, and each farmer must judge for himself. But, even on a small farm, the saving, not only in actual labor, but in the greater security of the crop, when it can all be rushed into the barn or put into stack in three

or four days, will not unfrequently pay for a good mower in one or two years.

THE CURING should be done in all cases as quickly as possible, and on no account should rain or dew be allowed to fall upon it after the curing is once fairly begun. Better put into barn or stack while yet half green than allow it to bleach and harden like iron or dead brush in alternate rain and sun.

If necessary to put up rather green, don't mix with dry hay, and at time of *mowing* away, sprinkle on about two quarts of rock salt to the ton.

Great efforts are making to increase the amount of live stock this year; don't neglect to provide an extra amount of fodder.

Are Your Fences all Right?

ED. FARMER:—In compliance with your cordial invitation to farmers to correspond, I would suggest a few items on one of the most deficient and neglected parts of farming, to-wit: fences.

I know of nothing that more surely marks the character of the farmer, and warrants us in setting him down for either a thrifty or shiftless husbandman, as the case may be. The exterior is unquestionably a true sign of what the interior is.

The farmer that gains public merit for good, effective fences will be none the less worthy of merit in all other branches of agriculture. But Wisconsin presents so few specimens to the public eye of this, I might say it is the first need of our farming. Better erect no fence than to have a temptation fence; for what is not worth doing well is not worth doing at all, and there is nothing better calculated to engender strife betwixt neighbors than dilapidated fences The most patient and forbearing farmer can never submit to have his crops destroyed by the cattle of thriftless neighbors. But I am an advocate of amicable measures, therefore I urge all farmers to review their fences ahead of the marauders. The result will be your own security and public approbation. D. ARCHER.

SPRINGFIELD, Wis.

P. S. As the WISCONSIN FARMER is the channel of agricultural instruction, it will be a great public benefit if you will advance a few items as to the best method of preparing and setting posts for board fences—whether they are better seasoned or unseasoned; whether they are better with the tops or butts in the ground; what effect charring will have on durability; whether the posts are better, each set on the opposite side of the boards, or all on one side; and whether the boards are better nailed on in panels or cross joints. D. A.

More about Economizing Straw.

ED. FARMER:—The economizing of the old musty straw pile has been somewhat descanted on in late Nos. of the FARMER, and so far it has been consigned to the poor helpless brute. The question now pending is, shall stock be raised for that purpose, or shall stock be raised for domestic profit? The last seven years' experience should solve that problem. I defy any animal to be profitable for a mere existence. Living and existing are two separate matters. To exist is merely to retain life; while, on the other hand, living is the enjoyment of plenty.

Then I ask, where is the wisdom and policy of raising male calves, with all the incumbrance of them for about forty months, for the paltry sum of from $12 to $14 to the butchers? I speak of the last seven years especially, because the call for working cattle has been so diminished that farmers in the southern part of Wisconsin have had but little else to depend on but the knife. For my own part, I resolved five years ago that I would never raise another male calf until they will realize $30, at the above age. My object is to raise all the female calves I can, and that will always give me a surplus stock. When they arrive at the age of cows it don't require a very great judge to distinguish betwixt a good dairy cow and a poor one; consequently kickers and unprofitable ones can be dispensed with to butchers; and by that means butchers will always receive a plentiful supply. The fact then will soon be developed by realizing a good stock of cows

that will demand better attention than the favor of an old musty straw pile for support and shelter.

I may add that the cornstalks should never lack consumption, and likewise that the corn will yield more profit if fed to good milch cows than to hogs. For my own part I am reluctant to milk a straw pile cow, for the inferiority of the milk renders it comparatively worthless, while corn and cornstalks and clover yield the richest milk and most delicious butter that can be produced. I have had the privilege to attest this, for I have been a witness to the different qualities of butter from different modes of feeding, for the last thirty years. D. A.

STOCK REGISTER.

American Stock Journal.

After a temporary suspension, for reasons assigned at the close of the last year, that old-time friend, the American Stock Journal again comes to our sanctum, looking just as formerly only a little happier, perhaps, and more hopeful; as much as to say, We have sounded the depths of this before uncertain sea and are not afraid to trust our gallant bark on its tossing waves once more.

Welcome, good friend! and all the more welcome for that we have learned during this brief absence to appreciate thy monthly visits, so full to us of interest and pleasure. When, in the better future, the Southern Rebellion shall have been squelched, and many years shall have passed away in wealth-accumulating peace, may we still have the pleasure of welcoming thy monthly returns.

The publication of this sterling journal will henceforth be in charge of that long and widely known book publisher, Saxton, which is a good guaranty that it will lack nothing in the way of good taste, energy and enterprise. It is still under the general editorial management of D. C. Linsley, Esq., who will be aided by Otis F. R. Waite and a large number of the ablest writers in the country. The first two numbers are the most interesting and able that we remember to have examined, and give a most gratifying earnest of what is in store for its already large and growing list of subscribers. No stock grower should be without it.

Price, as formerly, $1 per annum, single copies; with liberal rates for clubs. Address C. M. Saxton, New York.

The "Blackleg" and other Diseases of Cattle—Remedies.

Mr. Editor:—In the early settlement of this part of Wisconsin many young cattle died of "Blackleg." Having myself lost more or less each spring for several years, and experimenting to some extent upon each new subject, I finally hit upon a remedy which ever after proved successful.

On our return from the burial of a two year old steer, we found another of the same age lying down never to rise again without help. I had observed that the bone of the tail seemed to be dislocated, usually just above the bush, in all the animals attacked by this disease, and that break or separation was much more extensive than in any of good health. I, therefore, served him as I have served all since, and as the darkey approved of treating Satan. His response to the sentiment in the prayer of his master that "the power of Satan might be *curtailed*," was "Amen; yes, massa, cut him tail smack smoove off!" I cut them off at the joint or break, which takes the most ornamental part of that useful appendage. In addition to the surgical operation, which has the credit of being the principal agent in effecting a cure, I drench with a pint of new milk containing two tablespoonsful of soft soap, and exercise the animal without stint.

Should the disease have well nigh finished its work before the tail is clipped, but little or no bleeding occurs until the exercise commences. If the bleeding is too profuse or too long continued, it may be stopped by bandaging.

A colt's mane twisted into "stirrups for witches" or loops is a sure sign that the animal's health is not perfect. So cattle, with the bush of their tails twisted and snarled, need treatment they have not received. A preventative and a cure for the twisting of young cat-

tle's tails may be had by docking about half an inch therefrom each spring, which very much improves the appearance of that appendage, with but little loss of blood.

The steer referred to speedily recovered and ever after showed no symptoms of indisposition. In like manner have many since been treated, and all with the same happy results.

Blackleg, unlike the hornail, attacks the well fed quite as often as the half starved. Nature sometimes shows a generosity to cattle which have lost the bush from their tails, by sending out a growth of long hair (though not long compared with the first growth) which improves the deformity, and leaves the beast in fair condition for fly-brushing.

A lankness about the stomach and bowels is the prevailing disease among the horned cattle and colts of this region, at this time; which seems to be aggravated, if not produced, by a want of stuffing for the internal region. One marked symptom of this disease about a place is the transposition of the straw piles and cattle—the cattle being uppermost. Another is a scarcity of sheds and haystacks. Not having lost any stock by this disease, I will not attempt to prescribe a remedy. S. L. MILLER.

FULTON, April 16, 1863.

Sheep-Washing.

The question, Shall sheep be washed previous to shearing? or shall they not? is attracting more and more attention from year to year.

Recently, at Wool Conventions held at Rochester and at Cleveland, the question was extensively discussed—at Rochester without a positive decision pro or con—at Cleveland with a unanimous verdict for the *negative*. and a resolution expressive of a strong sentiment to the effect that manufacturers should make a marked and uniform difference in their purchases in favor of clean wool.

If judiciously managed and if performed at the right time, i. e. in mild weather, late in May or early in June, it is our opinion that sheep need not be injured in the process of washing. But, on the other hand, there is no doubt that sheep *are* sometimes injured thereby. In any event there should be established an equitable rule as to price.

"When should we Shear our Sheep?"

Not until warm weather has fairly come, and yet not after the fleece has come to be uncomfortable and the new wool has made considerable growth.

If too early, your sheep will suffer on cold nights and possibly contract catarrhs. If too late, considerable portions will be rubbed off on brush and fence rails in the effort of the sheep to relieve themselves of the itching which they will be almost certain to suffer.

If you ask for a reliable rule, we tell you squarely, there is no sure rule which does not include the *weather* as the chief element—and the season, you know, is very uncertain. Sometimes it might answer to shear as early as the middle of May; at other times the middle of June would hardly be too late. Perhaps, as a general and variable rule, we might say, *after you have planted your corn and other hoed crops, and have not become engrossed in their cultivation.*

Breeding too Early.

No fault is more common among our Western farmers, so far as the raising of stock is concerned, than that of allowing animals of all kinds to begin breeding at too early an age. We have often urged the importance of a more rational practice, but cannot permit this season to go by without again warning our farmer readers against so unwise a custom.

The following from the American Veterinary Journal, contains ideas which are worthy of notice:

"Victor Gilbert never allowed ewes to have lambs until they passed their third year, and the bucks were not used until they had arrived at full maturity. During the period of growth and development up to maturity, the reproductive organs are dormant, while at the same time the nutritive function is wholly engaged in elaborating chyle and blood for the development of bone, muscle and nerve, and that calling into use the reproductive or generative organs before the animal has attained full growth, must necessarily divert the elements of matter

intended for nutrition from their legitimate channel, and direct them to the reproductive organs. A too early use of the purely animal function induces weakness and stunted growth.

Influence of Sire and Dam, respectively, on their Young.

As the season is now here when subjects of this class are especially appropriate in our journal, we ask the attention of all our readers who are interested not only in the mere breeding of horses, but likewise in the improvement of all our stock, to the sensible views set forth in the following article from the North British Agriculturist, in answer to the question "Does stock more take after the sire or dam?" The editor's reply relates more to the horse, but the principles are equally applicable to other animals.

"So important is it that agriculturists should have definite ideas on this interesting subject, that we this week place at the head of our column a query addressed to us by a correspondent from Kinross. Judging from prevailing practice, we can scarcely avoid the conclusion that farmers generally deny that the mare has much or any influence on the development and growth of the progeny. How else can we explain the notorious fact that an immense proportion of the breeding mares throughout the country are selected not on account of their superior appearance and qualities, but because age, accident or hereditary effects have rendered them less valuable for work. How opposite is this to the more rational practice of those keen horsemen, the Arabs. Money fails to purchase their best mares. According to the view first distinctly set forth several years ago by Mr. Orton, of Sunderland, and concurred in by most good judges, the progeny appears especially to resemble the dam in the head, carcass, internal organs, and temper, whilst the influence of the sire is more fully noticeable in the color, and the form and style of the limbs. The powers of endurance depending upon the deep chest, arched ribs, and well-developed lungs, are the valuable qualities of many a priceless mare, and descend with great certainty to her offspring by various horses. On the other hand, the foals got by particular stallions usually exhibit great similarity in color, in the style of their action, and also in the defects of their limbs. If the horse has been subject to splints, spavins, or such other bony deposits, a large proportion of the colts will exhibit a similar tendency. This view must not, however, be carried too far. It must not thence be presumed that the sire exercises no influence upon the development of the internal organs or temper, or that a mare's weak or mis-shapen limbs will not appear in her progeny. It only justifies us in saying, that while the male and female appear to impress their characters tolerably equally upon the offspring, the characters, peculiarities, and even the diseases of the internal organs are, in a majority of cases, those of the female parent, whilst the skin and organs of locomotion usually indicate the preponderating influence of the sire. From this law, however, two important practical deductions may be safely drawn—1st, never to breed from mares with narrow, contracted chests, or weak loins, or delicate constitutions; 2d, to eschew decidedly, horses with weak, badly-shaped or diseased limbs."

Blind Staggers in Sheep.

A correspondent of the *American Agriculturist*, in the April No., writing under the above heading, very properly calls it "Hydarid on the brain," and says: "The hydatid is a minute parasitic insect, that in some unexplained manner finds its way to the brain, and forms a small sack containing watery fluid in which it multiplies. These sacks increase in size, press upon the brain and absorb its substance, causing derangement and ultimate death of the sheep. *No certain cure is known.* As the disease is most prevalent in weak animals, the preventive is to keep them in good condition. The malady is most frequent in wet, marshy districts, and little known upon upland or dry pastures."

I call the above a good, common-sense description of the disease. But I differ with the writer on one point, viz: no certain cure is known. It is necessary to know the exact locality of the sack or bladder containing the watery fluid, in order to treat the disease successfully. It is located exactly over the curve of the nostril, pressing against the anterior lobe of the brain and the skull. Any person may learn the locality of the sack by dissecting the head of a sheep that has died of the disease.

A certain cure is effected by the following operation: Take a round sharp-pointed instrument (a carpenter's scratch-awl is good) and pierce the skull right into the sack. The water will run out in a few seconds. Then take a small syringe and force a few drops of spirits of turpentine inside the sack. Mix a

little turpentine with lard and rub round the wound. Let the sheep go, and if you have performed the operation well, it will be all right in a few days. A syringe and spirits of turpentine can be bought at the drug store for a mere trifle, and the life of a sheep saved in a few minutes. Don't be chicken-hearted; it is a christian duty to help man or beast in distress.

J. BOLD.

ORANGE, May 5, 1863.

Don't Slaughter your Calves!

They'll bring a good round price ere they're a year old—that is if all our calculations are not upset.

Last fall, many of our farmers, tired of "raising cattle for hide and tallow," sold out their full grown cattle for paltry prices and knocked their calves on the head as soon after they were born as a butcher could be induced to bid on them. We then warned them against such folly, and we now repeat our admonition with the emphasis added by increasing prices. Perhaps, after the sheep mania has somewhat abated, they will be more open to conviction. Well, we can afford to wait if they can.

THE BEE-KEEPER.

The Wants of the Bee.

We have knowledge of no animal in whose nature are embodied the elements of self extermination to so great an extent as the bee. Since the instinct for gathering and storing honey predominates over all else with the workers, they very soon fill any ordinary cavity in which they are placed. Indeed, so strong is their determination to work, when honey is abundant, that if they enter the hive laden with the product of nature's richest store of sweets, and there find all the cells filled, either with honey previously gathered or with young brood, they vacate cell after cell containing newly laid eggs, larves, or sealed bees, till the entire hive is filled with honey;* in consequence of which breeding is wholly suspended, and since the life of the worker is of short duration during the season that honey is most abundant, the colony suddenly becomes reduced in numbers, and not unfrequently are they entirely lost, leaving a hive almost, and sometimes wholly, filled with honey and bee-bread. Hence, were it not for the swarming instinct, imparted to them at certain periods, they would in a few years become extinct.

The *fact* that workers are short lived having been but recently discovered, may require some demonstration to satisfy the mind of many who are just beginning to give to practical bee-culture the importance that it demands. This matter is considered at some length in the Am. Bee Journal, 1861, p. 9, also the same, p. 148, where we find the following: "We may estimate that during the height of the honey season, they do not, on the average, live longer than five or six weeks."

Also see Taylor's Manual, London, 1860, p. 15. He says, on the authority of Dr. Bevan and his own experience, that "there is no doubt that every bee existing after Christmas was bred during the latter part of summer or autumn." And on page 150: "They are short lived, and periodically renewed; a large proportion of the bees at the close of the season are those produced in the *latter months*.".

Many other references are at hand, but the *fact* must suffice for the present. An Italian queen was given to a vigorous stock of native bees on the 15th of July, and in sixty days after I could not find any native bees in the hive, but it contained a numerous colony of Italian bees. This, with many other facts, coming to my knowledge, satisfies me that the life of the "worker," during the height of the working season, is less than fifty days. Hence we may conclude that *the excess of honey stored early in the breeding chamber of the hive is quite fatal to success in bee-culture.*

A large majority of bee-keepers, not being familiar with the habits and instincts of the bee, depend wholly upon *luck* for success with their bees. And many suppose if they can get their bees into some "new-fangled notion" for a hive, that has been *patented* by some one who has studied much more on bee-hives than

* Am. Bee Journal, 1861, p. 233.

on the habits and nature of the bee, then their *luck* is favorably turned and their fortune secured. But let it be fully understood that no *hive* in existence can make a man a *bee-keeper*.

Hence we must conclude that bees require the intelligent care of the apiarist bestowed upon them at the right time.

Moths may infest a weak colony. They must be removed from the *combs* where they do their mischief.

A stock may be reduced in numbers so as not to be able to generate heat enough to keep up a "hatching temperature" in the hive. They must be strengthened by supplying bees or maturing brood from strong ones.

They may lose their queen, and can be saved only by giving them another, or supplying them with comb containing newly laid eggs or young larves from a hive that has a prolific queen.

Too many are the "wants of the bee" to be enumerated in one short article; but *how* to supply some of the wants mentioned, and more especially how to afford relief in this matter of the excess of honey in the breeding chamber during the height of the breeding season, when the queen should be depositing from *two to three thousand eggs every twenty-four hours*, will be hereafter explained.

J. M. STEBBINS

APPLETON, May 5, 1853.

Bee-Keeping Experience.

About ten years ago, I commenced keeping bees in northern New York. I had no knowledge concerning them, theoretical or practical. I bought, in the spring, two stocks for $9. In the fall, I sold the increase and honey from the two stocks for $36—reserving about 20 lbs. for family use. The honey sold for 20 to 25 cents per lb.—the swarms for $5. These were in common box hives, with boxes on top for the storage of surplus honey. The next spring after, I started with the same stocks. Part of my hives I made one foot square in the clear, (same as the old-fashioned box hive), the rest were of the same size, but with bars in the top, and surplus boxes turned directly upon them, giving greater facilities for the access and working of the bees in the caps.

I got a splendid yield of honey in the caps, but lost some of my swarms the following winter, because my hives were so small that the bees had not sufficient stores to winter. In getting a large yield of cap honey, I robbed the laborers of their sustenance for the winter.

The following spring I had four hives—one of them light and but few bees. That year, I did not get a large supply of cap honey, but my bees increased so that I had 13 hives that I carried into the cellar in November. In the winter I lost, by rats and moulding of the combs, all but four hives. I had them up on shelves where I thought them safe, but the rats got access to several hives by gnawing through the inch pine boards of which they were made. The water came into the cellar, three feet deep, during the thawing of the snow in the spring, and the combs of some hives became almost a mass of mold, and ruined several stocks, and injured the balance. I sold two stocks at $5 each, and set out two. I received only one swarm that season, but got a fair supply of surplus honey from the old stocks and swarm—in all about 71 lbs.

Had I possessed more knowledge and experience, I could have improved these results. Every year, by the aid of books and agricultural papers, and experience, I gained valuable information, which, had I previously possessed, would have been a source of profit to me. Since I came to this State I have kept a limited number of swarms. My business being such that I could give them but little attention, many times when they most needed it, I have still met with a fair share of success. Nothing has yielded me more pleasure or profit for the amount of capital invested. My bees, one year with another, saying nothing about superintendence or expense of hives, have yearly, in honey and increase, doubled their value. With my present knowledge and experience, I should think I was doing very poorly not to double the value of my bees yearly.

The prairie portion of this county can not well be beat, in this northern climate, for bee pasturage. The white clover of the commons, the roadsides, and the pastures, is one mass of bloom from early in the summer till late in the fall. This our great reliance. But there are many other honey-producing plants that are by no means to be despised.

In my next I will say something about hives. If it treads on any patent vender's toes, I can't help it. L. L. F.

ROLLING PRAIRIE, Wis., April, 1863.

THE POULTERER.

Setting Hens and Raising Chickens.

The time for raising chickens having come a few hints, founded on experience, may prove of service to some of our young readers.

SELECTING THE HEN.

An old hen is usually more reliable than a young one, and a hen having more or less of game blood in her will usually have the more heat about her. Avoid those hens reared from a cross with the Black Spanish or Bolton Gray breeds, as the characteristic non sitting qualities of those breeds will be apt to injure them for this use Of the large breeds, the Asiatic varieties, their large bodies and docile habits, are of great advantage, but their heavy movements will break the eggs and destroy the chickens, unless special precaution is taken.

In preparing nests for such, arrange matters so that the fowls can reach their nests without being obliged to step down any distance to reach them. I have usually set them in a box so filled as to bring the eggs nearly on a level with the top, and then putting the box in a corner, placing around the two sides other boxes of equal height.

One marked advantage of the large breeds is this: they are such a hardy race, and have usually so large a stock of spare fat, that they can, without detriment, hatch a couple of broods at one sitting, the first brood being added to that of some other hen as soon as hatched. I have seen twenty-five to thirty-five chickens reared (not hatched) by one of these large fowls of the Brahma Pootra variety.

SELECTING THE EGGS.

Having decided upon the breed of fowl you wish to raise, you cannot exercise too much care to guard against impurity. It is not enough to know that the fowls from which the eggs were obtained have all the marks of purity. Your eggs will give all sorts, unless the fowls that laid them are pure-blooded. Use only the freshest of eggs. Eggs even but a week old are not so reliable as those fresher. There are those who pretend to forecast the sex of the chick, by the shape of the egg. I once selected the short, thick eggs, as the most reliable for producing pullets. The result was nine roosters and one pullet! Do not set eggs of the small breeds under the larger varieties of fowls; there is a law of adaptation between the rough ways of each variety of fowl, and the toughness of their chickens, which it is not wise to violate.

In preparing the nests, favor the natural instincts of the hen, selecting a retired location—rather dark, withal.

THE HORTICULTURIST.

A. G. HANFORD, : : CORRESPONDING EDITOR.

Our Small Fruits.

RASPBERRIES.—The Yellow and Red Antwerp Raspberries grow vigorously and seem to be perfectly hardy on our prairie soil. The Yellow is an abundant bearer of good fruit. The Red is not very prolific, but bears a moderate crop. Canes of both kinds, in a rich soil, and with good cultivation, grow to the length of ten or twelve feet—the tips bending over and taking root, from which an abundance of new plants can be obtained. The plants should be set about six feet apart each way. If any of your readers want a good raspberry for family use, we think they will be pleased with the Yellow Antwerp.

We have tried Allen's Red, or, at least, what a Wisconsin nurseryman sold us as that variety. It grew and multiplied by suckers prodigiously; became a perfect nuisance, blowed full every year, but no fruit. Have a suspicion that I was humbugged by the nurseryman Will your readers give their experience?

The American Black Cap is perfectly hardy and bears abundantly. The fruit when well grown is not bad to take. Some complain of its dryness and seeds, but all our friends that have called on us in its season could always contrive to worry down a few, and would not very strenuously object to taking home a quart or two, if very strongly urged.

Last year we set out three plants of Brinkle's Orange. They bore abundantly, consequently grew but little. We left them exposed without

protection through the winter, and two out of the three died. It was low wet ground where we set them, and the little growth consequent, upon allowing them to bear the first season, might have contributed to their death. We also set three plants of the Large Fruited Monthly under the same conditions, and lost one plant in wintering.

BLACKBERRIES.—The Lawton or New Rochelle has winter-killed here every year for four years, until the past winter. It is pretty sure to winter-kill down to the ground, unless protected. It will do nothing in this region without the best of culture and winter protection. Have seen it bearing a fair crop in a well sheltered garden surrounded by a board fence and shrubbery. We are setting the Dorchester and Newman's Thornless this year. Two plants of each, set last season, passed through the winter safely. Will report progress after further trial.

STRAWBERRIES.—Wilson's Albany Seedling we regard as one of the best hardy and most prolific varieties we have tried, though some of the plants killed out the past winter. The quality is not first rate, yet its large size and abundant bearing make it a very desirable berry. McAvoy's Superior is a good berry, of good size and hardy. Hovey's Seedling proves hardy and vigorous, but rather a shy bearer.

L. L. FAIRCHILD.

ROLLING PRAIRIE, Dodge Co., June 1, 1863.

Those Seedlings Again.

In response to our remarks in the April No. upon the seedling apples left in our office by Marcellus Finch, Esq., we have the following from his pen:

"I have read your remarks about those seedlings sent you. I was in hopes that you would give some opinion of their merits as to cultivation and propagation; for if we have natural fruit that is equal to or better than the grafted varieties, it is my opinion that it would be economy to propagate them, if they are hardy and great bearers, which is the case with those I sent you."

The answer to this request must be to the effect that we would not think them worthy of propagation, nor, indeed—except, perhaps, one variety—of cultivation. Not that they would not be very respectable fruit in a new country, where fruit is scarce, but that they are inferior to others which might be produced in their stead. We believe most emphatically in producing *the best of everything* we undertake to produce at all.

The Petunia.

Among the large number of annuals beautiful for bedding, few are more deserving of cultivation than the Petunia. Varied in color, plain, striped, blotched, or veined, and delicate in organization, the flowers are always pleasing. Uusually they vary in diameter from one to two inches, but in some cases they have been produced with a diameter of three inches and partially double.

DESTROYING PURSLANE.—The *Prairie Farmer*, after stating that purslane will not grow after being digested by a hog, says that Prof. Turner has a sort of toothed scoop with plow handles attached, with which he passes between his nursery rows and takes out the purslane which the hoe and cultivator have left there, and carries it off easily and rapidly for the food of swine. The teeth of this instru-

ment are made of iron rods, about three-fourths of an inch in diameter, and half a dozen in number.

Wine Farming.

Mr. R. Buchanan, a well known successful wine producer of Ohio, gives in the Ohio Valley Farmer the following statement of the raising and fermentation of wine:

Wine farming will, in a few years, become simplified, and almost as easily understood as corn planting. There is no mystery in it. Experience alone must teach the proper position, as well as the soil; the right distance apart for the vines, the most judicious method for spring and summer pruning; and as for cultivation, keep the ground clean with the plow or cultivator like corn.

Making the wine is as simple as making cider. The grape bunches are cut from the vines and all unsound or unripe berries picked off the bunch and thrown into a basket, to make —with the addition of sugar—vinegar, or an inferior wine. The imperfect grapes of each day's cutting are taken to the wine house, and in the evening, after being mashed in a barrel with a beetle—stem and berries—or passed through wooden rollers in a small mill, are put on the press and the juice extracted. About one-third runs off without any pressure. The outside edges of the pomace are cut off for 8 10 inches, after the first pressing, separated with the hands, and thrown on top, when the power of the screw is applied, and another pressing made. This is repeated two or three times. The juice from the last pressing, being very dark and astringent, is put with the inferior wine. The other is put into large casks filled about five-sixths full, to ferment and make the good wine No sugar or brandy should be added to the best Catawba juice—or must—as it makes a better wine without and is strong enough to keep well. One end of a syphon is placed in the bunghole of the cask —the other being crooked over rests in a bucket of water.

The fermentation commences in a day or two and the carbonic acid escapes through the water. In ten or fourteen days the syphon may be removed, the casks filled up and the bung driven in lightly—in a month, tightly. In mid winter the wine is drawn off into another cask, and the lees of the wine, with the pomace of the grapes, is used to make brandy.

The wine will be clear and pleasant to drink in a month or two after the fermentation ceases. The second fermentation occurs in the spring—about the time of the blossoming of the grapes—this is but slight, and it will be merely necessary to loosen the bungs; when it is over, the wine will be clear in two or three months, and safe to bottle, but that operation had better be deferred until November. And this is the whole process of making still wine —the wine for general use; and, being a natural product of the pure juice of the grape, it is more wholesome than any mixed or artificial wine, however showy and high priced it may be.

Let the grapes be well ripened; the press, casks, and all vessels perfectly clean, and then keep the air from the new wine, by having the casks constantly bung full, and there is no danger of its spoiling. This is the whole secret.

It is presumed that no one will go into wine farming largely at first, but take the precaution to test, by the cultivation of a few acres, the capabilities of the soil, position and climate, and the kind of grape best suited to it.

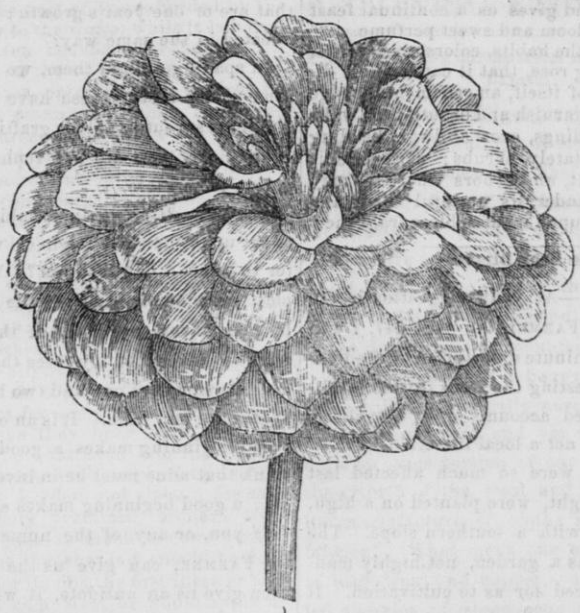
Pegging Down Roses.

I saw a method of training roses last year which I believe has not been noticed in your magazine, though I am pleased to say it is not often you are caught lagging in the rear of useful hints for your readers. This is neither more nor less than simply pegging down roses so as to cover the whole surface of the soil in a bed, instead of training them up to stakes in the usual way. Strong forked branches of trees, cut so as to make pegs of them, are used, and the beds are beautiful in the extreme, if such beauty can be aptly termed extreme. The beds I saw had but one kind in each—one I remember was of Louis Phillippe, this was crimson; and another was Cels, nearly white.

There were also some beds with Hybrid Perpetuals, which, though not making such a brilliant effect as the former kinds, were very pretty indeed, and they seemed to flower much more freely treated in this way than when grown, as usually, upright. C D.

[With regard to the free flowering properties of the Hybrid Perpetuals, noticed as following this treatment, we are informed that this was attributed to the practice of cutting off the blooms as fast as they faded, though our correspondent is no doubt right in her surmise that pegging down has some influence on their productiveness.]—*Gardener's Monthly.*

How to Save a Crotched Tree.—Notwithstanding all that has been said against allowing a tree of any kind to grow so as to form a crotch, most persist in permitting many young trees to grow with two equal branches, thus forming a crotch, which is very liable to be split by the wind, or by a large burden of fruit. Procure a carriage bolt of the proper length, and bore a hole through the crotch, so that the bolt may be seen at the junction of the limbs, after it has been driven in. Put a large washer at the head of the bolt, and one at the nut, and screw it up tightly. Many a valuable tree has been and may be saved in this way from being split down at the crotch.



Zinnia Flore Pleno.

Among the numerous varieties of flower seeds which we have sent out the present season, some will be found labelled *Zinnia*. The double Zinnia, from which the seeds referred to were selected by those of whom we ordered, very much resemble the Dahlia. It produces flowers of various colors, and for the past year or two has been exceedingly popular. The cut, perhaps, scarcely does justice to the subject, but, nevertheless, seems to give a very good idea of that beautiful flower.

Mowing Lawns.—It is of the first importance that the first mowing should be done as early as possible in the season. If left to grow long before the first cutting, the leaves get yellow at the base, and at every cutting after the yellowness appears, totally destroying the fine green color which gives the lawn its chief attraction. Where a first rate mowing is desired it is best to roll the grass the day before cutting. The grass is then pressed all one way, and cut evenly, and any dirt or stones pressed beneath the surface that would otherwise take the edge off the scythe. A good lawn-mower keeps his scythe very sharp. Some grind a little before each regular set-to at mowing. Those who are not accustomed to mowing lawns should take but a few inches in width at a time, so as not to "score." With a little thought and judgment, any field mower can soon become a good lawn hand. A sharp scythe is the chief element of success.—*Gardener's Chronicle.*

The Ever-Blooming Rose.

If there is a plant in whose culture we excel the people of all other nations, it is the ever-blooming rose; if there is one plant that gives more gratification and pleasure than others, for the care bestowed upon it and the price of its cost, it is the ever-blooming rose; if any body grows but one plant, it should be an ever-blooming rose. It will thrive as well in the common flower pot in the window of the poor, as in the richest vase of the conservatory of the wealthy; and with the same care it flourishes as well at the side of the humble cot as at the ingenious verandah of the palace.

When there were none but the yearly flowering rose, it was praised, worshipped, and adored; orators lectured upon its virtues; scribes wrote of it, and poets sung of it; it was strewed on the paths of the great and meritorious as an emblem of adoration; it was wrought into wreaths and garlands to ornament the temples and thrones, and persons of kings; it garnished the bride and holy altar where the ceremony of marriage was performed; it decked the festal boards on great occasions, and embalmed the remains of the dead; it was planted on the remains of the worthy to record the virtues of the departed. When so much adulation and honor were bestowed upon the rose that flowered but one month in a year, what language is sufficient to chant the praise of the one that now far surpasses it in beauty

and fragrance, and gives us a continual feast of its gorgeous bloom and sweet perfume.

So various are the habits, colors, and sizes of the ever-blooming rose, that it can make a diversified garden of itself, an ornamental hedge for an enclosure, garnish and beautify the walls of unsightly buildings, grow as dwarf bedding plants, and as stately shrubs; clothe trellis work for ornament, and arbors where we may rest and repose under its grateful shade and shelter, and feast upon its matchless fragrance.

The Pear Blight.

FRIEND HOYT:—At your suggestion in the April No. of the FARMER, on page 147, I will give you a more minute description of the Pear Blight that is infesting the trees in this locality. I have noticed accounts of it elsewhere, so I suppose it is not a local infection.

My trees, that were so much affected last year with the blight, were planted on a high, dry prairie soil, with a southern slope. The plat is occupied as a garden, not highly manured, but well cared for as to cultivation. It is usually spaded up in the spring and hoed several times during the summer.

The trees, from the time they were planted out, have made a rapid and healthy growth; but the growth has not been so great but that they have matured their wood in the fall, so that they passed the ordeal of our severe winters without killing. They have grown so finely and looked so healthy, till last summer, that we looked upon them as the *belles* of the garden. The blight was not confined to any particular time; we could see new traces of it from May till late in the fall. Some commenced blighting early in the spring; others did not commence till midsummer, and as late as the middle of September. Some leaved out in the spring and blossomed full, set for fruit, and the fruit was half grown when they commenced blighting. Some two or three Bartletts made a growth of ten or twelve inches, and then blossomed on the end of that growth, which set for fruit, that grew to the size of a butternut, and then blighted.

These trees were budded on the seedling pear, and had been planted out eight or nine years. They were one year from the bud when they were planted out. I have some seedlings that are of one year's growth; they, too, were affected in the same way.

In spading around them, we necessarily cut some of the roots; these have sprouted up.—Are these sprouts good for grafting or budding? If they are, then we can replenish by propagating from these.

Now, in setting again, would it be advisable to set upon the same land, or would it be better to select a new location? Would it be the most judicious way to set the pears on a plat by themselves, or intermix them with other fruit? Several of my trees that one year ago last summer bore one and two bushels of pears apiece are now dead. It is an old saying that a "bad beginning makes a good ending," but I think that mine must be in inverse proportion, viz: a good beginning makes a bad ending.

If you, or any of the numerous readers of the FARMER, can give us the true cause, and then give us an antidote, it will be gratefully received by many who now look upon the future prospects of pear culture as being doubtful and uncertain. I opine that the true cause of the disease is a virus in the atmosphere, and that the only one that is able to apply an effectual remedy is "He who doeth all things well."

H. W. WOLCOTT.

ROSENDALE, April 13, 1863.

Nails in Fruit Trees.

A singular fact, worthy of being recorded, was mentioned to us a few days since by Mr. Alexander Duke, of Albemarle. He stated that while on a visit to a neighbor, his attention was called to a large peach orchard, every tree of which was totally destroyed by the ravages of the worm, with the exception of three, and these were the most thrifty and flourishing peach trees that he ever saw. The only cause of their superiority known to his host was an experiment made in consequence of observing that those parts of worm-eaten timber into which nails had been driven were generally sound. When his trees were about a year old, he drove a ten-penny nail through the body as near the ground as possible. Whilst the balance of his orchard had gradually failed, and finally yielded to the ravages of the worms, three of these trees, selected at random, treated precisely in the same manner, with the exception of nailing, had always been healthy, furnishing him at the very period with the greatest profusion of the most luscious fruit.

It is supposed the salt of iron afforded by the nails is offensive to the worm, while it is harmless, perhaps even beneficial to the tree. A chemical writer on the subject says:

"The oxydation or rusting of the iron by the sap evolves ammonia, which, as the sap rises, will of course impregnate every particle of the foliage, and prove too severe a dose for the delicate palate of intruding insects."

The writer recommends driving half a dozen nails into the trunk. Several experiments of the kind resulted successfully.

MANAGEMENT OF FRUIT TREES.—Dr. Kennicott, in a late essay on this subject, makes the following remarks: He says, "a crop of rye, barley, oats or wheat, in a young orchard, is worse than fire-blight or caterpillars"—that fruit trees need as much cultivation as corn and potatoes, not for one year or five, but forever, or as long as they bear fruit. Cultivation should not be continued late in summer, for half-hardy trees, such as peaches, but the wood allowed to harden and ripen. He says that, as commonly practiced, orchard trees need pruning about as much as cows' horns; and that most of the shaping should be done in the nursery, or during the first three or four years. In the rich West he would apply no manure to orchards till the trees had been years in bearing. He would spread it broadcast in autumn, not at the foot of the trunk, as is sometimes done, and where the roots cannot get it. Plow it under slightly in spring.

REMEDY FOR BARREN FRUIT TREES.—Some fruit trees will never produce any *good* fruit, and some will not bear even *poor* fruit. I had several such trees, and every effort failed to make them bear fruit, but this one. We erected a portable fence around each one, and kept a pig or two in the enclosure. Four panels, about sixteen feet long, of light board fence were placed around the tree, and simply nailed together at the corners. After the pigs had been in that pen about a month, they were removed to another tree. If this remedy fails to produce good fruit, after they have been well manured and regrafted, then let the trees be cut down. Make a high board fence around plum trees, for young chickens, and keep them there until they are old enough to run at large, and see if they will not destroy or frighten away the curculio, and thus save a crop of plums. The experiment is worthy of trial, as it promises good results.

BARK-WOUNDS.—To protect bark-wounds against the decaying influences of the air, cover them with a thin coat of gum shellac, composed of one ounce of shellac dissolved in one quart of alcohol of 95 per cent. strength. The alcohol will soon evaporate and leave the shellac coating dry and hard—but it should be thin or it may crack and peel off.

MECHANICAL & COMMERCIAL.

A Good Opening for Eastern and Transatlantic Capital.

Circumstances of geographical location, of physical configuration, of soil, of mineral deposits, of immense supplies of timber, of inexhaustible natural mechanical powers, and the westward tendency of the star of empire, all conspire to enforce the conviction that the Great Northwest, already the granary of the world, is destined to become a leading section in the department of manufactures.

If this hope is not to be realized, what mean these millions of fertile acres, productive of all staples of food, and yet adapted, as is almost no other portion of our vast country, to the growth of the wool and flax essential to the manufacture of cloths and other textile fabrics? What mean our exhaustless mines of lead, iron, and copper,—our well-distributed quarries of stone—our mighty forests of pine, and cedar, of oak, and ash, and hickory, and the other woods so extensively used in the building of houses and ships, and in every branch of the mechanic arts?—our numerous and measureless water-powers, sufficient for a world of mills and factories—our unexampled facilities for easy water-communication with every people on the globe? Are not all these a sure prophecy on our behalf? Or are we to continue henceforth and forever to *produce* merely? selling the fruits of our mining, our lumbering, and our agricultural enterprise to the East and to the Old World?

The answer will not long be doubtful. Woolen cloths and linens, paints and oils, iron and copper ware, castings of every description, agricultural implements, &c., will not always be manufactured for us by Eastern mechanics with the added cost of transportation both ways, still further increased by half a dozen intermediate profits.

Factories are sure to be established as a necessity ere long, and it is our opinion that capitalists, either American or foreign, could not do better with their money than to invest in certain branches of manufacturing even

now. The saving of transportation would help them to compete with Eastern Manufacturers who have longer been established, and within ten years we may thus supply ourselves with three-fourths of all the multitude of heavy articles we now purchase abroad.

Already something has been done. Touching this subject, an able writer in the *Merchants' Magazine* thus remarks:

"In the past ten years the West has, as we have shown, exceeded all other sections in prosperity. Population and capital have flowed in upon her, developing productions which have found a ready sale at good profits, while by means of the railroads the whole Western country has participated in the general prosperity. Now the population has grown somewhat in excess of the number which can readily be supported from agriculture, even if possessed of a large foreign market, and, as formerly in the East so at present in the West, manufactures are growing up and are succeeding, even in spite of the advantages of capital and long experience of the East. The census gives us the following figures in relation to the progress of the West in that direction:

	Population.	*No. factories.*	*Capital.*
Eastern States.....	10,580,840	71,878	$721,679,206
Western States.....	8,567,249	34,301	196,889,475
	Value raw material.	*No. Hands.*	*Value produced.*
Eastern States....	$635,787,343	1,025,067	$1,298,208,058
Western States...	224,257,494	222,325	390,411,942

"Thus it appears that the value per head of manufactures at the West is $46, and at the East $122, and that the West produces nearly one-third as much as the Eastern and Middle States. But the productions are of a coarser description, as is evident from the fact that at the West the raw materials are 60 per cent of the value produced, while at the East they are but 50 per cent. These manufactures at the West, it must be remembered, have grown up without any protection from the vast competition of New England Capital, although that competition has been far more direct and effective than was that of foreign goods against New England at the close of the war in 1812. The principal kinds of manufactures produced East and West, have been as follows, according to the same authority:

EAST.

	Capital.	Value	
	1860	1850	1860
Boots and shoes.....	$20,019,039	$46,723,572	$77,355,368
Woolens	31,513,258	40,232,769	62,609,568
Cottons.....	89,446,544	58,566,922	106,573,646
Clothing.....	17,471,504	37,837,591	51,618,292
Sewing Machines.....	1,344,050	.....	5,416,560
Furniture	3,372,152	12,270,416	16,026,165
Pig iron.....	.....	.....	3,170,101
Steam engines.....	.....	23,529,733	32,937,361
Agricultural impl....	.....	4,134,232	8,249,281
Iron froundries.....	.....	14,683,600	20,871,310
Lumber	.....	32,648,645	38,524,900
Flour.....	.....	74,753,665	90,261,856
Soap and candles.....	3,816,958	7,940,632	10,458,542

WEST.

	Capital.	Value	
	1860	1850	1860
Boots and shoes.....	$3,141,920	$5,141,520	$9,465,205
Woolens	2,519,289	3,930,084	3,718,092
Cottons.....	783,000	1,269,403	1,391,987
Clothing.....	3,021,221	2,765,232	8,610,329
Sewing machines.....	46,200	.....	178,785
Furniture	3,971,910	2,760,993	6,674,839
Pig iron.....	.....	.....	16,311,000
Steam engines.....	.....	3,625,317	8,233,876
Agricultural impl.....	.....	1,923,317	8,233,876
Iron foundries.....	.....	3,839,887	5,170,984
Lumber.....	.....	14,577,250	33,274,793
Flour.....	.....	42,673,992	96,038,794
Soap and candles.....	1,783,127	1,836,802	5,707.187

"These figures indicate the nature of the struggle that has been going on. Thus, articles like shoes and clothing, have not as yet flourished at the West under the severe competition of the East, although the West has the advantage in respect to raw materials. But in the heavier articles, like iron, furniture, agricultural implements, steam engines, etc., which are protected at the West by the cost of transportation of the materials, the increase there has far outstripped the progress of the same branches at the East. These figures also indicate that all branches of manufactures are organized and ready for expansion. At such a moment war supervenes and closes the door to much of the usual trade of that region, by cutting off the Southern outlets. The employments of Western capital come to an end, and enterprise is turned in the direction of manufactures at the very moment when cotton, the raw material for $106.000.000 of Eastern manufactures, is no longer available, and the flax and wool of the West are becoming the materials for clothing.

"Thus the golden period for the West has arrived; the East no longer having the advantage over her, and the usual employment for capital being cut off to a great extent, we shall soon find her expanding in this new direction and furnishing not only food but clothing for the world. Her fertile soil, aided by machinery, can, with the same amount of manual labor, furnish a larger surplus of food than any other region; while her raw materials, her minerals, her water-courses, and her railroads all combine with cheap food to make the West the region for the cheapest possible production of manufactures. The fruits of her rich soil will then find a market, not only directly but also in the shape of goods. England now imports food and material from the West, and, combining them with English labor, furnishes goods for the supply of the world. The Eastern States have also in the same way gained great wealth. But now the West is about to do that business for herself—combining her own labor, material and food, and thereby becoming the centre of manufactures."

☞ It is said that if bricks are dipped in water before being laid in the wall, the mortar will adhere better.

A New Design of a Spring or Dairy House.

BY J. WILKINSON, LANDSCAPE GARDENER AND RURAL ARCHITECT, BALTIMORE, MD.

I constructed a spring-house during the summer of 1841, which has been very much admired, and believing it to be very perfect in principle, I will describe it for the benefit of your readers. This house is for a small dairy; it will accommodate but twenty pans or crocks, that are fifteen inches in diameter each, though its capacity may be doubled without increasing the size of the house, by placing another sink for water twelve inches above the one I shall describe, supporting it in the same manner, and allowing the water to flow into the uppermost one first, thence to the lower one. The building is circular, ten feet in diameter on the inside, and has a ten feet ceiling.

The wall may be of brick or stone. If of brick, it need be but nine inches thick; if of stone, eighteen inches thick.

The floor to be cemented on the earth. The building to be located below the spring, so that the water will flow through a pipe to the height of two feet nine inches above the floor of the dairy room. The water is received into one end and discharged at the other end of the sink in which the pans of milk are set.

The sink is the shape of a horse-shoe, the opening at the heel being placed in front of the door.

It is of iron, eighteen inches wide at the top, and thirteen inches at the bottom, and twenty-six feet long.

It is supported on iron brackets, set in the wall of the building, two feet six inches from the floor, and being circular in form, and surrounding the interior of the building, is most conveniently located.

In the absence of both bricks and stones, it may be a double frame building, with an air space between the two frames. In the use of a frame building, it should be constructed by laying two foundation walls, with a four-inch air space between them, which should extend at least two feet below the surface of the ground, as it is at that point that the heat is conducted into the building more than at any other. The outer foundation wall should be laid at least eight inches above the surface of the ground.

The floor should be built the same as in the brick or stone structure.

The exterior of the building may be lathed and plastered, or sided with boards. In either case, the side of the outer studs should be lathed and plastered before the inner ones are erected, and the interior should be neatly plastered and lime-washed.

If arranged thus, this building will be found equal if not superior to one of bricks or stones.

The ventilation should be effected in the manner I shall describe, whatever may be the material used in construction. The mode of ventilation which I use is an original idea, and the action of it just the opposite of that used in ventilating heated buildings, or where the air within is warmer than that without the building. The cold spring water used for cooling the milk, if it is allowed to flow in and out perpetually as it should, has the effect to reduce the temperature of the building below that of the air without it in summer, the season when the dairy house is used Hence, there will be a circulation downward if there are openings for circulation both above and below.

I provide the lower escapes for air, by inserting in a building of the size described, eight two-inch glazed draining tiles, equally spaced around the building. The tiles should not project within or without the walls, and should be set just below the sink. There should be a space of one inch between the inner wall and the sink, that the air may have free passage over and behind the sink, to the openings in the wall, and to prevent the heat from being conducted from the wall to the sink. The eaves of the roof should project two feet six inches, and the boards with which the projection is ceiled on the under side, should be laid with a space of three-eighths of an inch between them, as these are the ingress openings for air. By this arrangement the air is taken into the space between the roof and the ceiling of the room, where all dust that may be floating in it will be deposited before it descends into the dairy through the opening in the centre of the ceiling, where the air is admitted through an ornamental iron lattice, two feet in diameter.

In the downward passage of the air towards the egress openings, it is required to pass over all the milk in the sink, equally, which is of great importance.

A circular marble table is set in the middle of the room on a single iron column, set in the cement floor. On this table the milk is skimmed and the butter worked.

This location of the table in the centre of the space surrounded by the sink, it will be seen, is as convenient as it can be, as none of the pans are to be moved more than two and a half feet, to or from the table.

The building being entirely above ground, the carrying of milk up and down stairs is avoided.

The cost of a building constructed of stone, of the dimensions, and with all the appurtenances described, finished in a neat and workman-like manner, is $225.—*Germantown Telegraph.*

SCIENCE, ART, STATISTICS.

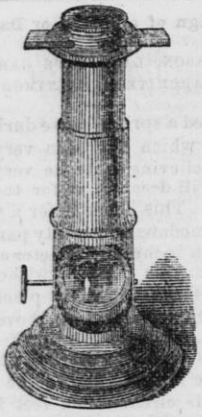
The Craig Microscope.

We cannot interest the curious, inventive, and knowledge-loving portion of the community more than by giving them a description of a new microscope, lately patented and introduced into public notice. It is, indeed, a new revelation to the natural vision, and opens up and extends indefinitely the field of observation and investigation. It is thus described by one who has used it and who knows its merits:

"This beautiful and useful instrument was patented on the 18th day of February last. The microscope, as the reader is aware, is an instrument used to magnify minute objects; it reveals whole races of living beings which the unaided eye has never seen, and enables us to behold the wonderful beauty and adaptation to the purposes for which they were intended, of the most minute parts of animal and vegetable organizations. No field of inquiry is more inviting and promises a richer harvest than that which is opened up by the microscope, and few departments of education are more important and interesting than this.

"There are two kinds of microscopes, denominated simple and compound. In a simple microscope we look directly at an object through a single lens, whereas in a compound microscope there are two glasses—one near the object and the other near the eye—and the focus is adjusted by changing the position of one of the glasses. So much time, skill, and patience are required to use a compound microscope, that it has never come into popular use, notwithstanding the wonderful interest which attaches to microscopic investigations.

The simple microscope, if of a high power, can be used with but very little satisfaction and comfort, owing to the fact that both the object and the eye must be very near the lens, and it is difficult to get and retain the focus during the examination, as every one is aware who has attempted to use the little lens set in a plate of silver or other metal. But we have



now in the "Craig Microscope," an instrument which requires neither skill nor experience, and but very little time and patience, to make numerous examinations of microscopic objects. Although it has but one lens, yet its shape and composition are new, and practically it stands midway between the simple and compound microscope; and the serious obstacles, named above, to the general use of either of these instruments, are obviated in this new microscope. The lens is neatly mounted in hard rubber, at the summit of the instrument; the stand is either of brass or rubber, about five inches high; the focus is on the under or flat surface of the lens, the object glass is placed immediately beneath the lens, and, two or three inches below this, there is a mirror to reflect the light on the under surface of the object and lens. The magnifying power of this instrument is greater than that of the cheapest compound microscope, and in fact is just about the power most frequently required in making microscopic examinations, and the inventor has had the good sense to offer it to the public at a very low price—simply two dollars.

"There is no end to the objects suitable for a microscopic examination—they are innumerable. Take, for illustration, a common house-fly. Now, the reader must not expect to be able to place a whole fly in the focus of a microscope which magnifies one hundred diameters, for the field is not large enough—the higher the power the smaller the field of

vision—if a whole fly could be magnified one hundred diameters, a full-grown turkey could apparently stand in his shadow, but this is impossible. To examine large opaque objects a simple magnifying-glass should be used; of course this has but a limited power. In order that a microscope may be used for this purpose, it must be a compound instrument, and have a separate glass to condense the rays of light on the upper surface of the opaque object, so as to render it visible, and then only a minute portion of the object can be seen at once. To be able to use such an instrument, with any satisfaction, requires an amount of skill, patience, and experience possessed by but few scientific men even. The microscope, then as an instrument for popular use, is intended to examine either very minute objects, or such as are at least sufficiently transparent for the light to shine through them. But to return to the fly. First, we have his feet; we have all noticed the ease with which he walks on the ceiling with his feet up, and we, perhaps, have wondered at this, but the microscope reveals two small sharp claws. But how can he walk on the under surface of smooth glass? surely his claws can be of little service to him here; but on examination we find that he has two pads, or spongy bodies, between the claws, which enable him to adhere to smooth surfaces. Remove his proboscis, and place it beneath the lens, and it will be found to be a wonderful and beautiful object. Shave off the front part of one of the eyes, wash it in a drop of water, and then examine it, and you will find a multitude of small eyes through which the insect looks in different directions, for his eyes are stationary. Examine his wings, for they are worth looking at, although not as beautiful as those of the black wasp and many other insects. Next, shave off his face and examine it, and you will find it a beautiful object. Beneath his wing you will find a small scale, or wing, which will pay for the trouble of an examination. So we may examine every part of the fly, which is either very minute or sufficiently transparent for the light to shine through it, and discover new wonders and new beauties. Every insect may be examined in the same way, for no two are alike even in the same parts, and some have additional organs. The bee has his sting, the roach and cricket their antennæ, or feelers; all very beautiful objects when viewed through the microscope. Hair, wool, fur, feathers, silk, linen, scales from a butterfly's wing, small seeds, thin slices of orange, lemon, or apple-peel, or of the surface of a strawberry, are only a few of the multitude of interesting objects. Liquids are very readily examined by the aid of this microscope. The globules of the blood, milk, and pus may be seen; also, the animalculæ of stagnant water, and the eels in vinnegar. Sugar or salt, partially dissolved, or dissolving, presents a beautiful appearance; and when dissolved and the water allowed to evaporate on the lens, the wonderful manner in which crystals form may be witnessed.

"A fine assortment of microscopic objects, with a microscope, furnishes a chaste and elegant entertainment for friends and neighbors, young and old, far more interesting and instructive than stereoscopic views, and at a less expense. The stereoscope can only be used with a given set of pictures or views, but this microscope can be used to view innumerable objects, of the most beautiful form and color, which the unaided eye can never see, and which cost nothing. In this microscope, then, we have a scientific instrument adapted to popular use, and so simple that a child can use it, and so cheap as to be within the reach of all.

"The microscope, like a book, spy-glass, telescope, &c., should be found in every school house and college, as one of the means and facilities for thorough and complete education. But the microscope likewise makes one of the best, most interesting, and instructive means of entertainment in the family at home."

We mentioned having received one of these beautiful little instruments, in the May No., but at that time we had not been able to give it a careful examination. To-day we have given it several tests, and feel bound to say that

we have been delighted with the result. The farmer who often wishes to examine the insects which infest his crops, will derive great pleasure from the use of it; while the younger members of the family will find it an unfailing source of amusement and instruction and amusement.

By referring to the inventor's advertisement those interested will learn the remarkable terms on which it is sold.

EDUCATIONAL.

Faithful Students Successful Men.

To a member of Parliament who had intimated that a University education unfitted young men for the practical duties of life, Hon. T. B. Macauley made the following reply:

"If I understand the opinions imputed to that noble lord, he thinks the proficiency of a young man in those pursuits which constitute a liberal education is not only no indication that he is in after-life to make a distinguished figure, but that it positively raises a presumption that in after-life he will be overcome in those contests which then take place. I understand that the noble lord is of opinion that young men gaining distinction in such pursuits are likely to turn out dullards, and utterly unfit for the contests of active life; and I am not sure that the noble lord did not say that it would be better to make boxing or cricket a test of fitness than a liberal education.

"I must say that it seems to me that there never was a fact better proved by an immense mass of evidence, by an experience almost unvaried, than this: that men who distinguish themselves in their youth above their contemporaries in academic competition almost always keep to the end of their lives the start they have gained in the earlier part of their career. This experience is so vast that I should as soon expect to hear any one question that arsenic is poison, or that brandy is intoxicating. Take the very simplest. Take down in any library the Cambridge Calendar. There you have the list of honors for a hundred years. Look at the list of wranglers, and of junior optimes, and I will venture to say that for one man who has in after-life distinguished himself among the junior optimes you will find twenty wranglers. Take the Oxford Calendar: look at the list of first-class men, and compare them with an equal number of men in the third class, and say in which list you find the majority of men who have distinguished themselves in after-life. But is not our history full of instances which prove this fact? Look at the Church, the Parliament, or the Bar. Look to the Parliament from the times when Parliamentary Government began in this country—from the days of Montagu and St. John to those of Canning and Peel. You need not stop there, but come down to the time of Lord Derby, and my Right Honorable friend the Chancellor of the Exchequer. Has it not always been the case that the men who were first in the competition of the schools have been the first in the competition of life? Look also to India. The ablest man who ever governed India was Warren Hastings; and was he not in the first rank at Westminster? The ablest civil servant I ever knew in India was Sir Charles Metcalfe; and was he not a man of the first standing at Eton? The most distinguished member of the aristocracy who ever governed India was Lord Wellesley. What was his Eton reputation? What was his Oxford reputation?

"If there be in this world a trying test of the fitness of men for the competition of active life, and of the strength and acuteness of their practical faculties, it is to be found in the contests of the English bar. Look at Lord Mansfield, Lord Eldon, Lord Stowell, Sir Vicary Gibbs, Lord Tenterden and Lord Lyndhurst. Take either the common law or the equity bar. The present Lord Chief Baron was senior wrangler; Mr. Baron Aldersen was senior wrangler; Mr. Justice Maule was senior wrangler; Mr. Baron Parke was eminently distinguished at the university for his classical and mathematical attainments; Mr. Baron Platt was a wrangler; and Mr. Justice Coleridge was one of the most eminent men of his time at Oxford. Then take the equity bar. The Lord Chancellor was a wrangler; Lord Justice Sir George Turner was high in the list of wranglers; all the three Vice Chancellors were wranglers; Sir Lancelot Shadwell was a wrangler, and a very distinguished scholar; my friend Sir James Parker was a high wrangler, and a distinguished mathematician. Can we suppose that it was by mere accident they obtained their high positions? Is it possible not to believe that these men maintained through life the start which they gained in youth? And is it an answer to these instances to say that you can point—as it is desirable you should be able to point—to two or three men of great powers, who, having neglected the struggle when they were young, have afterward exerted themselves to retrieve lost time, and have sometimes overtaken and surpassed those who had got far in advance of them? Of course, there are such exceptions. Most desirable is it that there should be, and that they should be noted, in order to encourage men who, after having thrown away their youth, from levity or love of pleasure, may be inclined to throw their manhood after it, in despair; but the general rule is, beyond all doubt, that which I have laid down. It is this: that those men who distinguish themselves most in academical competition, when they are young, are the men who, in after-life, distinguish themselves most in the competition of the world."

THE HOME.

The Beautiful River.

BY BENJ. F. TAYLOR.

Like a Foundling in slumber, the summer-day lay
On the crimsoning threshold of Even,
And I thought that the glow through the "azure-arched way
Was a glimpse of the coming of Heaven.
There together we sat by the beautiful stream;
We had nothing to do but to love and to dream
In the days that have gone on before.
These are not the same days though they bear the same name,
With the old ones I shall welcome no more.

But it may be the angels are culling them o'er,
For a Sabbath and Summer forever.
When the years shall forget the Decembers they wore,
And the shroud shall be woven, no, never!
In a twilight like that, Jenny June for a bride,
Oh! what more of the world could one wish for beside,
As we gazed on the river unrolled,
Till we heard, or we fancied, its musical tide,
When it flowed through the Gateway of gold?

Jenny June, then I said, let us linger no more
On the banks of the Beautiful River—
Let the boat be unmoored, and be muffled the oar,
And we'll steal into Heaven together.
If the angel on duty our coming descries,
You have nothing to do but to throw off the disguise
That you wore when you wandered with me,
And the sentry shall say, "Welcome back to the skies;
We have long been a-waiting for thee."

Oh! how sweetly she spoke, ere she uttered a word,
With that blush, partly hers, partly Even's,
And that tone, like the dream of a song we once heard,
As she whispered, "*That* way is not Heaven's;
For the River that runs by the realm of the Blest
Has no song on its ripple, no star on its breast—
Oh! *that* river is nothing like this!
For it glides on in shadow beyond the world's west,
Till it breaks into beauty and bliss."

I am lingering yet, but I linger alone,
On the banks of that Beautiful River.
'Tis the twin of that day, but the wave where it shone
Bears the willow tree's shadow forever.

Tow-Heads.

The dandelion flowers were bright
Through all the month of May;
Like little suns, with yellow light,
That bravely shone with all their might,
Whatever the clouds might say.

But flowers must wither, after all;
And so, one sunny noon,
I saw the stems, so green and tall,
Each tufted with a downy ball,
In the thick grass of June.

The children came, with eager quest,
To pluck them where they grew;
They sought each little downy crest,
And north, and south, and east, and west,
The baby seedlings blew.

Dear playmates, when the sun is low,
And the summer day is o'er,
I look to see your heads of tow
All nodding in a sleepy row,
Within the cottage door.

Sleep on; there comes a gliding guest
On your white heads to blow;
Then—north, and south, and east, and west—
None but the Friend that loves you best
Can say where you will go.

Children's Summer Clothing.

For summer wear, the garments of children should be loose and light, and fitted so that the shoulders, which are the natural support of the clothing, may perform their duty without any hindrance. For this reason, children should never be clothed in those very low-necked dresses which are so common, and which are apt to be cut lower than ever in the summer, in order to have the child cool and comfortable as is said. There is no reason why one part of the body should be left sweltering under such a mass of clothing as is usually fastened about the waist, while another portion equally delicate is left entirely exposed. The undue perspiration produced from those parts of the body which are overclothed, will so open the pores as to render the exposed parts far more liable to cold from draughts of air, or changes of temperature than they would otherwise be. A long-sleeved and low necked apron is undoubtedly the most sensible upper garment that can be worn by a child either winter or summer. It may be made of lighter material for warm weather, and the under garments *thinned out* as far as comfort demands.

INFLUENCE OF MOTHERS.—John Randolph never ceased, till his dying day, to remember, with unutterable affection, the pious care of his mother, in teaching him to kneel at her side, and, with his little hands pressed together, and raised upward to repeat, in slow and measured accent, the pattern prayer.

"My mother," said Mr. Benton, not long before he died, "asked me not to drink liquor, and I never did. She desired me at another time to avoid gaming, and I never knew a card. She hoped I would never use tobacco, and it never passed my lips."

Not long ago, the Rev. Dr. Mills, in one of his powerful appeals to mothers to consecrate their children to the ministry of the Gospel, said:—"A youth, after great deliberation, and with the knowledge that his mother desired him to be a clergyman, decided at last to become a lawyer; and, soon after, his mother inquired of him, in a tone of deep and tender interest, 'My son, what have you decided to do?' 'To study law, mother.' She only replied, 'I had hoped otherwise;' and her convulsive sobbing told the depth of her disappointment. 'Do you think,' said he, 'I could go into the law over my mother's tears?' He considered the case, and has long been an able and efficient clergyman.

All that Leigh Richmond was, he attributed to the simplicity and propriety with which his mother endeavored to win his attention, and store his memory with religious truths, when yet almost an infant.

Oh! Christian mothers would but wake up to the use of their powers and their influences, a Samuel might rise out of every family, and Leigh Richmonds be numbered by thousands. —*Hall's Journal of Health.*

The Baby.

Another little wave
Upon the sea of life;
Another soul to save,
Amid the toil and strife.

Two more little feet
To walk the dusty road;
To choose where two paths meet,
The narrow and the broad.

Two more little hands
To work for good or ill;
Two more little eyes,
Another little will.

Another heart to love,
Receiving love again;
And so the baby came,
A thing of joy and pain.

[*Providence Journal.*

A Touching Incident.—The war has given birth to many gems of poetry, patriotim, humorous and pathetic, illustrative of the spirit and varied impressions of the times. A volume compiled from the newspapers of the day, would prove a rich contribution to the military literature of the country. I send below a touching morceau, from an unknown pen, copied from the Philadelphia *Bulletin*, suggested by an affecting scene in one of the army hospitals. A brave lad of sixteen years, belonging to a New England regiment, mortally wounded at Fredericksburg, and sent to the Patent Office Hospital in Washington, was anxiously looking for the coming of his mother. As his last hour approached and his sight grew dim he mistook a sympathetic lady who was wiping the cold, clammy perspiration from his forehead, for the expected one, and with a smile of joy lighting up his pale face, whispered tenderly, "Is that mother?" "Then," says the writer, "drawing her towards him with all his feeble strength, he nestled his head in her arms like a sleeping infant, and thus died with the sweet word 'mother' on his quivering lips."

"IS THAT MOTHER?"

Is that mother bending o'er me,
As she sung my cradle hymn—
Kneeling there in tears before me!
Say?—my sight is growing dim.

Comes she from the old home lowly,
Out among the northern hills,
To her pet boy dying slowly
Of war's battle wounds and ills?

Mother! oh we bravely battled—
Battled till the day was done;
While the leaden hail storm rattled—
Man to man and gun to gun.

But we failed—and I am dying—
Dying in my boyhood's years,
There—no weeping—self-denying,
Noble deaths demand no tears!

Fold your arms again around me;
Press again my aching head;
Sing the lullaby you sang to me—
Kiss me, mother, ere I'm dead.

Ancestry.—It is with antiquity as with ancestry, nations are proud of the one, and individuals of the other; but if they are nothing in themselves, that which is their pride ought to be their humiliation—*Colton.*

DOMESTIC ECONOMY.

An Ode to Lamb.

Hind quarters of the type of innocence
Whether with peas and mint I must dispense,
Or go the twain—blaspheming the expense—
And thus enjoy thee in the fullest sense—
That is the question.

Rear section of young mutton—tender food—
Just in the dawn of grass-fed juicy-hood—
Dainties like thee should not be served up nude,
But graced with all the trimming understood,
To help digestion.

Then boil the peas—the fragrant mint prepare—
Be thou, prime joint! not overdone, nor rare,
Concoct the gravy with exceeding care,
When all is ready, serve—I shall be there—
I always am!

Incipient sheep's meat! when on thee I dine,
Hot be the plate, and icy cold the—water—
Three slices midway of the leg be mine—
Then put the rest away—for very fine
Is cold roast lamb!

Something Quite too Good for Sinners.

For the following recipe for making a most delectable dessert, we are indebted to Miss Nellie M. Hayes, of Palmyra. It has been our good fortune, many times, to prove its high merit as prepared by the fair auther, and we give it as our impartial opinion that no delicacy of the kind was ever *so* delicious. Try it, all ye lovers of things especially good.

ALMOND CREAM.

Blanch and pound twenty bitter almonds; six tablespoons of corn starch, diluted with a little milk; one quart of milk slightly salted; let it heat slowly. When scalding hot, put in the pounded almonds, then stir in the corn starch as rapidly as possible, and pour into a mould. Any deep earthen dish will answer.

Frosting.—Beat the whites of five eggs thoroughly, then add six tablespoons of white sugar. Pour over the cream and put in a quick oven for a few moments, or until the frosting is slightly brown.

Wheat Coffee.

During a short visit to Chester county last week, I received some information concerning the use of wheat as a substitute for coffee, which I have found so useful that I feel bound to do my part in imparting the knowledge to others, especially to those living in agricultural regions. I tried the recipe immediately on my return, and no one at the table was able to detect the difference.

I take about two pounds of wheat, scald it,

to assist the bursting of the grain, throw it into a colander to drain; when dry, put it into a dripping pan, and brown it exactly as if it were coffee. On one or two occasions I have mixed a teaspoonful of ground coffee through the quantity of wheat intended for the table, and it would puzzle any one to detect the deception.

As this information may be of use to those who would otherwise be deprived of their accustomed cup of coffee in these days of high taxes and high treason, may I ask you to give it a place in your valuable paper?

ECONOMIST.

HEALTH AND DISEASE.

Bodily Carriage.

Instead of giving all sorts of rules about turning out the toes, and strengthening up the body, and holding the shoulders back, all of which are impracticable to many, because soon forgotten, or of a feeling of awkwardness and discomfort which procures a willing omission; all that is necessary to secure the object is to hold up the head and move on, letting the toes and shoulders take care of themselves. Walk with the chin but slightly above a horizontal line, or with your eye directed to things a little higher than your own head. In this way you walk properly, pleasantly, and without any feeling of restraint or awkwardness.

If any one wishes to be aided in securing this habitual carriage of body, accustom yourself to carry your hands behind you, one hand grasping the opposite wrist. Englishmen are admired the world over for their full chests, and broad shoulders, and sturdy frames, and manly bearing. This position of body is a favorite with them, in the simple promenade in the garden or gallery, in attending ladies along a crowded street, or in public worship.

Many persons spend a large part of their waking existence in the sitting position. A single rule, well attended to, in this connection would be of incalculable value to multitudes—use chairs with the old-fashioned straight backs, a little inclining backwards, and sit with the lower portion of the body close against the back of the chair at the seat; any one who tries it will observe in a moment a grateful support to the whole spine. And we see no reason why children should not be taught from the beginning to write, and sew, and knit, in a position requiring the lower portion of the body and the shoulders to touch the back of the chair all the time.

A very common position in sitting, especially among men, is with the shoulders against the chair back, with a space of several inches between the chair back and the lower portion of the spine, giving the body the shape of a half hoop; it is the instantaneous, instinctive and almost universal position assumed by any consumptive on sitting down, unless counteracted by an effort of will; hence parents should regard such a position in their children with apprehension, and should rectify it at once.—*Hall's Journal of Health.*

YOUTH'S CORNER.

An Attempt to Catch a Shark.

When within four or five hundred miles of New York, on one of the warmest and brightest days of the season—the water as smooth as glass—a half dozen wicked looking sharks came swimming alongside and were quite around us, although we were steaming along at the rate of 12 miles an hour, and were evidently determined that something should happen. The whole company of passengers were on deck or leaning over the gunwales to get a good view of them, when the sauciness of one or two who, with great goggle eyes turning upward to the four hundred faces above them, seemed to insist that some of us should fall into their jaws, induced us to see whether we could not overmatch them.

A man was despatched to the first officer for his consent and the use of his great steel hook and chain; another went to the cook room for a big lump of pork, and there was a great stir everywhere on board. Finally all things were ready and the baited hook was tossed overboard! Quick as a flash one of the sharks turned towards it and we were all in high glee—the ladies scattering off to the other end of the ship as hurriedly as if we were already dragging the monster on deck. But then, like a sensible shark, he stopped to take the sober second thought, and rather concluded that lump of meat didn't quite resemble the man he expected for his dinner; and so he stopped in his course. But the pork went on, and would soon be out of his reach. That wouldn't do at all; and again, swift as lightning almost, he dashed at it. Again his reflections stopped him, but only for a moment; once more he darted, and—we had him!

Now there was a scampering in earnest. He was not one of the largest, but would probably measure fifteen to twenty feet in length; quite

large enough for our purpose. As soon as he found there was *no end to the other end* of the bacon he had swallowed, his sharkship began to dash about and flounder, until the sea was all in a foam on that side of the ship.

Haul away! my brave tars, and all ye excited, half-frightened passengers! Pull away, for there's a load with a will at the other end. Be ready, too, with the axes and long-handled knives, or we are all gone in a minute! There he comes! rolling his terrible goggle eyes, gnashing the chain, and looking like a demon of vengeance! But why do the crew at the rope all suddenly fall backward? The rope has broken, and that's the matter! Sharkie is again in the deep, pork, hook, chain and all! A general exclamation of "Oh pshaw!" and the sport is over. Henceforth that shark will undoubtedly plow the brine *on his own hook!*

THE DAYS OF THE WEEK.—The division of time into periods of seven days each was in use among the ancient Egyptians and Hebrews, and is borrowed by the latter from the Mosaic account of creation. If according to some modern philosophers, that account is of uncertain origin, a mere oriental myth, then every successive week as it comes is an unexplained phenomenon. Both Christians and Mohammedans adopted this division from the Hebrews; the Greeks and Romans received it with the introduction of Christianity after the reign of Theodosius. The names of the successive days were those of the seven heavenly bodies with which the old Egyptian astronomers were most familiar; the sun, the moon, and five planets, which, however, they did not name as we do in order of their nearness to the sun, but successively as Mars, Mercury, Jupiter, Venus and Saturn. This institution of the week, though originating in the Old Testament and propagated in the New, spread much further and faster than the truths on which it was built; the Roman names of the planets and of the days over which they presided were those of their own divinities, and the Teutonic nations from which we descend, while they retained the sun and the moon, substituted, for the other five days, the corresponding names of their own mythology. Hence, our English week is an early Jewish institution with Pagan names; the sun's day, the moon's day, Tuisec's day, Woden's day, Thor's day, Friga's day, Seater's day. It is remarkable that the week is recognized by the Brahminic astronomers, the days being named from the same planets and in the same order as that of the Egyptians, but beginning with Friday, or the day of Venus. The Egyptian week began on Saturday. The people of China and Thibet have a week of five days, named from what they consider the five elements, iron, wood, water, feathers and earth.

The Spider's Industry.

A room in a house of one of the principal ecclesiastics in Oporto was set apart for the reception of a quantity of maize, or Indian corn, which had been threshed out. It is well known that each of these grains of wheat must be, at least, as heavy as three or four grains of our common wheat. On visiting this room one day, its owner perceived a grain of the maize suspended from the ceiling of the room by a single thread thrown out by a spider, and which was, from time to time, gradually but slowly drawn upwards. Surprised at this very unusual sight, he invited several persons to witness it, and amongst others my three informants. What the motives of the spider were, in endeavoring to secure this heavy grain of wheat, and draw it up to its nest on the ceiling, I will not attempt to account for, as it is so contrary to the usual habits of these interesting insects; but it is a curious fact, that a single thread thrown out from the body of a spider should be able to bear the weight it did.—*E. Jesse, in Once a Week.*

WAR MISCELLANY.

The Charge of Murat at Eylau.

It is at Eylau, says the historian, that Murat always appears in his most terrible aspect. This battle, fought in mid-winter, in 1807, was the most important and bloody one that had then occurred. France and Russia had never before opposed such strength to each other, and a complete victory on either side would have settled the fate of Europe; Bonaparte remained in possession of the field, and that was all; no victory was ever so like a defeat.

The field of Eylau was covered with snow,

and the little ponds that lay scattered over it were frozen sufficiently hard to bear the artillery. Seventy-one thousand men on one side, and eighty-five thousand on the other, arose from the frozen field on which they had slept the night of Feb. 9th, without tent or covering, to battle for a continent. Augureau, on the left, was utterly routed in the morning.—Advancing through a snow storm so thick he could not see the enemy, the Russian cannon mowed down his ranks with their destructive fire, while the Cossack cavalry, which were ordered to charge, came thundering on, almost hitting the French infantry with their long lances before they were visible through the storm.

Hemmed in and overthrown, the whole division, composed of 16,000 men, with the exception of 1,500, were captured or slain. Just then the snow storm clearing up, revealed to Napoleon the peril to which he was brought and he immediately ordered a grand charge by the Imperial Guard and the whole cavalry. Nothing was further from Bonaparte's wishes or expectation, than the bringing of his reserve into the engagement at this early stage of the battle, but there was no other resource left him.

Murat sustained his high reputation on this occasion, and proved himself, for the hundredth time, worth of the great confidence Napoleon placed in him. Nothing could be more imposing than the battle field at this moment. Bonaparte and the Empire trembled in the balance, while Murat prepared to lead down his cavalry to save them. Seventy squadrons, making in all 14,000 well mounted men, began to move over the slope, with the Old Guard marching sternly behind.

Bonaparte, it is said, was more agitated at this crisis than when, a moment before, he was so near being captured by the Russians. But as he saw those seventy squadrons come down on a plunging trot, pressing hard after the white plume of Murat, that streamed through the snow storm far in front, a smile passed over his countenance.

The earth groaned and trembled as they passed, and the sabres above the dark and angry mass below, looked like the foam of a sea wave as it crests on the deep. The rattling of their armor, and the muffled thunder of their tread, drowned all the roar of battle, as with firm, set array and swift, steady motion, they bore down with their terrible front on the foe.

The shock of that immense host was like a falling mountain, and the front line of the Russian army went down like frost-work before it. Then commenced a protracted fight of hand to hand, and sword to sword, as in the cavalry action at Echmuhl. The clashing of steel was like the ringing of countless hammers, and horses and riders were blended in wild confusion together; the Russian reserve was ordered up, and on these Murat fell with his fierce horsemen, crushing and trampling them down by thousands. But the obstinate Russians disdained to fly, and rallied again and again, so that it was no longer cavalry charging on infantry, but squadrons of horse galloping through broken hosts that, gathering into knots still disputed, with unparalleled bravery, the red and rent field.

It was during this strange fight that Murat was seen to perform one of those desperate deeds for which he was so renowned. Excited to the highest pitch of passion by the obstacles that opposed him, he seemed endowed with ten fold strength, and looked more like a superhuman being treading down helpless mortals, than an ordinary man. Amid the roar of artillery and the rattling of musketry and falling of sabre strokes like lightning about him, that lofty white plume never once went down, while ever and anon it was seen glaring through the smoke of battle, the star of hope to Napoleon, and showing that his "right arm" was still uplifted and striking for victory.

He raged like an unloosed lion amid the foe; and his eyes, always terrible in battle, burned with increased lustre, while his clear and steady voice, heard above the turmoil of strife, was worth more than a thousand trumpets to cheer on his followers. At length, seeing a knot of Russian soldiers that for a long time had kept

up a devouring fire upon his men, he wheeled his horse and drove at full gallop upon their levelled muskets. A few of his guards, that never allowed that white plume to leave their sight, charged after him. Without waiting to count his foes, he seized his bridle in his teeth and with his pistol in one hand and his drawn sword in the other, burst in headlong fury upon them, and scattered them as a hurricane had swept by. Murat was a thunderbolt on that day, and the deeds that were wrought by him will furnish themes for the poet and the painter.

Ere the end of this dreadful war, we shall doubtless have heroes of our own to honor with recitals as daring and sublime as any that have haloed the history of the past. God grant that the greatest achievements of the war may be on the side of the Right!

NEWS SUMMARY.

NATIONAL AFFAIRS.

There is yet vitality in the army. Banks has made a successful push into the Red River region. Grant, routing the enemy at Port Gibson, pushed eastward and captured Jackson, then following the railroad to Vicksburg, after five pitched battles and five decisive victories over the forces of Gens. Johnston and Pemberton, invested that stronghold of the rebellion, taking 10,000 prisoners and more than 100 pieces of heavy artillery.

Stirring events in the East give evidence that something is likewise to be expected in that quarter. Gen. Hooker is now known to have battered the enemy across the Rappahannock very severely, to have killed and wounded some 18,000 of his men, to have captured 5,000 prisoners, and but for the shameful failure of the 11th corps, would undoubtedly have vanquished them completely. This failure, however, so disconcerted his plans and forced him into disadvantageous ground that it was deemed best to recross the river, where it would be easier to prepare for an irresistible advance. The skill with which Hooker handled his troops in the fearful engagement of May 2d and 3d, and the cool courage manifested by him, have inspired confidence in his future, notwithstanding his temporary rebuff.

But why should we suffer these repeated failures? That is a question we would put directly to the powers that be. We have men enough for an army whose march should be resistless and overwhelming. Why, then, this piece-meal slaughter of our brave citizen soldiery? Why not raise an army so large as to move upon the enemy like an avelanche, crushing him once and forever? Why not have done this at first?

But of what use are these regrets? We are somehow, doubtless, under the general guidance of Providence, and, if the war is not managed in our way, let us hope that it will, at last, be terminated in God's way. He may have grander results in view than we have—let us hope a more enduring basis for our free institutions than we would have builded for ourselves.

Ex-Congressman Vallandingham, for violent and defiant speeckes against the war and the Government, has been court martialed by order of Gen. Burnside, and sentenced to be sent south.

FOREIGN NEWS.

Matters in England are looking better. The people are more and more disposed to range themselves on the side of justice and good government, and the cabinet are compelled by the power of a more christian public sentiment than they possess themselves to assume a more reasonable attitude towards this country. Mr. Seward and Mr. Adams are deserving of credit ror the able and prudent manner in which they have managed the important and delicate questions which have several times threatened to involve us in a foreign war.

The Polish insurrection still goes forward, and there is an evident disposition on the part of France and other powers to take sides with the Poles. The Emperor Alexander manifests a disposition to deal moderately with the insurrectionists, however, and it is not unlikely

that he will consent to an important modification of his former policy towards that oppressed people.

The French army in Mexico is still making but poor progress towards the subjugation of that poor distracted people.

EDITORIAL MISCELLANY.

New and Splendid Premium!—In addition to the Strawberries offered as prizes in the last number, we now offer the CRAIG MICROSCOPE, described in this number, for every club of 8 dollar subscriptions—each subscriber being entitled to the strawberry premium.

The Editor Abroad.—Though seeming, by this number of the FARMER, to be at home, it is, nevertheless, true that we are quite remote from Wisconsin, even at the Capital of the Nation—not in the capacity of an office-seeker, however, but rather, and solely, on behalf of the State Agricultural Society, whose interests we are endeavoring to represent in the matter of a claim against the breeches pocket of Uncle Samuel. A clever old gentleman is Uncle S., but some of his boys sometimes behave in such a manner as to almost belie their parentage. In truth, some of them are what a Hoosier would call *right down scaly fellers*, unduly witholding what belongeth to others, and again, "gathering where they had not strewn." And the Treasury—is it not like the "mills of God," which not only "grind slow, but grind exceeding small?"

Incidentally, since our leave of home, we have been visiting the Agricultural Colleges of the country, of which a full account will be given hereafter in the Educational Department.

Our journey to this point has been made via Milwaukee, Detroit, Suspension Bridge, Lake Seneca, Albany, New York, Philadelphia, and Baltimore. We shall return through Pennsylvania and Ohio, in order to take other institutions in our route.

In the absence of both of us, (Mrs. H. and self,) it is not impossible that the June No. will present an undue number of typographical and other errors, though the carefulness and scholarship of the FARMER's excellent compositor and proof-reader relieves us of nearly all anxiety on that score.

Editorial Notes of European Travel.—LAUSANNE—BASLE—THE RHINE—JUNE, 1862.—Lausanne, the capital of the Canton of Vaud, is a handsome old town, very conspicuously located upon three commanding hills, whence the view of surrounding mountains, valleys, and of charming Lake Leman, is extremely fine. History does not inform us of its origin, but unmistakeable traces of a Roman road together with a recently discovered subterranean passage in the wood of Vaux, full of works of Roman art, leave no room for doubt that this place has been the abode of man for many long centuries. Its present population is not far from 16,000.

The fine old cathedral, which cannot fail to attract the attention of the stranger, was built in the year 1000, and consecrated by Pope Gregory X. The College—also somewhat famous—was established in 1587.

In more recent history, Lausanne is noted for having been the residence of Gibbon while he wrote his famous history of the Decline of the Roman Empire, and of Kemble, known so long and favorably in the dramatic world.

Many of the buildings, particularly the more ancient ones, are of a stone known as *Molasse*, a very compact material capable of a long continued and very remarkable resistance to the action of the atmosphere. It is found in the chain of hills known as the Jorat, which are likewise further noted for the beautiful vineyards that clothe its southward slopes and yield a delicious wine. Much of the fuel consumed in the city and country is derived from the coal pits that lie between it and the village of Vevay.

In the College and other public buildings are many paintings and relics of ancient art, but other things beyond are fraught with more interest to me just now, and so I have said Good bye to Lausanne, and am dashing my way to the Rhine.

The railroad leads me through the beautiful plain which spreads out between Basle and Lausanne, and affords me once more a glimpse of broad fields, bearing rich crops of grain, of grass and roots. On my left are the grand old Jura Mountains, shutting out from my view the fields of sunny France. Every few moments the whistle calls us to a halt at some station old or new—for be it known villages are sometimes born of railroads in the old world as well as the new—but the most of them present nothing worthy of note. But here is Iverdun, a town of considerable magnitude, and deserving of mention for that it introduces the northward traveler to the well known lake Neuchatel, along whose pleasant border the railroad winds its way. For some time after the road was completed to Iverdun, the only link between it and the extremity of the lake was by boat; but the rushing public could not long endure transportation so slow, and now I am viewing the lake on the right, and the mountains on my left, at the rate of thirty miles an hour.

Another scream of the locomotive, and the station guards shout in at the windows, "Neuchatel! Neuchatel!" But what of it? Nothing, only that this is the place famous in all the world for the manufacture of clocks and watches It is a dingy looking old Swiss town, lying rather low, and presenting no particular attractions to the eye of the stranger. Did I stop to visit the great factories which fill the world with the best of time-keepers? No; for the reason that there are no great manufactories there. The Swiss have not yet learned to apply machinery to the manufacture of watches, and have no need, therefore, for large establishments. On the contrary, of the thousands of *Neuchatelers* who devote their lives to this business, each one giving himself exclusively to a certain branch of the manufacture takes the material to his own home and there does the work assigned him. When a quantity of that particular article is completed, he takes them to the workman who next has need of them; he to another, and so on, until, at last, the several parts have found their way into the hands of the man or men whose business it is to put them together; when the clocks or watches thus finished are turned over to the capitalist who furnished the material and by whose order the work was executed by all.

In this connection I should not omit to mention that quite in contradiction of the sentiment contained in the old adage, "The shoemaker puts shoes on everybody's feet but his own," almost every public building in Switzerland is provided with a great clock—very many of them announcing the hour by means of a pleasing chime of bells.

Off again. Good bye! O ye watchmakers! If at any time in the progress of your art you should chance to discover some simple method of converting minutes into days and days into years, thus prolonging the life of man, be so good as to let me know at your earliest convenience—by the sub-Atlantic Telegraph, if you please!

Lake Bienne! much smaller than Neuchatel, but still a pretty feature of the landscape. At Soleure we touch the river Aar, a branch of the Rhine. Aarburg and Liestal are passed, and Bale, Basle or Basel—as it is variously written and pronounced—is in view. Hardly *in view* either, for it is night, and but little is visible save the thousands of lights which, glaring and glimmering high and low, prove to my curious eye that this city also is built on hilly ground.

I am directed to the "Hotel de le Savage," which, after a little time, I succeed in finding. Hotel of the Savage! not a very inviting name to be sure, but a really good hotel, nevertheless.

I have risen with the morning light, and am standing on the banks of the glorious old Rhine! The sun pours a flood of golden light across the flowing stream and gilds the old city into a richness and a beauty not its own. But my thoughts dwell most on the river, of which I have a thousand times read and dreamed, whose name is classic in history, in painting and in poetry. Who can think of it without the association of strange scenes in the far feudal past of poetic legends, of more recent.

yet quaint and delightful, vintage scenes in the far-famed vineyards that for many centuries have clothed its sunny banks? And this is really the Rhine—this full-flowing tide before me! I accept it all as a reality—the river and my own identity—and salute this old river as a patriarch come down from the glorious past!

The Rhine divides the city, and although there are bridges of stone, the light and gaily painted ferry boats, with striped awning screens, are plying back and forth for the accommodation of the people, who seem to so love the old river as to prefer the ferry, at two sous, to the bridges at nothing.

The chime of Cathedral bells reminds me that it is Sunday. After service, I so far indulged my curiosity as to stroll out into different portions of the city as a preliminary to the more careful inspection of whatever of most interest the city presents. Among the finest public buildings there are the old Cathedral, the Library—containing 50,000 volumes, many valuable manuscripts,, paintings and antiquities—a theological seminary, a gymnasium (training school, similar to our college), with twelve professors, a polytechnic school, a university with twenty-four professors, the Agricultural School, and the Erasmus College. The Cathedral was built in 1,009, and will probably last another decade of centuries without becoming dilapidated. The Botanical Garden affords many attractions. The Library connected with it is said to be the richest of its kind in the world.

The Agricultural School of Basel has been in existence for years and is full of interest; but as I have in contemplation a series of articles on the Industrial Schools of Europe, I need not dwell upon this one in this connection.

Agriculturally considered, the Canton of Basel is one of the finest of Switzerland; while as a manufacturing and commercial city, Basle (which is the capital of the Canton) is the first town in Switzerland. Its chief manufactures are paper, silk, gloves, leather, printed cottons, hosiery and jewelry, in the interest of which there are several large establishments.

Being near the head of navigation of the Rhine, and at the same time on the very borders of France and Germany, it is natural that it should be, as it is, the entrepot of the commerce of Switzerland with those Empires and with the so called Low Countries.

Aiken's Knitting Machine Again.—"I can knit with it men's socks, ready to finish, for 10 cents a pair, and make from $1 75 to $2 a day; women's long hose at 15 cents a pair, and make the same per day; and I am crippled with one hand. People that think there is no profit in them are people who know nothing about them. There is profit all the while you are working the machine, but none when it is idle. *I can knit enough in one month to pay for the machine*, and then the machine will be as good as new. They are not liable to get out of order. A needle will carelessly get broken once in a while, but five cents will replace it; a set of needles will last from three to five years."—*Extract from a letter of H. R. Beebee, Platteville, Wis.*

See FARMER Prospectus, or address Branson & Elliot, 120 Lake St. Chicago.

CONDENSED CORRESPONDENCE.

Asparagus, Queries, Recipes.—RAYMOND, Wis. May 15, 1863.—MR. EDITOR:—The article on Asparagus, in a late number of the FARMER, ended just where many housekeepers would feel the most interest. That taught us how to cultivate it; the next thing is how to cook it. My way is this: Break off the shoots while the heads are solid, as low down as they will snap readily; wash them, cut them in pieces an inch in length; boil them about twenty minutes, or till tender, in just enough water to cover them, a little salted; then pour in flour and water stirred free from lumps, so as to make the soup about as thick as thin cream or oyster soup; season with black pepper and butter. Cover the bottom of your dish with light bread, good biscuit, or crackers, and pour over it the asparagus and

soup, and you have a dish good enough for anybody.

I have been told by some that they pour off the water and put in new, by doing which I think they lose half the goodness of the asparagus.

Will some one please give a good and simple recipe for making Sorghum cakes?

Will some of your numerous readers who have no trouble in coloring a jet black which will not crock please favor me through the FARMER with their recipe?

I give you my recipe for coloring red which I have repeatedly used, and I have never failed to have a beautiful, rich red. To one lb. of woolen, take 8 oz. of madder, 3 oz. alum, 1 oz. cream tartar, and 4 gallons of rain water. First, put the alum and cream tartar into the water; raise to a boiling heat; then put in the cloth and boil two hours; empty your kettle, rinse the cloth in clean, cold water; put in as much water in the kettle as before, put in the madder, rub it fine in the water, raise the dye to near a scalding heat, then put in the cloth; keep it in constant motion one hour, boil five minutes, take it out, rinse in cold water thoroughly, then wash in strong soap suds.

MRS. E. B. LOOMIS.

Information Wanted.—I have a horse that became a little knee-sprung at the age of two years. He grew worse. I began to work him when he was four, and he still grew worse. I have tried different things to strengthen his knees, but I can get nothing to do them good. If any of your correspondents can inform me of a remedy, I would be happy to hear from them.

I believe it is one of the worst things that a man can do to keep a young horse on a plank floor. In my opinion that is what injured mine. A. L.

Hops.—POSTVILLE, Alamakee Co., Iowa.—Will some of your subscribers give me information as to the best method of raising hops, i. e. the trimming of the roots and of drying &c.

WESLEY COTTON.

LITERARY NOTICES.

The Independent.—This weekly religious, literary, and family Journal, edited by Rev. Henry Ward Beecher, Rev. Joshua Leavitt, D. D., and Theodore Tilton, having a circulation, it is stated, more than double that of any similar newspaper in the world, gives notice in its issue of the first of January, that its subscription price will not be increased, nor its size diminished—that the same terms, viz: Two Dollars per Annum, will be continued, notwithstanding the great advance in white paper. The same array of distinguished contributors, including Harriet Beecher Stowe, Rev. Messrs. Hatfield and Cuyler, Horace Greeley, Whittier the poet, and others, also a sermon by Mr. Beecher, will continue to enrich its columns.

Acknowledgments are due to the following named gentlemen for documents of much interest;

To X. A. Willard, A. M., Little Falls, for a pamphlet on Cheese Dairying in Herkimer county.

To Henry S. Randall, LL. D., of Cortland, N. Y., for "Fine Wool Sheep Husbandry"—a valuable work of 124 pages, appropriate to the times.

To Dr. E. Pugh, President of Penn. State Agricultural College, for a Report on the condition and progress of that institution; also for the "Fifth Report of Experiments on the Feeding of Sheep. By J. B. Lawes, F. R. S., &c., and Dr. J. H. Gilbert, F. R. S., &c., England—the same having been forwarded to us through him by the authors, who likewise have our cordial thanks.

We shall carefully dissect the above works as early as opportunity will permit, and give their available contents to our readers.

To Ingraham Gould, of Beaver Dam; Batcham, Hanford & Co., and others for Nursery Catalogues

STATEMENT
OF THE
Madison Mutual Insurance Company,
FOR THE YEAR ENDING
DECEMBER 31, A. D., 1862.

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,.....		$327,464 67

ASSETS.

Unimpaired premium notes of policy holders.....	$281,000 07	
Cash on hand and due from policy holders and agents, for cash premiums,.....	45,464 60	
Office furniture and fixtures,...	1,000 00	327,464 67
Whole No. policies issued.....		22,061
Am't of outstanding risks thereon.....		$15,962.000 00
Number of policies issued in 1862,.....		7,706
Am't of outstanding risks thereon.....		$6,069,813 00
Am't premium notes thereon,.....		108,323 93
Am't cash premiums thereon, less commissions to agents,.....		45,727 80
Am't interest received,.....		972 18
Total am't losses reported during 1862,....		$17,744 16
Total am't losses paid durihg 1862, 89 in number,.....		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due.....		none.
Losses adjusted and not due.....		none.
Losses unadjusted,.....		292 35
All other claims against the company,.....		97 50
Am't paid for advertising and postage,....		1,763 66
Am't paid for printing.....		540 50
Am't paid for policy stamps,.....		600 00
Am't paid taxes to Com'r Internal Revenue		82 02
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses,.....		7,290 98

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : : : : : : : EDITOR.

VOL. XV. MADISON, JULY 1, 1863. No. 7.

Water for the Prairies.

BY D. S. CURTISS, OF THE ARMY.

This is an interesting topic—one upon which we have thought and planned very much ever since we became acquainted with the peculiarities of the *Prairies;* we have sometimes written upon the subject and wondered that abler hands had not taken it up, and furnished instructive papers upon it for the Patent Office Reports, which are unquestionably the most widely useful documents published by our Government; and we have a lively hope that this important matter will not be longer neglected by those amply able to elucidate it.

EFFECTS OF GOOD WATER.—Beautiful is water, and rich in health and vigor and pleasure; and the effects of a full supply on the enjoyment of a people is hardly calculable—certainly but inadequately appreciated, unless when once deprived of it.

Particularly, where good water is scarce or procured at considerable cost, is that full habit of cleanliness, so conducive to high health and comfort and moral elevation, too much neglected. Nor will sufficient drink be furnished to animals, by which they will be capable of supplying that full vigor of flesh, fleece, milk and service, which would result from ample drink; nor will the same quantity of food do as much good, on scant drink, at different seasons. Unless we have observed the bountiful results of plentiful drink—particularly of *soft water*—can we appreciate its value; but those who *do* understand it could hardly be induced by any means to dispense with the use of soft water for drinking, cooking and bathing; nor would they withold it from their animals.

Frequent, even daily washing of the whole person is conducive to health and strength; but particularly so on our broad prairies where there is more constant exposure to sun, dust and wind, are more frequent ablutions necessary to secure the same measure of health, than is needed in forest or shaded localities.

Certainly this is a too much neglected subject, and cannot be too earnestly pressed upon the consideration of those who inhabit the prairies and extended plains of the West, and new States generally, where the people are so eagerly engrossed in *money making* that they scarcely have a moment to study or think of their highest *personal comfort*, so easily attainable. And all who know anything about it must concede that no other practice does more to promote health and elasticity of mind and body than habitual bathing.

Hence, no other temporal blessing is of greater importance than an adequate supply of *soft water;* and if he "who makes two blades of grass to grow where but one grew before, is a benefactor," then how eminently is he also a benefactor who is instrumental in securing abundant supplies of good water in destitute locations.

These remarks are principally called forth by the lack of water on the Broad Prairies..

DISTRIBUTION OF BLESSINGS.—Many persons, aware of this apparent destitution of water on the prairies, are deterred from settling upon them; and hence, these extensive fertile regions, so surpassingly favorable for agriculture, remain comparatively useless to the thou-

sands of population who need them, and would otherwise speedily settle and open up splendid farms all over them.

Providence, in the dispensation of physical blessings or resources over the face of the world, has observed a just system of equivalents—offsetting or recompensing one deficiency with some other resource. The absence of timber is made up with cleared, pleasant fields ready for the plow; the absence of water with handsome pastures and meadows ready for the scythe: and the necessary labor required to dig cisterns, and basins, and underground ditches, is repaid by deliverance from the hard, dirty, weary toil of chopping and "logging off" heavy timber; and the convenience of running water is offset by freedom from vexation in plowing among stumps and roots and stones.

Absence of Water from the Prairies.—This lack of water is, in reality, only apparent, as there is a resource within the reach and power of every farm owner, which is capable of affording a more convenient and wholesome supply, and at less expense, than is usually enjoyed by those who live in regions favored with brooks and springs—although even the latter class may, and had better, avail themselves of this facility, as well as those on the prairies, who, being destitute of springs and brooks, must rely upon *Rain Water*, which is our chief subject.

This idea of inequality of advantages for residence, results in the minds of many from taking a narrow view of things, which perceives only a certain lack, without seeing the compensating advantages for the same deficiency. Failing to take a broad and rational view of *all* the facts and resources, this lack of water, in regions so capable of feeding millions with richest provisions, seems to present an oversight in Providence. To have spread out before the inspection of man such vast, inviting tracts, upon which health, plenty and easy labor might be enjoyed, and yet withold a necessary so indispensible as water, would be strange; and, were it irremediable, it would be lamentable. But such is not the case. Upon this, as upon many other subjects, men often take but a partial view of the facts, and hence their judgments are erroneous. Abundant rains fall upon these prairie districts, as several years in Michigan, Illinois and Wisconsin fully prove to me; though somewhat less snow, yet as much rain falls here as in most portions of the United States.

Proofs by the Rain Guage.—The indications by various rain guages, recorded for several years, at different localities, on the great Lakes and the Mississippi river, show that the average depth of water—rain and snow—which annually falls on the whole surface of that belt of country between St. Anthony's Falls north, and Cincinnati south, is about two and a half feet This is a vast quantity, and did it not regularly pass off, by currents, absorption and evaporation, the entire country would soon be submerged. Even in a single month, sometimes, as much as six to seven inches of water falls on this region. This vast quantity of water, annually, showered upon those splendid prairies, is a beautiful as well as blessed spectacle, delightful to contemplate, as well as enjoy.

Roofs and Cisterns.—All interested parties may collect as much of this as is necesary for farm and home purposes, with little trouble and expense, in various ways, some of which will be distinctly pointed out in the following pages. A more definite idea of the quantity of water which falls from the clouds may be formed by considering the fact that over four hundred hogsheads may be collected from the roof of an ordinary 30x40 foot barn, annually; enough to supply drink to a goodly number of stock, the year round, even though they got no drink from any other source. A hogshead contains about thirty-two pails of water, and four hundred hogsheads about 12,800 pailsful. Allowing four pailsful to each creature—a liberal allowance—per day, taking all seasons of the year, and this supply will afford drink for nine head the year round, or 3,200 head for one day. But there are many months of the

year, when, in the dryest prairies, stock get drink from low and hollow places on the farm, without having recourse to this supply collected from the roof. Thus, at least a dozen head could be annually furnished with drink from the water which falls on an ordinary barn roof in the absence of wells and streams.

With a little digging and plastering in the low spots and basins of the fields, at trifling expense, more or less water may be retained after showers for stock, and save drawing on the regular cisterns until very dry times. These field basins can be made more or less capacious and permanent, according to the judgment of the owners; very cheap ones often answer a good purpose.

Incidental to these suggestions for supplying needed water to farms on dry prairies, it is pertinent here to allude to another mode, sometimes resorted to, as well for this object as to improve the productiveness of the land, by making it dry and warm.

Some operators have been much and happily surprised by unexpectedly obtaining a tolerable supply of water for stock from thorough *underdraining* with "mole ditches," and in other ways—where side ditches are led and flow into a larger main ditch, when a considerable rivulet of water soon appears and continues permanently, even in fields and ravines where no water was before known or suspected; and this in consequence of most soils being saturated more or less with cold water, at two or three feet depth, though we are unaware of it, and which renders some of our seemingly dryest fields cold and sour, producing only dwarfed sluggish vegetation, compared with that which grows on warm, well drained fields.

Thus our lands are greatly benefitted by the same process which affords us a reliable supply of good water for stock; and teaches us a wholesome lesson.

But substantial *cisterns* must be the great and general reliance where there is no brook water. And this is the chief point or central idea of our article—to show their use and practicability, together with the superiority, in all respects, of *cloud water* over earth water; as well for barn as household purposes, as well in watered as in destitute localities.

Cost of Cisterns vs. Wells.—Substantial cisterns, of sufficient capacity to receive this roof water, can be made at considerably less expense than most of the wells on the prairies, while they need not be more than half as deep as the shallow ones, nor one-fourth the depth of the deep ones, rendering it far easier to raise the water; and besides, these cisterns can be placed wherever convenience may dictate, which is not the case with wells. Every good farm or farmer has, or soon will have, a good barn, from the roof of which the cistern may be continually filled with wholesome water; and, as before stated, a sufficient cistern will not cost as much as the cheapest wells, nor one-quarter as much as the dearest ones, on elevated prairies. Many of the wells in the prairie districts cost from one to two hundred dollars, and rarely less than fifty dollars; while in any locality good and ample cisterns —both house and barn—with good pumps, can be made for this lowest sum, even less, which will furnish abundant pure, soft water for all culinary, bathing, and washing operations at the dwelling, and for stock at the barn; and all within reach, under cover, and raised with ease by pumps, in pleasant contrast with the heavy tugging incident to deep wells and distant springs and brooks.

In some places, too, in the prairie regions, the rain water is collected in reservoirs above ground, then drawn out through faucets into vats for *washing sheep*, which is much easier and better done, and with less water, than where the hard water of streams is used. This fact is well worth consideration by sheep growers. Then a second benefit may be derived from the water thus collected and used: the vat being above ground, after the washing is done, the water, by a very little trouble, can be drawn off to *irrigate* the garden, or other contiguous grounds, which will be found very fertilizing.

Every one acquainted with its effects well

knows that the benefits of irrigation to crops are very great, and will alone pay well for the cost of this operation, which so readily secures the twofold use of rain water. Those who are not satisfied of this fact should observe the rich and thrifty effects, upon meadows and some other crops, of water standing a day or two on them, after heavy showers.

The roofage of house and shed for a good dwelling is usually equal to that of the barn, where a large quantity of soft water may be continually collected in a good cistern, which every owner of a farm is able to have, with good pump and sink attached. But cisterns for the house should be deeper and narrower than for the barn—say twelve to fifteen feet deep, that the water may be cooler for drinking. They should also be divided by a partition wall, with a *filter* of some kind; there are various ways of making them, at small cost. If the partition wall be of porous brick or stone, it will answer the purpose very well as a filterer; though a regular one, which can be changed or renewed, as may be needed, is better. The apartment into which the water runs from the eave conductors should be a few inches deeper than the one out of which the water is drawn for use; then the impurities and sediments will settle to the bottom of the former, and clear water will always be afforded for use for all purposes.

Besides being more healthful to drink, and pleasant for washing, soft or cloud water is far better for all culinary purposes. All meats and vegetables cooked in it will have better flavor and be more wholesome, while tea and coffee are more quickly made in it, and their finest aroma more perfectly preserved. An English physician, who has carefully examined the subject, writes: "Hard water for cooking is decidedly bad; many vegetables are nearly spoiled by being cooked in it; and it is difficult to get a good infusion of tea or coffee in it; the water used in the city of London requires full one-fifth more of tea and coffee to obtain an infusion of equal strength as that which is obtained in soft water."

Experienced tasters, those in the habitual use of it, can readily distinguish by the taste tea and coffee made in soft water, by its richer flavor and superior strength.

And those who have become accustomed to it like the taste of rain water from clean cisterns even better than good well water; while after a little season of using it, the water drawn from these deeper cisterns will be found palatable, cold enough, and will be found to quench thirst more satisfactorily than colder water. Such is the experience of the writer.

Then it is well known that apothecaries can not make as good tinctures and decoctions with hard water, but always use soft or distilled water. Besides, the teakettles and other utensils do not get coated and filled up with lime, in the use of rain water.

This is an advantage that will be appreciated, particularly by tidy housewives.

Safety against Fire.—In dwellings and other buildings where water is collected in reservoirs above the floors, or even in shallow cisterns, it can be more quickly and easily used in case of fire, than when deep wells or distant springs must be resorted to; a consideration of no small importance, particularly in rural districts and small villages, where there are no fire engines. Where these reservoirs are known to be kept in order and filled, in the buildings, the cheapened cost of insuring them will nearly pay the expense of them.

More Conducive to Good Health.—But here is really found the most interesting argument in favor of the habitual use of cloud water. Besides the convenience and cheapness resulting from a supply of water by this mode, there is another and superior recommendation to its universal adoption, for both man and beast—that is the *preservation of health.*

This important consideration will not be unheeded by wise and thoughtful persons in arranging a comfortable residence, in country or city, in watered regions or the destitute prairies; in this respect it is everywhere equally valuable.

It is a well established fact that the stomach

and bowels are far less liable to derangement and disease,—to be attacked by epidemics—under the uniform use of soft water, than where hard water is used. This will be confirmed by the testimony of scientific and medical men everywhere, who have examined the subject carefully.

Cholera.—During the cholera seasons of 1848-9, the writer of this had an opportunity of seeing this fact clearly demonstrated. He spent the spring, summer and autumn, during the prevalence of that frightful epidemic, in one of the Mississippi cities, one portion of which lies below the high bluffs, on the flat near the river's edge; while the other portion is high above, on the rocky bluffs, where it is almost impossible to dig wells, or reach water in the ground, so that a resort to cisterns is the only alternative of obtaining water for any use; and little or no earth water is used till you go some distance back into the country. The consequence was that scarcely a case of cholera, fever or diarrhœa has occurred among the residents on the bluffs, and not one that proved fatal, nor was there a fatal case of dysentery or summer complaint among the children; while in the lower town, where earth water was used, those diseases raged with malignant fatality, sweeping off old and young, and became so marked that hundreds removed their abode to the upper town.

With great unanimity Medical Reports, in regard to cholera and other epidemics, which we have read, state that cases of attack were rare, and still more rarely fatal, in families and communities that exclusively used rain water for all purposes, even in the most severely afflicted localities, both in Europe and America; while those epidemics were as uniformly fatal where hard water was used; and this result is as marked in cases of "summer complaints" as of malignant cholera.

A French Commissioner of Health, writing upon this subject says: "It had been clearly ascertained, both in Paris and elsewhere, that that rain water is a *prophylactic* (antidote) to cholera, and that the disease has never proved an epidemic in any city where rain water was exclusively used." And he recommends "the general use of soft water, at whatever expense it may be secured."

Dr. Hobbs, of Memphis, reports as follows: "That by the exclusive use of cistern water cholera will speedily disappear and never return; this is known both from analysis and an experience of over twenty years;" and hence he "recommends that it should be used, faithfully, for all personal purposes."

Prof. Sea, of Cincinnati, writes "that it is a verified fact, which will stand the test of strictest investigation, that rain water used for drinking and cooking and bathing, instead of the hard water of wells, is a sure preventive of cholera and bowel complaints; that no city or town exclusively supplied with soft or rain water ever suffers from epidemic cholera."

Thus, it is unquestionably true, that the exclusive use of rain water is a preventive of epidemics and conducive to general good health. Testimonies of high order might be numerously multiplied, showing that the habitual use of hard or earth water is the fruitful pre-inducing cause of disease and epidemics. But enough, perhaps, has been presented on this particular point, to secure the attention of intelligent, interested people; as well those who have easy access to earth water as those who have not, but are compelled to resort to cisterns; for the possession of vigorous health and security from epidemics is equally desirable by all, at whatever of expense attained.

Even though hard water were obtained abundantly at small expense, still in the long run we should find a pecuniary saving in incurring the expense of cisterns to secure soft water for personal uses, by the decreased loss of time and money in sickness, to say nothing of the increased strength, capacity and exhileration of joy, from continuous good health.

Suffering on the Prairies.—In years past we visited some neighborhoods on the broad western and southern prairies, where, from general scarcity of water, it was very scantily used, in both washing clothes and persons—and in bathing never; while the animals abso-

lutely suffered very much for the want of even moderate drink, and in some places they died in considerable numbers, it is believed, from this cause alone; and the larger number which survived manifested but a feeble, sluggish life, making little or no thrift during a whole season. And nearly all of this loss and suffering might have been avoided for the price of one good animal, if judiciously expended in making a cistern and temporary basins in the fields, as before suggested, to collect the rain water, which falls in sufficient quantities in every locality to relieve these wants. And this is one of the peculiar conveniences of cisterns; they can be made in any desirable spot, while care, skill, and uncertainty must attend the sinking of wells. Cisterns may, if desired, always be under the buildings, out of the wind and cold, so that the water may at all times be drawn and used with comfort, which is a pleasant thought in preparing feed for animals, washing harness and carriages, and drawing water for the kitchen, &c.

Conclusion.—By the preceding pages, it will appear that our design has been, not only to show how water, of the very best quality, may be cheaply supplied in abundance to the dry prairies, and they be rendered more pleasant and remunerative residences; but also to direct the attention of all to the healthfulness, pleasure and profit of exclusively using rain or soft water, even where other kinds are cheap and abundant; and to prevail upon all, who possibly can, to abandon the use of hard water in all personal purposes; and even for stock, as their thrift and health and strength will thereby be enhanced.

Indoor cisterns lighten the toil and increase the comfort of the family, over outdoor wells and springs.

Cisterns under or near the barn are more convenient and comfortable for both man and beast, than the brook or spring in the field.

Washing face, hands or clothing in soft water is far more pleasant than using hard water for the same.

Infusions of tea and coffee are much richer, and more economical when made in soft than hard water; and medical tinctures more effective in the former than latter.

In all localities where a residence is desirable or farming can be done, cloud water can be secured, though no earth water may be found: and in this the occupant has a decided advantage over Mahomet and his mountain, for when it would not come to him he would go to it; but, in our case, we may uniformly cause the water to come to us—the brook runs away; the cistern comes to us.

Lastly, the prevention of disease is the most beautiful consideration. The bodies are kept clean, and the internal organs—stomach, bowels, &c.—are attacked with no unwholesome or deleterious minerals or substances in the water which is drunk, consequently they are sound and invulnerable against the effects of epidemics, and other diseases—except in cases where imprudent eating and drinking shall vitiate the organs. Thus, the wise person may say to disease, "thus far, and no farther, mayst thou come."

Thus, in the exclusive adoption of rain water, we have economy, convenience, cleanliness, pleasure and healthfulness, and a sure supply in localities where other resources fail—but the Waters of Life fail not!

Rotation of Crops.—The *Country Gentleman* says that James Beatty and sons, successful farmers in Cayuga county, N. Y., adopt the following rotation:

Their fields successively lie in meadow two years; in pasture the third; the fourth corn is planted on the sod, the manure having been applied the previous autumn, and the sod plowed just before planting. Corn is followed the fifth year by barley, which is seeded to clover by rolling. The clover is pastured by sheep, the pasture thus obtained being equal to the expense of seeding, until the following summer, when it is converted to summer fallow for wheat. The droppings of the sheep and the crop of clover furnish an excellent preparation for this grain, which is harvested the sixth year. It is followed by a growth of two years and pasture one, as already mentioned. Underdraining and this rotation "have more than doubled the crops in the aggregate," during the last ten years.

Tobacco Culture.—Continued.

In previous numbers we have given a concise account of the manner of propagating and the mode of early culture. It now remains to say something of its cultivation in the latter stages of its growth, and of the process of curing.

CULTIVATION.

Having cultivated and hoed the crop as often as once a week or once in ten days, destroying all cut-worms as fast as they show themselves, it now becomes necessary to attend to other important operations.

If allowed to perfect itself for seed the tobacco plant develops into a branched top, full of clusters of flowers.

But the object of cultivation is chiefly the leaf. It becomes necessary, therefore, to pinch off the flower-bearing stalk, so as to secure the largest and most complete development of the leaf. Even the leaves themselves may not all be allowed to remain, for it is better that the virtue of the plant should pass into a few, rather than that it be distributed to many. The number of leaves that may economically be allowed to grow will, of course, depend, to a great extent, upon the richness of the soil; and also on the apparent vigor of the plant, and on the length of time it has for maturing its leaves. The more forward plants, having a longer season of growth after topping, can nourish and ripen a greater number of leaves than the later ones, which must be topped lower. "There is great difference of opinion as to the proper height of topping. From 8 to 20 leaves are recommended—the latter for manufacturing. If the tobacco is pretty forward and the land rich, at first prime off just enough of leaves to hill up the tobacco well, and top to 12 or 14 leaves." Continue to top to 12 leaves until the first of August, then reduce the number at each successive topping, until the last when top to 6 leaves. The usual limits in Wisconsin will generally lie between 8 and 12 leaves, and scarcely ever more than 14 should be left to mature.

What is known among tobacco culturists as *priming* is simply stripping off a few of the lower leaves next the ground, so as to leave a space of some three inches between them and the surface. This may likewise be done at the time of topping.

But this is not all the pruning that is necessary. Suckers will early appear, starting out at the junction of leaf and stem. These must likewise be broken off at each going through, until they cease to make their appearance. Care must be used in breaking them off not to break off the leaf itself.

But the tobacco plant requires not only thorough cultivation with the ordinary implements, and careful topping and repeated suckering; it must also be most carefully protected from the ravages of the *tobacco-worm*. We are informed by those who have had experience in tobacco growing in Wisconsin that this pest is not so troublesome with us as in many other localities; still it is hardly probable that any crop will entirely escape it. The pest in question is a monstrous green worm two or three inches long when developed, and the most inveterate tobacco chewer in the world, unless it be some of our Western grinders who consume a two-pound plug every twenty-four hours! The only known way to dispose of these worms with absolute certainty is to knock them off the leaves, when found, and tread them under foot—an operation which must be repeated at every going through with the hoe, until the plant matures and is ready for harvesting.

Of the cutting, gathering and curing, in the next number.

FENCE TIMBER.—When a man has rail timber that is hard to split, and has a sawmill, it might be good policy to saw the logs into rails, three inches square; but the same timber sawed into boards would make twice as much fence (we might add, if well made, twice as good.) Rails should always be peeled. Bark preserves timber when alive, but hastens its decay when dead, unless buried in the ground; a post will be more durable if the bark be left on. Two kinds of timber, unless equally durable, should not be laid in the same fence; for one rotting before the other makes repair necessary.

By heeding this suggestion much time may be saved.

Culture of Hops.

In answer to the query of a correspondent in our last No., in regard to the best method of cultivating hops, we extract the following article, written by D. B. Shapley, of Madison county, N. Y., from the *Country Gentleman*. Hops are largely imported into this State from New York and elsewhere, and we see no reason why the crop should not be remunerative.

The successful cultivation of the hop implies watchful and incessant care during the first stages of its growth. They should be planted upon a warm, deep, loamy soil, on a dry bottom, which is best found upon a sandy, gravelly or stony porous subsoil, affording drainage from off and about the roots of the plants during the rainy and frozen season of the year. Hops are one of the most exhausting among cultivated plants, both in respect to the organic and mineral constituents which are extracted from the soil. Therefore rotation of crops should not extend more than four years on the same ground, unless the soil is supplied with that which the hops most extract. In comparing the table of analysis, we find that both lime and potash enter largely into the growth of both the plant and hop.

The usual mode of planting is to lay out the ground in rows 7 and 8 feet asunder. The best and quickest way to proceed in laying out the ground is to use a horse and a corn marker, by having the pins in the marker 7 feet, the distance required for the rows one way. Marking the rows the other way is usually done by stretching a rope the distance desired, at which time the setting is done by the guide of the rope, by setting the hill where the rope crosses the mark made by the corn marker. The setting is done the first of May, by setting the roots of the previous year's growth, called runners, which are carefully selected, so as to get healthy roots, which are cut into pieces with two setts of eyes to each section—setting them with a dibble in the ground, with five setts in a hill, setting one at each corner of a square of 6 inches, and the fifth in the centre of the square, all in an upright position, with the eye buds pointing upwards, and all beneath the surface of the earth at least one inch. In the planting there should be much attention paid to the introduction of a sufficient number of the male plants, one hill in two hundred or about five on an acre. They ought to be planted at regular and known intervals, so that in subsequent years they may not become indiscriminately mixed. The first year, planting is usually done with corn, taking care not to encumber the hop hill; the after culture the same as for the accompanying crop of corn. As the corn matures and is fit for cutting up there should be much care taken not to cut the hop vine, which would be very likely to bleed so as to injure the hill.

In the succeeding month of October, or the first of November, there should be placed over each hill of hops at least one or more good shovels of well rotted manure for winter protection, and to enrich the ground for the benefit of the plant the succeeding season culture, which requires more care and watchfulness than the first year to secure a good crop of hops.

As soon as the plants make their appearance above the ground the manure should be carefully spread over the hill. Then the poles are introduced, varying from 18 to 20 feet long, with two at each hill, and inserted in the ground in perfectly straight lines upon each row, an incision being made with the hop bar in the ground to a depth required for firmly holding the poles. Then the plowing commences, which is done by one horse, having the plow kept clean, beginning in the centre of the rows, turning the furrow from the hill the first time plowing—subsequent plowings the furrows should be turned towards the hill.

The cultivator is used after each plowing to level and pulverize the earth, which should be kept smooth and level at all times. The process of hoeing the first time is done as near as may be at the same time as the first hoeing of corn. The vine is usually tied up before the second hoeing, or as soon as the vine has grown two or three feet in height; they are tied by selecting two of the most even vines for each pole, the strong rank ones being selected, and subsequently tied until sufficient strength is acquired in the vine to force itself up to the summit for the production of its flower. The culture in the meantime is performed with the plow and cultivator and hoe, earthing up the hill a little the second time hoeing, keeping the ground clean and pruning the hills. Never suffer but two vines to grow upon each pole, which are preferable to a greater number. It may be here remarked that hops want richness of soil, which should be kept up in order to be a successful grower. Leached ashes is a good substitute for potash, applied to the hill after the first hoeing. When it is found to be important to use lime, it should be well slaked, half a shovelful thinly applied to a hill in the month of October or the first of November. When lime is used, muck should be applied to the hill, in the place of manure, for winter protection. Salt has also been found to be a good fertilizer when the vine is disinclined to run the pole; by making a brine and applying it in small quantity to the hill, it acts like a charm in facilitating the vine in running the pole. I have practically used them all, and found the productions good.

Picking usually commences about the first of September; as the flower becomes hard, with a bright yellow color on opening it, the envelope of the seeds a purple color, and the

kernel or seed itself hard, they are ready for harvest. Picking is mostly performed by women with aid of men's help to extract the poles from the ground, severing the vine some three feet above the ground, and placing them upon a frame over a box, which is subdivided into four apartments, and accommodates as many pickers, with each a box three feet long, two feet deep, and eighteen inches wide, each picker filling the box two or three times during the day, for which they receive from twenty to twenty-five cents per box.

Drying.—The kiln for the operation of drying should be constructed with much care, with stoves, and arranged in the room, and the hops spread upon a cloth floor above resting upon slats, where they dry in about twelve or fourteen hours. Hops in the green state, if left standing long after picked, are liable to become heated and change color, hence the kiln should be made sufficiently large for curing as fast as picked, at intervals of twelve to fourteen hours for each kiln.

Thorough Cultivation.

How few farmers at the end of the present month will be able to show clean crops of such grains, roots, &c., as require cultivation? Probably not one in fifty of all who are growing such crops. Not that they entertain the belief that the growing of corn, and potatoes, and weeds is more economical than the production of corn and potatoes without the weeds, but, in most cases, because they have either covered more ground than they can cultivate well, or because they will have been a little slow in getting about the work of cultivation, and have thus given the weeds an advantage which cannot easily be overcome.

If the fault has been in trying to do too much, it is now too late to correct it for this year; but the lesson should not be lost, *for ten acres well and thoroughly cultivated will yield larger and more profitable returns than fifteen if cultivated in a slipshod manner.* Again, if the fault has been in beginning too late, or operating with too little energy, that, too, is, in part, beyond the power of correction; still, it may yet be possible, by means of new energy and persistent application, to make partial amends for the failure; and this is the object sought to be attained by this writing. A little more steam, rightly applied, with, perhaps, better implements than you have been accustomed to use, may yet save you from the disgrace of weedy fields and stinted crops.

Agricultural Fairs Again.

It is gratifying to observe how sensibly the agricultural men of the country are settling down again, after two years of distraction, into their accustomed channels of effort for the advancement of the great interest to which they have consecrated themselves, and are this year so much less disturbed by the turmoils of war than heretofore. We would not have them lose their interest in the grand struggle in which, as a free people, we are engaged with the demons of rebellion—for vast consequences hang upon its termination—but we would have them so far prove their wisdom and patriotism as to devote all their practical energies to that interest upon the perpetuity of which the ultimate success of the Government seems now, more than ever to be staked.

If we are not to break down the Rebellion by great victories won on the field of Mars, it must be done by an obstinate hemming in of the rebels on every side, and by triumphs in the Fields of Industry. For the farmer, therefore, it is patriotic to attend to his farm until his country shall call for his services in the ranks of war. Industry was never so much in need of the earnest efforts and enthusiasm of its votaries. And, inasmuch as agricultural exhibitions have been found to be a very efficient means of advancing the interests of practical agriculture, it is hoped that every effort will be made to insure their success this year.

It is possible that, after all has been done that can by the most zealous friends of the many Societies of our State, some of the exhibitions will not be all that they otherwise might be made, nor equal to some of the great successes of the past, but what of that? There is but little doubt that with proper effort they may, without exception, be made to clear expenses; and if they do no more than this, the results can hardly fail to make full compensation for the labor expended upon them.

Members of Societies, if your officers have become lukewarm in these matters, kindle them anew by the fire of your own enthusiasm, and thus set the ball a-moving once more.

Curing Clover Hay.

In the summer of 1861, having a field of red clover to cut, I concluded to try an experiment in making it into hay, or rather to vary the process which I generally take in making and housing clover hay.

My practice for some years past has been to cut my clover when about one-half the heads were getting out of the blow, or beginning to turn brown. If it is cut when there is no wet in it, I let it lie in the swath until it is wilted, and then put it into cocks, using a fork to do it with, and taking small forkfuls in making them; have the cocks as small on the ground as will stand well, and not make them very large. The next day, if the weather is favorable, lay the cocks over in the following manner: With a fork take off the top of the cock and lay it on the ground, then take off another forkful and place it on the first one, and so on until the whole has been laid up and the cocks have been turned bottom upwards. In this way the greener parts are placed on the top and outside, and the whole left loose so that the heat and air will circulate through it, and carry off the moisture. The third day open the cocks, and let the hay be exposed to the sun for a few hours, and then put it in the barn.

Although this method of curing clover hay is a great improvement on the old method, (which was to spread out and dry it like grass) yet in this way there is some loss by the leaves and heads becoming so dry as to shell off.

The way in which I designed to make this field of clover into hay, was to cure it entirely in the cock, not to open it at all, but to lay the cocks over from day to day, until the hay was suitable to be put in the barn. The clover was cut in the morning, in the afternoon it was put into the cock; the next day in the afternoon the cocks were laid over. The next morning (the third day) the prospect was that we should have showers before noon, and rather than have this clover wet I decided to put it into the barn, and as soon as the dew was dried off, commenced carting it in. Although this clover was well wilted and some of it partially dried, yet at least one-third of it appeared to be as green as when it was first put into the cock, and I expected that it would be damaged some by putting it in so green, but probably not any more than by leaving it out and having it get wet.

The clover was all put on a scaffold near the barn door, so that when the door was open it would receive the benefit of the air or wind that might come in. After a while the scaffold was filled with other hay. Not having occasion to use all my hay the next winter, this scaffold remained until the past winter, in which I have fed it out. As before stated, I expected when I came to feed out this hay, to find it mow-burnt, musty, and perhaps mouldy, but instead of this I found all of it bright and sweet, and as well cured in every respect as any hay could be; all of the heads and leaves were on the stalks, and the whole was eaten by my stock with as much relish as any hay that I have, and it was eaten up clean, stalks and all.

The summer of 1862 I cured all my clover hay in the cock, but it stood out longer in the cock before it was put into the barn, than that cut in 1861. All that I have yet fed is as bright and as sweet as I want hay, and judging by the way that my stock eat it and thrive on it, it is worth as much as any hay that I have.

From my own experience in curing clover in the way mentioned, I am satisfied that there is a saving of fifty per cent. over the way practised by many, that is to spread out the clover and dry it until the stalk is dry. By this way a large portion of the heads and leaves fall off and are lost, these being the most valuable part of the hay when cured in this way. Especially is this the case when the clover is allowed to stand until it is over ripe before it is cut.—*C. T. Alvord, in Country Gent.*

A Good Farmer.

An English farmer recently remarked that "he fed his land before it was hungry, rested it before it was weary, and weeded it before it was foul." We have seldom, if ever seen so much agricultural wisdom condensed into a single sentence. Reader, have you not some land which at this time will pant and blow and struggle under the burden of a starveling and sickly stalk of corn. "Weeded before it was foul." Why, some of our farmers raise weeds for manure. Vile pests, of no use to man or beast, are suffered to grow up and encumber the ground, merely for the sake of the privilege of burying their bodies to supply vegetable matter to the soil. On a perfectly conducted farm no plant would be suffered to mature its seed which was not of some known and positive utility. Peas or clover are better than weeds; they feed both the soil and domestic animals, and give no trouble to succeeding crops. Remember the practice of the English farmer. Do not wait until your land begins to get poor before you manure it. If it is rich, make it a little richer. Do not wait until your land begins to fail before you rest it; give it rest in time to prevent its being tired. Do not wait until your farm is stocked with weeds before you begin to destroy them. One weed destroyed this year will save much hoeing next year. Manure soon and well, give abundant rest, and cultivate clear. He is a good farmer who observes these rules.

Iowa Gleanings.

Now that the Mississippi river divides the union, viz: the WIS. FARMER and your humble servant, a few gleanings from the west side of the "Father of Waters" may not be amiss to your readers.

This is a "great country," like all the rest of the great Northwest. Wheat, corn, oats, barley, sugar cane, pigs, cattle, &c, are the staple products. The country through this county is very broken, but well watered. The streams or rivers are numerous and very crooked, especially the Yellow river, rising in the county west and making an easterly course to the Mississippi but in many places running a distance of four to six miles and really gaining but one. The timber upon most of these streams resembles that of New York. Maple is abundant, and maple sugar has been made in large quantities the past spring. One man we met had made nearly 1,000 lbs. and the season was not then over.

The prairies are very rolling and broken, but no gravel to be found. They are covered with a rich, strong limestone soil. Winter wheat is looking remarkably well, much to the disappointment of all. The winter was very open—no snow—and all expected that the wheat would be ruined. But an abundance of rain sustained sufficient moisture, quite contrary to a cold dry winter, and the crop now bids fair for one of the best if not the best raised for many years. Chinch bugs last year ruined almost the entire crop of spring wheat, so that farmers have now great confidence in the winter wheat crop, as ripening before they reach it.

Considerable attention is being paid to raising sheep, especially among the Norwegians. And wherever I go now I find the girls busy at their tread-spindle, working up the this year's fleece. They taught me a lesson not without value in the economy of saving wool, viz: to take it from the sheep early. They never wash them, but remove the fleece as early as April. The first sheep shearing of the season I saw April 1st. Two women were robbing the sheep of their covering. I protested that it was not time, but they asserted "ya, ya, goot time," and so *fooled* the animals as they chose. But the example has its lessons though they carried it to an extreme. It is often the case that, for the sake of washing before shearing, we wait for warm water and weather till much of the wool becomes loose, greatly to the loss and discomfort of owner and sheep.

Sugar Cane is receiving much attention. Almost every man is planting one to five acres. Arrangements have been made for one man to get a mill and work up the entire stock for the neighborhood. All hands are taking hold of it with a will, evidently intending to be independent of the world and the rest of mankind.

But one thing northern Iowa very much needs, and must have in order to develop her full resources as an agricultural state. Her prairies are large enough and her soil is rich enough, but there is no market for the back counties. Eastern counties find a ready and convenient market at the river, but to draw by teams—frequently cattle—produce 75 to 150 miles, eats itself up, leaving nothing for the support of the farmer's family. Above all is the moral influence brought to bear upon the rising generation, as they are compelled to travel much upon the road, for weeks and often months before their surplus produce is all off. It may be owing to this drain upon their resources that so few agricultural papers are taken. Of the hundreds of families I have visited, not six could show me the "Farmer's own paper."

Fruit trees are in bloom and look well. A slight frost last week, but it did little damage.

O. S. W.

Alamakee Co., Iowa, May 11, 1863.

KILLING CANADA THISTLES.—In the spring of 1861 I bought a few acres of land. That part of it on which I intended to make my garden and plant my vegetables grew so full of Canada thistles that I thought it was entirely worthless. But I resolved to try what hoeing would do; so, just as soon as the thistles got one or two inches long, I hoed them, through the whole season. This year, up to the present date, not one thistle has appeared. Any one who will adopt this plan of extermination

will never have to complain of these pests.—*Cor. Genesee Farmer.*

Estimating the Capacity of Barns.

Very few farmers are aware of the precise amount of shelter needed for their crops, but lay their plans of outbuildings from vague conjecture of guessing. As a consequence, much of their produce has to be stacked outside after their buildings have been completed, and if additions are made they must of necessity be put up at the expense of convenient arrangement. A brief example will show how the capacity of the barn may be adapted to the size of the farm.

Suppose, for example, that the farm contains 100 acres, of which 90 are good arable land, and that one-third each are devoted to meadow, pasture and grain. Ten acres of the latter may be corn, stored in a separate building. The meadow should afford two tons per acre, and yield 60 tons; the sown grain, 20 acres, may yield a corresponding bulk of straw, or 40 tons. The barn should, therefore, besides other matters, have a capacity for 100 tons or over one ton per acre as an average. Allowing 500 cubic feet for each ton (perhaps 600 would be nearer) it would require a bay or mow 40 feet long and 19 feet wide for a ton and a half to each foot of depth. If 20 feet high it would hold about 40 tons. If the barn were 40 feet wide with 18 feet posts, and 8 feet of basement, about 45 tons could be stowed away in a bay reaching from basement to peak. Two such bays, or equivalent space, would be required for the products of 90 well cultivated acres. Such a building is much larger than is usually allowed; and yet, without it there must be a large waste, as every farmer is aware who stacks his hay out, or a large expenditure of labor in pitching and repitching sheaves of grain in threshing.

In addition to this, as we have already seen, there should be ample room for the shelter of domestic animals. In estimating the space required, including feeding alleys &c., a horse should have 75 square feet, a cow 45 feet, and sheep about 10 square feet each. The basement of a barn, therefore, 40 by 75 feet in the clear, will stable 30 cattle and 150 sheep, and a row of stalls across one end will afford room for 8 horses. The 30 acres each of pasture and meadow, and the 10 acres of corn fodder already spoken of, with a portion of grain and roots, would probably keep about this number of animals, and consequently a barn with a basement of less size than 40 by 75 would be insufficient for the complete accommodation of such a farm in the highest state of cultivation. —*Register of Rural Affairs.*

A Great Fault.—On some farms the barns and hog pens are so near the house that the odor from either or both is wafted by every breeze through all the house, and a cool draught of air is poisoned to all delicate sense of smell. A farm house ought to be, of all others in the world, the sweetest and most fragrant place. The scent of apple blossoms, of clover, of new mown hay, of ripened fruit, are ever about it, while there is no excuse for crowding buildings together. Besides this, the wife and children should have their flower garden, and the yard about be kept scrupulously neat.

STOCK REGISTER.

Better Saddle Horses.

An opportunity to visit the Grand Army of the Potomac recently has been the occasion of the brief article thus begun. Here there were thousands of horses devoted to the cavalry service, or used by officers of various grades, from Majors up to Major Generals; and yet hardly one per cent., so far as we could discover, were particularly fit for the saddle—easy in their gait, sure footed, fleet. Many of them—perhaps ten per cent.—would be called good for riding by a majority of careless observers and poor judges; nay, it is very likely that by their owners this small per cent. are believed to be very superior; but all that cannot stand in evidence against the fact that not one in a hundred is possessed of those qualities which should entitle him to the special commendation of an experienced horseman.

In connection with this fact, certain questions naturally arose, such as

1. Of what practical importance is it that the army should be provided with good saddle horses?

2. Why is it that there are so few horses of this class in the country?

3. How can the error be corrected?

The first question will hardly require an answer, as it must be apparent, on a moment's reflection, that at all times the comfort and endurance of the rider are involved, while oftentimes his life and the fate of a battle may hang upon this single circumstance of officers and cavalry being well or badly mounted.

The second question is easily settled by reference to the fact, which no one will deny, that the people of the North have been—par-

ticularly of late years—but little accustomed to ride on horseback. Buggies and other light vehicles have superceded the saddle horse, and, until the war, our people scarcely ever thought of any other means of private transportation, whether for pleasure or business. In the South, where the country is less supplied with good roads, and where carriages are manufactured to a small extent, the opposite is true. Nearly all the people, ladies as well as gentlemen, are good riders, and almost every family is possessed of at least one pretty good saddle horse. And this is the reason why, in the earlier part of the present war, the enemy so generally excelled us of the North in the performances of the cavalry branch of the service. His horses were better, and his cavalrymen were more accustomed to riding. But now that two years have elapsed—within which time the South has been nearly exhausted of good horses, and our Northern men have been trained in horsemanship—the Stonemans and the Griersons of the Union Army are even excelling the Stuarts of the Southern.

True, the war will not always last—that is, we hope not—but the habit of riding on horseback, formed by thousands upon thousands during the war, will not only be continued after the war is over, but will likewise have the effect to extend the practice, and to render it more generally popular than it has ever been heretofore.

It must be evident, therefore, that our third question is one in which not only the riding public but especially farmers, who are our stock-raisers, are directly interested. The answer is simply this: Let our farmers take pains to breed a larger proportion of their colts from parents themselves possessed of the requisite points. If the concurrent testimony of authors who have written most acceptably on the principles of breeding can be relied on, it is the male that gives form and proportion to the framework of the offspring; which would seem to require that the sire should especially be characterized by those points. But, to make the result sure, we would advise that the dam be likewise possessed of them.

Will not our farmers give to this matter the consideration to which it is entitled?

Inflammation of the Horse's Eye.

Ed. Farmer:—In the May No. of the Farmer I read an article on The Horse's Eye which I cannot agree with. But before I commence to criticise, I will inform you that I am not a Farrier. I doctor horses occasionally, and have had some experience for the past ten years, and what I have done has been done for pleasure and not for profit, as I have scarcely ever made a charge, except for the medicines furnished.

Now, as regards the horse's eye, I think that if the anatomy of the horse's eye is carefully examined and understood, no man will ever cut or in any manner interfere with what the writer of that article calls the haw, without he knows what the end will be. According to the standard authorities, such as Mayhew, Youatt, Mason, Jennings, and others, the *Cartilago nictitans*, or haw, or third eyelid, performs a very important function in keeping the eye clear of dust or any substance that may get on the surface of the eyeball And this being the fact, should it be cut off, it then leaves the eye without that protection which nature provided.

Now, according to my experience, and I have had some, the best thing to do was first to use cold applications until the swelling and inflammation were reduced, and then the haw resumed its place, and was as good as ever. I have never seen it necessary to take it out, nor would I. It may be necessary, sometimes, to place a seton in the side of the jaw if the inflammation is severe, but cooling applications will do it, if persevered in for a little time.

And as for Wolf teeth, I have never seen one, although a good many persons have tried to show them to me. I have seen caried teeth, some of them bad, but I could not discover the wolf teeth. I am inclined to think they are more in the eye of the examiner than in the examined.

How do you think the rule would work, if

for inflammation of the eye we take off the haw, why not for inflammation of the lungs take out or take off the covering of the lung? I think if farmers would study their own interests they would purchase some standard work, and study diseases for themselves, and if they cannot practice, they can oversee and have it done right.

In another article in the same No. an inquiry was made about the cure of colic or stretches in sheep. If the inquirer will purchase Cole's Veterinary work, he will find the causes and cure explained. WM. H. MCCRACKEN.

BARTON, Wash. Co., May 9, 1863.

The Most Profitable Sheep.

The Genesee *Farmer* for February has a good editorial article under the head of "What breed of sheep shall I keep?" After having given the characteristics of different breeds, the following summary is presented:

"The advantages of the Merinoes are:—1. They produce more wool for the food consumed; and 2. Their wool usually commands a much higher price. The advantages of the long-wooled sheep are: 1. They afford more mutton for the food consumed; and 2. The mutton usually brings a much higher price.

"Under ordinary circumstances it is not easy to determine which of these two classes of sheep are on the whole most profitable. As before said, it depends much on the character of the soil, on the location, the system of agriculture, the proximity to market, and on the taste of the breeder.

"It may be asked what we mean by the long wooled sheep. In England sheep are generally classed as 'Long-Wools' and 'Short-Wools.' The former include the Leicester, Lincoln and Cotswold; the latter the different varieties of the South-Down, such as the Sussex, Hampshire and Shropshire Downs.

"We think that so long as the present price of coarse wool is maintained, the English sheep are the most profitable. But we would not advise those who have Fine Wools to dispose of them and purchase Coarse Wools; for by the time they have raised a flock of Coarse Wools, fine wool may and probably will be again in demand."

KINDNESS.—"We once had a very awkward horse to shoe," said a smith, "and I was punishing it severely to make it stand still. My shop was just before the kitchen window, and my wife who is a kind-hearted woman, came out, and reproved me for my conduct to the animal. She went up to it, patted it, and it stood quiet as a lamb, and we could have done anything with it." Oh, that people would try kindness! It is a mighty cure.—*Stock Jour.*

Holes for Nose Rings.

The Maine *Farmer* recommends boring the noses of all domestic animals of the ox tribe—cows, steers or bulls, and says that "it is very easily done—occasions them but little trouble, and is often of great service when you wish to handle or control them, by putting your finger in, or a rope, or a ring. The best way to do this is to take a carpenter's gouge, about half an inch wide, with its edge ground circular, that is with the angles ground off, and the edge passing up the sides a little way, thus ⊃. Make it sharp—take hold of the nose of the animal with the left hand, holding the lower part of the cartilage between the nostrils with the thumb and finger, and then place the gouge a little above, against the gristle, and with a little pressure turn the gouge round and it will cut a round smooth hole through easily, and without any apparent pain to the animal." Anima's thus treated can be broken easily to lead or to stand hitched quietly, thus saving much vexation and trouble.

THE BEE-KEEPER.

Lee's Patent Bee Hive.

Experience has demonstrated that the Bee-keeper need no longer trust to luck for success in keeping bees, but may as uniformly secure rich returns for his labor and skill in this as in any other department of husbandry.

Bees need *intelligent attention.* The man who is unable to give this for want of time or ability ought not to attempt to manage bees, or if he does so, need not expect great success. But the greatest skill is often rendered abortive by the want of a proper hive, and the most intelligent and successful apiarians in the country admit that the best and most uniform results are only to be obtained by the use of a hive better adapted to the wants of the bee than the common box hive. Says Mr. Quinby, who

is confessedly high authority on this subject, (Appendix to "Mysteries of Bee-keeping Explained," page 381,) "There is not the least doubt in my mind that whoever realizes the greatest possible benefits from his bees will have to retain the movable combs in some form. The principle—movable combs—can hardly be dispensed with."

To Mr. Langstroth belongs the praise of first introducing to the American bee-keepers the movable frame, or of rendering it of any practical utility to him; although to another (Huber) belongs the honor of its invention.

But, like all pioneers, Mr. L. could not perfect everything as he went along. His method of applying the principle, mentioned above by Mr. Quinby, is open to numerous and grave objections not applicable to the productions of some later inventors. A perfect hive, adapted to the latitude of the Northern States, must possess, among others, the following features:

1. It should be of suitable size, which, I think, has been sufficiently shown to be about the capacity of a bushel.

2. It should approach nearly a cubical form, that a sufficient amount of heat may be collected and retained to keep the bees comfortable in winter, in case they are wintered out in the open air; and also to enable the bees to lay up a sufficient amount of stores for the winter, *above them*, that it may be easy of access at all times, particularly in the coldest weather.

3. The interior of the hive should be easy of access, that the bee keeper may readily determine the condition of his bees at all times, which can only be accomplished by means of the movable frames.

4. The hive should be so constructed that it can be easily and thoroughly ventilated, both during the hot and cold seasons; the former to prevent the melting of the combs, and to secure the uninterrupted labor of all the bees during the working season; and the latter to prevent the destruction of the bees by the accumulation of frost in the hive.

5. The hive should be so constructed as to permit the passage of the bees over the top of their combs at all seasons of the year, which can only be accomplished by means of the movable frames.

6. The hive should be so constructed as to give the bee-keeper complete control of both the bees and their enemies, the greatest of which is the wax moth; to secure which end the movable frame is indispensable.

7. It should be so constructed that the bee-keeper can form artificial swarms with ease and certainty, thereby always keeping his stocks strong, which can only be accomplished by the aid of the movable frame.

8. It should enable the bee-keeper to shut off and slaughter the drones at will, thus saving from one to five lbs. of honey per day in each hive.

9. It should enable the bee-keeper to secure the greatest possible amount of pure comb honey in surplus boxes, which can be readily put on and removed.

10. Lastly, the hive should be simple in construction, and cheap.

A Wisconsin Hive, patented by Walter M. Lee, of Rosendale, Fond du Lac Co., Oct. 15, 1861, is claimed by its inventor to more nearly approximate this standard than any other now before the public.

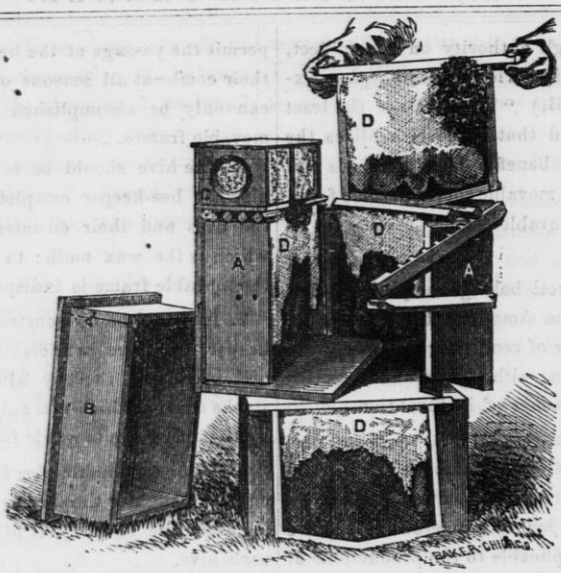
Its chief points of excellence are claimed to be the following:

1. As to size; it containing a little more than 2,000 cubic inches.

2. Its form; being nearly cubical.

3. It has an inclined and movable bottom board, the advantages of which are claimed to be the following:—1. It enables the bees to more readily keep their hive clean. 2. It affords a chance to ventilate the hive at the bottom. 3. The entrance to the hive can, by its use, be so contracted as to shut off the drones or confine the queen bee, and at the same time afford to the workers uninterrupted ingress and egress, or it can be entirely closed at will, affording many advantages which cannot now be named.

4. It makes use of the movable frame, the



peculiar shape of which uniformly secures straight combs; a result not attained by any other hive in use.

5. Adjustable strips or bands are employed to keep the frames in their places, the ends of which projecting beyond the side of the main body of the hive are accessible to the fingers, without disturbing the movements of the bees when removing them from the hive.

6. By the use of the frame holders the hive can be thoroughly ventilated during the heat of the summer, also an entrance for the bees directly into the boxes is afforded, by which, it is claimed, a greater quantity of surplus honey is secured.

7. It is also a dividing hive, without a partition, giving the bee-keeper a choice in his method of making artificial swarms, which operation, it is claimed, can be more readily and safely performed by this than by any other hive in use.

8. The bees can at all times pass and repass around, above and below each and all of their combs, which affords them easy access to their stores at all times, which is particularly important in winter.

9. The arrangement of the hive is such that the bees, while at work in the boxes, are detached as little as possible from the main body of their fellows, affording ready access to the boxes at all times; also by this means keeping the boxes as warm as the main body of the hive, thereby enabling the bees to work in them at all times, which they will do, it is claimed, as readily as in the hive itself.

10. The boxes rest on the top of the hive, which is surmounted by a cap, easily removed to enable the apiarian to determine the condition of his bees, put on and remove surplus boxes, &c.

11. By removing the boxes and leaving on the cap every comb in the entire hive can be completely ventilated at the top during winter, which is of the utmost importance, as to a want of this may be ascribed the greatest part of the losses so usual at this season of the year.

The construction and operation of this hive may be readily understood by referring to the annexed engraving. Letter A indicates the open halves of the hive, with the comb attached to the frames; B, the top cover or cap to fit over the honey boxes; C, a honey box filled and resting in its proper place on the honey-boards; D, frames and comb attached, one resting on the ground in front of the hive, and leaning against a box on which the hive stands, and one held in the hands and resting on the

top of the hive, showing the honey and bees attached. The movable bottom board is seen beneath the hive. The frame holder is seen in front, held at one end by a screw, the other end resting on the alighting board.

John F. Winnicok.

Beaver Dam, Wis., May 20, 1863.

Scientific Handling of Bees.—The Transferring of Swarms.

Of nothing with which farmers *should* have much to do are they so reprehensibly ignorant as of the bee. A large majority of them know how to eat the delicious fruit of its skill and faithful industry; indeed we have never found even a very small minority who were disposed to regard good, clear white honey as a thing "bad to take," and yet how few there are who take any pains at all to acquaint themselves with the needs and habits of the wonderful little creature through whose agency the flowers of garden and field are made to yield for their use this most delectable of sweets.

In the days of old fashioned hollow log hives, it was, perhaps, not so surprising, for in them it was more difficult to study their modes of life and labor. But now, since the ingenious hives of Mr. Langstroth and others, constructed in accordance with principles deduced from years of patient observation and experiment, the study has become so comparatively easy and interesting that we wonder every farmer in the country does not undertake the production of honey.

But it was not our purpose when we wrote the caption above to descant upon the profit and pleasure to be derived from the culture of the bee—simply to illustrate, by reference to a case which came under our own observation recently, how easily swarms of bees may be handled, when it becomes necessary to divide swarms or to transfer an entire swarm from an old hive.

The case in hand is an instance of transfer recently effected in Madison by that skillful operator and scientific apiarian, Mr. J. M. Stebbins, of Appleton, General agent for Wisconsin of Langstroth's admirable hive.

The bees were in an old hive consisting of a cross section of a hollow log, and were doing the best they could under such circumstances. The sequel showed that they had been manufacturers of honey under difficulties.

There were the old hive and the new one, side by side, suggesting comparisons we have sometimes been accustomed to make between the old limb-of-a-tree plow of the Romans and the splendid steel patterns of the present day. To the uninitiated it would have appeared a difficult thing to tear open that old log and transfer its entire contents, bees, brood, comb, honey and all, into the new quarters. Not so, however to Mr. Stebbins, who went as quietly about the work as if he had been going to eat the honey, instead of enraging the bees by a destructive onslaught upon their old and beloved habitation. For the benefit of those who do not but would like to know how a thing of that sort is done, we give a description of the process in detail:

First, the new mansion was made ready by removing the top part and taking out the frames, so that it was a simple square box.

Secondly, the bees in the old hive were prepared for the intended interference with their further occupation of it by blowing the smoke from a burning twist of rag into the several openings; not "to put their eyes out," as a bystander suggested, but to alarm them for their safety, so that they would gorge themselves with honey—it being their prime instinct to see that they are amply provided with a store of food, at least as much as their stomachs will hold. In this condition of satiety they have no disposition to sting, unless driven into a pretty close *pinch*, and may be handled with as much impunity as so many peas. In five minutes the hive was removed from its place under the porch to a bench in the carriage house; the new hive being placed near it on the floor.

The next thing to be done was to get the bees out of the old into the new hive, comb and all, so that they might be prepared to go right on with their regular business in a few hours as though nothing had happened. In

the further progress of the transfer, Mr. Stebbins removed the top-board of the hive, and then with an ax split out and removed about one-third of the circumference of the hive. This gave him an opportunity to get at the comb, and to remove it card by card, by cutting down the edges and around the central sticks with a long-bladed knife.

The fourth step was to place the combs in the frames of the new hive. In order to do this, each section of comb was cleared of bees, by brushing them off into the new hive, and it several times became necessary to trim down the comb so as to get it within the frames; in doing which care was taken to preserve all the brood-cells and to cause as little dripping as possible of the honey. When cut down so as to just crowd into the frame, as a closely fitting board might be crowded into a slate frame, two pieces of twine—one at each end—were tied around comb and frame to keep the former in place until the bees should again cement it thereto by new wax.

Thus prepared, the frames were successively suspended in the box of the new hive; adjusting the distance between them, so as to leave room for the bees to pass up and down. And quantities of the bees still remaining in the old home were tenderly scooped up in our bare hands and *poured* into the new. But after all there still remained a considerable quantity of them, unwilling to leave until convinced that they could do better elsewhere. To transfer these it was only necessary to spread a clean sheet or tablecloth on the floor and place the two hives in juxtaposition. In a few minutes they streamed off into the place prepared for them, and gradually the multitude of individual bees which had alighted here and there, inside and outside of the carriage house, or had just come in from the fields, laden with honey, found their way to the gathered swarm.

During the entire operation we were not once stung, and in about thirty minutes from the commencement the task had been entirely completed.

Mr. Stebbins showed himself to be a master of his business, and we can conscientiously and most cheerfully recommend him to all who may desire either information or very superior hives.

THE POULTERER.

Poultry and Poultry House.

As the season is approaching when many of our readers will desire to confine their poultry, in order to keep them from the ripening grain, we commend to their attention the following, which we take from the *Dollar Newspaper:*

"Much has been said and written upon this subject, and but very little practical information has ever been given to the reading public. I propose to give my experience in raising poultry, and my plan for a poultry house—a plan which will be the best fitted for the easy management of fowls, as well as being the least expensive. For a hen-house, it may be built on one side of the barn, or if you have no building suitable, get four posts, hew two sides; let them be, for the high side, say nine feet; for the low side, say 6 or 7 feet, which will be enough pitch of roof, provided the house is not more than 9 feet wide. Twelve feet by nine will be large enough for twenty hens; plant the posts firmly in the earth, so as to keep the house firm and steady; get second quality pine or hemlock boards; nail them on lengthwise, if you do not choose to get plates so as to have the boards run up and down. A shingle roof will be the best, though a good board or slab roof will do well enough, —the slabs to cover the cracks between the boards. The house must have a window, with lath nailed across, to let in air and sunshine. The roosts or perches should be placed in the highest side, so as to leave space enough for the convenient placing of the nests, which ought to be in the warmest part; fit a tight door on with good hinges and a good lock, and you will have as nice a hen-house as you could wish for. The cost will not be more than $8, with lumber at two cents a foot. A good feed or water trough is made out of a log, something of the shape of a hog-trough.

"The best breed of fowls, in my estimation, is the Poland, or top-knot; they are excellent layers, and are of profit till 5 or 6 years old. There are no better hens than the Poland to raise with. As a good, hardy breed, the English pheasants have no equals; they are good layers, and are excellent for the table. They are of middle size, with blue legs and double combs; the males are in color red, intermixed with black.

"A good feed for fowls is a mixture of corn,

wheat screenings, oats or any grain you can get, mixed together; fresh meat is very good, but I would not feed on it altogether. To have hens lay through the winter, they must not be affected by sudden changes of the weather. Hens that lay steadily through the summer do not lay in winter. Pure water is indispensable in poultry breeding."

THE HORTICULTURIST.

A. G. HANFORD, : : CORRESPONDING EDITOR.

Go Plant a Vine.

Reader, go plant a vine;
Why should the virgin soil drink in the sun,
Why should his blessings shine
On the bare earth, with nought to rest upon?
Go plant a vine.

Dig deep the soil,
Let it behold thy morn and evening care;
Bend to thy toil
As though it were glad labor to prepare
To plant a vine.

Perhaps 'twill cling,
Alas! too late, around a withered tree,
And all its fragrance fling
On the ungrateful air full wearily;
Yet plant a vine.

No clusters may
Reward thy labor and thy toil arrayed,
Yet e'en a lamb may stray
In summer heats beneath its broad-leaved shade;
Go plant a vine.

Thou lovest thy fellow man?
Why tarry longer? for the sun will set;
No philanthropic plan?
Up! Up! Oh, hast thou nothing done as yet?
Go plant a vine.

And then, when night shall come,
Trellised 'mid stars, the Husbandman above
Thy vine shall carry home,
Transplanted to the garden of God's love;
Go plant a vine.

Renovating Flower Beds.

If the exhausted beds have a good bottom, we advise removing the top spit and replacing it with a mixture of virgin earth from an upland field, well chopped up with old chippy cow-dung, and a good proportion of leaf-mold —say, if you can obtain the quantities, equal parts of each of the three ingredients. If you can get the beds empty in the winter, the best way will be to take off the top spit and fork over the subsoil, so as to let the frost and snow penetrate it; then get a good supply of burned clay and hot-bed dung, and chop them down together in a ridge, and let them be well frozen and fill up the beds with the mixture early in March, and they will be in admirable condition for planting as soon as they have settled. Chippings off hedges, refuse wood, straw, &c., built up over a hole, and packed round with cakes of old turf, and then burned, make a capital dressing to dig into the old soil, if you cannot well get new material to replace the worn out stuff. If used chiefly for bedding plants, a compost of leaf-mold and sandy soil from a common, equal parts, and one-fifth of the whole very old dung, would prove a good mixture. Bedding plants do not require a rich soil as much as a *new* soil.—*Gardener's Weekly Magazine.*

Strawberry Culture.

One year ago we gave the readers of the FARMER particular directions how to treat their old strawberry beds. If our experience is proof, all who carried out faithfully our plan last year are abundant gainers thereby. Especially are the advantages of this system apparent at this time, when the prevailing drouth has blasted the hopes of many a strawberry grower.

The principal features of that plan are

1. Thorough and deep stirring of the soil, with severe thinning of the plants;

2. A light winter mulch in late autumn, to remain on to decay until after the fruit is off the next season.

This plan of thorough, deep tillage, immediately after the crop is off, we deem one of the utmost importance to successful culture—using the spading-fork, hoe and rake for the garden, and the subsoiler, drag and horse-hoe for the field.

This mode of culture we style *annual renewing*. And this is the only period of the whole year when this can be done without injury to the succeeding crop. This is great economy over the common way of allowing the ground to mat over with vines at two years from planting out, and making new beds every second year.

Unless the soil is very rich, an annual top dressing of composted manure should be applied at the time of this overhauling. None but such manures should be applied to the strawberry bed. Avoid raw manures, as they generally contain abundance of weed and grass seeds. Sawdust, tanbark, or even chips are excellent for winter mulch.

We do not advise planting at this period; six weeks or two months later is found preferable, but spring is the only sure time.

J. C. PLUMB.

Care of Young Orchard Trees.

BY F. R. ELLIOTT, CLEVELAND, O.

Never water the ground around the trees at any time for one year from the day of planting out. If they do not swell readily in spring, take a fine rose sprinkler, and just at sundown each night sprinkle the tops. If the ground becomes hard around the roots, loosen it with the hoe an inch deep, and then cover it with three inches deep of sawdust, tan bark, chip dirt, or any other litter that will keep it again from drying, and prevent any great changes of temperature or moisture in the soil about the roots, and thus assist in their formation and growth. This is called mulching, and should always be put around trees in the fall to keep them from being acted upon by the frost heaving and cracking the earth.

If by any accident a tree has its bark rubbed off, or broken, trim it smooth with a sharp knife, but avoid rubbing any earth or preparation of any kind over it; left untouched, except the smooth trimming, it will soon heal over. When newly planted trees or vines have to be in grass land, as is sometimes the case, when near the house, the earth should be kept mellow and light a foot or more in diameter beyond the area of the branches; and to keep the appearance good, the mulch may be of new mown grass, renewed from week to week or as fast as it becomes brown. In the autumn, such trees should have a coat of well rotted manure mixed with lime laid all over the previously mulched circle, and left to be dissolved and conveyed to the roots by the frosts and rains of winter.

Should a tree or trees exhibit any feebleness in growth, or its bark become mossy or rough, wash, or rather rub it well with strong soap suds or weak lye water; this will not only give renewed action to the bark, but destroy any insects that may have fastened to it.

Of crops to be grown among trees, during their early years or until they require the whole of the land, all grains and grasses are to be avoided, and potatoes, tomatoes, etc. adopted. A very good way is to cultivate the land during the early part of the season with horse and cultivator, and in August sow turnips; when the turnips are grown, pull and remove the bottoms of the best ones, and turn the poor ones with the tops underneath, by using a light one-horse plow, and plowing only two or three inches deep. Top dress the land every fall, if it be not rich, with good, well rotted, composted manure, or with lime or bone dust, or such other special manure as the land may demand. Plats of dwarf trees in the garden are easiest cared for by mulching the ground all over four inches deep, thus keeping down the weeds, and the land light, loose, and uniform in temperature and moisture.—*Ohio Farmer.*

Pruning in Mid-Summer.

Though much difference of opinion exists as to the propriety of heavy pruning at this time, there is no doubt but that where pruning has been neglected until now, it should be promptly attended to.

We have, the last twenty years, practiced midsummer pruning, trimming off surplus wood of young stocks, to render the balance of the tree vigorous for August budding; and we always found such wounds to harden without decay, and heal over rapidly and healthy.

In vigorous trees in the nursery or orchard, very heavy pruning may induce a late growth, which will not ripen sufficiently to withstand the winter; but moderate pruning, especially of side shoots and suckers, where needed, should not be delayed. It will be found perfectly safe, will require no application except in case of large limbs, where it would be well to apply a cement composed of gum shellac dissolved in alcohol to the consistency of mucilage. A thin coating rubbed on with the finger or swab will be perfectly impervious to the weather.

Look out for suckers from the roots of your choice roses, especially if budded stocks; they shoot so rapidly after this time that they often prove dangerous robbers.

The same may be said of grape vines: allow no young wood to grow below the fruit, or from the base of the bearing vine; for it is right here that the majority of people fail to grow palatable grapes, or vines which can produce such. J. C. P.

A PLEASANT FERTILIZER.—Many persons, particularly ladies, dislike to use the ordinary fertilizers form the barn or poultry yard on flowers and other house plants. "One who knows," sends the following for the *Agriculturist*, which is good not only to stimulate house-plants, but for out-door plants of almost every kind. Dissolve one-half to three-fourths of an ounce of sulphate of ammonia, (obtained cheaply at the druggist's) in one gallon of water. Apply it once a week, and then only to growing plants. It may be used with great benefit on beds of strawberries, on peas, on dwarf pears, grape vines, dahlias, and for all kinds of pot plants. This mixture increases the size of the foliage of plants, and gives a

dark, shining green color. The flowers also are improved in proportion. And, not the least important, this fertilizer will do no harm.

Set out Shade Trees.

Yes, set out shade trees! You have room enough and to spare. You have time enough. If you cannot afford to purchase them, gather the seed and sow them in some spare corner, and in a year or two transplant them; and in a few years the improved appearance of your premises will more than pay for the trouble and time.

On the prairies, especially, plant out shade trees. Their shade around the house will be grateful on many a hot summer day, and the breeze coming in at the open window will be tempered to a most refreshing coolness. Then a house looks more like the residence of a human being with a soul in him when it is cosily embowered in the midst of over-arching trees and interlacing vines. How different from the lonely aspect of a garish house, bleaching and scorching in the sun of summer, shivering and rattling in the blasts of winter!

What do you remember most readily about the home of your childhood? Is it not the well-known tree under whose shadow you played and dreamed the dreams of boyhood? On every bough hangs a memory, and tender reminiscences cluster about it as thick as the leaves on its branches. Plant trees, then, to make your homes attractive, and comfortable, and to waken into life in the hearts of your children an affection for the old homestead, which will grow stronger and stronger as time carries them away from the hearthstone—which will be a sure safeguard against temptations and allurements to vice.

There is economy in it. Buildings protected by shade will last longer, but the trees must not be so near as to chafe, or so dense as to prevent a free circulation of air. There is pleasure in thus beautifying your homes. There is a habit of neatness induced by this striving after beauty which will finally affect the character of all your farming operations.

We may combine beauty with utility and plant trees which are valuable for economical purposes. The Yellow Locust makes excellent posts. They may be planted six feet apart, and when of a fair size every alternate one may be cut out; then, in a few years, every alternate one of those left may be cut and split into halves for fence posts. In process of time the remainder of the old ones may be cut, and the shoots from those that were previously cut trained, with a very little care, to supply their place. The locust grows very rapidly, and in prairie districts a little pains in their production will pay handsomely—to say nothing of the beauty of the tree, or its fragrance when in blossom.

The Sugar Maple grows quite slowly, but may be made valuable for manufacturing sugar. Select trees that are good size, and cut off the top, leaving the trunk about 12 feet long if possible. The tree will be more apt to grow and will have a handsomer top, and upon the size of the top in a great measure depends the amount of sugar yielded by a tree. We have heard of maple groves in this State that yielded a good supply of sugar the twelfth year after planting. They may be set in rows along the roadside and around the house. Fifty trees will make quite a respectable sugar-bush. The maple is a handsome and remarkably clean tree, not infested by insects as are very many trees usually selected as shade trees.

The maples may be set with the locusts, and as the latter are cut out may be allowed to take their place.

The Chestnut is also a handsome tree, and quite easily raised. There are some in this city, twenty feet in height, that have borne nuts, and others find no difficulty in making them live.

Of course these do not take the place of fruit trees, but are better for the purposes of shade, as fruit trees grow so much smaller with us than at the east; and besides, they may be placed in more exposed situations, along the roadsides, &c. But we are rather inclined to the opinion that the timber of the Yellow Locust, the sugar of the Maple, and the nuts of

the Chestnut would pay quite as well for the time and care bestowed upon them, and for the space they occupy, as any fruit trees that are raised—to say nothing about the increased beauty of our homes and the grateful shade afforded by them. Blending with the various kinds of fruit trees and shrubbery, they soften into beauty the more rugged forms of the merely useful, and thus, by quickening our perceptions of the beautiful in God's works, they become really useful.

Don't neglect this matter. If you are too busy in the spring, do it this fall. Select your trees now, or find where they may be procured and contract for them. It will pay in dollars and cents, as well as in comfort. *

Plants Consecrated to Heathen Deities.

The ancients delighted to idolize and to symbolize objects. They placed gods and goddesses in the cups of flowers; and we may trace in our sympathies toward certain plants the still lingering remains of heathen mythology. The fig tree was in the early ages dedicated to Saturn, the oak to Jupiter, the ebony to Neptune, laurel to Apollo, thyme to Mercury, the vine to Bacchus, the poplar to Hercules, reeds to Pan, the lotus to Harpocrates, the God of Silence; poppies to Morpheus, whence the active principle of poppies, or opium, is now called morphia; the lily was dedicated to Juno, the olive to Minerva, the myrtle to Venus, corn to Ceres, garlands of flowers and nosegays to Flora, orchards and fruit trees to Pomona, the white rose to the nymphs, sea-weed to the Nereids, separate trees and trunks of trees to the Hamadryads and Dryads, the lilac to Hebe, the Crocus or saffron to Sickness, the laurel and palm to glory and courage. The violet, the forget-me-not, and many other flowers have still their symbols.—*Septimus Piesse.*

Planting Grape Vines.—Geo. Campbell says: "I have found very little difference in the growth of vines, whether planted in fall or spring. When planted in the fall and slightly protected during the first winter, an early start and usually a more vigorous growth may be expected, than from vines transplanted in spring."

MECHANICAL & COMMERCIAL.

Business Rules.

1. Do not undertake a business with which you are not perfectly acquainted, any sooner than you would attempt, if blind, to survey a city. First thoroughly understand what you propose to do. Serve an apprenticeship before taking a single step involving risk.

2. Never attempt a business for which you have no tast or tact. Seek to do that for which you have a natural faculty and relish. Don't aspire to be a merchant when you should be a farmer, a mechanic, or a day laborer.

3. Never connect yourself in partnership with those in whom you have not perfect confidence—with those to whom you would not be willing, sick or well, at home or abroad, living or dead, to entrust all your business affairs.

4. Never attempt to do more business than you can safely do on your own capital.

5. Avoid the taking of extraordinary risks of long credits, no matter what profits are in prospect.

6. Give no credit whatever to any one who does not possess a good moral character.

7. Supervise carefully your own business, (not your neighbor's,) and look after your clerks and see that they are faithful in the performance of all their duties.

8. Let all those with whom you have dealings or intercourse, understand distinctly, that you will not lend yourself, for sake of trade, to do any mean thing—anything which your conscience will not approve.

9. Never lend your name by endorsement or otherwise, except under most extraordinary circumstances, and then let the act be guarded with every possible security.

10. Never allow yourself or your partners to draw a dollar from the concern to invest in any "outside operation" whatever.

11. In forming a copartnership, insist that a limited, fixed sum only shall be drawn by each partner for personal expenses.

12. Under no circumstances whatever, deal in stocks. Don't believe any one of the thousand marvellous tales of a fortune in that direction. They are a trap and a lie.

13. Keep all your accumulated profits in your business so long as you owe a dollar.—When you have more capital than you can use, then it will be proper to invest outside.

14. Never borrow of banks or other sources, if you can avoid it. If temporary assistance is needed, seek it from a tried friend, or from a sound banking institution, and then return the loan, on the day fixed, with the most rigid punctuality.

15. Have an eye on the condition of the country, its crops, and the general prospect for business, and look out sharp for the movements of politicans, who, in nine cases out of ten, care more for a re-election than for our commercial interests or our national prosperity.

There are other and most important matters which should not be forgotten. Keep good company. Value integrity more than money. Live within your means. Eschew wines, theatres, and fast horses. Use no profane language. Never quarrel with a partner. Be kind, considerate and generous to clerks, and also to your unfortunate debtors. Cultivate the friendship of all. Do your proper share in promoting the public weal. Be a man, a gentleman, and a christian; and you will make sure of an inheritance in this life and of untold riches in the life to come.

SCIENCE, ART, STATISTICS.

Making Mortar.

In common practice, the cohesion of mortar is greatly impaired by using too large a portion of sand; it should never exceed two parts by measure to one of lime paste. A cask of lime weighing 280 lbs., made into eight cubic feet of lime paste, should be mixed with sixteen bushels of damp sand. The notion used to be generally entertained that the longer lime was slaked before it was used, the better would be the mortar made of it.

This, however, is not the case with our common fat lime and sand mortars. The sand should be mixed with the slaked lime as soon as the latter becomes cold, and no more water should be employed than will reduce the lime to a thick paste. In preparing mortar, the unslaked lime should be placed on boards and sheltered from the sun and rains; it should be open above and surrounded with some sand. The water necessary to slake lime should be poured upon it with any suitable vessel, and care should be taken to stir the lime so as to bring the water into contact with every portion, when it may be left until all the vapor has passed off.

The sand may now be incorporated with the lime by means of a hoe or shovel; and, if necessary, a little water may be added to produce a homogeneous, consistent paste, when it is ready for use. Sand from the sea-shore should never be employed for making mortar without being first washed with fresh water, because the salt left in such sand is liable to absorb moisture and prevent the mortar becoming hard.

In putting up walls of brick or stone, care should be taken that the stones or bricks be moistened before they come in contact with the mortar. Every brick and stone should be laid in a good bed of mortar, and should receive a blow to fix it firmly. The bricks should not be *laid* merely, as is the common custom, but forced down, so as to press the mortar into all the pores and crevices. The superintendent of a building should give his personal attention to the vertical joints in the walls, as the masons frequently neglect to fill them up with mortar.—*Scientific American.*

Inattention to these little things is one great cause of so many rickety, dangerous buildings, sometimes involving in their ruin the lives of the occupants, as in the case of the cotton mills in Massachusetts, a few years ago, in which so many operatives lost their lives. It is not now as when

> "In the elder days of Art,
> Builders wrought with patient care
> Each unseen and hidden part,
> For the Gods see everywhere."

It will pay a man here, as well as elsewhere, to pay personal attention to his own business.

EDUCATIONAL.

How to Secure Neatness.

It is said that cleanliness is next to godliness. This may be rather an exaggeration of the true value of neatness, but a great truth underlies the maxim. A proper estimate of man, a recognition of the true dignity of our humanity, which so distinguishes true religion, will also manifest itself in a proper self-respect—and neatness is but one form of expressing self-respect.

The love of ornament seems to be an original endowment of our nature. It makes its appearance where art would least of all be expected. It seems, when properly restrained, to harmonize with the beauty of the world all around us. The flowers might have been created without color or odor, and yet perform every function they now do, for there are flowers with neither; but God seems to have created the beautiful to gratify the love of the beautiful with which he had endowed man. And, as a general rule, that soul is capable of the highest culture and the most complete development which possesses the keenest appreciation of the beautiful in nature.

And right here we would begin in the school: cultivate the taste for the beautiful. Make friendships with flowers, with paintings, with with ornamental gardening. Imitate their colors, their outlines, and their plans, with pencil and paper, no matter with how rude a hand

or coarse a touch. Once secure attention and interest here, and neatness in person and dress will naturally follow. Slovenliness would be impossible in the midst of such associations. Respect will also be paid to the appearance of the school room. The desks will not be cut or scratched. The books will not be scribbled or torn or soiled. Rudeness in manners will be softened, and vulgarity of language be refined into elegance, by the elevating influence of this newly developed faculty.

One great reason why we see so many slovenly school children is, we think, because we see so many slovenly school houses. They stand bleak and bare, without the slightest attempt at ornament in the building, or the remotest hint at adornment in the grounds. Not a tree casts a friendly shade over the scorching sides of the house; not a shrub stands as a fragrant curtain before the glaring window. The blank, dull monotony of the walls is unbroken by any object upon which the eye may rest lovingly. Not a fence suggests privacy or home-feeling. All is repulsive, sombre, chilling to the soul. The children seem to feel that neatness or ornament would be entirely out of keeping amidst such surroundings, and never make the attempt. The teacher tries in vain to secure order and attention from the flock of hardly restrained urchins who are longing for recess. The trustees don't care; and so goes on the school, term after term, and year after year.

We would have flowers and shrubs and trees surround the intellectual nursery of the little ones. We would have their young eyes open upon the beauties of God's handiwork and man's skill, and not school their minds to such a familiarity with the grosser realities of life as too many school houses and their surroundings would introduce them to.

The raggedest boy in the street will step tip-toe when he enters a room where there is a carpet, and the most uncouth urchin is tamed into a sort of politeness by the neatness of a lady's parlor. Why not use these facts in the management of our schools?

Teachers, parents, and school boards, will you try this plan, and see if it does not succeed?

THE HOME.

A Morning on Rich Mountain.

BY MRS. HOYT.

I do not remember the date of the battle that made this mountain memorable, neither that of my first visit to a locality so sacred and interesting. I only know it was in the time of leaves, and near the anniversary of the consecration of that temple of nature to holiest use. A year of intense life has gone by, and many other pictures have been added to the gallery of memory, many other impressions ground into the tablet of my soul; and yet, at this distance, looking out upon the hubbub and dust of a great city, a breath touches my cheek and I stand again in the dim cathedral aisles of the summit of Rich Mountain.

It is always interesting to trace the law of associations to the results that often seem inexplicable; but time is everything in this crisis of life and death. Stand with me, just one moment, beside the graves that have need of no monument beyond that the God of the forest and the sky has reared.

There are sixteen of them, quite near together, one only within the enclosure of a garden, and all marked with the name, regiment, and state of the soldier boy beneath. These, being on wood rudely cut, as by the jack-knife of a comrade, were even then, at the end of the first year, quite indistinct, and will soon be wholly effaced. What difference? They were soldiers of the American Army, and they died in defence of their country. Is it more to have been from Indiana, or Wisconsin, or Maine? What if posterity labeled their ashes as having belonged to the first, or the fortieth, of this, or that, State regiment?

I did not think of this. They thought not of it as their heart's blood ebbed away from the enthusiasm of the battle to the rest of this last sleep. One stood beside me who thought

of sixteen young men, cut off from the active business of life, and all the gains of interest and development, bewailing the untimely end of so much promise and hope. Another of our party could see but the shadow of death, and the mourners of sixteen homes following their slaughtered sons. A third pondered of all the suffering and agony of shot and shell, and the quick sabre thrust, and gravely balanced the ascendancy of soul or body in times of such sharp conflict. To me, there was no business of life; no mourner at the bier; no endurance of hunger, or thirst, or the violent rending of soul and body, only the glory and the gain of a great sacrifice to a great principle.

Never before, perhaps never again, will such a vision of the possibility of the individual soul pass before me. The thought of the mission for which it was endowed, and all its vast resources and powers ordained; the thought of the ages of human struggle, and divine over-ruling, to bring the occasion for such a display to bear directly upon the greater good of the great future; the thought of the costliness of the sacrifice of those sixteen royal young souls opened up the far vista of the Infinite meaning of all this, and though that sixteen had been multiplied by millions it had been well.

The inhumanity of needless atrocity and recklessness of life is one thing; the folly of attempting to balance the vindicature of the eternal principles of right by so much of blood, and muscle, and agony, is quite another. As a people we have thought too much of this last, too little of the other. Your brother, husband, son—these are very dear to you. So are mine to me. Let us not make the mistake of giving the most of our thoughts to reflections upon the *mine*, or *yours*, of those whose souls and bodies have been thrust in the breach made by the traitor hand that is not against you, or me, or *our* country simply, but against the race of our common humanity.

The fortifications, a substantial abattis piled up breast high of the solid wood of the forest, run for miles around the base and slopes of the mountain, and testify to how many hands helped build the barricades where these ministers of Satan lay in wait for those they intended to destroy. The great trench that was dug by the same hands, for the burial of their intended victims, is rounded up to heaven with the bodies of those whose counsels were so soon brought to nought.

As I have said, it was in the time of leaves, and in the quiet of an early morning hour that, with reverent step, we walked amid the relics of so much infamy and so great honor. It was the first time I had ever seen the fair face of an American forest scarred by the hand of war, the first time I had plucked flowers from the graves of those who had died in defence of our Flag. I took my knife and dug out bullets that, aimed against the life of your brother, and mine, were received by the breast-work of the sentinel trees. I put them into my pocket, and into my soul the iron of a deeper hatred of the men, and of the cause of the men, who are responsible for the graves that lifted their bloom and their appeal to heaven.

The memory of the rebel dead has been sealed with the execration of posterity; the heroes of that little band of patriots seemed to walk, as under the brooding of God's wing, in the stillness of the overshadowing wood. As I mused, these words of the most mystic of our poets were freshly translated, and I smiled that any should have counted them other than the plainest statement of a great religious truth. If those who mourn the early dead, whose burials are making sacred so many of the before unnoted localities of our great country, would dwell upon the bright side of both present and future of this struggle, such lines as these would be rich in ministrations of good cheer.

"If the red slayer think he slays,
Or if the slain think he is slain,
They know not well the subtile ways
I keep, and pass and turn again."

Adversity.

The Gods in bounty work up storms about us,
That give mankind occasion to exert
Virtues that shun the day, and lie concealed
In the smooth season and the calms of life.

Social Life in the United States.

The women are very charming. This much the most bitter hater of Yankeedom must admit. Take any American evening party, and you will see a greater proportion of interesting looking girls than in any part of the world I know of. Regular beauty is rarer than with us; that beauty which the French, why or wherefore, I know not, have assigned to the devil — certainly so. But the faces are so bright and animated, the features are so delicate, the eyes so full of spirit, that it would be hypercritical to complain because the complexion always foretells a future sallowness, and the hair has an invincible repugnance to curl. The manners, too, to my mind, constitutes the chief charm to American female society. You never experience in the States the torture of being introduced to a woman who has nothing to say for herself. As a rule the women are better educated, or at any rate more widely read, than the men, and there is a frankness and openess in their conversation which one misses sadly in our own more guarded intercourse. To our conventional English prejudices, it is I admit, somewhat startling, when a young lady you have met for the first time, whose name you have not caught, and who is obviously equally uncertain about your own, tells you that her parents will be very glad to see you if you like to call. But even if your own good taste does not teach you so, experience will soon show you that this freedon of manner implies no want of delicacy. How far the system works altogether favorably may be a matter of question. Two facts, however, are certain; American women make very good and very domestic wives, and married life is wonderfully free from scandal in the States. The truth is, the abstract woman in America, occupies a position dissimilar to that held by her in any other country. I recollect talking to my friend N. P. Willis on this point and his telling me that a Mrs. W., a very pretty and fashionable New York lady, complained to him, that she quite dreaded having to return to Europe, where her husband was obliged to live, because she should miss so much the attention which she had got used to in America. Mixed up with a good deal of affectation, there was some truth in this remark. Throughout the States, there is a respect paid to women which I never saw equalled elsewhere. A young girl might travel alone from Maine to Missouri with the absolute certainty that not only would she meet with no annoyance, but that on the contrary she might reckon on the assistance of any stranger she met. At times, undoubtedly, the manifestations of this sentiment is exaggerated. It never seemed correct to my notions of the eternal fitness of things, that an old man should be expected, as a matter of course, to give up his seat in the cars to a strapping young woman who is as well able to stand as any man in the carriage—still there is a grace about the custom. No matter whether a woman is young or old, beautiful as Venus or homely as Medusa, she is a woman, and as such, has a right to a kind of deference not awarded to her in older countries. So it is in conversation.

In most respects the ordinary social life of an American household is very like that of an English one. Every man, almost without exception, is in business in some form or another, so that the male members of the family are away from home during the day. The difficulty of obtaining servants, causes the ladies to look after the cares of the house perhaps more than they would do in a similar position here, but otherwise they appeared to do very much what they would have done in England. Every American woman is a politician, and reads the papers regularly, an occupation which takes up a good deal of time. Then, too, there is a popular passion for attending lectures and meetings, which creates in itself a number of sources of interest for women; and finally, calling in America is a custom enforced with the strictest regularity. Moreover the rocking chair is like smoking, at once an amusement and an employment. The extent to which American families live in hotels, appears to me to have been much exaggerated. The practice undoubtedly offers great attractions to persons with small incomes and without children. Still of all the people I was introduced to, I only found one gentleman living with his wife at an hotel, and that was at Washington, where my friend was himself only a visitor for a few months. Of course for one family who lives at an hotel in England, you have a hundred who do so in America; and, as far as I could learn, it was very common for a newly married couple to board at an hotel during the first year or so after marriage. But in no sense is hotel life the habitual or ordinary one of well-to-do Americans.

The social amusements of the people are, like our own, mostly home ones. In almost all the Northern States the climate is too cold in winter and too hot in summor for out of door amusements to be much in fashion. In the winter there are sleighing carnivals, which are doubtless very enjoyable to people who have no objection to having their fingers frost-bitten, and in the early summer there are strawberry feasts, which are a sort of gigantic picnic sgot up by the members of some class or congregation. Dancing is said to be the great passion of the young people in America. Personally I saw very little of it, for since the war there has been a strong popular feeling against balls or festive meeting of any kind. The few dances I saw anything of, were very like ordinary London parties, except, perhaps, the supper was a more substantial meal than it is in London. The most striking feature, however, about them, was the extreme youth of the company. As a rule, all American women marry young; and after marriage they go little to balls. The great majority become "church members," and the most of the churches, with the exception of the Episcopalian, look unfavorably, to say the least, on dancing. Card

playing seemed to me as rare in families as it is in England; and, indeed, from what I saw I should say that gambling in games of chance was not a natural vice of the Northerner.—*Edward Dicey.*

DOMESTIC ECONOMY.

To make Apple Fritters.—Take one pint of milk, three eggs, salt just to taste, and as much flour as will make a batter. Beat the yolks and whites separately, add the yolks to the milk, stir in the whites with as much flour as will make a batter. Have ready some tender apples, peel them, cut them in slices round the apple, take the core carefully out of the centre of each slice, and to every spoonful of batter lay in a slice of the apple, which must be cut very thin. Fry them in hot lard to a light brown on both sides.

A Delicate Dessert.—Lay half a dozen crackers in a tureen, pour on enough boiling water to cover them. In a few minutes they will be swollen to three or four times their original size. Now grate loaf sugar and a little nutmeg over them, and dip on enough sweet cream to make a nice sauce.

Hominy Cakes.—A pint of small hominy, a pint of white Indian meal, sifted, a salt-spoonful of salt, three large tablespoonfuls of fresh butter, three eggs or three tablespoonfuls of strong yeast, a quart of milk. Having washed the hominy and left it soaking all night, boil it soft, drain it, and while hot mix it with the meal, adding the salt and butter. Then mix gradually with the milk, and set it away to cool. Beat the eggs very light, and add them gradually to the mixture. The whole should make a thick batter. Bake on a griddle.

Bread and Butter Pudding.—Cover the bottom and sides of a deep dish with moderately thick slices of bread, thinly spread with butter, and then fill the dish with any kind of sweetmeats. Over this place another layer of bread and butter, and let the dish stand until the bread is thoroughly soaked with the syrup. Make a custard and pour it over the whole. Bake for about twenty minutes, and after it is cold turn it out on the dish on which it is to be served. Send to the table with a hot liquid sauce.—*Genesee Farmer.*

Lemon Pie.—Two cupfuls of sugar, two cupfuls of warm water, two eggs, two lemons, three ounces of butter, one tablespoonful of corn starch. Grate the rind of the lemons, use the juice of both lemons but the rind of only one, or it will make it bitter; beat the sugar and eggs together, then add the juice and rind, then the butter and corn starch, then add the warm water; this is sufficient for two pies.

HEALTH AND DISEASE.

How to Learn to Eat Less.

It is difficult to convince people that they really eat too much. They say that they eat no more than the appetite demands, and that nature does not make a demand for more than she needs. This I think is sound doctrine, and yet I believe that most people do eat too much. The error is begun by eating too fast. Americans are a fast people. They like to travel fast, get rich fast, work fast, eat fast, drink fast, and take the chances of going to destruction fast. The haste with which a dinner is swallowed, for instance on board our Mississippi steamers, is quite astonishing to one who is not accustomed to such fast ways.

The consequences of eating too fast are:

1. The food is not well masticated—is not reduced to such a comminuted, pulpy mass as to fit it for being readily acted upon by the gastric juice in the stomach.

2. The sufficient secretion and admixture of saliva, which is essential to good digestion, is not promoted.

3. In order to facilitate the rapid swallowing of half masticated food, unmoistened by saliva, an undue proportion of liquids is required: hence we drink too much, as well as eat too much.

4. The sense of taste—the enjoyment of eating—is gratified only in a limited degree, and hence one reason that it requires more food to satisfy the appetite.

5. The most important consequence is, that for the reasons already given, the food we take is less perfectly digested, the waste of the system is unduly promoted by the too free use of liquids, and hence an appetite is created for larger quantities of food to supply the demands of the system.

In this view of the case it is easy to understand how we may eat too much and still imperfectly supply the demands of nature for the wants of the system, and how an appetite is created for more food than would otherwise be required.

Therefore, if we would learn to eat less, we should first learn to eat slowly. We would then enjoy our meals better, the appetite would be satisfied with less food, and what we take would be better and more easily digested. The demands of nature would be better supplied, and there would be less temptation to excess in drinking either water or more potent liquids. We would be healthier and happier, wiser and better, stronger and richer. Imperfect nutrition creates a feeling of want, which the unhappy sufferer too often seeks to relieve by the use of fiery beverages. Eating fast and drinking too much water has often much to do with the intemperate use of alcohol.—*Cor. Valley Farmer.*

YOUTH'S CORNER.

The Fly.

BY THEODORE TILTON.

TO BE RECITED TO A LITTLE CHILD.

Baby Bye,
Here's a fly,
Let us watch him, you and I.
How he crawls
Up the walls—
Yet he never falls!
I believe, with six such legs,
You and I could walk on eggs!
There he goes,
On his toes,
Tickling baby's nose.

Spots of red
Dot his head,
Rainbows on his back are spread;
That small speck
Is his neck;
See him nod and beck!
I can show you, if you choose,
Where to look to find his shoes;
Three small pairs,
Made of hairs—
These he always wears.

Black and brown
Is his gown;
He can wear it upside down.
It is laced
Round his waist;
I admire his taste!
Yet, though tight his clothes are made,
He will lose them, I'm afraid,
If to-night
He gets sight
Of the candle light.

In the sun
Webs are spun;
What if he gets into one?
When it rains
He complains
On the window panes:
Tongues to talk have you and I;
God has given the little fly
No such things;
So he sings
With his buzzing wings.

The Origin of Letters.

Do you remember when you learned your letters? You remembered O because it was so round, and S because it was so crooked, and A because it looked so much like your father's harrow. But there was a time, long, long ago, before the old world knew that God had laid away for us this beautiful continent; long before there were any cities where London and Paris now stand; long before the time of Solomon who built the temple at Jerusalem, or of David, his father, who slew the great giant Goliath, with a sling; long, long ago there was a time when people didn't have books, and the little boys and girls didn't have any letters to learn. Men had not learned how to make or use them.

Perhaps it was your mother who taught you your letters; and perhaps her mother taught her; but who taught the first man his letters?

Who made the first letters? Some say that his name was Thoth, an Egyptian god. Others say that Mercury, a Greek god, taught the Egyptians their letters. Some think the Assyrians invented them, and others give the honor to the Phœnicians. Some attribute the the invention to Moses, others to Abraham, others to Abel, and some to Adam, who, you know, was the first man. The wise men of the Jews say, "The Almighty formed them on the evening of the first Sabbath." So, you see, it would be a hard thing to tell who first taught a boy his letters.

There is no positive evidence that there was any writing before the declaration of the law on Mount Sinai, 2,512 years from the beginning of the world; and then the Almighty is said to have written the Ten Commandments with his finger upon two tables of stone. Since that time writing is frequently mentioned, so that letters must have been in use.

Probably before the invention of letters the whole world "made their mark," something as the Egyptians used hieroglyphics, to express their ideas. The Indians use this "picture-writing" now, but we have to guess at their meaning.

PICTURES.—A room with pictures in it, and a room without pictures, differ about as much as a room with windows and a room without windows. Nothing is more melancholy, particularly to a person who has to pass much time in his room, than bleak walls with nothing on them, for pictures are loop holes of escape to the soul, leading other scenes and other spheres. It is such an inexpressible relief to a person engaged in writing or even reading, on looking up, not to have his line of vision chopped off by an odious white wall, but to find his soul escaping, as it were, through the frame of an exquisite picture, to other beautiful and perhaps heavenly scenes, when the fancy for a moment may revel, refreshed and delighted.—Thus pictures are consolers of loneliness; they are a relief to a jaded mind; they are windows to the imprisoned thought; they are books; they are histories and sermons, which we can read without the trouble of turning over the leaves.—*Downing.*

WAR MISCELLANY.

Federal Generals at Vicksburg.

GENERAL GRANT.

First in rank, as well as notoriety, we have Major General U. S. Grant—indifferently known as Grant, Ulysses S. Grant, United States Grant, Uncle Sam Grant, and "Unconditional Surrender" Grant—the same whose "move on the enemy's works" at Fort Donelson has become national property, and the same man under whose lead our armies have split the Confederacy in two, and wrung from their grasp all or the greater portion of the Mississippi Valley.

Almost at any time one can see a small, but compactly-built man, of about forty-five years of age walking through the camp. He moves with his shoulders thrown a little forward of the perpendicular, his left hand in the pocket of his pantaloons, an unlighted cigar in his mouth, his eyes thrown straight forward, which, from the haze of abstraction that veils them, and a countenance drawn into furrows of tho't, would seem to indicate that he is intensely preoccupied. The soldiers observe him coming, and rising to their feet, gather on each side of the highway to see him pass—they do not salute him, they only watch him curiously with a certain sort of familiar reverence. His abstract air is not so great while he thus moves along as to prevent his seeing everything without apparently looking at it; you will see this in the fact that, however dense the crowd may be, if you are an acquaintance, his eye will for an instant rest upon yours with a glance of recollection, and with it a grave nod of recognition. A plain blue suit, without scarf, sword or trappings of any sort, save the double-starred shoulder-strap, an indifferently good 'Kossuth' hat, with the top battered in close to his head, full beard of a cross between 'light' and 'sandy,' a square cut face, whose lines and contour indicate extreme endurance and determination complete the external appearance of this small man, as one sees him passing along, turning and chewing restlessly the end of his unlighted cigar.

His countenance, in rest, has the rigid immobility of cast iron; and, while this indicates the unyielding tenacity of a bull-dog, one finds only in his gray eyes the smiles and other evidences of the possession of those softer traits seen upon the lips and over the entire faces of ordinary people. On horseback he loses all the awkwardness which distinguishes him as he moves about on foot. Erect and graceful, he seems a portion of his steed, without which the full effect would be incomplete. He held in early days the reputation of being the best rider in the Academy, and he seems to have lost none of his excellence in this respect.

Along with the body-guard of General Grant rides his son Fred., a stout lad of some twelve summers. He endures all the marches, follows his father under fire, with all the coolness of an old soldier; and is, in short, "a chip of the old block."

Of Gen Grant's ability I need say nothing—he has been so long before the public that all can judge for themselves. The South calls his successes "luck;" we in the West believe that he owes them mostly to the possession of a cautious military judgment, assisted by good advisers, and backed by invincible perseverance, endurance and determination.

GENERAL SHERMAN.

Almost the exact opposite in every feature of our taciturn, unsmiling chief, is Maj. Gen. Sherman. Tall, loosely built, narrow chest, sandy hair and beard, light grey eyes, glancing incessantly in every direction, smiling mouth and rapid utterance, he forms a character as opposite Grant's as Zenith is to Nadir. Grant goes about like a piece of marble endowed with just sufficient vitality for purposes of locomotion, while Sherman, whether walking, talking, or laughing, walks, talks and laughs "all over." Grant's soul is crusted over with rigidity—Sherman's bursts out at every pore—every agitation of his inner man produces a corresponding agitation of his physical machine. Soul and body seem attuned in such harmony, that a chord struck upon the former communicates its vibration to one in the latter.

Socially he is a pleasant man, affable to his inferiors, and engaging to his equals, with a mood that changes with the rapidity of a barometer in the tropics. With an utterance rapid almost to incoherency, he at one instant is relating some laughable incident, the next unfolding the details of some masterly plan, and the next hurling fierce imprecations upon the head of some offender.

Like Grant, he has courage and endurance in abundance; like him he will ride into a storm of bullets, and sit there and watch and order as unconcernedly as if the air were filled with roses instead of hissing messengers of death. Of his ability, there is in the army but one opinion, and that is, that among the ablest men this war has produced he is entitled to no second rank. His ability is not confined to any speciality; he is equally at home whether drilling a company or a division, inspecting a quartermaster's accounts, arranging the de-

tails of a battle, making an advance, or ordering a retreat. In short, he seems to be, and is, familiar not only with the practical details of war, but with the principles which underlie this most intricate and comprehensive art.

GENERAL STEELE.

Next to Sherman, not in rank, but experience and ability, comes Major-General Fred. Steele who, like Grant and Sherman, originated in that much-quarreled-about institution, West Point. Were I attempting a philosophical examination of these gentlemen, instead of a superficial portraiture of a few externals, I could not get along with General Steele much more easily. Like a Geneva watch, he presents but little surface—his merit, the fine machinery, and exquisite balance are all within. A small and well knit man of thirty-eight, with a hand delicate and white as a lady's, light complexion, only preserved from effeminacy by a flowing beard, eyes of a light blue, and a full compact forehead, dress rich, elegant, with a touch of velvet about the cuffs and collars, always free from dust and as clean as if just stepping out of a dress parade at his Alma Mater, West Point. These are the outward peculiarities of General Steele. Without ever being over-dressed, he is, I think the best dressed and best mounted man in the army. His prevailing trait is quietness—a gentlemanly sort of repose—which he carries with him, undisturbed, whether doing the honors of the table to his friends, or directing the movements of a storming party amidst the roar of the fiercest battle. Few soldiers among volunteers love, but all respect him; as a strict, unyielding disciplinarian, he frequently excites their dislike, but his unruffled calmness when surrounded by the surging tides of battle; his pre-eminent skill in guiding their movements, and the lightning-like rapidity with which he adapts himself to the new combination created in a contest, compel their admiration, and have won their highest respect.

He chats with you unconcernedly up to the very moment he enters battle, and the instant it is over he resumes his sociability and discourses upon general subjects, as if the affair through which he had passed were of as little account as washing his hands for dinner.

GENERAL LOGAN.

Were one to pass our Generals in review, and endeavor from their countenances to select the man with the most gunpowder in his disposition, he would undoubtedly choose Gen. Logan. He is marked by a square, massive frame of medium height, a countenance swarthy as that of an Indian, jet black hair, and eyes of the most piercing blackness: The general ferocity of appearance is not detracted from by a heavy moustache, whose ends drop below his jaw on either side, and this effect is heightened by a broad, short neck, like that of a bull or a gladiator. And yet, when the General's countenance is not lighted by the glow of battle, his swarthy face is sunny with good nature and his eyes blaze with fun and good humor. No commander in the army is more popular with his men than he; their love for him as a man is only equaled by their confidence in him as a commander.

During operations he is omnipresent, encouraging his men with advice, urging them on with some funny remark, ever at their head in battle only happy when moving, and only completely happy when hurling his invincible brigade against the enemy.

GENERAL BLAIR.

A description of Gen. Blair will almost be superfluous, so well known is he from his long appearance before the public as politician and legislator. Tall, well formed, "sandy" complexioned, light grey eyes, high forehead, heavy moustache and clean shaven face, make up the "points" that will be noticed in a cursory glance at his person. He is slow and deliberate in speech, like one who has been accustomed to speak to large audiences, and performs everything, from leading an assault to uncorking a bottle of champagne, with calm, dispassionate manner and dignified movement. I do not think he knows what fear is—if he does, he learned to conceal the fact so completely, that its existence can, on no occasion, be discovered. In conversation he is a good listener, and, when he speaks, an engaging, an unassuming talker.

Beneath all his calmness he has a character of tremendous force, and a brain of wondrous power; the momentum with which he threw his brigade against the rebel heights at Chickasaw Bayou, and the revolution which his course has produced in the political character of Missouri, abundantly prove both of these assertions. He, too, is popular with his division; he is careful to supply them with everything that will add to their convence and comfort, and when face to face with the enemy he asks no man to go where he will not lead.

NEWS SUMMARY.

STATE MATTERS.

From all parts of the State we get good accounts of the winter wheat crop, and, from present appearances, we should judge that spring wheat will not hereafter hold such a prominent place in the affections of our farmers. The chinch bugs have made their appearance, but we have not heard of any damage done by them, and it is hoped that the number will not be large enough to seriously injure late grain and corn. The drouth continues unbroken, at the time of this present writing; and, although but little damage has been done yet, another week or so of such dry weather would probably result in serious injury.

FOREIGN NEWS.

Prince Christian, of Denmark, as is now understood, refuses the throne of Greece. Instead of begging for a king, let them remember their own glorious history as the first republic on the globe, when they gave laws and language to the greater part of the civilized world. Greece begging for a king! The world has not seen so pitiable a spectacle.

The Polish insurrection keeps gaining ground, and the European powers are all taking a hand in the matter. Uncle Sam. has been invited to dip his spoon in the porridge, but Sec'y Seward answered that under no circumstances could we depart from the doctrine of non-intervention.

NATIONAL AFFAIRS.

All is once more excitement. The rebels have invaded Maryland and Pennsylvania. One division of Lee's army is fortifying Hagerstown, as a base of operations, from which point they send scouting and foraging expeditions into the rich valleys of Pennsylvania. Strange to say, Hooker seems to pay no sort of attention to the matter, and no serious attempt has been made to hinder the invasion or to drive them out. The opinion seems to be gaining ground that Hooker has been completely outgeneraled.

The rebels are now in the immediate vicinity of South Mountain and Antietam, where McClellan gave them such a severe defeat last summer. And if they are suffered to work months upon their fortifications unmolested, it may take a harder campaign than the former one to dislodge them. The action of the authorities seems inexplicable, and the apathy of the militia of Pennsylvania remarkable, to say the least.

Matters at Vicksburg are progressing slowly and surely. Banks is also besieging Port Hudson. We soon expect to hear of the fall of both these rebel strongholds, and then the Mississippi is clear.

A few days will probably bring us stirring news.

EDITORIAL MISCELLANY.

Editorial Notes of European Travel.

—BASEL TO FRANKFORT-ON-THE-MAIN, *via* STRASBERG, BADEN-BADEN AND HEIDELBERG. JUNE, 1862.—I had made up my mind to attend religious service in the great Cathedral of Strasberg, and, accordingly, early in the day, crossed the Rhine and took the train for that noted city.

The country along the route is a fertile valley, very happily protected by the Jura mountains, which slope northeastward. Arrived at Kehl Junction in the afternoon, in company with a multitude of Swiss and German peasants, who were likewise disposed to avail themselves of that custom everywhere practiced on the continent, of practically regarding Sunday just as good a day as any other! Distance to Strasberg one or two leagues, and as the eastern boundary of France lies between, my passport was put into requisition. Don't know whether I should have been compelled to spend the rest of my days in Germany but for the good fortune of having it, or not. As it was, however, I was soon examined as to the contents of traveling bag, &c., and allowed to pass once more into the grand empire of the French.

STRASBERG

During the middle ages subject to the German emperors and the capital of Alsace, was ceded to Louis XIV, in 1681, and is now one of the strongest fortified towns in Europe. It lies in the midst of a broad plain and on the river Ill, about a mile from its confluence with the Rhine. Surrounded by a strong wall, entered by 7 gates, it is further protected by bastions, ditches, outworks, and a citadel at the eastern extremity, with five bastions whose outworks stretch down to the Rhine. Further, the river Ill flows directly through the city from southeast to northeast, and at its entrance there is a sluice, by means of which the surrounding country can be flooded with water. Just below this sluice, the river divides into five branches, which, however, re-unite before they issue on the other side of the city. Bridges, consequently, abound.

The buildings, of every description, in Strasburg are almost without exception of stone, very high, with two or three tiers of roof-windows. There are many public squares, one in honor of Guttenberg, who, according to the most reliable accounts, here made his first experiments in the art of printing. The most noteworthy public edifices are the Royal Palace, the Episcopal Palace, offices of the Prefect, Town Hall, the Public Library, (in which there are 140,000 volumes), numerous military institutions, including an artillery school, a military hospital, &c., and various academies and other schools, and some fifteen churches. Among the latter, and indeed before all the great buildings of Strasburg, ranks first the noted Cathedral, which was founded in 504, destroyed by lightning in 1007, rebuilt in 1015 to 1439. The most remarkable part of this remarkable edifice is the great tower, which, in common with the remainder, is built of a compact freestone, which is 466 feet high—(48 feet higher than St. Peter's at Rome, and 15 feet higher than the Great Pyramid, as it now stands, and the highest in the world) and which is surfaced all over with such elaborate carving and added decorations as to give it the appearance, at a distance, of being covered with lace of stone. The other notable features of this cathedral are a rose window 48 feet in diameter, three equestrian statues to Clovis, Dagobert, and Rudolph of Hapsburg, and a wonderful clock that gives not only the time of the day, day of the week, month, &c., but likewise indicates many of the most interesting phenomena of the heavens.

The "service," I should remark—lest I be thought to have forgotten the object of my Sunday travel—was characterized by nothing remarkable.

As a manufacturing city, Strasburg is a place of considerable importance, turning out large quantities of woolen and cotton goods, sail-cloth, clocks and watches, metallic buttons, cutlery, jewelry, cast iron ware and other hardware, china, porcelain, soap, leather, straw hats, paper, &c. Several large dye-works, sugar refineries, breweries, &c. further add to the industrial importance of the place.

Its trade is chiefly with other portions of France, with Switzerland, Germany, Holland, and Italy.

BADEN—ITS AGRICULTURE, AND SOME OF ITS TOWNS.

The succeeding day found me in Baden-Baden, one of the several important towns of the Grand Duchy of Baden, and the most famous watering place in Germany.

The Baden district or grand duchy has an area of 5,904 sq. miles, and a population of nearly a million and a half. Bavaria lies north of it, Wurtemburg east, Switzerland south, and France on the west. Carlsruhe is the capital, and Mannheim is the principal commercial city. On the western side, along the Rhine, there is a strip of very fertile land, where are growing fine crops of wheat, barley, Indian corn, beans, potatoes, flax, hemp, and tobacco. East of this strip, the country rises until it becomes mountainous, some of the highest peaks being as high as 4,650 feet. It is here that lies the famous Black Forest (Schwarzwald) which extends as far north as the river Neckar, a tributary of the Rhine. And it is likewise here, in the midst of these mountainous lands of Baden, that the Danube has its source.

In the plains and valleys the climate is very fine; in the mountains, cold, moist and changeable. Fruits and wines of excellent quality are produced in all the more favorable portions of Baden, and I found growing, even on the mountains, quite respectable crops of *rye* and oats. Agriculture is without system, however, the stock being of inferior quality, and the farming implements more than fifty years behind the times. Plows with wooden moldboards; the clumsiest harrows the world ever saw, with wooden pins for teeth; wagons such as any very awkward Yankee farmer could get up for himself, and drawn by *cows lashed to them by the horns!*—these are the evidences that Agriculture here yet slumbers as in the night of barbarism.

Manufacturing is likewise behind the age. Iron, hardware, cotton yarn, cloth, and salt are its chief products.

THE VILLAGE OF BADEN-BADEN

Is delightfully situated in the valley of the river Oos, and has appeared to my eye one of the most charming little towns I have yet seen on the continent. Many of the dwellings and public houses are surrounded with shrubbery and flowers, even to the summit of the hills on either side, and the streets are remarkably neat and clean. Population about 6,000.

The springs which make Baden-Baden so famous the world over, are 26 in number, varying in temperature from 115° to 156° Fahr. Ursprung, the most remarkable of them, yields over 7,000,000 cubic inches of water per day; the saline constituents being common salt, salts of lime and magnesia, with traces of iron and free carbonic acid. When quite fresh it suggests weak broth of beef. Said to be good for dyspepsia, scrofulous and rheumatic diseases. Some of the springs are made all the more attractive to visitors by fine public buildings, embracing spacious halls for dancing, beautiful saloons for all kinds of gaming, restaurants, reading rooms and handsome porticoes for promenading. Probably no place in the world is so distinguished for the extent to which gambling is carried on by the many strangers of wealth and fast habits who gather here, in July and August, from every part of Europe. What would be considered large fortunes in America are lost and won many times every day; so that such occurrences soon cease to be novel. Such desperate gaming does not cease to mark the parties who practice it, for I am sure I have never on earth seen so dreadful a play of the most hellish passions of the depraved human soul as I have witnessed there—faces the fiendish expression of which, I fear, will long haunt my memory. To the *citizens* these ruinous "sports" are wisely prohibited.

The most interesting objects next in order are the castles, the old and the new. The former is located quite on the summit of a high hill on the north side of the valley, and is quite in ruins. For 600 years it was occupied by the old Margraves of the middle ages. The new castle is remarkable for the subterranean dungeons, supposed to be of Roman origin, and thought to have been the seats of the Vehmic Courts of early times.

HEIDELBERG

Comes next on my programme—a fine old German town on the Neckar. The distance from Baden-Baden is a little more than fifty miles, and the railway lies in the smiling valley of the Rhine. An hour's ride brings us to Carlsruhe, the capital of Baden, and a town of considerable importance. Several gay young gentlemen in student's dress drop off here; from which we may conclude that, like many other German towns, it is the seat of some institution of high order. And it is, for the polytechnic school of Carlsruhe is one of the most noted in Europe.

Another hour and I am in Heidelberg, and have already caught a view of the old university, centre of many hopes and plans when I was a college boy, years ago, in my native land. It consists of a series of plain old structures quite unimposing, and requiring positive history to convince one that here have taught and been taught some of the most distinguished literateurs, divines and scientists of modern or medieval times. The institution was founded over 500 years ago by Elector Rupert I. Its library numbers nearly a quarter of a million of books and 2,000 valuable MSS. The University embraces, not only theological, medical and law departments, but likewise includes a school of Agriculture and Forestry—in which, however, the instruction is rather behind the times.

One of the characteristic features of this university is the number of literary clubs and the degree of the rivalry between them. The members of each are distinguished by some peculiarity of the cap which they wear, and quarrels—even duels—are not at all uncommon between the champions of rival societies. There are nearly a hundred professors and many hundreds of students.

[We are compelled to defer the description of the town &c. until the next No.]

The Prize Strawberries.—Each new subscriber to the FARMER will be furnished with 6 plants of the new and superior WISCONSIN SEEDLING Strawberry. Each old subscriber, who sends us a new subscriber, will also be furnished with 6 plants. Orders for plants *must* be accompanied by 3 cent stamp.

NOTICES OF NEW ADVERTISEMENTS.

The Tribune Strawberries advertised in this number are a prize worth having. Read the advertisement clear through; it contains many useful hints to amateurs and those engaged in improving the varieties of fruit.

Lake Side Nursery by J. C. Plumb needs no especial notice from us, as its proprietor is too well and widely known to require any endorsement from anybody. See his advertisement on the 2d page of cover.

Sugar Cane Mills are advertised by Harris, Guild, & Angell, of Janesville. They claim some valuable improvements. Examine all, and buy the best.

Railway Horse Powers, so deservedly popular at the east, and destined to be so here so soon as our people see the great economy of them, are advertised in this No. by R. & M. Harder, Cobleskill, N. Y.

"Noses" are treated of as indicating character in our advertising department. If any body *nose* enough, he will read the advertisement.

Short Horns are offered for sale by R. Richards. A good chance to improve your stock.

Lee's Bee Hive is a Wisconsin invention of merit. Read his advertisement.

Burson's American Grain Binder.—We had the pleasure yesterday of witnessing the operation of this important labor saving implement upon the farm of Michael Phelps, Esq., near this place. Arriving on the ground, we found a large crowd of our citizens and farmers watching the operation with intense interest, all seeming pleased, satisfied and delighted. We would not attempt to describe the unique machine which most of our readers will have an opportunity of examining while at work in the harvest field. The Binder is placed upon a small extension of the Reaper platform, has no connection with the gearing of the Reaper, but is worked by hand. But three motions are required to bind a sheaf—to raise a handle or lever when the gavel is brought up by the Forker, to push down the same handle, which puts the band around the sheaf, when one turn of the crank fastens the band around the sheaf, cuts it off, and leaves one end of the wire fastened ready for the next sheaf. The grain is shoved to the Binder with an ingenious Clasping Fork, with which the Forker puts the grain into the Binder in good order, and we are told by those using the machine that the Forker is considered almost indispensable in getting the grain to the binder in shape for binding. However this may be, one thing is certain, that with this fork the grain is delivered to the binder in neat gavels without difficulty. The following conclusions were unanimous among the crowd in attendance:

1. That the Binder will work fast enough; at least it looked like play binding a six foot swath.

2. That the grain can be saved much cleaner than in hand binding.

3. That it is not hard work to use the Binder; all that we conversed with saying they would much rather work it than bind by hand.

4. That it does not add much to the draft of the Reaper. Mr. Philips was working it on a six foot J. H. Manny with two horses without fatigue.

This binder is manufactured by Emerson & Co., of Rockford, Ill., favorably known throughout the West in connection with the J. H. Manny Reaper, who sent to our enterprising Thresher manufacturers, Messrs. Harrison & Co., their agents, a number of these Binders, which being made and warranted by so well established a firm, were taken hold of by our best farmers, and cash orders are now urged upon the agents, who are now unable to supply any more. We certainly congratulate our farmers upon their happy escape from the hardest work of the harvest field. Our farmers will, of course, look in season for next harvest.—*Belleville Democrat.*

STATEMENT
OF THE
Madison Mutual Insurance Company,
FOR THE YEAR ENDING
DECEMBER 31, A. D., 1862.

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,.....	$327,464 67

ASSETS.

Unimpaired premium notes of policy holders.....	$281,000 07	
Cash on hand and due from policy holders and agents, for cash premiums,.....	45,464 60	
Office furniture and fixtures,...	1,000 00	327,464 67
Whole No. policies issued.....		22,061
Am't of outstanding risks thereon.....		$15,962.000 00
Number of policies issued in 1862,.....		7,706
Am't of outstanding risks thereon.....		$6,069,813 00
Am't premium notes thereon,.....		108,323 93
Am't cash premiums thereon, less commissions to agents,.....		45,727 80
Am't interest received,.....		972 18
Total am't losses reported during 1862,....		$17,744 16
Total am't losses paid durihg 1862, 89 in number,.....		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due.....		none.
Losses adjusted and not due.....		none.
Losses unadjusted,.....		292 35
All other claims against the company,.....		97 50
Am't paid for advertising and postage,....		1,763 66
Am't paid for printing,.....		540 50
Am't paid for policy stamps,.....		600 00
Am't paid taxes to Com'r Internal Revenue		82 02
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses,.....		7,290 98

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : : : : : : : EDITOR.

VOL. XV. MADISON, AUGUST 1, 1863. No. 8.

The Agricultural Department of the Government

Ever since the creation of this Department by Congress, there has been felt a deep anxiety by all intelligent friends of American agriculture as to the administration of the first Commissioner. For, upon his success or failure has been thought to hang the security of the Department itself. We have not, ourself, been exactly of this opinion, although a failure of the Commissioner would undoubtedly discourage a few faint-hearted friends of the new Department, and strengthen the opposition of those who, blind to the great interests of the country, have always opposed any and all appropriations from the national treasury for the encouragement of Agriculture. The reason of our faith lies in this—that the honor and interests of agriculture have long demanded a more direct and positive recognition than they have received heretofore, when agriculture was a mere incidental appendage to the Patent Office, (itself a subordinate branch of the Department of the Interior), and that the growing intelligence of the industrial classes, and the consequent progress of the industrial arts, have qualified the whole body of the people to take higher ground on all great questions of political and social economy.

For a half century most of the European governments have embraced either the equivalent of an agricultural department, such as the one at last organized in this country, or, according to it a still higher importance, as a primary interest, have established *Ministries* of Agriculture, holding rank co-ordinate with the highest departments. Yet none of those countries are so emphatically agricultural as ours. We are not, therefore, of those who are alarmed lest the people go back from the Department, so lately established, to the mere drawer-in-the-bureau of the Patent branch of the Department of the Interior. They have long asked for a recognition of this, the greatest material interest of the country, and will not be prepared to relinquish what they have secured, even though the first and a second Commissioner should utterly fail in the administration of its affairs.

Has the old drawer, which, for years, did but little more than scatter worthless seeds and comparatively valueless documents, without discrimination as to place or person, accomplished so much that it would be desirable to return to the old regime?

But there are reasons for hoping that the new Department will not disappoint its friends. A detention of several days in Washington has given us an opportunity to examine somewhat into its operations and plans, and we are happy to announce an increase of confidence.

The location of the new Department in the Building of the Interior (usually known as the Patent Office) is in the basement of the central portion of the south side, as heretofore; some eight apartments of fair dimensions being occupied thereby, under the general designations of Commissioner's Room, Chief Clerk's, Library, Engraver's Room, Laboratory, Statistician's Room, &c., &c.

The working force of the Department is about as follows:

The Commissioner,—Salary per annum,		$3,000
Chief Clerk,	" "	2,000
Chemist,	" "	2,000
Entomologist,	" "	2,000
Sup't Experimental Gardens,	"	2,000
Statistician,	" "	2,000
Some 15 Clerks each with a salary of		$1,200 to 1,800

The Seed branch of this Department occupies a separate building and, during the busy season, employs about 15 men and 40 women.

A few words of the controlling head and of the heads of bureaus:

Commissioner Newton is understood to have been a Pennsylvania farmer of much experience and good success. Of this we know nothing personally. We *are* fully satisfied, however, that he is a man of earnest desires for the progress of industry, and withal so identified with the origin of the Department that the country is sure of the best efforts of all his energies. His plans, as far as unfolded, give evidence of sagacity and foresight, and his nominations for the several official positions in his Department are further proof of good practical judgment. We shall continue to look for good results during his administration.

Mr. James S. Grinnell, Esq., for some time Acting, but only lately confirmed, as Chief Clerk in the Department, appears to us especially well qualified for the important position he holds. An attorney by profession, but also the successful manager of a good Massachusetts farm, and for several years secretary of one of the most flourishing county agricultural societies of that commonwealth, he readily makes himself at home in both the business and the practical departments of the office. He is, moreover, possessed of those graces of temper which, although so essential in such a place, are too often quite wanting on the part of those who must deal extensively with the public. Moreover, his course, thus far, has been characterized by a most commendable promptness, energy, and faithfulness to the discharge of his arduous duties.

Prof. Wetherell we have never seen. As a chemist he has something of a reputation in the country and, we doubt not, is quite competent to the important duties of his office.

Prof. Glover, of Philadelphia, the Entomologist, is an enthusiast, and (if he does not now) is destined to stand at the head of this department of Natural History in this country. He had pursued the study of his profession and the work of making collections many years previous to receiving his present appointment, and is now prepared to give to the Agricultural Department the rich fruits of a lifetime of laborious research. He is about completing a valuable work on entomological classification, which appears to us very superior to anything now extant.

Mr. William Saunders, long and favorably known as a leading landscape gardener and a popular writer on horticultural subjects, is, by late appointment, Superintendent of the Experimental Gardens. Trained to his profession in Great Britain, endowed with good natural capacities for advancing the art and science of gardening, and fitted by many years of practice and study in this country to serve the public in this new field, we rejoice in his appointment as an important element in the prospective success and popularity of the Department. Instead of a mere fancy garden, growing useless plants by the thousand and yielding scarcely anything more than a crop of boquets for Washington officials, he will make it a garden for proving, in the most economical manner, the qualities of really promising foreign plants, and for determining, by carefully conducted experiments, the best methods of culture.

Mr. Bollman, of Indiana, lately appointed to take charge of the Statistical Bureau, has arrived and entered upon his duties. By profession he has been a farmer, newspaper correspondent, legislative reporter, &c. He seems to be a man of sound practical views, with habits of thought on all the important industrial topics of the day; and imbued as he is with a strong sense of the great importance of his bureau, we have good hopes of his success. The plan instituted by Mr. Grinnell for collecting and publishing monthly statistics of the most important crops, in all parts of the country, meets with his cordial approval and will engage his best endeavors.

The distribution of seeds has been more faithfully and judiciously made the past season than ever before, and we have good reason to believe that the future will show yet further improvements in this respect.

The people want not a thousand varieties of seeds of the commonest sort, such as they can supply themselves with from any four-corners grocery, but rather seeds of the rarer and more promising kinds, such as the Government alone can obtain for general dissemination. Nor do they want the distribution of even these through the medium of Members of Congress, who, in most cases, will be influenced more by political considerations in their selection of consignees than by any special fitness of the individual farmer to make a careful trial of the seeds sent out. The agricultural and horticultural societies of the country are the natural and proper media, and we are pleased to discover that the Department is disposed to adopt this view of the subject, in its practical distributions.

When these more rational views concerning seeds—when the more thorough collection of valuable statistics bearing upon every branch of American industry—when the incorporation into the Annual Report of none but the most valuable information, appropriate to the circumstances and needs of the great industrial community of this country—when the strictly scientific and the experimental branches of the Department shall all be wisely and faithfully devoted to widening the domain of scientific agriculture, by the discovery and demonstration of important facts and scientific principles;—when all these cardinal ideas shall have thoroughly entered into the policy and practice of the Agricultural Department, then will it not only be worthy but perfectly sure of the approbation and cordial support of the whole American people. To that end may the real friends of our national industry in all parts of the country earnestly, unselfishly, and persistently co-operate.

A Better Price for Wool.

Ed. Farmer:—I wish to converse, through the Farmer, with my brother wool-growers in regard to the prices of wool. Now, brother wool-grower, for one moment look at the quotations of the papers: wool from 50 to 60 cts. the lb.—unwashed, one-third off! What a shame it is for editors to be bribed by speculators to quote prices thus! Cotton has quadrupled in price; leather is nearly twice as high as formerly, and nearly all merchandize has risen in proportion. Now why should we be duped by these insignificant paper prices of speculators, and let our wool go at half price? There is but little wool in the market. It nearly or quite all went into the hands of the manufacturers months ago, so that there is no old wool in the market, and the manufacturer must have the present clip. They can't do without it, and if we fools will but hold on to our wool, we may just as well have one dollar per pound as 50 cents. Seth Rowley.

Wautoma, May 30, 1863.

The Great International Exhibition.

NO. X.

BRITISH DEPARTMENT CONCLUDED.

What next? A thousand things of great interest which the scope of this article will not allow me to mention; for I already imagine I detect symptoms of fatigue on the part of some of my listeners—a threatening to say pretty soon, if not relieved, Will the Dr. never have done with this long story about the British Department of the World's Exhibition? Yes, very soon; but then I cannot, in justice, slur it over in any branch, and unless I do describe it and all other departments pretty thoroughly, it must be evident that a good share of the benefit derivable from our attendance and inspection will be lost to the public.

Next in order, after naval architecture, of which you have already had a brief description, we come to

A MAGNIFICENT SHOW OF GLASS WARE

Of every description. Stained and gilded glass for church windows, glass for buildings in general, and for decoration—surgical, chemical and philosophical apparatus in glass—glass for household use and for innumerable fancy purposes, including candelabras, lustres grandoles and chandeliers, &c., &c.—stamped glass, blown glass, and cut glass—all specimens of the finest work in the world, unless it

be for chemical purposes, in which the Germans have the credit of excelling.

It is wonderful to what an extent the manufacture of glass has been perfected already, and yet the next ten years will undoubtedly advance the art much beyond its present status.

THE POTTERY WARE OF GREAT BRITAIN—

Under which general head we may, for convenience sake, include all earthen, china, parian, Wedgewood, terra cotta and other like wares,—as a whole is hardly equalled in the world. Until of late France was ahead in this branch of the useful and decorative arts, and it is quite probable that even now she excels in certain decorative branches of the manufacture. England, however, has, of late years, been more successful than almost any other in the revival of the antique wares, every day becoming more popular.

Here we have splendid collections of the cheaper earthen and terra cotta wares in jars, filters, sewerage pipes, stoves, &c.—table and toilet sets, of every fashion, in queensware and in china—vases, statuettes, lamps, &c., in porcelain—Wedgewood ware of most exquisite patterns—Limoges enamels, Minton's majolica and ivory enamels—pressed mosaics and beautiful jasper wares of various patterns—all in all a most magnificent display.

PRECIOUS METALS AND JEWELS.

Last of all, on the south side of the central nave, we come to a large open court, the brilliancy of which has had no parallel in history. Here, if one only had unlimited wealth, he could realize to himself all that splendor of furnishing and richness of decoration which he is wont to imagine have, in former ages, distinguished the royal palaces of some of the mighty potentates who have graced and disgraced the world.

Here we are dazzled by the magnificence of a multitude of trophies and individual works of art in silver and gold—by immense glass cases of gold and silver and electro plated wares for household use—by most superb displays of watches, tiaras, chains, brooches, bracelets, plain and jeweled—by countless precious stones, such as diamonds, sapphires, emeralds, opals, rubies and every other, flashing with irridescent hues or sending out streams of blinding fire, until we seem to ourselves to have left this world of dull care and cold realities, and to be standing in the midst of some fairy scene begotten of a wild and gorgeous fancy. Strings of pearls of almost fabulous size and worth thousands of pounds sterling, necklaces of diamonds rich enough for a veritable goddess, and costly enough to bankrupt a queen; and, at length, outshining them all, the crown jewels of Her Majesty, including the great Koh-i-noor Diamond, the finest the world ever saw! Oh! will there ever be anything like all this again?

All British articles in the class of precious metals are distinguished from those of other countries by a remarkable chasteness—almost coldness—of design, by massiveness and by a faithfulness of execution. These last qualities render them deservedly popular with all who delight in genuineness and despise every species of sham.

BRITISH FURNITURE.

On the north side of the nave we shall be favored with a fine display of every sort of household furniture—chairs, sofas, and carved and inlaid cabinets, in walnut, oak, rosewood, ebony and mahogany; sideboards, inlaid in white and gold with decorative panelings; decorative jewel stands; cabinets mounted with marbles, enamels, &c., in or-molu; carved specimens of Gothic and mediæval furniture; highly ornamental japanned papier mache works; carved stone and marble chimney pieces, surmounted with oak panellings and mirrors; carved centre tables, flower vases, and a thousand other things for which we have no time just now.

Substantiality and rich, heavy carving, with rustic or feudal scenes, characterize nearly everything English in this department; in all of which we are frank to acknowledge ourselves quite in sympathy. Oak is the favorite wood.

Above us, in the gallery, there is a fine show of philosophical, chemical and surgical apparatus, which we shall hardly have time to examine just now.

Entirely outside the visible interior court of Great Britain, and immediately under the Gallery of Paintings, on the south side of the Palace, we shall find a large collection of all sorts of wheeled vehicles—wagons, carts, omnibuses, coaches, carriages, cabs, &c. Weight, strength and clumsiness are the characteristics. Of these again, at some future time.

TEXTILE FABRICS, &c.,

Including flax and hemp, woolen and mixed, cotton and silk fabrics, with carpets and laces of every description, manufactured in the British Isles, are found in the galleries. Let us climb the stairs and take a hasty glance at the vast display of articles in this class.

Here are the woolen manufactures of the west of England and the West Riding, the Norwich fabrics, the poplins of Dublin, the rich shawls of Paisley, the coarse woolens and mixtures of Scotland, the flannels and blankets of Rochdale and Witney, the fine prints of Manchester and Glasgow, the printed table covers and bandannas of London, the sewing threads of Leicester, Paisley and Huddersfield; London, Macclesfield and Manchester silks, the ribands of Coventry, and all the varieties of English and Irish lace.

The muslins, cheap prints, plain heavy cloths, flannels and blankets, are, probably, without a rival; the heavier silks, velvets, and ribands are following hard after the French manufactures of the same class; and some of the laces are unsurpassed. One lace shawl, (point) marked seven hundred guineas, ($3500) was good enough for almost anybody to wear.

BRITISH WORKS OF ART.

The paintings, drawings, &c., are found in the eastern and a part of the southern gallery; occupying in the aggregate some 50,000 square feet of wall surface. Many of them are very fine, and challenge the admiration of connoisseurs of all countries. Landseer, Hogarth, Turner, West, and many others long famous, are well represented.

The Statuary is partly exhibited in the corner apartment of the Art Gallery and in part promiscuously along the stairway and the aisles below. The most striking work in this branch of English Art is Gibson's tinted statue of Venus, which, if the artist had not bedecked it with bracelets, ear-rings, and other tawdry ornaments, would have been almost perfect. A veritable goddess, of faultless form and beauty, standing nude before your ravished vision, yet with rings of gold in her ears and jewelled bands about her arms! Who ever conceived of such an absurdity before?

Well, we have, at last, completed our hurried survey of the British Department of the Great Exhibition. What it promised, at first glance, has been more than realized in the more detailed examination, and the United Kingdom stands out upon the stage of the great working world vaster in her resources, mightier in her ability to accomplish, and grander in her wonderful achievments, than she has ever seemed to us before. God make her as pure and noble in her ambitions and as beneficent in her deeds as she is physically and intellectually great and powerful.

Hints for August.

This month is crowded so full of work of one kind—the winding up of havesting and haying—almost to the necessary exclusion of everything else, that we came near letting our regular "suggestions" go for once. But then, on thinking the matter over, so many things, outside of the important work named, occur as very important to be attended to that we cannot forbear, at least, to urge them upon our readers. If the hints we give do no good, we trust they will do no harm.

Your Grain and Grass—See that they are well cured and carefully put up. Ventilation is important to both. In the stack it may be secured by building round a pole, to be drawn out when the stack is finished—hole to be covered over in case of storm, and entirely after the stack is thoroughly cured. In the barn, proper curing may be facilitated by leaving the

doors open most of the time during the hauling in and for a week or two after the mowing away is all done. A little pains in matters of this sort will be amply repaid by the superior quality of grain and straw. We need not urge attention to the barn roof, to the end that no leaks be left unrepaired—that is, we presume not; though a knowledge of cases is recorded in our memory, wherein many loads of wheat have been ruined by rain, after it was believed to be snugly in the barn.

For Winter Wheat—Plow early, so as to get in early in September.

The Corn Crop.—The plowing and cultivating having been pretty much all done up, it simply remains to go through once or twice and pull up any large weeds that may have escaped the implements. Let not a single one of them go to seed, under penalty of being denounced as *a sloven of the worst sort!*

Your Meadows.—Cut off, close to the ground, all bushes, single or in clumps, that may be standing as a reproach to you. Now is the best time to kill them by simple cutting. Top-dress with fine compost, if you have it—and you ought always to have manures on hand when you need them—to increase the aftermath and protect roots of cut grass from the scorching heat of the sun. Keep off stock until the new grass is nicely up.

Stock.—Good feed, a plenty of it, pure water, and salt, are essential. Don't neglect them if you would have your stock go into the winter in good plight. Your swine and poultry intended for market should be fattened pretty early to insure economy and the best prices.

The good of your sheep demands that the rams should be separated from the ewes, and that the lambs be weaned and placed with the yearlings of the flock. See that the udders of the ewes do not suffer for want of occasional drawing of the milk.

The Orchard.—Now is the time for budding, layering &c. It's so much better to have just the kind of fruit you want, and the very best kind, than to be eating miserable, gnurly, good for nothing stuff, with self-reproach for lack of ambition. Look out for the borers; they have hatched, probably, and penetrated the bark. After them with a knife before they shall have penetrated deeply into the wood.

The Garden.—Save all the fruits you can for canning. Fruits are the most wholesome food of man, and he is a barbarian who, for want of a little effort at the right time, will compel his wife and children to munch pork and potatoes the whole year round.

Management of Cane Juice.

ED. FARMER:—I feel much interested in the sorghum question, and have regretted that I could not attend the Convention held in your city last spring. So I will write you, asking you to lay my experience before your readers, in the hope that I may provoke discussion on the topic herein treated, viz.:—how to neutralize the acid in cane juice, without injuring it some other way.

On commencing to make syrup, five years ago, I procured some litmus paper, (for detecting acids), which, in one pailful of water, required two spoonsful of sharp vinegar before I could perceive that the mixture would change the color of the paper at all. Well, after I had got some juice ready, I tried my paper, and it was changed from blue to purple instantly upon touching the juice. I then mixed with the juice about half a pint of lime whitewash to fifty gallons of juice, tried my paper again, and could perceive very little or no alteration, proving that the lime had not neutralized enough of the acid to be perceived in its effect upon the paper. Afterwards I found that if much more lime was added than above stated that it would coagulate the impurities and disperse them through the mass, instead of causing it to rise in the form of scum so that it might be removed. Thus I found that very little of the acid could be removed with lime.

Then I tried saleratus when the syrup was about two-thirds boiled down, and it gave it a saltish, bitterish kind of taste. Then I tried saleratus applied to the cold juice, and kept on adding it until it would not change the col-

or of my paper, and got good pleasant syrup, only it was of a darker color than if nothing had been added. Afterwards, I tried, in the same manner, common ley and potash, (these being cheaper according to strength), with equally good results.

There is a difference in the acidity of different juices, but it usually requires about one-fourth of a pound of potash to ten gallons of juice. In this manner I get good pleasant syrup, that is universally preferred to that with nothing put in to neutralize the acid, and has but one bad effect that I know of, viz.: darkening the color. I have used Cook's and other evaporators, and the effect is equally good with them all.

Now, some contend that alkalies destroy the sweet, as well as sour, and a little of many things are used to purify and to take the acid from the juice, all of which I have found in practice utterly insufficient. I am not able to explain the chemical operations involved in this matter, but I state simple facts and leave it to others to enlarge upon; hoping that they will do so, I leave the subject for the present.

THOMAS SEARS.

A Brief Chapter on Economy in Farming.

MR. EDITOR:—When times are as hard as they now are, when everything that the farmer raises is down, and groceries and most of the necessaries of life (whiskey, the root of all evil, included) are up, it behooves every thinking man, and the farmer especially, to look to his income and expenditure,—to see that nothing is wasted.

The old proverb, a penny saved is a penny gained, will commend itself to every one, in times like these, when our country is in danger and its rights trodden into the dust, 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 their taxes and school their children the year round. And yet these are the men who complain of the scarcity of money, of the high price of calico and the low price of wheat.

There are many ways in which our farmers might save money. I will not particularize the many ways, but will only name a few, and leave it to the general good sense of my readers to add whatever may suit each particular case. First, I would name the insufficiency of our barns, a lot of rough slabs or logs covered with straw enough to keep the snow out while it is all open on one side, and the other three sides about the same. This is all the shelter that the cattle get through the winter, and is it to be wondered at that stock kept in this way, unsheltered and uncared for, present the appearance that they do in the spring?—poor, stunted, gaunt, near sighted, weak jawed, hollow bellied, flat sided, and their hair growing up their backs instead of down, and alive with lice. I was informed that I had two calves that strayed off, and late in the fall, when I found them, they were almost devoured by the vermin. I tried several remedies that I heard were a sure cure, but they all proved a failure.

Secondly, I would name the grinding of feed of all descriptions, whether for horses, cattle, or fattening hogs. Corn, ground cob and all, is better for working cattle than the clear meal; if ground and used with cut straw for stock, it will save from twenty to fifty per cent. above the same amount fed unground and uncut.

One of my neighbors had a heifer die with the blackleg, I should judge. I found, on examination, that the disease was wholly confined to the hind quarter, and it seemed as though all the blood had settled and stagnated there. The body swelled up a little before she died, and there was some froth and blood running out of her nose; these were the symptoms when I saw it. Please state your opinion, and what is the best preventive, and further state whether it is contagious or not.

THOS. LEAVY.

LODI, April 8, 1853.

Have had no experience with this disease. Will some of the cattle doctors answer?—ED.

Maud Muller.

BY J. G. WHITTIER.

Maud Muller, on a summer's day,
Raked the meadow, sweet with hay.

Beneath her torn hat glowed the wealth
Of simple beauty and rustic health.

Singing, she wrought, and her merry glee
The mock-bird echoed from his tree.

But, when she glanced to the far-off town,
White from its hill-slope looking down,

The sweet song died, and a vague unrest
And a nameless longing filled her breast—

A wish, that she hardly dared to own,
For something better than she had known.

The Judge rode slowly down the lane,
Smoothing his horse's chestnut mane.

He drew his bridle in the shade
Of the apple trees to greet the maid,

And ask a draught from the spring that flowed
Through the meadow across the road.

She stooped where the cool spring bubbled up
And filled for him her small tin cup.

And blushed as she gave it, looking down
On her feet so bare, and her tattered gown.

"Thanks!" said the Judge, "a sweeter draught
From a fairer hand was never quaffed."

He spoke of the grass and flowers and trees,
Of the singing birds and the humming bees;

Then talked of the haying, and wondered whether
The cloud in the west would bring foul weather.

And Maud forgot her brier-torn gown,
And her graceful ankles bare and brown;

And listened, while a pleased surprise
Looked from her long-lashed hazel eyes.

At last, like one who for delay
Seeks a vain excuse, he rode away.

Maud Muller looked and sighed: "Ah, me!
That I the Judge's bride might be!

"He would dress me up in silks so fine,
And praise and toast me at his wine.

"My father should wear a broadcloth coat;
My brother should sail a painted boat.

"I'd dress my mother so grand and gay,
And the baby should have a new toy each day.

"And I'd feed the hungry and clothe the poor,
And all should bless me who left our door."

The Judge looked back as he climbed the hill,
And he saw Maud Muller standing still.

"A form more fair, a face more sweet,
Ne'er hath it been my lot to meet.

"And her modest answer and graceful air
Show her wise and good as she is fair.

"Would she were mine, and I to-day,
Like her, a harvester of hay:

"No doubtful balance of rights and wrongs,
Nor weary lawyers with endless tongues,

"But low of cattle and song of birds,
And health and quiet and loving words."

But he thought of his sisters proud and cold,
And his mother vain of her rank and gold.

So, closing his heart, the Judge rode on,
And Maud was left in the field alone.

But the lawyers smiled that afternoon,
When he hummed in court an old love tune;

And the young girl mused beside the well,
Till the rain on the unraked clover fell.

He wedded a wife of richest dower,
Who lived for fashion, as he for power.

Yet oft, in his marble hearth's bright glow,
He watched a picture come and go:

And sweet Maud Muller's hazel eyes
Looked out in their innocent surprise.

Oft when the wine in his glass was red,
He longed for the wayside well instead;

And closed his eyes on his garnished rooms,
To dream of meadows and clover blooms.

And the proud man sighed, with a secret pain:
"Ah, that I were free again!

"Free as when I rode that day,
Where the barefoot maiden raked her hay."

She wedded a man unlearned and poor,
And many children played round her door.

But care, and sorrow, and childbirth pain,
Left their traces on heart and brain.

And oft, when the summer sun shone hot,
On the new mown hay in the meadow lot,

And she heard the little spring brook fall
Over the roadside, through the wall,

In the shade of the apple tree again
She saw a rider draw his rein;

And, gazing down with timid grace,
She felt his pleased eyes read her face.

Sometimes her narrow kitchen walls
Stretched away into stately halls;

The weary wheel to a spinet turned,
The tallow candle an astral burned,

And for him who sat by the chimney lug,
Dozing and grumbling o'er pipe and mug,

A manly form at her side she saw,
And joy was duty and love was law.

Then she took up her burden of life again,
Saying only, "It might have been."

Alas for maiden, alas for Judge,
For rich repiner and household drudge!

God pity them both! and pity us all
Who vainly the dreams of youth recall.

For of all sad words of tongue or pen,
The saddest are these: "It might have been!"

Ah, well! for us all some sweet hope lies,
Deeply buried from human eyes;

And, in the hereafter, angels may
Roll the stone from its grave away!

Now's the Time to Kill the Bushes on your Farms.

It has been our own experience—and we believe the testimony of others corroborates that experience—that the best season of the year for killing bushes, brambles, &c., by cutting down to the ground, is this present month (August). Their growth seems to be at just the right stage to render decapitation fatal.

So, sharpen up your bush-hooks, or bush-

scythes, and down with the brush in the fence corners and elsewhere. Slovenliness on a farm is worse than almost anywhere else. Farmers, don't compel us to be ashamed of your premises any longer on this score!

[From the Jour. of the Bath and West of England Soc.]

The Manufacture of Cheddar Cheese.

BY ALEX. M'ADAM, KIHILT, WIGTOWNSHIRE.

For various reasons, I prefer making my cheese according to the Cheddar system. If the system is carried out with care and intelligence, one is almost certain of obtaining a lot more uniform and excellent in quality than could possibly be made on the old Dunlop system. The latter is neither so easy nor so cleanly. In regard to quantity, I have found, after weighing the milk with the utmost care for two successive days, and making one-half on the Cheddar mode, and the other half on the Dunlop, that the result is always in favor of the Cheddar.

The difference, however, in the price of the two kinds of cheese is important. In 1859 I sold my whole stock made in that season at rather over 14*s*. 6*d*. a stone of 24 lbs. In 1860 I sold all my cheese, made between 23d March and 22d November, at upwards of 16*s*. a stone. Last year I sent the whole to an agent in London, and, after deducting all charges, had a return of nearly 14*s*. 6*d*. a stone.

On the other hand, I have known of no Dunlop cheese sold during the last five years which has realized anything like what I have done. The difference has been at least 3*s*. per stone in favor of Cheddar.

I make my cheese once a day. The evening's milk, as soon as it is drawn from the cows, is put into shallow tin boynes [vats or tubs] to cool. Next morning this is put through a very fine wire seive into the steeping tub, while the morning's milk is added as carried in from the byre [cow-house]. In May, and the four succeeding months, the milk put in this manner together in the evening and morning will generally have a temperature of 80° Fahrenheit. If it is not so high, a little of the evening's milk is warmed in boiling water to raise the whole to the above temperature. After this the sour whey, annatto, and as much rennnet as will coagulate the whole in an hour, are added, and well mixed.

I generally put in about 4 to 5 quarts of very sour whey to about 140 gallons of milk. As soon as the curd is properly formed, I commence to break it with a hand-breaker made of tin and wire, which is somewhat like a riddle, and having a wooden handle about 3 feet long affixed to the middle. When partially broken, the curd is allowed to subside a little. As much whey is then drawn off and heated as will bring the whole up to a temperature of 80°. After this, breaking is resumed, and the temperature maintained by adding more heated whey.

Nothing further is done for the next hour but to draw off and heat as much whey as will raise the temperature to 100°. At the end of the hour a portion of the whey is run off, and the curd is afterwards very gently broken with a shovel-breaker.

An assistant now gently pours as much heated whey as will once more raise the temperature to 100°. During the time the whey is pouring, the whole is actively stirred, but afterwards more gently, till the curd has acquired proper firmness. I cannot say how long it may be necessary to stir. If too much acid is present less time is required, and if too little acid, more is necessary. The time will vary, according to these circumstances, from 25 to 40 minutes

When stirring is finished, the curd is left half an hour, and then the whey is all drawn off. One side of the tub is raised a little to allow this to take place more perfectly. The curd is then heaped up to the highest side of the tub, covered with a cloth, and left for halt an hour. After this interval it is cut into large slices, turned upside down, covered up, and left for another half-hour. Then it is torn into thin stripes and spread on a cooler, on which it is allowed to lie for another half-hour. After thus being turned upside down, it is left another half-hour longer.

The curd is then vatted and put into the press, on which 28 lbs. are suspended for about 20 minutes. Afterwards it is taken out, milled, and salted. Cheshire salt is used at the rate of two lbs. to the cwt. It is salted in the cooler, and if it is above the desired temperature, it is allowed to lie, perhaps for half an hour, and stirred up once or twice. Our dairy being very warm, I am unable to cool down the curd as low as I would wish before making it up.

On referring to my diary, I find that not one of the cheese I exhibited at Kilmarnock was below 68 lbs. when vatted. The cheese is made up between two and three o'clock p. m., and a dry cloth put on the same evening. What I make on Monday is carried to the cheese room on Thursday. Each cheese only gets one dry cloth daily. The room is over the dwelling house and dairy. Its temperature during summer ranges between 65° to 80°. The specimens of cheese I exhibited at Kilmarnock were not subjected to any artificial heat.

I use an oak steeping-tub in preference to any other. All the implements and utensils are kept as sweet and clean as possible. The weight or pressure put upon the cheese is the same throughout the different stages of the manufacture.

For a Farmers' Festival.

[At the Fair of the Amesbury, Mass., Agricultural and Horticultural Society, the following beautiful poem, written for the occasion by J. G. Whittier, was sung by the choir.]

Once more, oh God, before our eyes
The fullness of Thy bounty lies.
And, shaming all our doubt and fear,
Again Thy goodness crowns the year.

On loyal homes, on rebel soil,
On slavery's task, on freedom's toil,
On good and ill Thy mercies fall,
For thou, oh Father, pitiest all!

Yet must the debt of sin be paid,
And justice come though long delayed;
The wrong must die, the good must be
Joint heir of Thy eternity!

Oh! hearts must break with pain and loss,
And mourners bow beneath the cross,
But well we know, whate'er befall,
Thy love keeps watch above us all.

Farming as an Occupation Again.

Ed. Farmer:—In reply to Adolphus, in the June No. of the Farmer, I would say that I never thought of being "offended" by his statements in the February No.; nor had I the remotest idea that mechanics and lawyers, by reading my article in the April No., would thereby be induced to become farmers. I wrote it principally for the encouragement of such as Adolphus who seem to think that farming and fruit raising in this climate is an extremely unprofitable and discouraging pursuit.

Adolphus and his neighbors, according to his statements,—which I doubt not are true—have had exceedingly bad results follow their efforts to raise apples, &c. If I could see him, I would inquire as to the varieties planted, and whether they had hoed, mulched and packed their trees and shrubbery, as they have been advised to do in past numbers of the Farmer. My own experience and that of my neighbors has been quite the reverse.

I set out a few apple trees on my place, two years ago, and this year some of them are bearing. Last year I set out one hundred apple trees, some grape vines, and other small fruit and shrubbery. Out of that hundred apple trees twenty are bearing this year, several of them over a dozen each. I have just been out and counted thirty on one of them, the Duchess of Oldenburg.

Some of my neighbors have been trying to raise fruit longer than I have. Several of them expect to gather from one to two hundred bushels of apples this year. They have also a fine prospect for a good supply of excellent plums, cherries, currants, strawberries, &c. One has, I think, twenty pear trees bearing this year, some of them profusely. Nor can I leave out of the list several of the finest varieties of grapes; witness the article of J. C. Brainard on page 484 of the Farmer for 1862. And just because I had rather have one apple plucked from my own tree than a bushel bought at the store, would I own a spot of ground to raise them on, believing, as I do, that they can be raised for profit as well as pleasure here in Wisconsin.

The reason why we "rate farming above all other occupations" is, in part, because it is the foundation of all other business. The farmer produces from nature, and as he prospers others prosper; and when he succeeds but poorly, others stand a good chance to fail entirely.

I think that Adolphus will eventually become convinced that he is mistaken in supposing that "the farmer depends as much upon the mechanic for his necessities and comforts as the mechanic for his bread on the farmer." These excellent pens, this paper, this kerosene lamp, our magnificent engines &c., are indeed quite convenient, and for the time seem to be necessary for our comfort; yet they cannot be said to be absolutely indispensable. We can get along, if need be, and enjoy ourselves comfortably with far fewer of these mechanical contrivances than we use now. And, as for physicians and lawyers, although they are generally very clever fellows, and their occupation considered as honorable as the farmer's, still I don't know as I ever knew an individual to gain materially in this world's goods by cultivating a very intimate acquaintance with them.

The mechanic turning agriculturist, and failing, proves nothing against farming, as the same experiment has often been tried by farmers with like results. I know a number who have sold out and gone into other business; some of them have returned contented to their

former vocation, while others would be glad to get the old place back again if they could command the means.

Neither can I agree with Adolphus in his estimate of grubbing, breaking, starting a new farm, &c. Perhaps the grubbing may not be as tedious in this vicinity as at Mt. Pisgah, yet I never heard a man complain of its being any too easy here; and from what experience I have had I think I am safe in saying I can take any ordinary acre of grubby land hereabouts and hire it grubbed, broke and sowed, and, with an average crop and price, I will pay the whole expense with the first crop of wheat.

Adolphus gives me credit for an easier chair and a livelier imagination than I possess, still I can imagine him a mechanic, with his twelve children depending upon his daily wages for their support. Times are good, because the farmers raise good crops and receive a fair price for them. Work is plenty and wages high. The children have plenty of both food and raiment. But suppose an untimely frost cuts short the crops, or produce brings a low price. The farmer postpones building &c. and there is no work to be had. The chances are that Adolphus would awake "some cold winter morning" and find his twelve destitute of clothing, and crying for bread. Then, I think, he would wish for a farm that he might raise bread, potatoes, pork and beans, garden sauce and fruit; and if I should offer him one rent free for five years, he would go to work upon it with a will, notwithstanding there might be some danger of his losing a little occasionally through a partial failure of his crops.

G. H. Adams.

Danville, Dodge Co., Wis., June, 1863.

False Butter.—Can you or any of the numerous readers of the Farmer tell the cause of what is called false butter, and the way of avoiding it. I am induced to write you from hearing the complaints of the butter makers of this section.

What is the best method of sprouting locust seed, and seed of all other trees! *

Charles City, Iowa.

STOCK REGISTER.

Kindness to Animals.

The noble horse who toils for thee,
And does thy bidding willingly,
Endowed by God with instinct rare,
Should in thy love and kindness share.

The patient ox, who meekly bows
Beneath the yoke, and daily plows
The rugged field, should surely be
Repaid with tenderness by thee.

O, spare the lash! remember, they
Have not *thy* gift—bright reason's ray;
Be gentle to the helpless brute—
Kindness is heaven's own attribute.

—*New England Farmer.*

The Profits of Wool-growing already Apparent.

For years past we have been abusing wheat-growers—exclusive wheat-growers, we mean—and trying to persuade them into sheep-raising, as a more profitable business. To some extent our arguments and efforts were successful, but the war has done the business more effectually than forty years of editorial coaxing and scolding could have done it. Thus much to the credit side of the war. Large numbers of farmers who have never given much attention to stock-growing of any kind have discovered the folly of the exhaustive system of farming they have been accustomed to practice, and have "gone into the sheep business."

Indeed, we have feared that with their natural tendency to extremes many would come to err as much on this side as they have heretofore erred on the other; and, accordingly, it has been our policy to steady all such with a little timely caution. The sequel will show that we have taken the right course, and thoroughly convince those who have felt like finding fault with us because we "have not been more zealous in stirring up the sheep question the past year." We thought we saw that it was already sufficiently stirred up.

But the profits? Well, they are coming along—that is, to all such as have not paid four prices for their sheep.

Mutton bears an extravagant price in all the principal markets, and good fine wool is pretty much blind to any figures less than $1 00 per pound.

To make fair returns all the surer, the farmers in many parts of the country have held meetings with a view to concurrent action in controlling the prices. At some of these meetings they have resolved to hold their wool at 80 cents, in others at $1 00. Large prices, to be sure, but not higher than have been known before in this country, and really not extravagant when put in comparison with almost everything the farmer has to buy.

The last year's crop of wool is undoubtedly used up, and manufacturers must commence at once upon the product of the present clip.

Our advice to farmers, therefore, is that they *keep cool* for a little time yet, and not sell out under value.

Fine Wooled Sheep.

Circumstances Affecting their Success.—The early importation of Merinoes into the United States attracted but little public notice. The woolen cloths then made in the country were mostly spun and woven in families. The fine Merino wool was as little adapted to the instruments employed, as was so valuable a material to the cheap, common fabrics worn by our people. Both Livingston and Humphreys, however, patriotically set the example of attempting fine cloth manufactures with the new wool; and the former, with his usual energy as a public improver, made and published the results of investigations and experiments on the subject, which were soon to prove of the highest value.

When the great warlike struggle then shaking Europe led, in 1807, to maratime regulations—the English Orders in Council and the French Milan decree—which converted American commerce into the mere prey of the belligerents, our Government made an effort to save it by laying an embargo (Dec. 22d) which entirely shut our shipping off from the ocean. This was succeeded by the non-intercourse law which prevented trade with England and France. France repealed her obnoxious decrees, and trade was restored with her, but the continued attitude of England rendered commerce with her neighbor precarious. A British outrage on an American vessel (the Chesapeake) early in 1811, forced our country to begin preparations for war. This was declared in 1812, and continued till 1815.

Thus, for a period of about eight years, our commerce was virtually suspended with those nations which had previously supplied us with our woolen goods, and was so interrupted and precarious with others, that the establishment of home manufactories and of the means of supplying them with the raw material became an object of prime necessity. Most fortunately, the embargo was raised at just the right moment to allow the sheep, which the situation of Spanish affairs threw in the way of M. Jarvis and others, to be purchased and sent home.

At such a juncture, it would be expected that the arrival of the Merino on our shores would be hailed with enthusiasm—particularly, when it was learned that we had obtained the very best sheep of Spain. And, as a matter of course, the spirit of speculation lent energy to the movement. From one thousand to fifteen hundred dollars a head were in many instances paid for imported rams, and one thousand dollars a head for ewes. Flocks of full blood or grade sheep were eagerly commenced in all parts of the country. Fine wool commanded such an exhorbitant price that it required the utmost bad management, added to the most extravagant original disbursement, to render the venture unprofitable. As early as 1807, wool rose to a dollar a pound. In 1809, Mr. Livingstone sold his full blood Merino wool *unwashed* for two dollars a pound! During the war with England it rose to two dollars and fifty cents.

Effects of the Peace of 1815 *on the Product and Manufacture of Wool* —The peace of Ghent and the liberation of commerce which followed exposed our infant manufactures, and our wool growing, to the competition of the world. The exhaustion and derangement of our finances assisted in their overthrow. The revulsion from war prices to peace prices, in almost everything, was enormous, and it carried bankruptcy into every department of business, and mourning into every neighborhood in the land. Our manufactories perished. Merinoes, which were valued at one thousand dollars a head in 1809, sold for a dollar a head in 1815. Speculating holders ceased, of course, to take any interest in them. Multitudes abandoned wool growing altogether. Careless owners no longer paid any attention to preserving purity of blood. But the "most unkindest cut of all," that I ever heard of their receiving, was the fear expressed by an agricultural writer of that period, residing in one of our northeastern counties, "that there was danger of the Merinoes running out the native sheep."

United States Tariff Laws.—In 1816 a tariff law was enacted by the Federal Government, which imposed a duty of fifteen per centum ad valorem on wool, and twenty-five per centum ad valorem on woolen manufactures. The duty on the latter was to be reduced to twenty per cent. after the expiration of three years.

This, as would be expected, produced no effect in favor of the growth of fine wools. There was little domestic demand for them. The Merinoes continued without any considerable marketable value until 1824. They became completely lost to public notice, and there was many a choice flock of sheep of which no trace can now be found.

In 1824 a tariff was enacted which imposed a duty of fifteen per cent., ad valorem, on wools costing less than ten cents per pound at the place of export; twenty per cent. on those costing more, until June 1, 1825; twenty-five per cent. from that date to June 1, 1829; and thirty per cent. afterwards. On manufactures of wool it imposed a duty of thirty per cent. until June 30, 1825, and thirty-three and a half per cent afterwards.

The decided protection thus afforded to wool and its fabrics conspired, with other circumstances, again to turn the attention of farmers to the production of that staple. Among these auxilliary circumstances is to be mentioned the arrival of Saxon sheep in this country. The most extravagant ideas were formed of their value. The country, after so long a rest, was ready for another wool mania, and it set in.—Hon. H. S. Randall, *Cortland Village*.

Cure for Stretches.

Ed. Farmer:—In the May No. of the Farmer I saw an inquiry for a cure for stretches in sheep. The cause is costiveness. Cure—two oz. Epsom salts and one drachm of ginger, or an equivalent of hog's lard or linseed oil.

T. K. Gillett.

Fond du Lac, May 11, 1863.

Unquiet Milch Cows.

One of the greatest errors in overcoming cows that are unquiet while being milked is to whip, beat, kick and bawl at them. This is generally done, and the cow becomes afraid or angry, and, instead of becoming better, grows worse. Milch cows cannot be whipped or terrified into standing quietly, gently during milking. They dislike to be milked, for they know that hard words and hard blows always attend the operation. They dread to see the milker as a little urchin dreads to see the birch rod in the hands of the angry pedagogue when he expects to feel it applied to his back. A cow, kindly and properly treated, is pleased to see the milker, gladly awaits his or her approach, and submits with pleasure to the operation of being milked. Every one having experience with cows knows this to be true. But the cow is opposed to a change of milkers; she soon becomes attached to one person who performs the operation, and does not willingly and freely give down her milk to another person; therefore, have one regular milker to certain cows, and bear in mind if you change milkers it is at the expense of a loss of milk and of an injury to the cow.

All animals are appreciative of kind treatment and resent abusive treatment. Therefore, if you would have them gentle and quiet, treat them gently and kindly. See that those who milk them can control themselves, govern their passions, speak low and kindly under any provocation, and soon the cows will learn that they are not going to be abused, and will submit to the operation. Milking should be performed at regular hours, not varying fifteen minutes from one day to another. No talking or laughing should be permitted at the time, and it should be done as speedily as possible.

Lustre Wool.

Within the past year or two years, we have several times noticed the fact that a certain description of long wool has brought a higher price in England than any other wool produced in that country. It seems that the kind of wool most sought after, is that of long staple, silky to the touch, and of a glossy, or lustrous appearance. It is produced to the greatest extent by the Lincoln breed of sheep, but to some extent by the Cotswold and Leicester. "The growth of Lustre Wool" was made the subject of discussion at a late meeting of the London or Central Farmers' Club, when a lecture, comprehending something of the history of the growth of long wool and the manufacture of worsted goods in England, was given by Mr. Anderton, of Leeds. The reason why the kind of wool alluded to has of late years become valuable, was more particularly stated by Mr. Unwin, of Colchester, a portion of whose remarks, as reported for the *Farmer's Magazine*, are as follows:

Mr. Unwin observed that there was no branch of trade or manufactures in the country which had commanded in past times so much attention as the worsted and woolen trade. The growth and cultivation of wool also had occupied the leisure of the affluent, and the skill and sagacity of the agriculturist from time immemorial. Notwithstanding the fiscal reforms which have of late years been carried out, thereby securing free ingress into this country for the produce of every part of the world, the British farmer enjoyed at the present moment what amounted to a monopoly of the growth of long wool. There was now no royal wool-stapler, as in the reign of some of our earlier monarchs, to dictate the price at which wool should be sold. There was, therefore, a wider scope for the extension of the growth of wool and the breeding of sheep than there was in any other department of agricultural enterprise and production; and he thought it both the interest and duty of the British farmer to increase the production of those articles to the largest possible extent.

The augmented value of lustrous wool was owing to the introduction of an entirely new branch of manufactures; he referred to the manufacture of alpaca. Mr. Salt, the owner of Saltaire, was the first purchaser of alpaca [the raw material] in this country, and the first to convert it into beautiful fabrics. The extensive use of alpaca gradually led to an in-

creased demand for Lincoln wool for mixing with alpaca, and the manufacturing of fabrics of a lustrous appearance. The result of this great demand for Lincoln wool has been to change the relative positions which fine and coarse wool formerly occupied, and *enhance the price of heavy Lincoln wool far above the fine South-Down;* so that at the present moment South-Down wool is selling in Bradford at 1*s* 8*d*., and Lincoln fleece is selling at 1*s*. 11*d*. per pound. Having had thirty-five years' experience in the wool trade, he had never known Down ewe fleeces fetching a higher price than they did at the present moment, evidencing that all kinds of wool participated in the present brisk demand.

Such was the extension of the demand for worsted and woolen manufactures, that there seemed to be no limit to the consumption of sheep's wool, while obtainable at a fair price. Last year, whilst the home growth was estimated at 157,000,000 lbs., the importations amounted to 147,000,000 lbs. The estimate of the wool produced in Great Britain was based on a supposed average yield of 4½ lbs. per fleece from 35,000,000 of sheep. He thought the average was not less than five pounds, and if that were the case, there would be produced annually in the country 175,000,000 lbs. of the value of £10,000,000 to £12,000,000 sterling. It was almost impossible to exaggerate the national importance of this branch of our industrial enterprise. It was equally important to the interest and success of the grazier and breeder of sheep, to endeavor to ascertain what description of sheep was best adapted to produce, in the locality in which he might be situated, the most delicate flesh combined with the greatest weight of carcase and fleece—in other words, the greatest value of wool and carcase combined.—*Boston Cultivator.*

Pure Water for Stock.

A good draught of *good* water is, probably, as refreshing to beasts as it is to people. But in the month of August nearly all domestic animals suffer, far more than we imagine, for want of good water. Sheep will thrive far better if they can have a plenty of pure water. And if milch cows must drink stagnant water wherever they can find it, how is it possible for them to give their usual flow of *good* milk? It is impracticable for them to do it.

Some people allow water to stand in troughs, day after day, and compel their animals to drink it all up. Did such people ever drink water from an old dirty slop pail, after it had been allowed to stand in the sunshine for two or three days? Let them try the experiment of such water, and wait for the result; and then they will be prepared to express a correct opinion whether or not such water is as good for stock, in the sultry days of August, as pure cold water would be.

Water troughs and water tanks should be cleaned frequently, during the hot days of August, and fresh water pumped into them several times during the day.

Milch cows require a vast quantity of pure water in hot weather, in order to produce their usual flow of good milk.—*Country Gent.*

To Cure Bloat in Cattle.—John Baker, of Baker's Corners, Lenewee county, sends us his experience in curing choked or bloated cattle, as follows: Take a stick about the size of a large sized rolling pin, or about two inches in diameter, and, after fastening a string at each end, put in the animal's mouth, and tie it with the strings around its head, so that the stick will act like a bit and keep the mouth open. In a very short time the bloat arising from eating too much wet clover will abate gradually; and where the choking arises from a potato or piece of turnip, it will work itself either up or down when the mouth is thus kept open."—*Mich. Farmer.*

Bloat in Cattle.—H. D. Court, of Bedford, writes that when cattle are bloated from eating wet clover, or horses from eating green clover, he has found a sure remedy in giving to the animal an ordinary charge of gunpowder, mixed with about the same quantity of fine salt in the hand, and thrown on the tongue every fifteen minutes, until two or three doses are given. He says: "In the summer of 1858 I had five head taken at one time, two of which were severe cases, but this treatment saved them. The same week the hides of forty head were sent into Battle Creek, and all from animals that had been lost by early wet clover."—*Mich. Farmer.*

THE BEE-KEEPER.

Practical Bee Culture.

In a former article on the "Wants of the Bee," in which a few of those wants were enumerated, promise was given to show how to supply some of them, and how to remedy certain difficulties.

This brings us on to the ground of practical bee culture, where the matter of primary importance that demands attention is the *excess of honey* stored early in the breeding chamber of the hive, thereby, as shown in the former number of the Farmer, retarding breeding, and seriously reducing the strength of the colony.

As hives are commonly constructed, the combs must all be attached to the top and

sides. A hole is made in the top and a rudely constructed box placed over it, into which but a limited amount of the warm and peculiarly scented air of the hive is admitted, as the orifice will have connection with but one or two of the spaces between the ranges of comb. And what air does pass into the chamber is rapidly discharged through open joints, thus forming a means of partial ventilation, instead of attractive surroundings and arrangements that will cause the bees to feel as much at home there as when among their brood with their queen.

In the first place, the hive should be in possession of a young, prolific queen, ordinarily not more than three years old. The hive must be shallow and broad, thus bringing the supers in close contact with the great body of bees and young brood, also to facilitate rapid breeding, where many more eggs can be kept at a hatching temperature than can be in a tall, narrow hive.

But, while on this matter of a shallow hive, we will be pardoned for dwelling at some length, as it is at variance with the notions of many bee keepers, whose apiaries have for many years been graced with these tall monuments of bee killing, sulphur-pit experience.

To Taylor's Manual, London 1860, we will again refer:* Speaking of the form of a hive, he says, page 28:—"It may be well, in this connection, to introduce the observations of Gelieu. 'One of my chief objects,' says he, 'has been to ascertain what shape of hive is the most profitable; and with this view I have tried all the different kinds, and have invariably remarked that bees thrive better in low hives than in high ones; that, in general, those which are *broad* and *flat* amass more honey, thrive better, and give out stronger and earlier swarms than those which are high.' A hive thrives only in proportion to the success or perfection of its brood combs in the spring. It is, therefore, of great importance to keep up the necessary degree of heat for the hatching of the brood. If, at that time, the bees are lodged in high and roomy hives, they will crowd together in vain, and the heat ascending is lost in the empty space above. This never happens in low, flat hives, where it is more easily concentrated."

Again, on page 31, referring to Mr. Payne, whom he calls "one of the most experienced of cottage bee keepers," he says:—"He saw reasons for altering the dimensions of hives from twelve inches wide to fourteen, and seven or sometimes eight inches in height (both inside measure)."

Again on page 52, he says:—"A fair average size for a plain hive is eleven and a half inches square, by eight inches deep, withinside; or perhaps better, twelve by seven or seven and a half inches, clear." And on page 56 of same work, on authority of Dr. Bevan (who recommends a low hive), and giving a description of his hive, he says:—"The dimensions withinside are thirteen and a quarter inches square, the height being seven inches."

The American Bee Journal, 1861, page 126, gives the results of Mr. Hiram Hamilton's experiments in California, in 1860, where Mr. H. declares that thirty-five hives of bees were increased to *five hundred* in one season, and shows how it was accomplished, and also shows the comparative merits of deep and shallow hives, as ten of the thirty-five swarms were in hives from fourteen to sixteen inches in depth, and twenty-five were in shallow hives, not more than eight or nine inches deep. All of them being managed alike, the *ten* deep hives increased to but *seventy-five*, or seven fold and a half; while the *twenty-five* shallow ones increased to FOUR HUNDRED AND TWENTY-FIVE, or *seventeen* fold!

But enough on this point, Now let the hive be so arranged as to allow a free passage of air from every part of it into any or all the boxes or receptacles for surplus honey, and the bees to be as readily admitted from any part of the breeding chamber into these same receptacles. This important item can be accomplished only by the use of bars or frames, to which the combs will be attached.

* I have special reasons for not quoting from the leading American works on this subject, though more important refereuces might be had from them.

Gum all the inside angles and joints of the honey boxes with wax and rosin, so that they may be made as nearly air tight as possible, excepting the large openings for the passage of the bees from below into them; in which case the warm and peculiarly scented air from the breeding chamber will be confined in the boxes as it rises into them, and no upward current will be formed for the constant escape of this vitalizing atmosphere of the breeding chamber, and the bees will feel as much at home in the supers as among the combs below. Hence, if this arrangement be made, and the boxes placed on the hive as soon as a little warm air can be spared from the breeding chamber in the spring—or, on a new swarm, within not less than two nor more than four days after they are hived—the queen will deposit eggs in cells as fast as they are furnished below, and the surplus honey will be stored above. In the latter part of summer and fall, after the height of the breeding season passes, the queen not occupying all the cells with eggs, the bees will rapidly fill them with honey for their winter use. Thus all the honey the bees can be induced to store above can generally be taken from them with safety.

Should moths infest the weak colonies (*strong* ones they never injure), be not deceived by the idea that a trap can be used to exclude the miller or catch the worm, and thus prevent their ravages, for every such device has thus far proved either a "bee-killer," or a "moth-breeder." Moth eggs can, and do, get into any "home of the bee." And while strong stocks will remove and destroy them in their embryo state, weak ones cannot thus effectually guard all portions of their domicils, and the worms get a foot-hold among the combs, feeding upon their natural food, which is beeswax, and weaving their silken galleries among them to the great discomfiture of the bees and the final destruction of the hive, if timely assistance be not afforded them, which can only be done by removing the worms and all their traces from *among* the combs, and not by destroying them when found on the bottom board of the hive, in nine cases out of ten already having accomplished their work as moths and are now ready to spin their cocoons and go into the chrysalis state, hereafter to become the miller, and then to deposit their moth-producing eggs. Hence it is of vital importance to have perfect control over every bee and cell in the hive, which can only be had by use of movable combs, by the aid of which, also, maturing brood can be given to strengthen weak colonies,—and newly laid eggs or young larves furnished to queenless colonies, thereby giving them the means of rearing a queen and preventing their otherwise certain destruction.

J. M. STEBBINS.

APPLETON, June 10, 1863.

Winter Management of Bees.

FRIEND HOYT:—As the FARMER is a medium of communication of thought, of practical results and experiments, perhaps the result of an experiment in the winter management of bees, that I have been trying, may be of interest to some of the many readers of the FARMER.

The American people are somewhat peculiar in their habits. For instance, if wool growing proves profitable, all must at once launch into the business of sheep raising, regardless of the prices paid or the knowledge possessed of that branch of husbandry. All must engage in that pursuit, should it require the clip for the next five years to liquidate a debt contracted under the excitement of a high speculative fanaticism. So it is, to some entent, at the present time in relation to bees. There can be no reasonable doubt that either branch of husbandry may become not only a pleasant but a profitable business, if managed prudently and understandingly; but to suppose that by purchasing a few stocks of bees, and then expecting that their possessor in a few years will roll in affluence that an Astor hardly dare dream of, is like the dog in the fable—catching at the shadow and losing the substance. Now to some the pursuit of the apiarian is both a pleasant and a profitable business. But in order that we may meet with success in this department, we should understand the nature

and habits of the bee. We should know what hive is best adapted to their wants, and what one is best arranged to give us perfect control of the bee and its stores; what is the best summer arrangement, also what is the best system for wintering, whether under protection or in the open air?

Since the introduction of the movable frames by Rev. L. L. Langstroth, the nature of the honey bee is becoming so generally understood that there is scarcely a new hive made, or a new apiary started, without the introduction of his system. My experiment has been with the Langstroth hive, and it has been highly satisfactory in its results. The following table will show the time they were put into winter quarters, and the time they were taken out again, with the amount of honey consumed by each stock, as shown by dates. They were all wintered in the cellar except those otherwise marked.

	when put in 1862	lbs honey then	when taken out. 1863	lbs honey then.	lbs honey May 7	lbs used to May 7
1	Nov. 15	21	March 26	13	6½	14½
2	15	29	15	20	11	18
3	15	34	16	24	15	19
4	15	28	15	19	10½	27½
5	*15	7	26	† 3	...	...
6	15	33	13	24	16½	16½
7	15	24	26	17	11	13
8	15	14	26	8	2	12
9	...	27	26	15	7	20
10	...	25	26	17	7	18
11	...	8	16	† 2	...	...
12	...	22	15	15	7	15
13	...	12	26	† 5	...	...
14	...	38	16	31	21	17
15	*...	5	26	† 0	...	...
16	*...	‡ 5	...	...	...	...
17	?...	...	20	11	7½	...
18	?...	...	20	13	4½	...

* Buried. † Fed from this time out. ‡ Died queenless ? wintered in the open air and did not weigh them until March 26, 1863.

Would it not be just as unwise in principle to think of wintering bees without knowing the amount of honey, as it would be to attempt the wintering of a stock of cattle without knowing the amount of provender on hand, or necessary for their consumption?

H. W. W.

ROSENDALE, May 25, 1863.

Morehouse's Patent Hive.

MR. EDITOR:—I have heard a great deal said on the subject of bee hives; and my opinion is that the hive invented by M. Morehouse is the best now in use. It is a self-protector both from cold and from the ravages of the miller. It is constructed in such a manner as to carry off all dampness or moisture occasioned by the breath of the bees, or other causes, by means of a ventilator at the top of the hive, on which is suspended a lamp of tin, of simple construction, by whose light thousands of these annoying insects are lured to certain destruction. This lamp will protect a space of forty feet, and can be use with any kind of dirty grease or oil.

There is also another advantage to be derived from the use of this hive: The honey can at any time be removed, beautiful, transparent and white, without disturbing the bees; this is done by means of boxes places on the top of the hive. This is what we have long desired—a hive that would protect the bees from the inclemencies of the weather, from the ravages of the miller, and from all dampness and impurities occasioned by the tightness of the hive and other exposures, leaving the bees in spring perfectly healthy M. LIVINGSTON.

A Short Chapter on Patent Bee Hives.

MR. EDITOR:—Patent bee hive venders have been around here this season, and have humbugged quite a number of my neighbors. Among the pedlers is a man with H. Kelsey's movable comb hive—a hive that will not work for two reasons: First, his frames are placed too far apart; it wants one more frame in each side. Secondly, he has a division fixed permanently in the centre of the hive. This makes each side too small for breeding purposes, besides which, it is thus made a nice place to raise the moth miller.

Now, in such a hive as that, no bee keeper can have success in this northern latitude. The whole truth of the matter is just this: the man did not understand his business. For, if he had understood the nature of the bee, he would never have got up such a thing as that for bees to live in. I have no interest in any hive humbug whatever, and I do not like to see my neighbors injured, in this or any other way. My advice is, subscribe for the FARMER, and then you can ask for information about

bee hives, through its columns, and you will get it from some one capable of giving it.

E. GALLUP.

BRANDON, July 3, 1863.

The Langstroth Patent.

An article in the July No. of the FARMER on Movable Comb Hives, making special mention of a hive sold by a Mr. Lee of this State, induces me to make the following statements concerning the Rev'd L. L. Langstroth's patent, upon which many honestly think Mr. Lee is infringing.

The first important step towards a prosecution for infringements has been taken in the RE-ISSUE of this patent. (See Patent Office Record.) Re-issues, May 23d, 1863.

"1484.—Beehive.—L. L. Langstroth, Oxford, Ohio, patented, originally, Oct. 5, 1852.

"I claim, first, constructing and arranging the movable comb frames of beehives, in such a manner that when placed in the hive or case they have not only their sides and bottom kept at suitable distances from each other and from the case, substantially in the manner and for the purposes described, but have likewise their tops separated from each other throughout the whole or a portion of their length, substantially in the manner and for the purposes set forth.

"Second, Constructing and arranging movable frames in such a manner that when they are inserted in the hive the distances between them may regulated at will, substantially in the manner and for the purposes described.

"Third, Constructing movable frames and arranging them in the hive in such a manner that the bees can pass above them into a shallow chamber or air space, substantially in the manner and for any or all of the purposes set forth.

"Fourth, The shallow chamber in combination with the top bars of the laterally movable frames, or their equivalents, and with the perforated honey-board upon which to place surplus honey receptacles, substantially as and for the purposes set forth.

"Fifth, A movable partition or divider, substantially as described, when used in combination with movable frames, substantially in the manner and for the purposes described.

"Sixth, The use of movable blocks for excluding moths and catching worms, so constructed and arranged as to increase or diminish at will the size of the bee entrance, substantially in the manner and for the purposes set forth."

These *claims* are founded on the original specifications which are not changed in case of a re-issue.

Those who have—honestly, no doubt—asserted that this patent was granted through *ignorance* of the department, at the time of its issue, must now see their error, since the re-issue is granted with so much light before those having the matter in hand.

But what has Mr. Lee patented? Here it is in full:

"2,482.—W. M. Lee, of Rosendale, Wis., for improvement in Beehives:

"I claim, first, Dividing the hive (*rack?*) vertically through the centre, without a partition, in such a manner as equally, or nearly equally, to divide the brood comb, the bees and honey, substantially as set forth.

"Second, I claim the peculiar construction and arrangement of moth trap, with slides for closing the hive at night, and ventilating screen, substantially as set forth.

"Third, I claim the honey boxes, provided with screens operated by springs on the bottom, substantially as set forth.

"Fourth, I claim the arrangement of the removable strip, dovetailed into the front, for the purpose of holding the two parts of the hive, and for the bees to alight upon, as set forth."

The right to the use of MOVABLE COMB FRAMES is secured to Mr. Langstroth, and to him and his lawful assigns only; and there is no doubt but that he is preparing to prosecute for infringement as rapidly as his feeble health and circumstances will admit.

Having no interest in this patent, except for individual use, I give this to the bee-keeping public for their information and self-protection.

J. M. STEBBINS.

APPLETON, July 10, 1863.

THE POULTERER.

To Insure Eggs for Winter.

Several of your correspondents have been discussing the point as to how to procure eggs in winter. One advises early hatched pullets—a very excellent plan—while, again, another recommends flesh and stimulating food. Perhaps you will allow me to offer a few remarks, which I trust may be found useful. I do not consider age of so much importance as some do; yet, if an old hen has been laying well all summer and autumn, and is consequently late in moulting, she requires rest and time to recover from the moult; and if cold weather comes on her when but partially moulted, she will perhaps be a long time recovering the condition proper for laying. In this case the early hatched pullet has the advantage; but her eggs are usually small. If, however, the old hen is allowed to sit late in summer, so as to rest her from egg-laying, and during the time she is tending her brood she is encouraged to moult, by warmth and generous feeding, she will, when her moult is completed, soon get into laying condition, and, by good management may often be kept laying all the winter, and lay better and larger eggs than pullets. I have two hens now laying that have not left off laying since October, having completed their moult in September while cooped with their second broods; the one is five and a half years old, the other is one year younger.

My feeding is very plain; they have the run of a small field, and I give them once a day a half gallon of barley and oats mixed, among twenty; the rest they must cater for them-

selves; they are in good condition, rarely clear up all their feed at once, and we have more eggs than we care to eat. To prevent their wanting to sit, I regularly look up all the eggs as laid, and never leave but two eggs in a nest. Most of the twenty are late pullets, that will not lay for a month or two to come.

But there is yet another point which I consider of some consequence, and that is "breed." Shanghais will lay well, but their desire to sit when they think proper is almost unconquerable, very provoking, and not conducive to laying; Spanish, crested, are everlasting layers, exhaust themselves in laying during summer, find moulting difficult, and are long recovering from it. Game, in my opinion, lay the most delicious eggs, but they are rather fastidious layers, and sometimes a trifle pugnacious. My present fowls are white Dorkings. I consider them the best of all fowls for general purposes —capital layers, sitters, mothers, and for eating; what more can any one want? Do not breed them in-and-in, then they are hardy; if you do, of course any breed will fail. Leave the eggs in the nest, and they will sit when enough are laid; take all away and they forsake the nest. They are first rate for the table; their uniformity is pleasing, their white plumage protects them against the sudden changes of our variable climate, and the feathers being all white are the more valuable for beds.—*Cor. London Field.*

THE HORTICULTURIST.

A. G. HANFORD, : : CORRESPONDING EDITOR.

What Apple Trees are most Hardy?

Mr. Editor:—I wish to enquire through your paper what apple trees have proved the most hardy and productive in our State? I am satisfied that we all need more light on this subject. Thousands of dollars have been worse than thrown away in attempting to cultivate trees which were not adapted to our northern climate. The country is filled up with tree salesmen, recommending this and that sort, who know nothing as to the hardiness and productivenesss of the plants they are selling here in this climate. As most of us came from the east, we bring our notions as to varieties with us. The consequence is we order trees unsuitable to this latitude, and failure is the result; and many give up in despair, saying it is useless to think of raising good fruit here.

G. G. White.

Preserving Flowers in Sand.

Those of our readers who attended the late Horticultural Fair in this city did not fail to notice those two framed wreaths of natural flowers that hung upon the wall near the horticultural tools. They were the admiration of all, and many times did we hear visitors wondering by what process they were thus preserved in their natural form and colors. It is this:

Get the finest and whitest of river or lake sand, wash it so clean that the water when flowing from it will be pure as if from the well. Heat it very hot and while hot mix it thoroughly with stearic acid in the proportion of one lb. of the latter to 100 lbs. of sand. Let it cool. Take a small common seive and nail boards under the bottom to prevent the sand from running through; place enough sand in the seive to hold the flowers in position—not covering them; then, with a sheet of paper twisted in the form of a cone or tunnel, carefully let the sand pass through it, between, around, and over the flowers—cover about half an inch. Set by the stove, or in some warm place where the sand will be kept at a temperature of about 70° Fahr. When they have remained sufficiently long, remove the boards carefully from the bottom and let the sand run out, leaving your flowers preserved in perfection.

The only difficulty is to know when the process is complete, different plants differing in the time required. Those with thick leaves and petals needing more than light ones. Seven hours are sufficient for some, while others require twelve and even more. Experience alone can determine this. It is best always for a beginner to experiment with a single plant at a time at first. When he has succeeded with a certain variety and noted the time required, he can proceed to others, and in a short time become versed in this art. It should be mentioned that the flowers for this purpose should be picked dry—say midday, after the dew has all evaporated.—*Prairie Farmer.*

What to do with Summer Fruit.

Much summer fruit is very transient, decaying even before it falls from the tree, and sometimes even before it is ripe. This is true of many pears. Picked, or shaken from the tree and picked over, they make excellent *perry*, which is like cider, but more delicate and wine-like. It needs a cool cellar to undergo its fermentation in. Apples should be made into cider. Sweet, it brings a high price in market, and is a delightful cooling beverage, but does not make so good cider as later when fermentation is less rapid. The small hand mills and presses are very good for pressing fruits, and a family may supply itself with the juices for preservation, and considerable quantities for sale.

The Wisconsin Seedling.

This interesting variety of the Strawberry is fairly shown in the above illustration. Other cuts may display a larger fruit, and yet we very much question whether the fruit itself which they pretend to represent would really prove to be larger or make a more attractive appearance.

According to Hon. Emil Rothe, who produced it originally by hybridization of the Triomphe de Gand, the Austrian Giant, and a very splendid French variety, it "is very prolific. Two years old plants yield from 150 to 250 berries; 287 have been counted on one single stalk."

"When properly treated and kept free from runners, it is sure to bear during the whole of the months of June, July and August." Fruit very large—some berries "measuring 5¾ inches in circumference, and 1½ inches in diameter." Flesh of the berry white and very substantial; the flavor delicious, pineapple-like, subacid. Plant hardy, enduring the cold of winter if left unprotected.

"The stem is generally thick, and strong enough to bear the fruit without bending down. The blossoms form a kind of grape cluster, and while some fruit ripens, blossoms and green buds may be seen on the same cluster."

It is this splendid variety of the strawberry that we offer as a prize for subscriptions to the FARMER. See advertisement on cover, and a full description in May No.

Dr. Jno. A. Kennicott.

This eminent practical Horticulturist departed this life on the 4th day of June, 1863, at "The Grove," his home in Cook Co., Ill.

From a biographical sketch, accompanied with an excellent photographic engraving, in the June 13th issue of the *Prairie Farmer*, Chicago, we glean some notes of his early history.

He was born in 1800, in Montgomery Co., N. Y. He was called the "Old Doctor," because he was the eldest of thirteen living children, among whom were several doctors.

His parents were born in Rhode Island, but of somewhat noted English and Scotch origin. His father was of the pioneer class who, after several removals, finally landed in the before mentioned county, Ill.

The Old Doctor, when quite young, became proficient in Botany, on which science he delivered a course of lectures in Buffalo, at the age of twenty-one, and at twenty-three commenced the study of medicine at the same place. His active habits of life, both physical and mental, formed, perhaps, from necessity at an early age, continued a remarkable feature in his character while living.

In the practice of his profession he visited several of the western and southwestern cities, and, in the capacity of editor and publisher, was a resident of New Orleans for several years. At the age of thirty-six he became a resident of Illinois.

Some ten years later he seems to have turned his attention particularly to horticultural and agricultural science, becoming a practical nurseryman. From this time he has been widely known, not only as a pioneer of western civilization and intelligence, but particularly in the horticultural field, a practical, earnest worker; in the varied capacity of editor or publisher of the *Prairie Farmer*, for three years from the close of 1852; for several years Corresponding Secretary of the Illinois State Agricultural Society; and President of the Illinois State Horticultural Society in 1861.

In all these, together with his numerous lectures before Agricultural and Horticultural Societies, he won for himself hosts of friends, and a western-wide notoriety, sealed by the easy familiarity and geniality of manner which ever recognized the real fruit-grower as a brother in a good cause. Many in this State will remember his plain, off-hand-talk lecture in the old Senate Chamber before the State Agricultural Society, at our last Fair, in 1860, afterwards published in the Society's Transactions. It is characteristic of the man—that practical, direct teaching which ever tells for the end desired.

At the "Grove," his home, made very attractive outwardly by perseveringly applying his theories to practice, says the editor of the *Prairie Farmer*, "no one could spend any time with him, especially at his home, wandering through his spacious and well filled grounds, where every living thing seemed to find in him a friend and companion, or in the villa erected with so much taste, in listening to his entertaining conversation, without feeling that he had been benefitted by the interview.

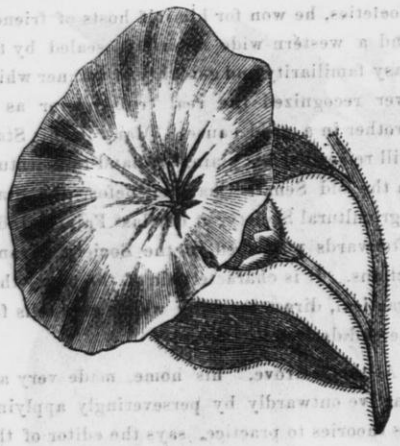
"In life the Doctor has been erecting monuments to his memary all over the northwest that are to last longer than marble. Thousands of homes have them growing in their grounds in the beautiful, tapering, pyramidal evergreens, especially, which were such favorites at "The Grove;" and, as each year adds stature to them and they point upward, they will always be a reminder of him who was always alive to everything tending to improve or awaken interest in Horticultural matters in the land."

J. C. P.

MADISON, Wis.

Homely Flowers.

It is not always the newest that is the most beautiful flower. We have presented illustrations of some of these that were eminently worthy of the high favor they enjoy, and we now pay our respects to a few whose commonness has so nearly run them out of the gardens of the more pretentious that they are likely, at no distant day, to require re-introduction, as something quite new under the sun.



THE CONVOLVOLUS.

Some people are persistent and eternal in their likes—that is, if the thing first liked does not change its qualities. We are frank to acknowledge that we are one of that class of old fogies. Ever since we waked up one glorious morning, away back in the radiant and joyous days of childhood, and found a most wonderful profusion of frail, etherial, and exquisitely beautiful funnel-shaped corollas of diverse hue and delicate tint—blue, purple, pink, variegated and purest white—peeping in at the window of our little chamber, and hanging in a more than rainbow arch over the doorway of the dear old cottage where we were born, the Morning Glory has been a favorite flower. How could so beautiful a flower unfold in all its perfection in a single night? How could so many of them appear, as by magic, in the fresh, dewy morn, where there were but trailing vines and clustering green leaves just the evening before? And then, how could they come forth any beautiful color they chose? These were the mysteries that bewildered and delighted us in the sweet spring-time of life. They are mysteries still, just as then; and the witchery that could so clothe a plain humble cottage in all the charms of Eden's bower is not less wondrous and potent to-day.

On one account the Morning Glory is even more beautiful now than then. Its closing with the morning sun was a grief to our childish heart. Why should it not continue in bloom the whole day and summer long? Even the perpetual succession, with increased variety, was hardly full compensation. *Now*, to the eye of experience and added wisdom, it so beautifully symbolizes those pure and frail child-flowers whose faultless life on earth is but a single morn, that we love it with a tenderer passion still.

We have no objection to the Dianthus Heddewigi, and Malope grandiflora; we would have them too; but give us, evermore, the good old-fashioned Morning Glory.

THE DWARF LARKSPUR

Is another of the common plants worthy of

more general cultivation in these days. The blossoms are very various as to color, and are so profuse as to almost hide the plant. Growing in a bed they are but a little behind the Hyacinth for beauty and attractiveness.

Orchard Culture in the West.

At the last meeting of the American Pomological Society, held in Boston last fall, Dr. J. A. Warder, of Cincinnati, read a paper on orchard culture in the West. From our own observation, we can bear testimony to the correctness of one or two points touched in the following remarks copied from the Doctor's Essay. We have reference to the pasturing of hogs in the orchard, planting low headed trees, and near together so as to shade the ground. We are familiar with an orchard near Dubuque, some fifteen years old, and of about two acres in extent. In that orchard the trees have attained a large size, and stand so near together that in many cases the tops nearly, if not quite, interlace their branches. The orchard has been in grass ever since we knew it—a period of some six years, and during that time, we believe, it has never failed to produce a fair crop of fruit. The ground is so completely shaded that the grass crop amounts to little or nothing. Upon the south side of the orchard, some of the outer trees show the effects of sun and wind by their inclination to the northeast and blackened decay upon the sunny side of the stem. Dr. W. says:

"When the orchard has acquired a sufficient growth, and assumes its condition of maturity and fruit-bearing, it no longer so imperatively requires to be cultivated, and is somewhat better if let alone; having been laid down to clover, or clover and orchard grass, it should be made use of as a hog walk. No other stock should ever be permitted to set hoof upon the soil appropriated to the orchard. The swine alone should be allowed to pasture it, and to consume the fallen fruit, thus destroying immense numbers of insects, they will keep these pests in check. They will distribute their droppings over the surface, and they may even be allowed to root in the soil, to some extent, with their snouts. Should weeds make their appearance, they may be mowed and left upon the ground, or thrown about the trees as a mulch; but with the close planting that is now generally recommended, and sometimes practiced, and with the low headed trees that are so very much preferred by all who have had an opportunity of observing their advantages, there is really little space left for any crop among the trees, except grass, and this will scarcely grow beneath them, in the thick shade of their depending boughs.

"Shall an old orchard ever be plowed? is a question often asked by those who have neglected their trees, or who have fallen heirs to orchards of the old style, with tall trunks and long, naked branches, furnished only with a brush of decrepit spray at their extremities, while their roots are starved beneath an old sod that has been tramped and pastured for years. Under these circumstances, the trees producing an excess of blossoms and fruit, having ceased to make any thrifty wood growth, may need a thorough cultivation, as well as severe pruning, to invite a reproduction of healthy wood and foliage. The damage that ensues from breaking the roots is more than overbalanced by the renewed vigor that ensues. A thorough pruning, removing the dead limbs, and thinning out those that are too close, scarifying the bark, and washing the stems with an alkaline solution, will ensure the rejuvenescence of the trees, which are then able to push forth new roots where the plow had broken the old ones, and with these adjuvants, and with the application of lime, the breaking up and after cultivation of the soil will be of the greatest advantage to the old orchard. Still, it is a question whether it be not better to avoid the necessity for this treatment; and it is believed that by a suitable course this necessity may be obviated. The proper cultivation of the young trees does not materially injure the roots, and it preserves the soil in a condition most favorable for their renewal. In an orchard that has been thus cultivated, there will always be a system of roots at a depth below the influence of the plow; these are permanent. If, on the contrary, by mulching or otherwise, the roots have been brought very near the surface, the thorough plowing may seriously injure the trees by too much breaking of these important organs; here, as in other cases, the less of two evils must be chosen, nor can there be any question as to the propriety of plowing in the condition supposed above, that of an orchard showing signs of decrepitude from neglect of pruning, and of proper care of trees, with a grass-bound surface of the soil beneath them, and hard, mossy bark, so that they are well styled hide-bound. The condition of a thickly planted and well grown orchard, with low heads, shading the ground, and mulched with the decaying grass and leaves, is more like that of the primeval forest, and such trees may be allowed to continue for many years without plowing; indeed it may be doubted whether, if occasionally limed, they be not really better without this disturbance of their roots."—*Iowa Homestead.*

Seeding down Orchards.

Mr. Editor:—In relation te seeding orchards, my experience is against it, particularly with clover. I tried it and thought to keep up the fertility by top-dressing. I got great crops of hay, but injured my orchard

badly for growth and fruit. Two years of cultivation has repaired the damage in a measure. The last season I had a large crop of fruit and good thrifty growth of tree. I believe it an error to manure young trees very highly. I have lost many, as I think, by forcing too rapid a growth. H. B. HAWLEY.

MILFORD, Wis.

Humanity vs. Toads.

MR. EDITOR:—I only cultivate the soil to the extent of a good sized garden, yet am an attentive reader of the FARMER. I like its practical features. It will do well enough for journals at the east, where there are a great number of fancy as well as theoretical farmers, to publish long essays upon different subjects connected with agriculture; but here in the west we are a go-ahead people, in a new country, and what we want is practical knowledge, derived from experience among ourselves, of the best methods of planting, growing, harvesting and marketing our orops.

The subject of my inquiry—for I regret to say I have nothing to impart—is a very small one, yet I have no doubt there are remedies known to your readers, which, if made public, will be of interest to others as well as myself. I have a large bed of Albany Seedling Strawberries which is now glowing with ruddy fruit. I have a great annoyance in the shape of toads. They are fond of strawberries, and notwithstanding I have carefully removed them several times, still they find their way back again.

The question arises, what am I to do with these "grave and reverend seigniors?" To see one of the largest sucking his strawberry reminds me of the old Turk, smoking in silence his *chibouk*. Again, if I attempt to treat them harshly, I am reminded very forcibly of the foolish lies told to and believed by me when a child, that if I hurt the toads the cows would give bloody milk.

I have no doubt but that they are useful in eating flies and vermin and inhaling poisonous exhalations; still they are in my strawberry bed a nuisance. Will some of your kind readers tell me how I am to act in the premises in order to do justice to myself, the toad, and the strawberry bed? V. F.

KENOSHA, June 26, 1863.

The Color and Culture of Apples.

Apples, this year, here, are more deeply tinged than we ever knew them before. The sun does this. Not more pictured are the leaves of autumn. The same principle (the sun) refines the flavor and the grain of the fruit.

It is a positive pleasure to walk in an orchard—limbs bending down with fruit that actually seems to flame, or is blood red, and shiny as a shell or ivory. Then there is a golden yellow—"Touch me not!" it almost says. And the great sphere, like a pumpkin, coarse and rough, as if the bark of the tree had been been extracted to it. And then it is sweet to hear the little folks, holding such spheres with both hands, call them "cheese brooks." They always pick for the biggest apples.

Careful pruning, with good judgment, does much towards bringing such fruit. Growth checked when too thrifty; trees fed when retarded; this is what is wanted. Liquid manure is the readiest. Holes should be made by a long, thin tined fork in different places under the tree, and the liquid poured over. The effect is instantaneous.

A good way is to mulch with manure. In this case coarse manure is best, providing always it is not new, not raw. I have known manure fresh from the stable to kill apple trees where soil was leachy. Otherwise, if the topsoil retains its fertility, puncture the ground. The heavy rains will fill the punctures with the juices, and you will have your mulch besides.

Mulching of some sort seems indispensable. But avoid a too heavy growth of fruit for substantial bearing. To this end, thin out both fruit and foliage—foliage if there is lack of quantity (of fruit); fruit if there is excess of number.

Sometimes lime, ashes, bones, or some other fertilizer, will make a tree bear. I have known the carcasses of a few dead lambs, buried in different places under the tree, do this; not immediately, the carcasses must first be decomposed. They should be buried two or three yards from the bole of the tree, with a few inches of soil on them. This will give the heat a chance. Old or mature trees alone should be treated in this way. They will stand more abuse, and thrive better under good treatment. A young tree is a tender thing, like most young things.—*Cor. Valley Farmer.*

Want of Small Birds.

The want of small birds is felt in England as well as elsewhere, caused by a wanton and wicked destruction of them. The following is a letter which appeared in a late number of the London *Times:*

"The spring proves the importance of the question whether our small birds shall be preserved or exterminated. This year the caterpillars were never known to be more numerous or more voracious. In many districts the small fruit is almost destroyed by them, and gardeners are forced to employ boys to pick them from the trees. This, of course, cannot be so well done as by nature's scavengers, the birds. In my own garden I have none, and the apple trees are covered with worms of two or three kinds, which have destroyed most of the buds and the young fruit. The effect of the universal tendency to destroy the small birds will be yearly more disastrous, unless active measures are taken to check the evil. At present these useful—nay, indispensable creatures, are at the mercy of the half educated; men shoot them, entrap them and poison them; boys are allowed by their parents to rob their nests, and thus destroy what, in the great scheme of nature, is of more value than themselves. In my own neighborhood, where (as I have observed) insects of the most pernicious kinds were never more abundant, a lady has, this spring, poisoned with strychnine, at one dressing of her grounds or gardens, no less than 800 birds of various kinds, and she was, a few days since, preparing for a second battue. To counteract this senseless and barbarous destruction of our best friends by man, woman and child, I look to the schoolmasters and to to clergy, who, as yet, seem not to have been fully convinced of the importance of the subject."

MECHANICAL & COMMERCIAL.

Chance for a Speculation.

Mr. Editor:—Your name and person are both unknown to me, but sometime during the winter I read an article on Steam Plowing, credited to the editor of the Wisconsin Farmer. I have for some years been studying the construction of a traction engine and steam plow combined; the intended design of which is to take the place of extra teams on large farms. I have built an illustrative model this winter and, from the knowledge I have of English and American inventions, I believe my invention to be, in nearly or quite all respects, equal, and in a number superior to those in use.

I can ascend any grade where the machine will not upset backwards; cannot plow where roots, stumps or stones are very plenty, but will plow in any land sufficiently even for the comfortable use of horses or oxen; can turn a corner at right angles, and, as a matter of course, on any desired curve. The plowing apparatus is easily attached, and the whole, either for plowing or otherwise, to be easily controlled by one person.

Judging from the article alluded to that you had some interest in such matters, and being pecuniarily unable to subject my invention to the only reliable test, viz: that of building a machine capable of working out its practicability or otherwise, I address myself to you, thinking that perhaps among your prairie farmers interested in such matters, there might be those who would be willing to aid in bringing out and developing ideas that might commend themselves as useful.

In this section we have small farms generally, and there are but few, comparatively, who feel an interest in such matters. Hence I can hardly expect to find the needed help here. If you have those among your acquaintance who would be willing to assist, I should be glad, in some way, to correspond. The principles involved in the construction of the machine will show for themselves. As for myself, my friends will testify, when needed. If it is not asking too much, I should like to hear from you.

B. H.

Remarks.—We like to be generous towards those who, while they aim at the public good, are, unhappily, without the means of demonstrating the practicability of their ideas and plans, and, accordingly, have given the above the widest publicity in our power, witholding the author's name, for obvious reasons, until requested by parties interested. As often said before, we firmly believe in the possibility of steam plows that will do economical work on the great prairies of the West; but we as firmly disbelieve in the economical working of any such plow of which we at present have knowledge.

If any of our readers have an abundance of surplus capital to venture in an enterprise of this sort, let them report, and we will cheerfully put them in communication with our Pennsylvania correspondent.—Ed. Farmer.

SCIENCE, ART, STATISTICS.

Source of the Nile at last Discovered.

Just now, no subject of scientific interest is receiving more attention than the recent discovery of the source of the Nile—for centuries attempted by the most daring and intrepid explorers, but hitherto unaccomplished, owing to the fatality of the climate and the ferocity of the savage tribes through whose wild and almost impenetrable countries the course of that wonderful river must be traced.

Captains Speke and Grant, of England, are the heroes who have accomplished the task, and just now they are being lionized by all the scientific associations, people, and governments of the old world. It is not known that any very important practical results will follow from this discovery, but so long as it still remained, at the noon of this sublime century, a reproach to the enlightened nations of the world that any portion of the globe should be and continue a *terra incognita*, it is but natural and eminently proper that intelligent men everywhere should rejoice at the great consummation.

The lectures of Captain Speke, recently delivered in London before the Royal Institution, abound in interesting descriptions of the countries and tribes through which his daring explorations led him, and when published in book form, as they undoubtedly will be ere long, they cannot fail of a universal reading in all languages.

It appears from the reports made that the grand and hitherto mysterious Nile has its source in a lake lying about ten degrees from the equator. The explorers named this lake Victoria Nyanza.

From the *Independent's* abstract of Captain Speke's account of his explorations of the surrounding country, we extract the following:

"On the southwestern shore of Lake Nyanzi he found the kingdom of Karagwe. Captain Speke was very hospitably entertained by the king, passing several days with him in the pleasant amusement of yachting and the chase. This royal personage was something of a philosopher. He was exceedingly curious to know what became of the old suns, why the moon made faces at the earth, and whether England could blow up all Africa with gunpowder.

"Leaving Karagwe, Capt. Speke and his companion entered the more northern kingdom of Uganda, which is situated on the most fertile shores of the Lake, and which is described as the most interesting and intelligent of all the tribes of equatorial Africa. Their king resides in a palace consisting of several hundred conical tents spread over the spur of a hill. At first the tented monarch refused to receive Capt. Speke, bidding him, in the true grandeur of Eastern despotism, sit on the ground and await his royal leisure. The gallant Captain replied with proper spirit, and immediately pushed his way into the august presence of majesty. His attendants followed trembling; but he terrified king and court into instant submission by merely opening and shutting his umbrella, which they took to be some dreadful instrument of magic.

"Capt. Speke very justly accuses the Ugandis of some 'very irregular' customs. Thus, when a king dies, all his sons are burned, except his successor, and two others who are kept in case of accident until the coronation, after which one is pensioned off and the other banished to the neighboring kingdom of Ungoro. Another custom is not so bad, and shows that all the negro races are not subject to the common reproach of inattention to cleanliness, untidiness being a capital crime, unless the offender possess wealth enough to pay an enormous fine. Even ingratitude and omission to return thanks for a benefit conferred are punishable offences. No one is allowed to stand in the royal presence; and to look upon one of his majesty's four thousand wives is a capital crime. The king is always attended by women crowned with dead lizards, which are regarded as a sure talisman against the effects of magic and the evil eye. Capt. Speke found it necessary to wrap up his presents in chintz before presenting them to the king, as nothing

bare or naked could be looked at by his majesty. As a mark of special favor, Capt. Speke was allowed to sit during the interview. His sable majesty stared at him for nearly an hour without speaking, and then broke the silence with the abrupt question, "Have you seen me?" At the end of the second hour his dignity thawed out, and he consented to receive the Captain's presents and to hold conversation with him.

"It is the opinion of Capt. Speke that all the tribes about Lake Nyanzi must be descended from the ancient Abyssinians, a mixture of Negro and Shemitic races. Of this double origin he related a very singular native tradition, that at one time all the inhabitants of that region were half black and half white, one side of their heads having curly hair, the other straight. These tribes have no religion, and do not believe in a soul."

It has been suggested by two or three reviewers of this discovery that this same lake was alluded to by Ptolemy, that it is found laid down in an Arabian map of Africa over one thousand years old; and again, that an old Dutch atlas, printed in Amsterdam in 1638, not only describes a lake "Zembre" in such a manner as to render its identity with Nyanza highly probable, but, in a reference thereto, presents the following remarkable language: "*Out of which* (some say) *springeth the Nile*," &c.

But, if all these statements are true, we do not see that they detract from the high merit of Captains Speke and Grant, who, not content with any mere surmises, or "some says," have persistently applied themselves to solve the question to the entire satisfaction of the enlightened world. They have enlarged the boundaries of absolute knowledge, and have therefore won a valid claim to honor and immortality among men. They well deserve the flattering reception they have received from their countrymen, not only on account of their crowning discovery, which reflects such honor on England, but for the pluck, endurance and enterprise which carried them triumphantly through, in spite of danger and difficulty.

EDUCATIONAL.

The Agricultural Schools of the Country.

AS SEEN BY THE EDITOR ON A RECENT TOUR OF OBSERVATION.

NUMBER I.

The Agricultural College of Michigan we had visited before, and did not, therefore, deem it necessary to stop at Lansing at this time. The State has wisely corrected its first serious error by transferring the control of the institution from the Board of Education to a new organization entitled "The State Board of Agriculture," and there is good reason to hope that with this new "change of base" the college may date a new and more prosperous era.

The Act of Reorganization requires a course of study of not less than four years, and that "the Institution shall combine physical with intellectual education, and shall be a high Seminary of learning, in which the graduate of the common school can commence, pursue, and finish a course of study, terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly on Agriculture and kindred industrial pursuits."

The following extract from the recent Report of President Abbott (then Acting Secretary of the State Board of Agriculture) will convey a yet more complete idea of the plan of the Institution. On this point he remarks:

"The Board refer with considerable confidence to the course of study laid down in the catalogue of the College for 1862. It enters into no competition with that of other institutions more literary in character or more full in their mathematical or engineering courses. It does, indeed, present a number of such studies as serve to impart the power of communicating ideas and extending the influence of one's education and experience; and a few, also, that teach the student his own nature, and his duties as a citizen. But its peculiar feature is the prominence given to the physical sciences, such as bear practically on the arts of life. Botany and Horticulture, Chemistry and Animal Physiology, in place of the weeks of study

required in other colleges, are here pursued from one to two years each.

"The law requires each student to labor three hours a day, and provides for payment for this labor. The plans for labor, heretofore existing, had been found to be such as to preserve the ability to work, which years of sedentary life is apt to endanger, and they were adopted by the Board."

Financially considered, the College is in a prosperous and hopeful condition. Sale has been made of some of the Swamp Lands donated by the State, and which lie contiguous to the farm of the College. The State appropriates, for the present, $10,000 per annum for the improvement of the farm and the maintenance of the school, and provisions have been made for the benefits derivable from the Congressional grant of 240,000 acres of land, as by the provisions of the Act approved July 2, 1862.

The Faculty of the College is believed to be an able one, and the institution is gradually gaining a higher place in the confidence of the people.

The number of students in attendance the past year was 72—"six more than during the preceeding year and twenty-two more than in 1860." The President states that the number would have been much larger but for the enlistment of scores of young men after they had made application for admission.

We predict a career of great prosperity for this institution when the war shall have ended and the attention of the whole people is again turned to the great Arts of Peace. Meantime the farm and garden, which were begun in the woods, and have required much labor to bring them into a cultivable condition, will have been so far improved as to render them more attractive and valuable to the students who may gather there for instruction in the best methods of applying the sciences to these practical arts.

In subsequent Nos. we shall give accounts of the colleges in New York, Indiana, and Pennsylvania.

THE HOME.

[From the State Journal.]

An Afternoon in Brooklyn.

Eds. State Journal:—To one who has never before spent more than from sunrise to sunset in this great metropolis, one week, two weeks, and then this third week, of continual going out and sight-seeing, has been each day a new delight. Besides the dear friend, the hospitality of whose home we have enjoyed, it is surprising to see how many acquaintances, friends of of the old-time and new, one meets with in this Babel of streets and bang. The people of Madison have not been without a fair representation, and more than one of us has planned to send back to our friends, through your paper, brief notes made by the way of our daily adventures. And now, lest the beautiful vision be drifted out of sight by the pageant of to-day, let everything else go by while I give you just a glimpse of yesterday afternoon.

It was the anniversary of the Sabbath School of Plymouth Church.—Last Sunday the usually over-flowing congregation of that church had assembled to listen to a farewell address from their pastor, who, on the coming Saturday, sails for Europe. The announcement of the Sabbath School anniversary for Tuesday afternoon had been remembered by all Brooklyn and a portion of New York, and we who were there at the opening of the doors were fortunate enough to get in; those of our party whose watches were a little behind, with a crowding, irritated, disappointed mass of people stayed outside.

The children of the church, to the number, so the superintendent told me, of nine hundred, occupied front seats in the gallery; those of other schools, counting many hundreds more, had seats nearest the desk below. Need I tell you that the children, one and all, girls and boys, little and large, were in the regalia of their best, that they came in good order, filing into their places, at the several entrances, with banners and song and flowers and the happiest of faces? Those who were in the good luck

of having a position where no one could stand before, and up stairs, may remember, but it is not in language to describe so fair a sight.

Mr. Beecher was not present, and to those who were in the secret of the programme, this was a marvel and no little disappointment. The superintendent of the Plymouth Church Sabbath School called the meeting to order, and the strictly religious services were conducted by the pastors of the several churches whose schools were participating in the festivities of the occasion. Then followed speeches, or little talks to the children, interspersed with singing of hymns and patriotic anthems, including of course the "Star Spangled Banner," and finally "America," that alone being worth a journey of a thousand miles to hear. Mr. Beecher's church will seat twenty-five hundred. The body of the seats below, as of the gallery, which runs entirely round the building, all rise a little and is so constructed that the volume of each voice, as of the organ, seems to pour its melody that but a moment before vibrated every pulse, at the foot of the altar. Those who have seen finer displays of this kind may smile at my enthusiasm, but to me it was a sight never to be forgotten. Not the number of people, the children it was that held the spell, and did not break it when, with banners, the number of which I tried in vain to count, and with flowers in every hand, rose, and sent our "America" up to the listening heaven, with a volume and a will I had never heard equalled.

The principal orator of the day was Ex-Gov. Wright, of Indiana, whose remarks were well worth repeating did space allow; but as is too often the case, on such occasions, more to the adult than to the child audience. I do not know that any one could tell you how many standing-up seats there are in this church, and I would only approximate it by observing that all these children passed out and through the parlors of the church, where refreshments were served to them, ere the people had found their way to the outside and massed themselves on the corners where the processions were to be formed. This was done in three divisions, those that did not belong to the Plymouth Church going away to other festivities. The children of the church, headed by thirty-two little girls in white, then proceeded to Mr. Beecher's house, where, with his family assembled, he stood upon the door-steps to receive them and their gifts. I have said before that every child had flowers, which is literally true. Observing these as they came into the church, I had asked the superintendent the occasion of this immense floral display. His reply was, "If you remain till the ceremonies are over you will see;" and did I not see? Standing upon his own door step, Mr. Beecher received his little flock with smiles and bows and pleasant words as they passed, each one casting flowers at his feet. It was very beautiful. The day was cloudless, but of so mild a blending of azure and gold, and with such pleasant breezes, that thousands of uncovered heads stood reverent, looking on.

As the last of these flowers fell at his feet, with a face glowing and a voice tremulous with emotion, Mr. Beecher looks up, for the first time from the faces of the children, and made one of his happiest little speeches. I cannot go more into detail than to say that he made every child there feel how much more desirable it was to be little folks than big folks.—He told them this ovation was doubtless as great a surprise to them as it was to him He said he had only been apprized of it a week before, and had, in common with them, been under promise to keep it secret even from himself, and that having done so, it had blossomed into this beautiful reward. He told them how he had stood knee deep often before, in the flowers of his garden, but never upon his door-step, all of which would be incomprehensible did he not see the faces of the fairies all around. Many other good and appropriate things which without being remarkable, Mr. Beecher gets off with such inimitable simplicity of manner, that they charm both old and young.

Did the people go away as soon as they were dismissed? No, they did not. All lin-

gered, and some of our party who had been too late for the church services, determined to have the compensation of a flower or bud from the wealth of bloom that could not possibly all be preserved. Whether because I had a speaking acquaintence with the central figure of that floral platform, or that I was most of a Yankee of any in our little company, I was commissioned to bring the flowers, if such could be had. I did make my way to the position, where, having caught Mr. Beecher's eye and indicated my wish, I met the approval of a smile and bow? Certainly I did and brought flowers, which, being arranged, made a nice little memorial boquet for each one of our party of five.

Did we go home? Not then; neither did the children. This being anniversary day for all the Sabbath Schools of Brooklyn, these with other, to the number of eight thousand, assembled in Carrol Park. Now, don't talk, but you who have imagination enough, just think of it. The afternoon of a beautiful day, a beautiful park, the actors, eight thousand beautiful children, five bands of music, the great mass of people below, the blue heavens blending above. MRS. HOYT.

Women's Work.

[There is much force in the following article, and we hope that none of the thousand husbands and fathers into whose hands the FARMER regularly goes will fail to read and consider it.—ED.]

Women's work is never done. Up in the morning with the lark, prepare breakfast for ever so many hungry mouths; wash dishes, skim milk, churn, work butter, bake bread, make beds, sweep rooms, dust furniture hunt strings for Willie, bonnet for Susie, jack-knife for Sammy, and shoestrings for Mary, fill the dinner basket, wash and comb and send off to school half a dozen urchins; clean kitchen, black stove, scour pans, knives, forks, and no one but a genuine housekeeper can tell what not. Prepare dinner, wash dishes, sweep and now for a little rest.—Yes, rest, for the feet, but not for the fingers, for are there not plenty of little garments that have been unluckily caught upon strong brambles or inconvenient nails, besides the backs that will soon require a new covering. Children tear off their clothes so fast, especially when they go to school.

All too soon the noisy boys and girls are at home again—then there are twenty things wanted at once, and for the life of you you can't tell which to get first. Their wants supplied, you turn your attention towards supper; wash dishes again, attend to milk, clean sauce for breakfast, wash chubby faces, hands and feet, slip them between the sheets, sit down and draw a long breath of relief, that is, if the little troop are likely to drop asleep soon.

Again there is rest for the weary feet, but none for the ever busy fingers, for there are all the feet in the family to keep covered, and the knitting is everlasting. As you sit by the bright light, busily plying the shining knitting needles, the good man of the house comes in. His day's work is done; perhaps it has been a hard one, but now it is over. He seats himself by your table in an easy chair, asks wife to get him the last paper, and composes himself for a good rest, fingers and all; furnishing his mind with healthful food at the same time. If you should ask him to read aloud, as you had found no time to look over the papers, he would undoubtedly tell you he was too *tired*. Should you intimate that you were tired also, he would look at you in astonishment, wonder how any one could get tired puttering around in the house all day; *he* could do all the housework in two hours. Wants to know if you are tired why you don't rest and read, not sit there punching away at that knitting work that don't amount to any thing.

You turn your eyes back, review your days labor and find, fatiguing as it has been, that you have done nothing that *he* would call *any thing*, or you either, taken separately; yet all together how tiresome it has been. Take six I almost might say seven such days, for in a large family there is much that must be done even on the Sabbath; add the washing, ironing

and other extra work and you have a hard week's labor. Fifty-two such weeks with soap making and house-cleaning in the Spring and butchering season in the fall, and you have a year's work which no woman can perform, year after year, without injuring her health and bringing on old age prematurely.

Those who are not blessed with a strong constitution to commence with, fall by the way. They die of consumption, fevers and every disease flesh is heir to,—but no one can tell how long they have been dying by inches. Husbands, if you have wives with whom you would spend the evening of your days, see to it that they are not overburdened, but have a little chance for rest of the body, and improvement of the mind. Be not more careless of their necessities than you are of the wants of your beasts of burden. Do not think because a woman's whole time is consumed in such work which would be nothing for your broad shoulders and strong arms, that she is never weary. Do not say that housework is *not anything*, until you have tried it yourselves for a week,—not after your bungling masculine manner, but as it should be done. Do not be very particular about getting all the latest patented drills, reapers, mowers and sowers before you fix things convenient for her work about the house and door yard; and above all, don't speak so slightly of housework before your young daughters; this creates a distaste for it in their minds, and causes them to wish for employment that will be more appreciated, thus leaving the whole burden upon their mother's shoulders long after they should have relieved her of a part of its weight.

MRS. G. H. ADAMS.

ELBA, Dodge Co., Wis.

HEALTH AND DISEASE.

Penalty for Marrying Blood Relations.

Nature's laws are all in harmony with each other and perfectly inexorable as to man. We may violate them with seeming impunity for a time, but the penalty is none the less sure to come. One of these decrees of nature (and Revelation re-asserts it) is that persons near of kin shall not marry. Touching this subject a forcible illustration is furnished by the editor of the Fredericksburg *News*, who says:—"In this county, in which we were raised, for twenty generations back, certain families of wealth and respectability have intermarried, until there cannot be found in three or four of them a sound man or woman! One has sore eyes, another scrofula, a third is an idiot, a fourth blind, a fifth bandy legged, a sixth with a head about the size of a turnip, with not one out of the number exempt from physical defects of some kind or other."

And so it is and must be. Young men and maidens, don't persuade yourselves into love with your cousins.

DOMESTIC ECONOMY.

The Preserving of Fruits.

Whether the process of keeping fruits fresh by the exclusion of the air be really a modern invention or not is a matter of indifference. The fact stands that fruits of any kind thus preserved are just about as good as new at any period thereafter. And so, the old method of stewing down in sugar enough to bankrupt a prince, with a product sadly wanting in flavor and savage on digestion, is fast falling into disrepute.

Vessels of every description are in use for canning, and each has its zealous advocates. Other things being equal, glass is preferable, for the reason that it is more easily cleaned, and, if carefully handled, will last forever. Tin answers well, but soon spoils by rust.

The following method, practiced by the Oneida Community of Friends, N. Y., is highly approved by those who have tried it. The description is taken from their Circular:

1. The fruit, properly hulled, assorted or prepared, is placed in clean glass bottles manufactured for the purpose, filling them to the neck.

2. Prepare a syrup of melted refined or white sugar, and pour into the bottles by the following rule, viz: Allow six ounces of sugar to one quart of fruit, or melt one pound of sugar in one-half pint of water, and give one-

half pint of the syrup thus produced to one quart bottle of fruit.

3. Place the bottles in a steaming box, or a boiler with a false bottom, which may be made of loose slats, resting on supports so as to raise it a little above the water in the boiler. Cover the boiler or steam box and gradually raise a steam that will thoroughly heat the fruit and syrup in the bottles, bringing them to the boiling point. This may take an hour from the commencement of heating; but whatever the time, be sure that the whole contents of the bottles are at boiling heat.

4. Have ready corks, steamed or moistened sufficiently to make them flexible. They should be large enough to fill the neck of the bottle tightly, and require some force to crowd them in. One cork, as procured of dealers, allows being cut in two, so as to stop two bottles.

5. Have ready a vessel of melted sealing wax, compounded of the following materials and proportions: One pound of rosin, 1½ ounces tallow, 3 ounces beeswax.

6. The fruit being sufficiently heated, take the bottles successively to a table, and quickly cork them. With a towel in the hand, they should be carried in such a way as to close the opening, and retain the heated steam in the bottles on the way to the corking table. The corks may be forced in by a blow of a mallet, or better, by a small lever arrangement fixed to work at the right height above the table. When inserted as far as practicable, if any part of the cork remains above the bottle, pare it off with a sharp knife.

7. Immediately after the cork is in its place a person should stand ready, and apply a coat of sealing wax to the end of the cork with a paint or lather brush, to close the pores of the wood.

8. Next proceed to seal the bottle by dipping its mouth in the melted sealing wax, so as to cover the bulb. Then transfer it to a basin of cold water, dipping to the same depth, to cool the wax. If the dipping is carried below the bulb or rim at the mouth of the bottle there is danger of cracking the glass. Now examine the sealed part to see if the wax has formed blisters. If there are blisters, rub them away with the finger, using a little tallow or oil to prevent sticking.

9. Repeat the dipping operation in wax and in water. See that the wax is left smooth and without flaws, and the sealing is complete.

10. Pack away on shelves or in chests in a cool, dry cellar. If placed on shelves, a cloth should be hung before them to exclude the light. In a few days after packing away, inspect the bottles to see if any show signs of fermentation, which may be detected by a foamy appearance of the fruit. If this is observed in any bottle, it denotes either a crack in the glass, or that the sealing was imperfect. The bottle should be opened or examined, the contents scalded, and the process of sealing repeated as before. In some cases during the season, a little vegetable mold may be seen to gather on the surface of the fruit in the bottles, but this is not to be regarded, as it can be readily separated on opening the bottles, leaving the mass of fruit without harm.

Two or three persons can carry forward the different operations of preserving at the same time, and with more convenience than one alone.

Very acid fruits, like the currant, will allow a greater proportion of sugar.

How to Color Black.

MR. EDITOR:—I notice in the June No. of the FARMER that Mrs. E. B. Loomis wants a recipe for coloring black. Here is my recipe, which I have tried several times and never failed to have a beautiful jet black that will not crock:

To one pound of cloth take two oz. extract logwood and one oz. blue vitriol. Dissolve the vitriol in rainwater enough to cover the cloth; have it scalding hot, and put in the cloth wet from a strong suds; keep it scalding for three quarters of an hour, not allowing it to boil, taking it out occasionally to air. In the mean time dissolve the logwood, then pour it into the vitriol water, after taking out the cloth. Put the cloth back in and let it remain three-quarters of an hour more, airing it as before. Then take out the cloth and wash it in four or five strong suds—always use soft soap—then rinse in clear water. MRS. JULIA A. SCHOFF.

SPRINGVILLE, Adams Co., Wis., June 9, 1862.

P. S. Would any of your numerous readers like a recipe for coloring with cochineal?

J. A. S.

Rhubarb Vinegar.

The English have found that a vinegar may be made from the juice of Rhubarb, the quality of which is almost, if not quite, equal to the famous wine vinegars of France. The following is the process described by the *Scottish Farmer:*

"Take twenty-five ordinary sized stalks of rhubarb, pound them, or crush them with a piece of wood, in the bottom of a strong tub; add ten gallons of water; let this stand twenty-four hours; strain off the crushed rhubarb,

and add eighteen pounds of sugar, free from molasses, and a teacupful of best brewer's yeast; raise the temperature to 65° or 68° and put your browst into a twelve gallon cask; place it in a position where the temperature will not fall below 60°. In a month strain it off from the grounds, returning it to the cask again, and let it stand till it becomes vinegar. For a large quantity, follow out the common process of making vinegar, either with malt or sugar, by adding rhubarb, which gives flavor and pungency."

The present high price of sugar will stand as an objection to this process, though if it were fifty per cent. dearer than it is, the vinegar manufactured would be much cheaper than the expensive and miserable stuff usually sold by our grocers. Perhaps sorghum molasses would answer as well as sugar. Let somebody try it.

Pickles and How to Make Them.

Pickles, though generally considered contraband of good digestion, are, nevertheless, in universal use, and the clever housewives of the country will not take it unkindly if we give them a full batch of approved recipes. Indeed they will not, for not a few of them have requested information on this subject. Thus compelled, we, of course, submit, but we want it understood that we publish two-thirds under protest.

Green Tomato Pickles.—Half peck tomatoes, 3 onions, 2 bell peppers, (green), white mustard seed, salt to each layer; scald vinegar and turn over it.

Tomato Catsup.—To 1 gallon of tomato juice add 4 tablespoonsful of salt, same of black pepper, 2 spoonsful of allspice, 4 pods red pepper, 4 tablespoonsful ground mustard, 1 quart vinegar; boil two hours; when cold, bottle and cork tight.

Tomato Pickles.—One peck of green tomatoes sliced, 1 dozen sliced onions, sprinkle with salt and let them stand till next day, then drain them, 1 box mustard, half an oz. black pepper, 1 oz. whole cloves, 1 of yellow mustard seed, 1 of alspice; put into the kettle a layer of tomatoes and onions, and one of spices alternately, cover with vinegar and boil half an hour.

Pickled Damsons.—To 1 peck damsons allow 7 pounds brown sugar, half pint vinegar, 2 tablespoonsful ground alspice, the same of cloves, let the vinegar and sugar boil, and to the mixture add the damsons and spice. They should boil 2½ hours, being constantly stirred; when cold they are fit for use.

Picklelily.—Four quarts green tomatoes, 2 of peppers, 1 pound white mustard, 1 cup of salt, add vinegar, 2 quarts onions.

Quick Pickles.—Take a head of cabbage, slice it up or chop it, sprinkle salt through it; let it remain all night; chop up an onion with the cabbage, drain it through a colander, season it highly with pepper and celery seed, cover it with strong vinegar, and it will be fit for use the third day.

Yellow Pickles.—Half a pound of bruised black mustard, half a pound of ginger, sliced; half a pound of garlic soaked in brine one week and bleached; half a pound of horse-radish, soaked in brine one week and dried; two oz. of turmeric, two oz. cayenne pepper, or four oz. of black pepper; put in one gallon best apple vinegar, and let it remain in the sun three weeks; then put in your pickles.

Green Pickles.—To a jar containing four gallons, put half an oz. of turmeric, 3 pounds of brown sugar, 2 handfuls of horse-radish, 2 of garlic, and 2 of bruised mustard seed; 3 oz. of broken cinnamon, 2 oz. of cloves, 2 of allspice, 4 of broken ginger, 2 of black pepper; put them in as much good cider vinegar as will cover your pickles; put them on the fire, and as soon as it comes to a boil, pour it on your pickles: add a little vinegar now and then so as to keep them covered.

Red Pickles.—Divide your cabbage in quarters, sprinkle it well with salt, and pack it in a jar; let it stand 24 hours; take it out and wash off all the salt, lay it in a sifter to drain the water from it, and wipe as dry as you can; to one gallon vinegar, put one quart of pokeberry juice, (which you can get by scalding the berries and squeezing them), one pound of brown sugar, one pint of onions, two oz. of cinnamon, 2 oz. of pepper, 2 oz. of allspice; boil all (except onions) a few minutes; pour over the cabbage, while boiling; cover closely and it will be ready for use in a few days.

YOUTH'S CORNER.

A Very Old Riddle.

White bird, featherless,
Flew out of Paradise,
Lit on the castle wall:
King came, footless,
Took it up, handless,
Ate it up, toothless,
Rode away, horseless.

The Honey Bee's Song.

WHAT THE BEE SINGS TO THE CHILDREN.

I am a honey bee, buzzing away
Over the blossoms the long summer day;
Now in the lily's cup drinking my fill,
Now where the roses bloom under the hill.
Gaily we fly,
My fellows and I,
Seeking for honey our hives to supply.

Up in the morning—no laggards are we—
Skimming the clover-tops ripe for the bee;
Waking the flowers at dawning of day,
Ere the bright sun kisses the dew drops away;
Merrily singing,
Busily winging
Back to the hive with the stores we are bringing.

No idle moments have we through the day,
No time to squander in sleep or in play;
Summer is flying, and we must be sure
Food for the winter at once to secure.
Bees in a hive
Are up and alive;
Lazy folks never can prosper and thrive.

Awake, little mortals; no harvest for those
Who waste their best hours in sloth and repose.
Come out—the morning all bright things belong—
And listen a while to the honey bee's song.
Merrily singing,
Busily winging,
Industry ever its own reward bringing.

A School of Whales.

Our last story was about "Catching a Shark," if we remember. Of the Whale we have nothing so exciting to tell, though we were really more interested in him than in his fiercer fellows of the "briny deep."

"But a 'School of Whales!' what do you mean, Mr. Editor by that?" says some curious little reader, his great round eyes standing out like peeled onions! "Do whales go to school?—and do they have to stand up in the sea and learn all their letters, and the everlasting multiplication table?—and what school-ma'am could make such big scholars behave?—I'd like to know that!"

Yes, there are schools of whales in the sea; but the whales do not go *to* school—only *in* school. Eyes larger than before! "Don't know what you mean, Mr. Editor." "I do," says a wide-awake little girl who has studied Natural History; "when a number of fishes of any kind go in company most of the time, like a swarm of bees or a flock of birds, they call them altogether a *school*—just because they seem like a flock of children going in company to learn their lessons."

That's just it. You are a nice little girl, and have not, yourself, been to school in vain.

Well, we saw a number of these "schools;" some of the whales being monstrous great fellows, twice or three times as long as the house you live in—their immense brown backs appearing for a few seconds above the surface of the water and then disappearing from sight, to re-appear a long way off in another direction. But it was only when they came quite near to the ship that the whale himself could be seen. It was only by his *spout* of water that we could know where he was when away out in the ocean. The *spout* is made by a stream of water which the whale occasionally—every time he comes up to the surface—forces up with great violence through an opening in the fore part of the head, known as the *spout-hole*. The water thus spouted rises to the height of several feet and is more like a jet of steam from an engine than a proper stream of water.

Sometimes our ship would plow right into a large school of these great *leviathans*, as they are called in some books; and then it was sport to see them scatter in every direction and fill the air with their clouds of spouted water.

We could tell you many strange stories of the immense size of some whales—over a hundred feet long and as large as a small house—of the vast quantities, sometimes hundreds of barrels, of oil obtained from one whale—and how they often knock sailors' boats and small ships all to pieces with their powerful tails, when wounded and pursued by the daring seamen who make it a business to catch them for profit. But we have no time for all these stories now; and, besides you can find them in the books which you will come to read in school.

NEWS SUMMARY.

INDUSTRIAL AFFAIRS.

In all matters of mere business, the country was never more prosperous and never had a better immediate prospect. The crops are gene ally good, agricultural products of every description bring high prices, and must continue to for some time to come. The manufacturing establishments of almost every description are being

crowded to their utmost capacity, and new ones are being erected with the surplus capital which has not been so abundant for years.

State Fairs for 1863.—Ohio, Cleveland, Sept. 15—18. Indiana, Indianspolis, Sept. 28—Oct. 3. Illinois, Decatur, Sept. 28—Oct. 2. Iowa, Dubuque, Sept. 22—25. New York, Utica, Sept. 15—18. Upper Canada, Kingston Sept. 22—25. Vermont, Rutland, Sept. 8—11.

County Fairs.—We have reliable information as to the precise date of but just four, to wit: Green Lake, at Berlin, the 23d and 24th of Sept.; Monroe County, at Sparta, the 8th and 9th of October; Vernon Co., (Bad Ax) at Viroqua, Sept. 22—24; Sheboygan Co., at Sheboygan Falls, September 23d and 24th. Will not the other Societies send in the dates and places of holding their Fairs, for publication? Announcements may have been made in their county newspapers, but our absence has prevented our seeing them for two months past.

"A Flax-Cotton Manufacturing Co." is said to have been lately organized in Oswego, N. Y., which promises well for those who have undertaken it. The building erected is 140 feet long, 5 stories high and has in operation 50 looms and numerous knitting machines

More than a Million Dollars worth of Pine Timber is reported to have been destroyed by the recent fires in the vicinity of Lake Superior.

Commercial and Monetary.—Wheat and Wool, being staples, naturally rise and fall, within limitations, with the fluctuations in the price of gold, and have hence declined considerably during the past month. Wheat declined 2 to 3 cents in the Milwaukee market during the week ending July 25—No. 1 selling on that day at 1,03½@1,04. Wool was dull and nominal at 55 to 58 cents.

Gold fluctuating last week of July between 122 and 127 according to exportation and demand for hoarding. Government stocks steady.

NATIONAL AFFAIRS.

The War for the Union has progressed gloriously! Everybody knows this—yes *everybody*, for ere this 27th of July our victories have been proudly told in the hearing of every enlightened nation on the globe! Vicksburg captured by Grant, with 32,000 prisoners; Port Hudson, with 8,000 by Banks; 4,000 prisoners by Rosecrans, in Tennessee; 2,000 by Sherman from the rebel army of Johnston; 2,000 by Prentiss, at Helena; 2,000 by Blair, at Jackson; 2,000 by Hickman, in North Carolina; 2,500 of Morgan's raiders in Ohio; and 33,000 killed, wounded and captured by Meade, in Pennsylvania and Maryland; making a grand total of 87,000 men of whom we have, within less than one month, despoiled the enemy! And the Mississippi is again open—a consummation so long fought for by us and dreaded by them. Flow on, thou Father of Waters! bearing the freemen of the north to and from the sea. Henceforth no traitor hands shall rear effectual barriers against the freedom of thy course!

Lee has been sent howling back to his own accursed soil and may yet be forced to pay a further penalty for his treason by the utter loss of the remanant of the haughty army with which he so vauntingly invaded the free soil of the North.

Charleston is under seige by land and sea, and is surely doomed to the fate of Vicksburg. Then Mobile; then Richmond; then some desperate fighting in the interior of the South, and the glorious Stars and Stripes shall wave once more in unquestioned triumph!

Treason in the North, feeling the deep and mortal wound inflicted upon its ally in the South, though more alarmed and cowered than ever before, is yet more fierce and venomous. Its minions, with a desperation and a devilishness scarcely equalled by any savages since the world was made, have followed our great victories with riots in New York and two or three other cities, more disgraceful than anything ever enacted in the Sandwich Islands or in British India. In New York about 100, in all, of the citizens, and 200 of the rioters were killed. The mob showed its complexion and its twin relationship with the rebellion, by butchering, stoning to death, and hanging nearly all negroes upon whom it could lay its fiendish claws. The pretext was the Draft, the real motive a hatred of our Free Government. Such devils deserve to be "hanged in this world and damned in the world to come!"

FOREIGN NEWS.

Napoleon is finally victorious in Mexico, and will probably, if he has not already, appoint a Dictator—all for the good of poor Mexico and the progress of humanity!—Some fears are entertained by our friends in Europe that he may now turn his attention to the difficulties in this country, but we have no faith in any speculations of that sort. It's too late for him to begin.

Polish troubles continue unsettled.

EDITORIAL MISCELLANY.

May and June; *Or, a Month of Travel and a Month of Worry.*—A direct and personal knowledge of the condition of the Agricultural Schools of the country, and the completion of business at Washington—these were our objects.

Left Milwaukee in a flurry of snow on the 7th of May, via. Det. & Mil. R. W. An easy passage to Grand Haven, though a little behind time, on account of head winds, so that we found it convenient to rest a good part of the succeeding day at Det. Of all the clever things we have said of the D. & M. R. W., we have nothing to retract, however. The managers are thorough energetic and obliging—the route

one of the safest and pleasantest in the country. Detroit is a fine old town with some broad and beautiful streets, such as as few cities can boast, a large number of fine business establishments and a good many people of the right stamp.

Made a pleasant call upon our agricultural and editorial friend, R. F. Johnstone, Editor and Publisher *Michigan Farmer* and Sec. Mich. State Ag. Society. A good man in the right place. There are many such in the Peninsular State.

Michigan has about the same population as Wisconsin, but is considerably ahead of us in educational and agricultural enterprise.

NIAGARA FALLS.

Through Canada by night, reaching Suspension Bridge just after dawn. Pleasant company beguiled the hours, which but for the sad news of Hooker's retreat across the Rappahannock, would have held a choice niche in the memory of the years.

The unrivalled Bridge over the fearful depths, though a score of times crossed, had lost none of its wonder, and the mighty Niagara, with its thundering roar and heaven-reaching clouds of mist, poured its ceaseless floods as sublimely down the wild deep gorge of the river as in the days of yore. Mrs. H. was seeing the river and Falls for the second time only, and they who know her enthusiasm can judge of her delight now that she was seeing them for the first time with clear vision.

Twelve hours were spent at the Falls—in standing in solemn awe, in running like children up and down the swift rush of waters, throwing in sticks to see them plunge over the awful cataract, and in shouting ourselves hoarse to deaf comrades on the rocky shores. Niagara, Mount Blanc and the Ocean—there is nothing so grand on this planet. Let no American die until he has seen Niagara.

SENECA LAKE, SYRACUSE AND ALBANY.

The night of that golden day found Mrs. H. at Syracuse, our individnal self at Havana, seat of the People's College, on the Canadaigua & Elmira R. R., and three miles by rail from Lake Seneca. The day following was spent on the beautiful Lake—than which Geneva, in Switzerland, is not more beautiful—and in visiting the State Agricultural College of New York at Ovid. Of this delightfully situated college, as of the other, hereafter.

Sabbath at Syracuse, one of the handsomest and most active business places in the interior of the Empire State. Especially famous for its extensive salt-works and the superior quality of its immense yield of the saline product. Has one or two of the handsomest streets we have yet seen in this country.

Found the Voorhees House a capital hotel; the proprietors, Messrs. Sprague & Gage, exceedingly obliging and attentive.

At Albany about 3 p. m. of Monday, after a straight and fast drive through a handsome country and a multitude of thriving villages. The State of New York never seemed so grand before. She is rightly named. Farmers were just plowing and getting ready to plant. Soil not so good as ours af the Great West; and hence her farmers deserve the more credit for their almost equally large crops. Never realized before how Albany is built upon undulations of land which deserve to rank among hills. Fine in some parts, dingy, and quite too odorous of the past in others. Capitol buildings scattered and cramped.

We called, of course, and we may say chiefly, upon our highly esteemed and very able agricultural friend, Col. B. P. Johnson, Secretary of the New York State Agricultural Society. Found him in his well furnished Library, and were delightfully entertained by him in the Agricultural and in the Natural History Rooms of the State. These halls together constitute an entire and very handsome building, erected by the State at an expense of some $30,000—a noble monument (especially if the contents be included) of the enterprise and wisdom of the greatest of the great states of the American Union.

In all parts of Europe we found the intelligent people familiar with the name and miraculous progress of the State of New York; their knowledge of its resources and progress being chiefly derived from the widely distributed

"Natural History," and "Agricultural Transactions."

Col Johnson has been for more than twenty years the zealous hard-working Secretary of the State Ag. Society, and probably will continue in charge of its important interests so long as it shall please Providence to spare his useful life. The worth of such men is not yet appreciated, but the future will remember him with gratitude.

THE HUDSON.

The Hudson! who hath power to describe this noble river so that it shall seem to be the grand and glorious Hudson it is? We have voyaged on the great rivers of America—on the sluggish Thames, flowing from the heart of the Great Empire, whose throne is anchored in the seas—on the tortuous and picturesque Seine, flowing through the garden fields and orchards of Normandy—on the vineyard bordered Seine of Southern France—on the beautiful ice-born Rhone of Switzerland—aye and on the glorious old Rhine of classic Germany; but the Hudson, for the full and majestic flow of its waters, the beauty and sublimity of its scenery, surpasses them all. Give to it the historic interest which attaches to those great rivers of Europe and associates them with the ages past, and it, too, would be the inspiration of the world's first painters and poets.

The day of our voyage from Albany was as beautiful as Heaven could bestow and never was a day crowded more full of pure enjoyment. How much such days enlarge one's being and add to the growth of the soul. The world is richer and life is more beautiful ever after, for that they have been.

NEW YORK CITY,

The great Metropolis of America, the centre of commerce, of newspaper literature, of political rascalities and social abominations!—wonderful for its unparalleled growth, for the magnificence of its public and private structures, powerful by its immense wealth, glorious for its enterprise and benevolence, and execrable for its meanness!

We (the editorial *we*) remained but a few days—Mrs. H. much longer. But those few days were pleasantly spent in the society of friends whom we love, and their memory will be fragrant forever. If you have but little time in New York, and would see representative sights, visit Wall Street, Printing House Square, Five Points, and Central Park—grand types of all there is of this great weltering city.

A MONTH AT WASHINGTON.

Here is where the "worry" comes in. Heat intense—dust deep in the streets and filling the air with dense whirling clouds, suggestive of the sirocco of the Great Desert—officials in the Departments indifferent, lazy, technical, stupid! Did anybody ever have a tougher month than we?

Now that it's all over and we came off victorious, it is sometimes amusing to call up, in memory, the many provoking, fruitless interviews with the legion of obstinate fellows through whose several mills our grist of papers must needs be ground ere the "greenbacks" could be fairly won; and we would like to give a running history of that month of trial, were it not that our usually very amiable temper is not yet sufficiently cooled down to render it entirely certain that we are now prepared to do all parties the fullest justice. Only this we will say in this connection: If any man would prudently prepare himself to endure the trials of Purgatory we can recommend no better school of discipline than the engineering of a war claim through the requisite Departments at Washington in the Tophetian month of June.

If other creditors have as hard a time in getting their pay as did we in collecting a few thousand dollars for the State Agricultural Society, (and we were frequently told for our comfort that we were "getting along splendidly, much better than common!) there must be a great waste of time and money in all the country—and chiefly, as it seemed to us, because the Departments are full of broken down political hacks and old fossils, to the exclusion of the thorough, energetic, and experienced business men who ought to be in their places.

In our own case there was this one mitigating circumstance, namely, that we enjoyed the agreeable company of a number of Wisconsin friends—prominent among them, three of her popular Governors, to whom we, here and now, return our grateful acknowledgments for numerous courtesies. Long may they flourish!

VISIT TO THE ARMY ON THE RAPPAHANNOCK.

"No passes whatever to civilians!" But we were not to be bluffed. It was just after the return of Hooker to this side of the river; the army was again nicely quartered but might any day "move upon the enemy's work's." We wanted to see the Grand Army of the Potomac in quarters. We went.

The way from Aquia Creek—fifteen miles, by rail—was desolate enough. Fences all gone—timber chopped off and burnt up—traces here and there of what had been corn-fields, the old stubs and stalks still standing in the midst of over-growing weeds—and not an inhabited dwelling the whole distance.

At Falmouth, on the river, just opposite Fredericksburg. An immense stir at the depot—army stores being tumbled off the cars and hundreds of great wagons waiting to receive them. We pile into an empty two-horse wagon, and are driven, Jehu-like some four miles, over rough ways, in constantly enveloping clouds of dust and through the midst of old deserted winter camps. Hearing and feeling were the only senses allowed free exercise, for the blinding dust and suffocating stench of decaying horses and mules, only half buried, compelled a violent suspension of sight and smell.

At last we are tumbled out in a delightful little orchard on the summit of a mound and are cordially saluted by the Col. and Lt. Col. of the 139 Penn. Reg't of Vol's. Noble, warm-hearted, generous, patriotic soldiers, whose heroic conduct in the charge on the Heights with Sedgwick's corps made them thrice worthy of our respect. As far as the eye can reach, and much farther, indeed, are the encampments of the several divisions and corps which make up the Grand Army; covering every knoll and slope of this undulating section of Stafford Co. for a distance of fifteen miles up and down the river.

Oh it was a grand spectacle when, at evening, the drums beat, the bugles sounded and every regiment and battery stood in its place on parade. It lacked only one thing to make it the most splendid, soul-stirring sight we ever saw—that was the prestige of a glorious victory.

Early on the following day we might have been seen upon the Colonel's charger, and in military dress, dashing through the intervening pine woods, for the very outposts of our pickets, on the bank of the river. Rebel pickets were on the other shore with glistening bayonets, and, at first, we approached cautiously. But finding they did not *shoot*, we became more plucky and rode up and down the lines within speaking distance for more than ten miles, viewing the rebel camps and the scene of the recent battle on the other side; stopping here to say a cheery word to our brave and patriotic boys, and there administering a slight rebuke or wholesome advice, as circumstances seemed to require. Altogether we had a rich time—a time to be remembered. Thanks to the shrewd favor of our old-time friend, Maj. H. C. Bull, (formerly Gen. Bull of Madison) Paymaster to the Army.

THE STATE AG'L COLLEGE OF MARYLAND,

Near Bladensburg, and about 9 miles from Washington. Of our delightful visit to this prosperous young institution, at another time.

PHILADELPHIA.

Our mission accomplished, we left the "city of magnificent distances" for home, *via* Pennsylvania and Ohio. Spent a lovely sabbath in the city of Brotherly Love—about the handsomest and neatest city in the Union. Excitement occasioned by Lee's raid had somewhat abated

Homeward again, and over that magnificent route along the Susquehanna and Juniata, and over the crest of the Alleghanies. No better road and no finer scenery in the United States.

Stopped at Tyrone. Over the Bald Eagle Branch of the Penn. Cent. R. R., and thence on foot over the Bald Eagle Ridge, some eight miles, to

THE STATE AG'L COLLEGE OF PENNSYLVANIA.

A fine imposing stone edifice, in the midst of one of the handsomest valleys in the Quaker State. Of this college, also, again.

PITTSBURG

Was all shut up—the people at work on the fortifications, upon the heights across the Monongahela. A portion of Lee's army expected next day. Exciting rumors of the approach of the enemy in his march upon Harrisburg. Inspected the fortifications, told the people to keep cool, and dashed into

THE BUCKEYE STATE,

Where, up to the date of Vallandigham's nomination for Governor, we have always claimed to have been born. A good old State, in spite of her base men—rich in her mines, rich in her fertile soil, and rich in the enterprise of her two millions of people.

Crops, the last of June, looking better than in Pennsylvania.

A day at Columbus, pleasantly spent at the home and splendid nursery of our friend Hanford, and with the able and popular Secretary of the Ohio State Board of Agriculture, the Hon. J. H. Klippart; a few days of sickness at the dear old home, where a noble father and brother yet live, and then a resolute dash for Wisconsin, *via*

CHICAGO,

Which, after all, especially in view of its late origin, is about the greatest town in America. Splendid shops, magnificent hotels, and, above all, such an array of manufactories, elevators, mills, and shipping and forwarding houses as cannot fail to astonish the most ambitious and extravagant "down-easter." Great is the growth and grand is the destiny of this Metropolis of the Northwest.

Found our friend Emery, of the *Prairie Farmer*, in the midst of a flourishing business, as he deserves to be, good natured and hopeful of both agriculture and country. The *Farmer* is a good paper and deserves a large patronage.

IN THE CHAIR EDITORIAL AGAIN.

May and June have gone, and we have returned to the peerless capital of the Badger State, leaner and more weary than when we left, but yet richer in experience, happier, and we trust, better prepared for the work that lies before us. So mote it be.

A New and Valuable Book on Sheep Husbandry.—There is now in preparation and to be published in a few weeks by J. B. Lippincott & Co., Philadelphia, and D. D. T. Moore, Rochester, N. Y., a new and complete work on Sheep Husbandry, entitled *The Practical Shepherd*, by the Hon. H. S. Randall, LL. D., author of "Sheep Husbandry in the South" "Life of Jefferson," "Fine Wool Sheep Husbandry," etc.; also Editor of the American Edition of "Youatt on the Horse," of which over thirty thousand copies have been sold. The author of "The Practical Shepherd" is well known as the ablest and most reliable writer on Sheep Husbandry in this country, and the work cannot fail of becoming the standard authority on the subjects discussed. The work is intended to give that full and minute practical information on all subjects connected with Sheep Husbandry which its author has derived from the direct personal experience of thirty-five years with large flocks, together with that knowledge of different modes and systems which has flowed from a very extensive correspondence during a long period with leading flock-masters in every part of the world.

Sorghum—Good Prices Ahead.—The prospect for large returns from the Sorghum crop of the country was never so good as now. The Mississippi is again open, to be sure, but the southern papers report that but little sugar has been produced. We hope our farmers who have been enterprising enough to grow considerable quantities of the cane will take care to provide themselves in time with the machinery and apparatus necessary to work it up.

The Tribune Strawberries will be distributed to those of our subscribers who, in subscribing for the *Tribune* with the FARMER, then expressed a desire for them.

Editorial Notes of European Travel have been crowded out this month by Notes of Home Travel.

Who are You?—"MR. J. H. HOYT—*Dear Sir:*—I send you one dollar for my subscription for the FARMER, and a stamp for the strawberries."

The foregoing letter, without date and without signature,—money all right—came just recently in an envelope post-marked *Ladoga*. If our anonymous friend will favor us with his name, we will gladly send him the FARMER and put him on the strawberry list.

Our Article on Wool in the Stock Register was printed before our great victories in July, and the consequent decline of gold. Within limitations determined by actual imperative demand, wool and wheat, being staples, will fluctuate with gold; which last, therefore, may be looked to as a pretty reliable indicator. Let us have the victories, even though wool should go down to 30 cents!

Importation of Sheep from the East.—Mr. C. H. Jones, of Sun Prairie, the same who recently sold a buck to Moses Chase for $100, goes to Vermont to purchase other sheep for introduction West. We are glad to see this disposition to improve the breed of our seeep.

Sorghum Machinery, &c.—In answer to many enquiries in relation to machinery &c., we feel bound to say that we have yet to be made acquainted with any Cane Mill better than the "Climax Adjustable Sugar Mill," manufactured by E. W. Skinner, of Madison; or any Evaporator superior, all things considered, to Cook's.

Horse-Hoes &c.—A letter, making enquiries in relation to implements of this kind, dated Stoughton, May, 1863, and signed "G," came during our absence, and could not be answered in time to make the answer of use this season. At a convenient time we shall publish the enquiries and answer them.

What's become of all the Spinning Wheels?—Mr. J. R. Crocker, of Belleville, has ransacked Madison and the surrounding towns but finds not one,—that is, of the good old sort. The enquiry is suggestive, if not important, and somebody should be able to answer it.

Machine Wanted.—Will you inform me through your esteemed paper whether and where a machine is to be got to "pill" barley with to prepare it for cooking? C. WIELAND.

BEAVER BAY, Lake Co., Minn., May 11, 1863.

NOTICES OF NEW ADVERTISEMENTS.

Madison Mutual Ins. Co.—Some very important figures illustrative of the business of this flourishing Company for the six months ending June 30, 1863, will be found, as furnished by the able Sec'y at the close of the Annual Report of said Co., on the 2d page of our Advertising Dep't. It appears that the number of members at that date was 20,000, No. Policies 27,338, total am't accumulations $429,827 19. Probably few companies in any country can present a better record. We believe, as heretofore, that there is no better or safer Co. in the world.

The season is at hand wherein the farmers are particularly liable to suffer loss by fire and lightning, and it is far more with a view to their protection than to any interest of this Co., or any other, that we would urge them to make their hard earnings secure without delay.

H. Southwick & Son, of Dansville, N. Y., advertise in this No. Trees, Vines &c. for fall trade.

O. B. Maxwell & Co. advertise Pear and Plum trees, and a general assortment of Nursery Stock.

Great Western Nurseries.—See advertisements of Reiter & Maddocks, Tolebo, Ohio. Agents wanted

STATEMENT
OF THE
Madison Mutual Insurance Company,
FOR THE YEAR ENDING
DECEMBER 31, A. D., 1862.

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,		$327,464 67
ASSETS.		
Unimpaired premium notes of policy holders	$281,000 07	
Cash on hand and due from policy holders and agents, for cash premiums,	45,464 60	
Office furniture and fixtures,	1,000 00	327,464 67
Whole No. policies issued		22,061
Am't of outstanding risks thereon		$15,962,000 00
Number of policies issued in 1862,		7,706
Am't of outstanding risks thereon		$6,069,813 00
Am't premium notes thereon,		108,323 93
Am't cash premiums thereon, less commissions to agents,		45,727 80
Am't interest received,		972 18
Total am't losses reported during 1862,		$17,744 16
Total am't losses paid durihg 1862, 89 in number,		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due		none.
Losses adjusted and not due		none.
Losses unadjusted,		292 35
All other claims against the company,		97 50
Am't paid for advertising and postage,		1,763 66
Am't paid for printing,		540 50
Am't paid for policy stamps,		600 00
Am't paid taxes to Com'r Internal Revenue		82 02
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses,		7,290 98

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : EDITOR.

VOL. XV. MADISON, SEPTEMBER 1, 1863. No. 9

Suggestions for September.

If there is to be an agricultural fair in your county it is your duty to attend it, and not merely with your wives and children, as interested, selfish spectators, enjoying the fruits of the labor and enterprise of others, but as *exhibitors.* If you have anything worth showing, prove your merit by placing it alongside of other things of like character; and if you have produced nothing worth showing, then take the best of what you have, and manfully and repentantly bear the shame of being a laggard in your profession. But almost any of our readers, even the slowest and laziest, will have some thing—a calf, a pig, a chicken, a trace of corn, a turnip, a potato, an apple, a pound of butter, a pair of stockings, or a skein of yarn—that might be added to the display of articles, and so increase the interest of the exhibition.

We repeat it; go to the Fair, but don't go empty handed!

FARM WORK.

Don't forget our injunction of last month as to the care of grain and hay crops. Many a put-off-till-to-morrow farmer, after spending much labor in putting in, cultivating and harvesting his crops, loses the advantage of what he has done for want of a very little labor necessary to make them secure. The shock, the stack, the granary—these are yours, but rain, fire and vermin stand ever ready to destroy them. Take care of both grain and straw.

CORN.—Select the best ears on the best stalks for seed; gather when ripe; trace and hang up in a dry place. Cut up, for fodder, before frost, and secure in well-bound stooks. It makes excellent feed for horses and horned cattle and will save so much hay.

WINTER WHEAT.—Now is a good time to put it in. Be sure the seed is clean, and do it thoroughly. Drilling is best. Sow grass seed same time.

SPRING WHEAT—Plow for, this fall, and plow a *little deeper than usual.*

BUCKWHEAT.—Harvest as early as ripe.—Straw will answer for bedding stock and for manure.

ROOT CROPS may still be cultivated with profit.

SORGHUM MANUFACTURE.—Get ready for it, and begin last of month.

WEEDS—Wherever found, cut them down, gather before seeds will shell out and *burn* in heaps. It's too late to make them into manure.

STOCK.—If intended for fattening, commence feeding early and regularly; and if not, still it will pay to feed well, for it is always poor economy to let stock run down in flesh just before winter. If grass should be very short and dry, a little help from the corn field, oat stack, or corn and bran bin should be afforded them.

THE ORCHARD AND GARDEN.

Not much to be done this month but to carefully gather and sell or put up autumn fruits, to wash and scrub the trees with strong suds, and to dig out the apple and peach borers.

GRAPES.—Allow such as are intended to be put up for winter to remain on the vines until the approach of frost.

BLACKBERRIES AND RASPBERRIES.—Cut out the old canes, leaving but three or four of the

strongest young shoots in each clump, for next year's bearing.

MELONS.—Put broad chips under those ripening and occasionally turn, so as to expose all sides to the sun.

SQUASHES.—Gather as they ripen, and before the frost spoils them.

CUCUMBERS.—Save all you can for pickles. The soldiers of the great Union army will need them if you don't.

The Great International Exhibition.

NO. XI.

THE BRITISH COLONIES.

Standing again under the great Eastern Dome, and looking to the right as far northward and then westward as the naked eye can distinguish the armorial ensigns and the more prominent objects displayed by the different nations, we are filled with amazement at the number of provinces here gathered home by the great parent Empire upon whose glories with ever kindling enthusiasm we have already dwelt so long.

Nothing is so well remembered as what we learn in youth. The newspapers, now and then, and quite often, considering the importance of the event, have heralded to the world the accession of some new portion of the globe brought under the sway of the royal seeptre of "the little sea-girt isle," and we have once and again admired the indomitable energy and unquenchable ambition of this leader of Anglo-Saxon destiny; but other events of still greater importance to us as a yet more composite and more wonderful race of new people have so engrossed us that those occasions have not all been numbered and recorded in the memory. We have lived a quarter of a century—some of us twice that—since on our maps of the world we traced the British Islands and their dependencies, at the country school, and until our eyes here corrected us, we have preserved the outlines of her empire just as they were then; forgetting that the geography of great nations is exceedingly liable, in these times of but partial civilization, to very extraordinary growths.

Well, we shall not forget it hereafter, for here, before our astonished senses, stand the representative products of a colonial dominion which, exclusive of British India, embraces an area of not less than 3,350,000 square miles, and a population of some ten millions! If India be added—and geographical boundaries will hardly be anticipated or feel abused if we do so include her—then the Colonial possessions of Great Britain embrace an area equal to nearly one-third of the land of the whole earth, and a population scarcely less than two hundred and twenty millions!

But let us descend from the dais under the dome and review this most interesting division of the Great Exhibition a little more in detail—and yet very rapidly, for the world of other nations is yet before us.

First, on our right, proceeding northward, we encounter

THE WEST INDIA ISLANDS—

A full cluster of them, and finely represented by products of every class, both natural and artificial, for which these interesting tropical islands are remarkable—Jamaica, Trinidad, Barbadoes, Demerara, Bermuda, St. Vincent, Dominica.

As yet the arts are only in their infancy in these islands, but the spirit of progress is beginning to be manifest. Here is

JAMAICA

With a fine collection of objects in Natural History—fishes and turtles, peculiar sea shells &c.; a display of the economic minerals of Jamaica, including iron, lead, zinc and copper ores; botanical specimens of much interest—Guinea corn, sugar cane, mountain cabbage, bamboos, 253 specimens of the woods, such as rosewood, mahogany, ebony, cedar, yacca, &c.; a very large and remarkably fine collection of vegetable fibres, roots barks, &c., used by the nations in the manufacture of paper, ropes, hats, umbrellas, and various fabrics; beautiful furniture from the yacca wood; wax models of fruits and vegetables, includ-

ing the yam, the cocoa, turmeric, common ginger, pine apples, pears, oranges, lemons, limes, bread fruit, &c; seeds, nuts and preserved fruits, coffee, pimento,; sugars, oils in great number, starches, flours, and 192 samples of rum!—chemical preparations, perfumes, soap, wax, honey, choccolate, leather, fibrous mats, window blinds, calabashes, and a great variety of miscellaneous articles; specimens of printing and binding; ladies' ornamental work; engravings, photographs, water-color drawings of Jamaica scenery, and a number of excellent stereoscopic views of Jamaica.

Jamaica has now a population of about 380,000, mostly colored, and is gradually increasing in importance.

The display made by the other islands is of similar character, and need not be so minutely examined.

Next to the West Indies comes

MALTA,

Some four thousand miles, more or less, from Jamaica. A long distance, if we were to take a ship and cross over the sea to where it lies in the warm lap of the Mediterranean; but only a step here in the Great Exhibition.

We shall find none of the beautiful woods here which added so much to the interest of the Jamaica display, for in Malta there are no forests—scarcely brushwood even. The sirocco which blows from the African coasts will not tolerate their growth. Nevertheless the nations, who are supposed to have come originally from the Arabic stock, are skillful workers in wood, and have acquired quite a notoriety for their cabinet ware.

Cotton is the staple product, and we have here before us interesting samples of the raw material and of the fabrics (*Militensis vestis*) which have long enjoyed a high reputation in Rome and the Italian States generally. But the most remarkable articles in the Maltese Court are, the famous Maltese lace, which occurs in patterns of great variety and beauty—capes, collars, shawls, coiffures, &c., &c.—and the exquisite gold and silver filagree work, for which the smiths of Malta are so noted the world over.

But we may not linger. Another step, and we stand, as if transported by magic, where "the spicy breezes blow soft o'er

"CEYLON'S ISLE."

The satinwood, the ebony, and the cocoanut palm, with its multiform products—oil, sugar, arrack, vinegar, ropes, nets, mats, torches, calabashes, furniture, &c., &c.—betel nuts, cinnamon trees and cinnamon bark, cotton, rice, tobacco, coffee, pepper, numerous spices which we have not time to name, and bread-fruit; fibres in great variety, seeds without number, and tropical fruits in abundance, preserved in spirits. The air is filled with the sweet odor of the spicy isle, huge elephant's tusks lie around, the broad palm-leaf hats and palm umbrellas are overhead, the ear is now and then saluted by articulations of what is known to be the Cingalese tongue, and one finds but little difficulty in imagining himself to be a veritable inhabitant of this most interesting island of the Indian Ocean.

Another wave of the wand, and we stand in the midst of the forest timber, the rocks and minerals, the ores, the skins and furs, the agricultural products, and the machinery and implements of

THE CANADIAN PROVINCES!

These are most admirably represented, especially in the department of natural productions. In the centre of the north end of the Transept stands a magnificent trophy of timber which opens wide the eyes of all but Americans (who are familiar with gigantic trees) and attracts very great attention. This trophy is 90 feet high, the timber composing it being sections, transverse and longitudinal, of walnut, oak, ash, pine, and the other forest timber grown in Canada. Here are pine planks of great length and fifty inches wide—without a knot—sawn from trees 22 feet in circumference 120 feet to the first limb and 250 feet high. And here are most splendid polished plank and squared timbers of the beautiful black walnut, such as a vast ma-

jority of the countless thousands who gather wonderingly about them never saw before.

Sir William Logan, who is Chief Commissioner for Canada, has immediate charge of the fine botanical, geological and mineralogical specimens, and almost every day lectures instructively to the gathering crowds. His collections of iron, lead and copper ores, and of building stones and crystalline rocks is no less remarkable than that of the timbers, fruits and flowers just alluded to.

The specimens of cereal grains, of beans, peas, &c., &c. are very creditable indeed, and the wagons and agricultural and horticultural implements give one a high estimate of the Canadian mechanics. The Canadas are making good progress in the arts, and have before them a career of still greater prosperity. Politically considered they are already quite independent of the mother country and will scarcely remain *provinces* a quarter of a century longer.

Curing Tobacco.

On this subject we quote from a valuable article by Mr. Bishop, of Hartford, Conn., as given in the pamphlet on Tobacco Culture, published by Orange Judd. As the season is now so far advanced that buildings, such as the writer seems to contemplate, cannot be erected in time, it may be well to remark that cheap and temporary sheds may be made to answer a tolerable purpose.

CUTTING AND HANGING.

The plants grow rapidly and require less than three months from the time of setting before they are ready to cut. Any one used to the cultivation of the crop knows when it is ripe, the veins of the leaves are swollen, the leaves begin to look spotted and feel thick and gummy. The ends of the leaves will crack on being doubled up. After it is ripe the sooner it is cut the better, as it is liable to injury by frost or hail, and will not increase in weight as fast as the worms eat it, and the leaves get broken by catching them. The plants will generally ripen from the first to the fifteenth of September; they should not be cut immediately after a heavy rain unless in danger of frost, as a portion of the gum washes out, but should be allowed to stand two or three days. The cutting should not begin until the dew is off; a cloudy day is best, for when the sun shines hot, they will not have time to wilt sufficiently before they will sunburn, which may be known by the leaves turning white and looking puckered. Commence on one side of the piece, laying the plants all one way, in order to facilitate loading. The plants may, most of them, be broken off easily, by gently bending them over one way and another. Small plants, which will not break, may be sawed off with an old saw or cut with a hatchet. If the sun shines too hot, the plants should be turned over carefully to prevent burning. After lying an hour or two to wilt sufficiently, so as not to break by handling, they may be carted to the barn or shed. Ample room for curing should be provided, and if any one expects to raise tobacco for any length of time, it is best to have a building built expressly for it.

BUILDINGS.

In the first place one wants to know about how much room they will need, and then build accordingly. To hang an acre of good tobacco requires a building about thirty by twenty-four feet with fifteen-feet posts. Two girths should be framed into the posts on all sides of the building; one five feet above the sill, and the other ten feet above, to rest the poles on, also to nail the covering boards to. This gives a space of five feet for each tier of plants. Have a beam run across the centre of the building, with a post in the middle with girths to correspond with those on the side, extending lengthwise through the middle of the building for the poles or rails, each twelve feet in length, to be laid upon; or if sticks are to be used (as hereafter described) lay rails or poles once in four feet for the sticks to rest upon. Place a ventilator upon the centre of the roof, and have one board in every four feet hung on hinges, to be opened or closed at pleasure. If made with a floor and a cellar underneath, to let down the tobacco into when ready to strip, it is all the better. We will now return to the crop, and commence hanging it. A common way of doing it is by tying with common twine. Tie the end of the string tightly around the butt of one plant, and by placing it against the side of the pole nearest you, put another plant on the opposite side and carry the string over and around it, placing the plants alternately on each side of the pole until filled, then fasten the string, place the pole in the right place, (it should be nearly right before it is filled,) and commence on the next one in like manner, having some one to hand the plants as wanted. As to how thick to hang it depends upon the size of the plants, but in good sized tobacco about nine inches on each side is close enough, that will be from thirty to thirty-two on each pole of twelve feet; place the poles from fifteen to eighteen inches apart. Another method of

hanging much practiced and approved by many is to hang on slats or sticks sawed out four feet long, one and a quarter inches wide and five-eighths of an inch thick. Chestnut timber is generally used here. The common lath answers very well for this purpose. An iron made something like a chisel is used to slip on to one end of the sticks, which are sharpened a little at one end to receive it. It is made about eight inches long, wedge-shaped at the small end, and a socket one half by one inch to slip on to the sticks. When ready for use have a place fixed near where you unload to hold one of these sticks out at right angles from a post and about four feet from the ground. Let the plants be handed you from the load and slip them on the stick, piercing the stalk about six inches from the butt; put six or seven plants of medium size on each stick, thicker if smaller. As each stick is filled, it may be carried to its place in the barn. In getting them to the top of the barn they may be handed up with a pitchfork, lifting them by the middle of the sticks. These sticks should be about eight inches apart. I think a greater amount can be put into a given space by this method without danger of sweating, as it is more evenly distributed. The loose leaves that have been broken off while handling may be cured by placing four or five together and securing to a small pole, in the same way as plants are hung with twine.

SAVING SEED.

Strip the leaves off from the seed stalks and tie up the stalks to a stake driven into the ground by them, else they may be blown over. The seed should be gathered before the hard frosts destroy its vitality; when fully ripe, the pods or seed-vessels may be picked off and dried, then crush or roll them between the hands until the seeds are all out, the seeds may then be separated from the chaff by passing it through a fine seive.

CURING.

After the crop is all housed, the building should be well ventilated by opening the doors and boards on hinges, to secure a free circulation of air throughout the building. On rainy, damp, or very windy days the building should be shut up as tightly as possible, and opened again on return of fair weather. After hanging several weeks, until the leaves are mostly dried, the building should be closed to prevent the dry leaves from being broken by winds. It usually requires about twelve weeks to cure the plants thoroughly, that is, so that there is no more juice in the leaves or leaf-stems; it matters not if the main stalk is not dry, you need not expect it, and there will be green leaves that will not cure but freeze while green and are worthless. It will then be ready for

STRIPPING

This must be done only after a damp, rainy spell has softened the leaves, so that they may be handled without breaking; it may then be taken from the poles and stripped as fast as taken down, or it may be carried into a cellar and be piled in heaps to be stripped at leisure; care must be taken, however, not to let it remain too long in this condition, as the green stalks would soon heat and injure it. To strip a plant, hold it in the left hand by the butt, and with the other pull off all the bottom leaves and drop them on the ground or floor in a pile for "fillers," or the poorest quality; next, take off three or four more, or until you come to the best leaves, these put in another heap for the "seconds;" now strip off the remainder for wrappers, except such as are badly worm-eaten or otherwise injured—such go into a poorer quality; throw the stalk away and put the handful of wrappers under the left arm to hold while stripping another in like manner, put the two handfuls of wrappers together, taking pains to keep the butts even, and bind them by firmly winding a leaf around them at the butt, commencing within a half or three-quarters of an inch from the end and winding down smoothly about two inches, part the hand and put the end of the band between the parts, then close it again. thus securing the end and holding it tight. If the plants are very large, the leaves from each may be tied up separately instead of putting two together. Hands that will weigh half a pound are about large enough. The seconds and fillers are afterwards picked up and tied in the same manner. Much of the value of tobacco in the market depends upon the manner in which it is assorted and done up, as a few poor leaves in a hand would make a difference of several cents per pound in the price; none but good sound leaves, free from rust, pole-sweat, frost, or large holes, should go into the best quality. Small plants rarely contain any first quality, but should go into the seconds and fillers. A little practice will enable any one to sort it properly, better than any rules that can be laid down on paper. There is much difference in the color and fineness of the leaf, a darkish red or cinnamon color is preferred to that of a darker shade; the veins should be small and far apart and as dark as the leaf, as "white stems" are objectionable by reason of their growing lighter still when going through the sweat after it is cased.

After it is stripped, it should be packed down in a cool dry place. Lay some boards flat on the ground about four feet wide, and as long as you wish the pile to be, and commence by laying a row on one side of the platform with the butts out, then on the other side in the same way, letting the tips lap about six inches, or just enough to keep the pile level; proceed in this way, laying on each side

alternately till all is packed; lay the hands as close to each other as possible, not sprawled out like an open fan, but compactly. Lay some boards on top of the pile and put on just weight enough to keep them snug. Some boards or blankets should be put at the end of the pile to keep it from drying up. The seconds and fillers are packed in the same way; they may be packed in a separate pile, or on top, or at the ends of the wrappers. It is now ready for market. If it should remain long in pile it should be examined occasionally to see that it does not hurt, as it sometimes happens that when taken down, stripped and packed when it is too damp, it will grow damper and perhaps rot. If too damp, it should be repacked on some windy day to give it an airing, shaking out the dampest hands and letting them remain exposed till sufficiently dry to be repacked. The stalks, after being stripped, should either be spread on grass land and remain till spring, when they may be raked up and carted on to land designed for the next crop of tobacco, and burnt, or let them remain in the barn till spring, when they may be cut up fine and dropped into potato or corn hills, using a good sized handful to each hill.

Mixing Oats with Wheat.

[The following communication was received some time since, but was mislaid in some way so that it could not be published before.—Ed.]

Mr. Editor:—I have just had my attention called to mixing oats and wheat for seed. It is the general opinion that the quantity and quality of both are improved. I have often seen wheat, that was grown with oats, of a superior quality. With our improved Fanning Mills oats are so readily removed that they need be but little detriment to the crop.

Then, again, we know that chinch bugs never work in oats. Would not a good sprinkling of oats form some protection against their ravages? A happy day would it be for us farmers if some means could be devised to checkmate them. If this can be done, as well as improve the crop, by mixing, we would be well repaid for the little extra trouble it may cost.

Are there not some of your readers who have tried it already, and can give us their experience, that we may have some guide when the spring opens and the operation of seeding commences? James K. Thompson.

Beloit, Jan. 29, 1863.

Top Dressing Grass Lands.

Now is the time, says the New England *Farmer*, to commence the preparation of materials for this important work, Some persons doubt whether the application of manure to the surface of grass land is the best mode of using it. This depends upon two or three circumstances, viz,—1. Upon the nature of the soil. 2. Upon the time of application. 3. Upon the condition of the dressing.

Top dressing will continue to bring a crop longer on a moist soil than on a dry one, 1st, because such land is the best adapted to grass, and, 2dly, because the manure by being kept moist is brought into a state of decomposition, and becomes prepared as food for the plants instead of drying up. Top dressings, therefore, for high lands, should be applied in the spring, as early as March or the first part of April, so as to receive the early rains and get thoroughly leached, and the coarser particles washed down among the roots of the grass before the hot dry weather comes on. Or, it may be applied—and perhaps with better effect—late in November, when it will receive the later rains and be leached by them, or be covered with snow to be melted upon the dressing and thus carry its fertilizing properties gradually to the grass roots during the winter and spring.

It is unpopular—we are fully aware—to recommend top dressing for high and dry grass lands; still, we believe it to be a profitable way of fertilizing, when it is done judiciously. The error consists in cropping the land for many years, without manuring until not only the fertilizing agents are exhausted, but the *roots of the grass themselves* have either died for want of food, or have been driven out by plants more hardy and persistent than themselves. When a field is in this condition it is folly to top dress it. There is no basis upon which to act. The dressing was deferred too long—there is no recuperative power left. The remedy for such land is through the plow, manure, cultivation, and *plenty of seed*, or all of these, excepting the cultivation, which may be omitted by turning over the sod and laying down in August, or early in September.

In a wet season something may be done on high land by spreading fine compost manure liberally, scattering on grass seed and harrowing. Clover, sown early in April in this way, will sometimes succeed well. If the farmer would be watchful, manure his fields in season, occasionally scattering a little seed over them, while producing liberal crops, he might save considerable expense in plowing and re-seeding. All this, however, should not prevent a judicious rotation of crops, and, in turn, bringing the grass fields into cultivated ones, which is undoubtedly the course that will secure the most certain profits.

The *time* when top dressing should be ap-

plied, is a question upon which our best farmers do not agree. What is needed, is a copious rain immediately after the dressing is spread, but as we cannot command this, we must exercise a sound judgment in the matter, and be content with the result. If the compost cart should follow that which carries away the hay, and a liberal shower follow, perhaps there would be no better time to apply the dressing; and in a moderately moist season, this course will succeed well. March and April are good seasons, but then the objection exists of cutting up the fields by the feet of the team, and the wheels. In the autumn there is little danger of this, unless the season be very wet; the more pressing work of the warm season is out of the way, and, upon the whole, perhaps this is the best time for this operation. The third point requiring care is the condition of the dressing when it is used. It should be rich, that is, made of good materials, and fermentation not carried so far as to set free its gaseous properties; and then it should be fine—if as fine as sand, so much the better. This will allow of its being spread evenly, and present such a surface to the rain and dews as to have every part quickly penetrated and its fertilizing properties carried to the roots below.

The Straw Question.

The most important point of this question is: How to make the stock *eat* the straw? It is, at least, the one upon which I need the most information. Cattle, when allowed to run to a straw stack, will nose it over and pick out the titbits, and waste the rest. They would do the same were it fed to them, if they could. Now the question arises, Do they have a natural antipathy to the coarse part, or is the presence of the chaff and what little grain there is in it, being so much more palatable, the cause of their dislike for the rest? I am inclined to the latter opinion, as I have noticed that, as a general thing, the brute creation obstinately refuse to eat a common article of food when there is access to anything better.

If, then, this is the true difficulty, how are we to obviate it? This is the question upon which I want *practical* information. That it can be done at an expense that will more than balance the profit is a question of easy solution. What is wanted is the *economical* way of doing it. Perhaps some will say, "separate the fine from the course." But it is not supposed that with the coarse part alone we can keep our stock thrifty; consequently, the coarse and fine must be fed together. I have no doubt but that some one will be able to enlighten us upon this point.

W. A. B. Bangs.

Durability of Timber.

The piles sustaining the London Bridge have been driven 500 years. In 1845 they were critically examined, and found to have decayed but slightly; these piles are principally of elm. Old Savoy Place, in the city of London, is sustained on piles driven 650 years ago; they consist of oak, elm, beech and chestnut, and are perfectly sound. The bridge built by the Emperor Trajan over the Danube affords a striking example of the durability of timber in the wet state. One of these piles was taken up, and found to be petrified to the depth of three-quarters of an inch, and the rest of the wood had undergone no change, though it had been driven 1600 years.

There is much uncertainty concerning the conditions insuring the durability of timber. Many of the vessels built on the lakes during the war of 1812–14, from timber then freshly cut, have varied materially in their durability, notwithstanding the fact that the timber seems all to have been cut in the same manner at the same season of the year. Some of these vessels were decayed in three or four years, while one of them, which, in the presence of numerous spectators, was permitted to pass over the Falls of Niagara within a few years, was found to be perfectly sound when picked up below the falls.— *Working Farmer.*

Cheap Summer Food for Hogs.—The editor of the New England *Farmer* says he has practiced the following plan for summer feeding of pigs for many years, and finds it to be an excellent one:

"A few rods of grass-plat, convenient to the pen, is reserved for this purpose, and is manured by the weekly suds from the wash-room. Commencing at one side of the plat, a large basket of the thick short grass is mowed each morning while the dew is on, and a part given to the swine at each feeding, three times a day. By the time the last portion of the grass is cut, the first is ready to cut again, and in this way the ground is mowed over many times during the summer, while the grass is kept short, thick, tender and sweet. It keeps the hogs in a healthy, growing condition—they are fed with as much as they will eat every day, and little additional food is needed besides slops from the kitchen."

The Road to Poor Farming.

1. Invest all your capital in land, and run in debt for more.
2. Hire money to stock your farm.
3. Have no faith in your own business, and be always ready to sell out.
4. Buy mean cows, spavined horses, poor oxen and cheap tools.
5. Feed poor hay and mouldy cornstalks exclusively, in order to keep your stock tame; fiery cattle are terribly hard on old rickety wagons and plows.
6. Use the oil of hickory freely whenever your oxen need strength; it is cheaper than hay or meal, keeps the hair lively, and pounds out all the grubs.
7. Select such calves for stock as the butchers shun—beauties of runts, thin in the hams, and pot-bellied; but be sure and keep their blood thin by scanty herbage; animals are safest to breed from that haven't strength to herd.
8. Be cautious about manufacturing manure; it makes the fields look black and mournful about planting time; besides it is a deal of work to haul it.
9. Never waste time by setting out fruit and shade trees; fruit and leaves rotting around a place make it unhealthy.—*Springfield Republican.*

JOHN JOHNSTON AND HIS FARM.—The Genesee *Farmer* says:—"A day or two since we were on the farm of John Johnston, of Geneva, N. Y., the noble old farmer of underdraining celebrity. He remarked: 'The wheat midge never did me much damage.' For 30 years he has fed out large quantities of oil-cake, corn, &c., to cattle and sheep on his farm. He has used more or less lime and any quantity of plaster. He has raised immense crops of clover and made it into hay and fed it out to sheep. In this way he has made his land rich. At the same time he has tile-drained every field on the farm, or, we might say, every rod. He has laid over *fifty miles* of underdraining tile. His land is dry, rich, and well cultivated, and 'the midge never did him much damage.' No wonder that he is the great American Apostle of high farming."

A Ton of Hay by Measure.

It is a matter of considerable dispute how much *hay in the mow* ought to be allowed as a ton in weight. In some of the agricultural journals figures widely apart are given as correct. Some assert that a cube of ten feet square is required, or 1000 cubic feet; while others place it as low as six feet square, and eight feet deep, or only 288 cubic feet. Now, both of these cannot be right, neither can any measure be fixed upon to hold good under all circumstances. Hay at the bottom of the mow will be more solid than at the surface, and the whole will be very much affected by the quantity of grain put on top of it (if any) and the depth of the hay.

But, having occasion to sell a ton of hay in my barn, to be sure of the quantity for future reference I measured off a space 8 feet square on one corner of the mow, and cut down 7 feet deep, and found the hay removed weighed 2,020 lbs., thus making 448 cubic feet, a good measure for a ton of average hay; it was taken from the surface, upon which 200 dozen of good oats had been stored. The hay was 12 feet deep.

In this county, when hay is sold in the barn, it is generally calculated 392 feet to a ton, which I am confident will always fall short. On the contrary, 448 is as near the correct number as actual trial will give me.—*Ex.*

STOCK REGISTER.

Sheep Husbandry and its Importance to the Loyal States.

It is asserted by parties well informed upon the subject that no country adapted to "Sheep Husbandry" has ever entered into this important branch of agriculture without becoming wealthy. In England—where the annual rent of the land is fully equal to the cost of the freehold in Illinois or Michigan—the business is carried on to a larger extent and with greater profit than in any other part of the world. Sixty millions of sheep are clipped in the United Kingdom. The fleeces average about 5 lb after being washed, and it is not an uncommon thing for a quarter of mutton to weigh 60 lb after being dressed. Many of the fleeces weigh full 8 lb. It is a common impression that the English people are more fond of beef than of any other animal food. "John Bull" and "roast beef" are by many considered synonymous terms, but, nevertheless, mutton has for the last half century displaced beef on the Englishman's table.

A farmer in England who keeps no sheep upon his land is regarded as a poor manager, and behind the age. Sheep manure is valued at 40c. per head. Instead of importing guano from a distance of twelve thousand miles, at a cost of from sixty to seventy dollars a ton, the manure of sheep is obtained at comparatively no expense, and is equally distributed over the land. From the discussion of

the effect of the cotton famine upon England, one would be led to suppose that the manufacture of cotton goods was the most important interest in that country, but Sheep Husbandry and woolen manufactures very far surpass it.

For many years great attention has been paid to the growth of sheep best adapted to the growth of worsted. It is a singular fact that very few of the most intelligent merchants in our large cities know precisely what constitutes the difference between wool and worsted. Worsted is the long fibres of wool separated from the short by combing. Until within a very short period, this process of separation was done by hand, at very great expense, but within the few past years machinery has been constructed which performs the work so satisfactorily that a revolution in the cost of worsteds has been effected both in England and on the Continent. So important is the growth of sheep best adapted to the production of worsted considered in England, that up to within the last 25 years, it was a penal offence to export a Leicester or Cotswold sheep from any part of the Kingdom. By this means England has monopolized the production of coarse worsteds, and to-day supplies the world with these fabrics. The imports of worsted and cotton-and-worsted fabrics into the United States this year will amount to about $17,367,672.

The nature of our climate makes worsted goods more desirable than any other, and we have been for many years the best customers England has for this class of goods. The derangement of industry in the cotton growing regions, occasioned by the war, must necessarily produce a greater demand for worsted and woolen fabrics for years to come, and the tariff and high rates for exchange will make it profitable hereafter to produce the raw material and the manufactured goods in our own country. This subject has attracted the attention of capitalists, and we are informed that a company has already been organized in Massachusetts with a large capital, for the purpose of manufacturing worsteds. It is confidently believed that the enterprise will prove a success, and that worsted goods will hereafter be produced here to compete successfully with England or any other part of the world. All that is required to make it certain is—*that the sheep shall be grown.*

The soil and climate of all our Northwestern States are admirably adapted to Sheep Husbandry, and the farmers of that section could not possibly turn their attention to a more profitable branch of agriculture. The sheep best adapted to the production of worsted are the Leicester and Cotswold breeds, and can be obtained in Canada to any extent and at reasonable prices. The carcasses are large and the fleece of long staple, which makes these breeds more valuable both for the clip and for mutton. In Illinois, and other parts of the West, where corn is raised in such quantities that it is at times used for fuel, the Leicester and Cotswold sheep would pay a large profit to the grower, if raised and fed for the mutton alone, leaving out of the account the value of the fleece. Corn is a most excellent food for fattening sheep, and there is no country on earth that can compete with the West in its production.

By looking over the market reports of the three cities of Boston, Philadelphia and New York, it will be found that the average price of first-class mutton is higher at all times than the average price of first-class beef, but the largest profit in the growing of sheep in our country is realized on the clip. In Canada, where the Leicester and Cotswold are the favorite breeds, the average weight of the fleece is full 6 pounds after being washed. It is estimated, in all sheep-growing countries, that the increase of the flock will fully offset the cost of keeping, so that the clip is clear profit. In February we predicted that the wool clip of the West would bring seventy cents a pound. At that time gold was selling at a premium of 72 per cent., which made legal tender notes worth a fraction over 58 cents to the dollar. At present gold is at a premium of about 50 per cent., which makes the legal tender note worth 66⅔ cents to the dol-

lar. It will thus be seen that the currency has appreciated about 14 per cent. since February, and it will therefore buy 14 per cent. more of all commodities, wool included. If nothing should occur between now and the time the wool clip is brought into market to change the value of the legal tender note, we think the best clips will range from 60 to 65 cents a pound. At this price it will pay the grower a very handsome profit, and there is no question as to there being plenty of buyers for every pound in the country.

It should be recollected that the appreciation of the currency has produced a decline in the price of all kinds of merchandize as well as wool, so that the wool grower will be enabled to purchase, with sixty cents a pound for his wool, as much of other commodities as he could have purchased in February at seventy cents a pound. For years past the quantity of wool manufactured in the United States has averaged full 125 million pounds.* Of this quantity not more than one-half has been grown here. While we have been exporting grain and provisions to an immense amount, we have imported wool from Australia, the Cape of Good Hope, South America, China, Russia, India, and in short from every other quarter of the globe, and are doing so to-day, though it is an indisputable fact that no country on earth is better adapted to Sheep Husbandry than the Northwest. Should the agriculturists neglect to grow a sufficient quantity of wheat and corn to supply our home demand, it would be regarded as most surprising evidence of a lack of enterprise, and yet our natural facilities of soil and climate are no better for producing corn and wheat than they are for the growing of sheep. In Australia and the Cape of Good Hope, where sheep husbandry is carried on extensively and at a large profit, the climate is not as favorable, the soil is barren, and there is no market for mutton, while in the West the soil is rich, the climate dry and cool, and our large cities furnish a ready market for mutton at higher prices than in London and Paris.

For years past the people of the West have seen the wool buyer running through the country eager to contract for wool "on the sheep's back." How much more eager will they be in the future when the consumption of wool is increased fifty per cent. as it is likely to be? Although the population of our country is small as compared with older ones, yet it should be remembered that we consume more than five times as many goods in proportion to our numbers as any of the countries of the old world. This is owing to the fact that the wages of labor are higher and the cost of living cheaper. It is confidently believed that the 30 millions of people in the United States before the breaking out of the rebellion consumed more goods than 150 millions of the population of any other part of the world. In support of this assertion it may be mentioned that in Russia a strong able-bodied man receives 5 cupicks (equal to four cents of our money) for a day's labor pounding stone upon the public road. In Prussia laborers receive 5 silver groschen (equal to 12½ cents of our money) for a day's labor. In Ireland laboring men receive about £15 sterling ($75 of our money) for one year's services. In Poland a night watchman receives equal to about 25 cents of our money for guarding the streets from 6 o'clock in the evening to 6 in the morning. In Germany the women of the middling or well-to-do classes rarely ever have more than two silk dresses in a lifetime, and the laboring classes none. Silks are worn only by the nobility and wealthy classes. A teamster in that country with a pair of horses and wagon receives for a day's work of himself and team one thaler a day (or about 72 cents of our money) and pays his own expenses.

A gentleman who travelled in Germany a few years since relates that on one occasion he had his attention called to two hearty stout girls, who, he was told, had the care of eighty cows, and their pay was ten thalers a year,

* Appleton's Cyclopædia makes a grand mistake in its calculation for 1860. It says "the imports were 4,450,658 pounds." The compiler overlooked the fact that this amount was dollars instead of pounds, and represented only wool at and under 20c per pound.

equal to seven dollars and twenty cents of our money. Neither of them had ever had on either a shoe or a bonnet, yet they were pictures of health, and apparently contented.

These few facts are believed to be fair illustrations of the laboring classes of Europe, and will serve to show the inability of the laboring people to indulge in dress to anything like the extent that the American people are in the habit of doing, and they ought furthermore to be convincing proof of the blessings we enjoy as compared with any other people on the face of the earth.

Our information from the West is to the effect that much more attention has been paid within the past year to Sheep Husbandry, and that the clip of the present year will be larger than usual, but we are inclined to believe that our Western farmers do not fully realize the immense increase of the demand which will be created for the great staple by the cutting short of the cotton supply.

At the breaking out of the rebellion there was in the hands of manufacturers, commission houses, importers, jobbers and retailers, a very large stock of woolen goods, the accumulation of years. The stock of cotton goods was also large, and to work off the surplus of both has taken two years. It is believed that at present the stocks are limited both of cottons and woolens, as compared with the requirements of thirty millions of people, and that cotton having reached a point nearly as high as wool, the demand for the latter must necessarily be greatly increased. If we did not produce in the United States more than half the wool used by manufacturers before the commencement of the war, and when cotton was abundant at ten cents a pound, is it not reasonable to suppose that we could double the production profitably now, when cotton is at 65 cents a pound and when there is sound reason for believing that it will not for years to come, whether the war is prolonged or not, rule at less than twenty-five cents a pound? We have at present in the loyal states twenty-five millions of sheep, and we believe that this number could be doubled without producing a sufficient quantity of wool and mutton to supply the demand for the next five years.

There is no mystery about Sheep Husbandry. All that is required to conduct the business successfully is the exercise of plain common sense, which dictates that all domestic animals (and sheep in particular,) to thrive well, require to be well fed, to have plenty of room, and to be well protected from storms. The recent repulse of the Army of the Potomac is calculated to prolong the war, to put further off the renewal of the cotton supply, and to make necessary the call for half a million men. It will furthermore necessarily increase the issue of Government currency. All these influences will tend to increase the demand for wool and to enhance the price. In February we advised the Western farmers to buy every sheep that their means would admit of, and to sell none, nor kill any, except the aged. We would renew that advice, with the addition that they import the Leicester and Cotswold breeds from Canada as largely as possible.—*Economist.*

To Relieve Muscular Pain in Horses.—The *Datura Stramonium*, or thorn apple plant, is a very excellent remedy, as an external application, for the treatment of muscular pain, ligamentary lameness, sprain of the fetlock, &c. It is a remedy of great efficacy in chronic pains and inflammatory tumors. Four oz. of the plant, to one pint of boiling water, are the proportions. When cool, the parts are to be bathed often; when practicable, a flannel is to be saturated with the fluid, and bound on the affected parts, the whole to be covered with oiled silk.

The above is from an exchange. Medical works state that stramonium as an outward application allays pain. It is used to make a salve by macerating it in hot lard, then straining it. It is applied to burns, scalds, and is used for piles and bruises. The thorn apple is a deadly poison.—*Scientific American.*

☞ The Scottish *Agriculturist* says:—"An animal possessed of a broad, full, capacious skull, with strong, evenly bent, deflective horns, will be found to have a thick neck at the base, wide throat, and strong nervous system, while one with long, narrow, contracted skull, and puny, abruptly bent horns, will be characterized by weakness, wildness and slowness to fatten."

Fattening Swine.

On every farm there are articles which may be made useful in fattening swine, if taken in season, but which if not so taken will be totally lost. Of these we may mention summer apples, and "wind-falls" of the late kinds. Later in the season, pumpkins may be used to advantage. September is a good month for fattening swine, the temperature being generally neither too hot nor too cold. The same quantity of food will produce much more pork now than in December. Besides, it is much more convenient and every way better to feed out such articles as we have named before cold weather comes and renders them liable to be injured by frost.

Summer squashes, if cooked, will fatten hogs very fast. Many people who have used them consider them as profitable a crop for summer and early autumn feeding as can be grown. They are easily raised, and a large yield can be obtained on almost any soil, with a moderate quantity of manure. If the crop is properly managed, the vines will produce a regular supply for a long time. It is best to take off the squashes when they have reached their full size, but before the outer portion becomes hard. Hogs will seldom eat them raw to much extent, but by steaming or boiling they are made palatable, and by mixing with them, while hot, some meal or shorts, a dish is formed of which the animals are very fond, and on which they will thrive well.

In regard to apples much has been said in regard to their value as food for animals, especially for fattening swine. Various experiments indicate that when cooked, they are worth nearly or quite as much as potatoes for this purpose. Hogs will eat ripe, palatable apples raw, in considerable quantities; but they will not eat those which are hard, especially acid ones, to much extent. It is somewhat so with the human family. If we eat apples or pears raw, we want them fully ripe and mellow; but for baking, or cooking in other ways, we frequently use those which are not fully ripe. Hence apples which are too hard to be fed to swine raw, may be given to them in a cooked state with advantage It would probably be an object to save in this way many of the winter apples which are now falling from the trees. Most New England farmers are in the practice of cooking potatoes for hogs, and the same apparatus which is used for this purpose will answer for apples and other articles.

Several years ago, the late Payne Wingate, of Hallowell, Me., made some interesting experiments in regard to the value of apples as compared with potatoes for fattening swine. We have not this report at hand, but have a pretty distinct recollection of its principal points, which are as follows: he took two shoats, in the month of September, and fed them an equal length of time on apples and potatoes, alternately, giving equal quantities of each article in the same period, and weighing the animals at each change of food. The potatoes and apples were boiled, and an equal quantity of meal was mixed with them, stirring it while the mess was hot. After a trial of several weeks, the gain of the pigs was found to be slightly in favor of the apples. The apples were a mixture of sour and sweet —mostly sour—being principally wind-falls of winter varieties.

Considerable use may be made of apples for feeding swine, the present autumn, thus saving potatoes which will keep through the winter, and also saving the corn which will keep any length of time.—*Boston Cultivator.*

Large Fleece.

Mr. Hiram Taylor, of Sugar Creek, Walworth county, Wis., the 3d day of June, sheared a full blooded Spanish buck, aged two years, the fleece weighing 22 lbs. This splendid buck is called Young Champion of the West, and is owned by Hiram Taylor & Co., Sugar Creek. He was raised by J. T. Stickney, Vermont, and is probably as good a young buck as is to be found anywhere. The clip above mentioned is one year and six day's growth.

Mr. Taylor also reports the weight of his clip as follows: ninety fleeces, the average weight being seven pounds—no fleece going below five pounds. We call this hard to beat.

Preventive of Hog Cholera.

A correspondent asks us for a remedy for hog cholera We have seen a good many remedies proposed, but they seldom cure in all cases. Prof. J. B. Turner, of Illinois, a gentleman in whom we place confidence, contributes the following preventive of hog cholera to the *Prairie Farmer:*

Take 1 peck of ashes, 4 lbs. of salt, 1 lb. of black antimony, 7 lbs. of copperas, 1 lb. of sulphur, ¼ or ⅓ lb. of saltpetre; pound the ingredients fine and mix them well, and keep them constantly in a trough by themselves, and each hog will eat what he needs of the medicine from day to day. If predisposed to cholera, they will eat it much more freely than if wholly well; and at such times the expense will be considerable. If, through any cause, a hog gets down, pour down him or induce him to drink in slops one gill of coal oil per day, till he dies or recovers.

Sheep-Raising in Minnesota.

J. W. HOYT:—Partly from the timely advice given in the FARMER we were induced to buy a small flock of common sheep one year and a half ago. I bought seven for twenty-one dollars. Only four were ewes; they brought eight lambs. Soon after lambing one ewe died, apparently from water around the heart, the heart-case being full of it, one of her lambs also died at the same time

From the seven I got thirty-seven and one fourth pounds of unwashed wool. The first of October dogs killed one lamb, that had three and one-half pounds of washed wool. This year I got nine lambs—lost two.

Notwithstanding these losses, I now have a flock of nineteen, old and young. This year the six old ones and six yearlings sheared sixty-nine and three-fourths pounds of washed wool; one unsound one lost half or more of her wool in February, so that she sheared only 2½ pounds each year; this is a fraction over six pounds each for the eleven sound ones. Who says keeping dogs pays as well?

I attribute the gain in wool principally to better keeping. Having plenty of timothy pasture after wild grass failed, they came into the winter yard, the 1st of December, as fat as I ever expect to see grass-fed sheep. Then with warm sheds, plenty of hay and water, and one and sometimes two ears of corn each, a day, they kept fat till spring, but in February of each year they shed considerable wool.

Before next winter begins I would like the best advice I can get, through the FARMER, for feeding and sheltering sheep so as to keep them fat without shedding wool.

Minnesota is admirably adapted to sheep-raising, and farmers are beginning to see their interests in this direction,—and also the *number of dogs in their neighborhood.*

W. P. UNDERWOOD.

RICHLAND, Minn., July 13, 1863.

BALLS OF HAIR IN THE STOMACH —The *Irish Farmer's Gazette* states that balls of hair or wool in the stomachs of calves and lambs can be dissolved by giving the animal a teaspoonful of soda in water, twice or thrice a day.

Sheep and Wool.

MR. EDITOR:—As there has been for the last year much excitement upon the subject of sheep and wool growing, I wish to say a few words in regard to what my sheep have done, and then let every intelligent farmer judge if they do not pay as well or better than other branches of farming.

In the fall of 1860 I brought from Vermont 74 full blood Spanish Merino sheep—the best I could get from some of the choicest flocks. Since that time I have purchased from Vermont 27 more, making 100. From that flock and their increase I have sold bucks to the value of $622, ewes to the amount of $278, and wool $534, making in all $1434; and I have yet on hand my this year's clip of wool, 924 lbs., and 123 sheep of the best end of my flock; being, aside from what I have sold, an increase of 23 sheep above the original number, besides my last spring lambs, 47 in number.

My sheep are heavy shearers, as facts will show. I have a buck lamb, 14 months old, from which I clipped 13 lbs. 12 oz. of long, beautiful wool. His weight was 73 lbs., being one pound of wool to 5⅓ pounds of carcass. Some object to the Spanish Merino on account of their small size, but is it not better to get large fleeces from small sheep than to furnish from 25 to 50 per cent. extra feed for large sheep and get no more wool? I also sold a buck lamb to one of neighbors, Mr. Brown, which sheared, at the same age, 13½ lbs., and I have several other lambs which sheared from 10 to 11½ lbs. each. The 123 sheep, as I said above, sheared 924 lbs. of clean, washed wool, making an average of 7½ lbs. per head—100 of which sheared 800 lbs; forty-two ewes of the 100 went 7¾ lbs., and 28 of said ewes averaged 8¼ lbs. per head. My sheep were all washed as clean as could be in clear running water, after being well soaked in a long rain, except some 8 or 10. My sheep have only occupied, at most, 39 acres of land, as follows: 25 acres for pasture, 10 for hay, and 4 to raise their grain.

Now, brother farmers, what branch of agriculture pays better than this? A JONES.

LEEDS CENTER, Columbia Co., Wis., Aug. 4, 1863.

REMARKS.—The above is certainly a fine show of figures, and will hardly fail to make more than one farmer who has no sheep wish he had about 2,000 of the same sort. But one item is omitted, to wit: the original cost of the flock. If the 100 did not cost a very extravagant sum, the speculation was, beyond all question, a good one. We have received several samples of the wool clipped this year by Mr. Jones, all of a very superior quality. Such examples are worthy of imitation.—ED.

Worms in the Head of Sheep.

Mr. B. S. Farnham, of this town, left at our office one day last week the head of a sheep that had died from worms in the head. It was a sheep eight years old, and was noticed to be unwell but a few days before it died. As this is a common disease in flocks we will give a brief diagnosis of it.

Cause.—The worm is the maggot of the sheep-fly, which deposits its eggs in the nostrils of the sheep during the month of August, where they usually remain until the warm weather of spring, when they are loosened, and ejected through the nostrils by the action of sneezing. As soon as they fall they crawl into the straw or manure and pass their chrysalis state, until they become a fly, when they are ready to propagate a new progeny.

Symptoms.—Frequent sneezing and running at the nose, with an appearance of stupidity. After sneezing the sheep will frequently turn the nose on one side, then on the other, with the head inclined downward.

Treatment.—Prevention is better than cure. Remedies for the former are: tar applied to the nose when at pasture; plowing furrows in the pasture for them to protect their nostrils from the invasion of the fly by placing them in the fresh earth. Remedies for the latter: fumigating the animal with brimstone, and applying spirits of turpentine to the nose and nostrils. Young sheep are rarely troubled with them.

BLOODY MILK.—A subscriber says he has a heifer that gives bloody milk, and he wants to know what will cure the trouble. The animal is probably affected with what is called garget. Give her a tablespoonful of nitre, in meal or bran, every other day for a week. Or give her a few slices of poke or garget root. A piece as large as a man's finger may be put between two halves of a potato and presented to the animal's mouth. Give two such pieces at once, and repeat the dose every other day for a week.—*Boston Cultivator.*

SCOURS IN LAMBS.—A writer in the Mark Lane *Express* thinks the great cause of scour in lambs is their being placed in pastures formerly heavily stocked with sheep. As a preventive, keep them off such pastures; cure—give them a new range often, and feed with corn and oil-cake well salted.

SLABBERS IN HORSES.—Green burdock leaves will, it is said, cure the slabbers in a horse in fifteen minutes, if he will eat them; and usually a horse troubled in that way will eat them.

FATTENING CATTLE.—In fattening your cattle see to it that they get their food regularly, and just enough to satisfy the cravings of hunger fully, as cattle that are overfed until they are foundered will be seriously injured by such over-feeding.

THE BEE-KEEPER.

Beehives.

The kinds of hives in use are so numerous that the inexperienced bee keeper is perplexed to know which one to choose. The originators all claim some special advantages and peculiarities belonging exclusively to their inventions. How shall a man know how to choose the best from the numerous candidates before the public?

We answer that it is impossible to do it (except by accident) unless he first makes himself acquainted with the natural habits and traits of the honey bee. If we first understand their wants and peculiarities, then we stand a better chance of choosing such a hive as is best adapted to their nature and our wants. If we "go it blind," we are pretty sure to throw our money and time away, and lose our bees. Our bees may not run out immediately, but are pretty sure to do so sooner or later. Then we come to the conclusion that it is not our "luck" to succeed in bee keeping. But *luck* had nothing to do with it. It was *ignorance*, followed by mismanagement. That was what was the matter.

Before any one engages in bee keeping, let him peruse carefully some good work or treatise on the honey bee. Quinby's *Mysteries of Bee Keeping* is a plain, practical, common-sense

manual. It ought to be in the hands of every one who owns, or intends to own, a hive of bees. It is a standard work. Langstroth's *Hive and Honey Bee* is another excellent treatise—perhaps the most scientific of the two, but not quite so well adapted to everybody's comprehension. With the knowledge gained from these two works, no one need be badly gulled by travelling agents, or owners and inventors of patent dividing, artificial-swarming, anti-moth, honey-persuading hives.

L. L. FAIRCHILD.

ROLLING PRAIRIE, July 27, 1863.

September Management.

In some sections of the country, where fall blossoms abound, bees will find pasturage during a considerable portion of this month; and though much of the honey they now gather is less palatable than that collected at an earlier period, it will answer well for their own subsistence in the coming winter. But their accumulations derived from honey-dews on evergreens generally prove injurious to the stock. This honey is of a very inferior quality, and cannot be properly purified by the bees, because of the lateness of the season at which it is gathered; and as it, for the most part, remains unsealed in the cells, it is apt to become acid and produce disease, if the bees happen to be long confined by the severity of the winter, or the inclemency of the weather. Besides this, when tempted to fly, by the occurrence of such honey-dews at so late a period, many bees will be lost by becoming entangled in the webs of spiders, or be destroyed by hornets, which now eagerly watch for, catch and devour them.

Towards the close of the month the colonies usually contain very little brood; and, if kept in common hives, the bees of such as are not intended to be wintered as independent stocks, may now be driven out and given to the best provisioned standards. The stores and combs may either be appropriated at once, or reserved in the hive for spring use, to receive the earliest swarms. Where movable-comb hives are used, it is unnecessary to defer these operations to so late a period, as the combs still containing brood may at any time be transferred to the hives intended to be wintered, and colonies can be united without producing much commotion among the bees. Such colonies only as are in a healthy condition, have a young and fertile queen, and ample stores of honey and pollen, should be wintered. The attempt to carry feeble stocks through the winter will almost invariably end in disappointment, besides being attended with continual vexation of spirit. The making of artificial colonies, properly employed, is of incalculable importance in bee culture, mainly because we can thereby always secure a supply of young and vigorous queens, but it becomes ruinous to an apiary when the bee-keeper multiplies stocks injudiciously and inordinately, and then undertakes to winter his feeble and ill-provisioned colonies. None should be reserved for wintering but such as have at least twelve pounds (nett) of sealed honey on the first of October, and have sound clean combs, a healthy vigorous queen, and bees enough to cover five or six combs when clustered on them in the evening. All that fall below this standard should be broken up, adding the bees to other stocks, and using the stores for further provisioning the weaker of those retained. The poorer the season was, the more care should be taken to unite and strengthen the colonies in the fall. All the good, new and clear combs obtained by these operations should be carefully preserved for spring use—they will "come into play" when hiving early swarms or making artificial colonies. These, if supplied duly with good empty comb, will, in three or four weeks, be quite as valuable as an old stock whose feebleness exacted much attention and constant care during the winter. He who is in the habit of wintering weak colonies must never expect to become a prosperous beekeeper. He will have trouble during the winter, and with all his watchfulness will lose some stocks; those which survive will make slow progress in the spring, be laggards during the summer and, instead of yielding him some surplus honey in the fall, will probably need renewed nursing.

Even if after a favorable season, it be found that all the colonies in an apiary have secured sufficient supplies, it will not be advisable to winter them all. Among them there will probably be some whose queens are old and decrepid. Should these chance to survive till spring, the number of eggs laid by them would be too small to replenish the population of their respective hives adequately and early. Such had better be disposed of in the fall. If the hives contain good combs and a sufficiency of stores, the superannuated queens should be removed and replaced by a young one from a colony not so well prepared in other respects to pass the winter safely. Italian queens may at this time be more conveniently introduced into common colonies than at almost any other period. There being now but little brood in the combs, the workers are less disposed to build royal cells after the removal of the old queen; and the Italian queen may, without disadvantage, be kept confined in a cage for a week or longer, till the bees have become entirely willing to accept her. Queens may likewise be used whose genuineness has been previously ascertained or fully tested.

Those who still practice the old mode of tak-

ing surplus stores from the colonies, by cutting out a portion of the combs containing sealed honey, must deal liberally with their bees—allowing them to retain a full sufficiency for their support, so situated as to protect them from the severity of the weather, and being likewise conveniently accessible, from time to time as needed. It is better that the bees should have more than enough, than to rely on spring feeding, should their supplies fall short.

Colonies which still retain their drones at the close of this month, are usually queenless. The population of such is almost invariably much reduced and composed of old bees exclusively, which are not well qualified to endure the rigors of winter. The proper course is to break them up and appropriate the honey. The combs of such stocks generally contain large quantities of pollen, and should therefore be preserved till the close of winter. Then they may profitably be given to young stocks of the previous year, which are rarely well supplied with that article.—*Bee Journal.*

THE HORTICULTURIST.

A. G. HANFORD,.....CORRESPONDING EDITOR.

Hardy Fruit Trees.

A correspondent last month inquires for hardy Wisconsin fruit. I have inquired scores of times of those who own orchards bearing from ten to two and three hundred bushels of fruit. The answer has been, nine times out of ten, "don't know. The labels I never paid any attention to. I bought a lot of a man who came along selling trees. Some had labels and some had none; but I hadn't time to bother; so I set them out; some lived, some died—so I don't know anything about what sorts I have got."

Is it any wonder that fruit raising has been considered uncertain and hazardous in this State? It would be just as sensible for a man to plant his field with seed corn of unknown variety, trusting to luck for its prolificness and adaptability to our climate and soil, as it would be to set out an orchard, without knowing whether he is setting summer, fall, winter fruit, crabs, bitter-sweets, or the best quality of hardy fruit. How is a man going to know with what to refill the spaces left vacant in his orchard, if he don't know what varieties have winter-killed, or what varieties have proved thrifty and hardy? The only way left, if there is no record, is to play the same "game" over again. He may do this a lifetime if he does not chance to hit the nail on the head and replace with the right sorts.

Farmers begin to see the folly of such slipshod management. One farmer, when his trees begin to bear, finds them nearly or quite all summer and fall varieties. They must be soon consumed or marketed, or they perish. Another finds his all late winter apples. While others are enjoying their early fruit he can sit with his mouth watering, and ponder over his folly. Farmers, be entreated to be more careful of the selection and record of the varieties you plant. It is not only for your individual interest, but for the benefit of the whole community. If an orchard is worth planting, it is worth while to spend a little extra time and do it up right. *It don't pay to do things by halves.*

As the result of experience, Geo. J. Kellogg, of the Belle Cottage Nurseries, at Janesville, gives us the following lists:

Summer Varieties of Apples.—Red Astrachan, Carolina Red June, Keswick Codlin, William's Favorite or Early Washington, St. Lawrence, Augustin Sweet.

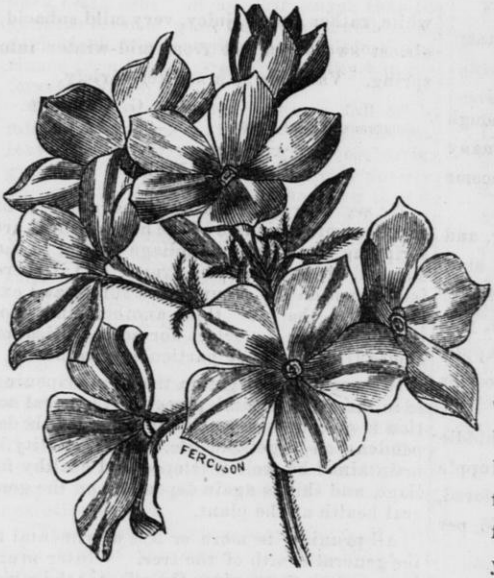
Fall Varieties.—Fall Queen, Snow, Lowell, Autumn Strawberry, Nonpareil, Fall Stripe, Fall Wine.

Winter Varieties.—Talman Sweet, English Golden Russet, Perry and Barrett Russet, Northern Spy, Yellow Belleflower, Willow Twig, Jonathan, Rawle's Janette, White Winter Pearmain, Red Romanite, Winter Winesap, Westfield Seeknofurther, Limber Twig, Pomme Gris, Fulton, Roman Stem.

The Maiden Blush is a fall apple, regarded with much favor here. It seems to be perfectly hardy, very prolific. Quality good, size medium. I have never seen more vigorous, thrifty and hardy trees anywhere than many specimens of the Talman Sweet growing in this and Jefferson county.

L. L. FAIRCHILD.

ROLLING PRAIRIE, Dodge Co., Wis.



PHLOX DRUMMONDII.

SALPIGLOSSIS.

Pretty Flowers.

A few more that deserve universal cultivation. The Phloxes are all beautiful and we are glad to see they are becoming so common in the gardens of town and country. Always very pretty, they have been very much improved of late by skillful cultivation, so that they now embrace all shades of color from pure white to dark purple. Some of the varieties are beautifully "eyed," others brilliantly striped. They bloom continually through the season, and constitute a very attractive feature of the garden.

The cut herewith presented to our readers represents the species known as *Drummondii*.

THE SALPIGLOSSIS.

Here we have another class of highly ornamental plants, blooming throughout the season, and very attractive, not only by reason of the form and texture of the flower, but likewise for the many beautiful shades and markings, including white, yellow, scarlet, crimson, blue, &c., splashed and marbled in the most varied and beautiful manner.

RULES FOR WINDOW PLANTS.—Watering —practice tells the eye whether or not required. The collar of the plant shows it. Better still, knock at the pot. If it sounds hollow, water; if it gives a muffled sound, don't.

Watering when not required sours the earth, and the fibres of the root will rot. To correct sourness, pour hot water—40 or 50 degrees Reaumur—if that won't do, repot.

Worse than too often watering is too seldom watering. Once neglected, water little and often till normal health is restored.

In warm days, the surface may appear moist and the root may be dry; plunge in water.

Water in the morning in preference, with rain or river water.

Let the water be of equal temperature with the air; the plant should be kept from gas; keep the soil loose.—*From the German.*

Three Long-Keeping Apples.

RED ROMANITE.

SYN. *Gilpin, Carthouse, Small Romanite.*

An old variety from Virginia, and though not of very good flavor, by reason of the many good qualities of tree and fruit, has become very popular in the West.

The tree is a good grower, very hardy, and uniformly productive; fruit of medium size, roundish oblong, smooth, fair and handsome; color, deep red on yellow ground; flesh, yellowish, firm, juicy; an excellent cider apple, and in spring becomes tender and good for eating; may be kept a year.

In passing through Milwaukee the middle of last month (June) we observed this apple for sale at the fruit stores, nicely colored, sound and fresh, dealers paying $1 75 per bushel for them.

FINK.

A seedling of Perry county, Ohio. Tree is a fine vigorous, upright grower, very hardy, an annual bearer and exceedingly productive. (The original tree has produced forty bushels of picked fruit in a season.)

Fruit, medium size, round, flattened; skin dull green becoming yellow as it ripens, with a slight brownish blush; very uniform, fair, smooth and handsome; flesh, white, juicy, mild subacid flavor. In use from April to midsummer — and will keep a year, retaining its juiciness beyond most long keepers.

It was first exhibited at the Ohio Fruit Growers' Convention in 1847. Its resemblance to the Tewksbury Winter Blush was so striking that it was deemed by the Convention identical. In 1854 it received the first premium on Seedlings at the Ohio State Fair.

On several occasions fruit of two seasons has been on exhibition at the same time. Like the Romanite it is also a good cider apple.

STARK.

From Delaware county, Ohio Tree is a strong handsome grower, very productive; fruit, large, roundish oblique; color, greenish striped and splashed with crimson and red, covered with fine dots, always fair and very uniform in size and shape; flesh, yellowish white, rather coarse, juicy, very mild subacid, almost sweet; in use from mid-winter into spring. Valuable as a market variety.

A. G. HANFORD.

COLUMBUS, O., July, 1863.

Ripening of Fruits.

We see everywhere around us numbers of excellent practitioners of the horticultural art stripping their vines of foliage to "let in the sun and air to ripen the fruit," and if there is one spot on the ground more sunny and exposed "to the air" than another, that spot they are sure to select for some apricot or choice fruit that they particularly value.

It seems to be forgotten that fruit ripening is in the main a vital process. Chemical action is of course essential to it; but it is dependent on vegetable life. This vitality is maintained by well developed and healthy foliage, and this is again dependent on the general health of the plant.

All pruning is more or less detrimental to the general health of the tree. Winter pruning or summer pruning, the effect is the same. Pruning is but a compromise. To gain a great object we sacrifice small advantages. In pruning that sacrifice is drawn from general health. We break off a strong shoot while green or succulent, that it may not rob a weaker one below; or we shorten a weak shoot in winter that it may push stronger next season. Here we gain desired advantages, but the vital force receives a shock. The more severely we pursue this course the more we perceive the shock, till, as is well known, we can take off leaves or shoots enough to utterly destroy the life of a tree. We prune trees at transplanting, just as we would cut off a man's leg; not because the tree likes pruning, or that amputation is a peculiarly pleasing operation, but as a part of that system of compensation which nature demands for broken limbs and broken laws. We gain an advantage but with a permanent loss.

Men like to deal with aphorisms. It is easier to follow a rule than to understand the reasoning; so if we tell a child to "take care of the pence and the pounds will take care of themselves," it will be more likely to be economical than if we read it a long homily on the reasons therefor. So we shall, perhaps, be more generally understood if we reduce all we have said to this, "take care of the leaves and the fruits will take care of themselves."

If we go into a dense wood, where the grape vine never knew the gardener's knife, and see the vine in its massiness of foliage, ambling over bushes and trees, in dells or ravines, and where the sun's direct light never shines, our "sun and light" friends will expect to see green and unripe grapes; yet no enraptured poet ever dwelt with more pleasure on "the

dark black orbs" of his fair angel, than the genuine lover of good fruit may dwell on the dark black orbs hanging in the wildest luxuriance from these extremely healthy but sunforsaken vines.

When your gooseberry leaves fall off by mildew, the grape leaves by hail, or the pear leaves by blight, do you have gooseberries, grapes or pears? We need scarcely answer; and yet the same persons, who know they do not get good fruit under these misfortunes, by their very systems of pruning, "which lets in the sun and air," are really working to the same unsatisfactory end.

"Take care of the leaves and the fruits will take care of themselves." Mr. Buist clearly showed this in an article he contributed to an early volume of the *Gardener's Monthly*. He set a novice to shorten in some shoots in his vinery, and before he saw him again, he had a few vines nearly stripped of their foliage. These vines had badly colored grapes. They never had before, nor had the rest of the grapes from the point where the defoliating operation ceased.

"Take care of the leaves and the fruits will take care of themselves." Long before Mr. Buist's article ever saw these pages, a few acute gardeners were well aware of the importance of the maxim. If they wanted grapes to color "very particularly" well, they shaded the vinery a week before the fruit ripened; "for," said they, "too strong a sunlight has a tendency to ripen leaves, and as soon as they ripen they are no longer of any service to the fruit. The longer we keep our leaves healthy the darker and better the fruit."—*Gardener's Monthly.*

Twelve Best Varieties of Pears for Market Cultivation.

At a meeting of the Worcester (Mass.) Horticultural Society a committee appointed to prepare a list of eight varieties of the pear, such as they themselves would recommend as best for market cultivation, stating whether on pear or quince, and the soil adapted to each variety, unanimously agreed to recommend the following eight pears, which are numbered in the order of their ripening, P. meaning pear roots, Q. quince roots:

1. Rostiezer. P.
2. Bartlett. P.
3. Flemish Beauty. P.
4. Paradise d'Automne. P.
5. Louise Bonne de Jersey. Q.
6. Seckel. P.
7. Duchesse. Q.
8. Beaurre d'Anjou. P. or Q.

For four more varieties, making a dozen market pears, the committee would add four autumn pears, numbered as they come into eating, viz:

1. Buffum. P.
2. Fulton. P.
3. Beurre Bosc. P.
4. Marie Louise. P.

The committee could not undertake to report in regard to the soil and cultivation specially adapted to each variety of the fruits above recommended. They would, however, state, in a general way, the conditions which they consider essential to the successful cultivation of nearly all pears. These are:

1. High cultivation; especially of certain varieties, as the Seckel, &c.

2. Very deep tillage.

3. Underdraining, wherever the subsoil is clay, hardpan or retentive in its character.

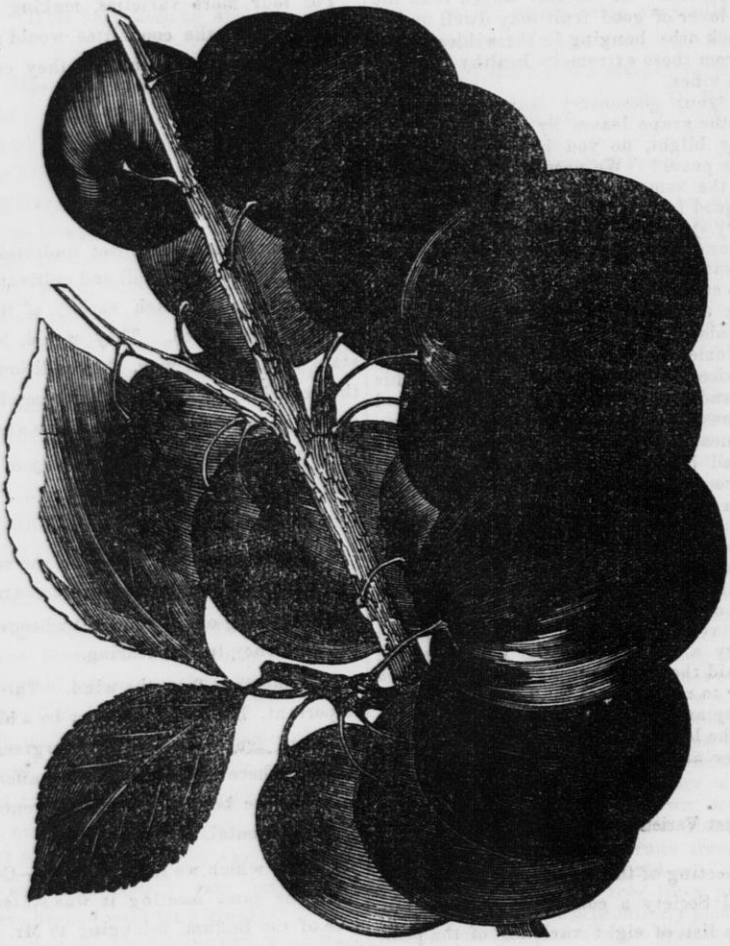
4. Thinning out of the fruit wherever there is a tendency to overbearing.

5. Protection from the wind. This is very important. The protection may be a high wall or board fence, or belt of evergreen trees, which, where the room can be afforded, is, perhaps, the best of all, being at once useful and ornamental.

[All of which we fully endorse.—Cor. Ed.]

At the same meeting it was stated that a tree of the Buffum, belonging to Mr. Edward Earle, has produced fruit to the average value of $23 per annum for the last ten years.

Begging Seeds.—How many of our readers are in the habit of annually begging or buying all their garden seeds? We know of some; and as human nature is about the same in all localities, it is presumed that the number of those who prefer to beg rather than take a little trouble on their own behalf, is not so small as it ought to be. Come, neighbor Shiftless, and Mrs. Slack, have a little more ambition, and never henceforth be guilty of planting seeds which you ought to have produced and saved for yourselves.



Why not Grow More Plums?

It has been in our mind many times to urge upon the farmers of Wisconsin more attention to the cultivation of the Plum. True, in some localities, it is liable to attacks from its special enemy, the curculio. But almost every other fruit has its foes likewise, and there is scarcely one of the larger class that does not suffer more than this one.

Several good reasons stand in its favor:

1. It is a delicious and wholesome fruit.

2. It is easily produced, and in quantities which make its production economical.

3. It is more easily preserved than several of the other fruits, requiring neither paring nor coring

4. The trees are hardy, do not require cultivation after being well established, as do the apple, the pear, and most other fruits. Indeed they succeed better and produce better fruit in a hard trodden soil, and may, hence, have their place in the pig and chicken yard, thus economizing space.

5. If well managed, the plum orchard will yield a larger return in money for the space occupied, than many others.

This article has been suggested at this particular time by a magnificent crop of plums lately examined in the well-ordered and prolific grounds of our esteemed friend, Mr. H. W. Hayes, of Palmyra. In his gardens plums are only one of a large family of fruits grown, and they receive comparatively little attention; and yet the profit in luxury and money which they yield is really surprising. Standing here and there, scarcely observed at first glance, and seeming to occupy no space at all, these trees will yield this year not less than 30 bushels of superior plums. Clustered by the hundred upon the slender branches, they were a temptation while yet green, and made the mouth water most decidedly in prospect of the ripe fruit, green, purple, and gold.

Among the favorite varieties is the Imperial Gage, illustrated on the adjoining page. Elliott says:—"As a market variety it is far superior to Green Gage and hardly surpassed by any other plum. Fruit above medium, oval; skin at first pale green with a white bloom, becoming yellowish green, rich, sprightly flavor. * * Season, first September."

Hooper styles it "a fine market variety; very rich stewed, in pies, or preserved."

Wisconsin fruit-growers speak highly of it, and surely nobody could speak ill of it after tasting such specimens as now lie in magnificent clusters on the table of our sanctum.

Cultivating Orchards.

An Illinois correspondent of the *Horticulturist*, referring to an article in a previous number in which the writer takes the ground that it is injurious to an orchard to plow the ground after the trees are planted, says:—"This idea is so at variance with our Western notions of orchard culture that I would like some explanation. My own rule has been to put in the plow as deep as I could, and never mind if it did break some of the roots of the trees; they seem to grow all the better for it. If it injures trees to plow among their roots, is it not bad practice to plow at all when there is any crop in the ground? We plow corn when the roots interlace across the rows, and the more we plow it the faster it grows, and the bigger the ears get. Is it a matter of opinion merely, or a difference of soil and climate, or what is the matter?"

To which the editor replies:—"It is true that a correspondent took the ground you name. Old, decaying orchards have been plowed at our suggestion in many different places, and always beneficially; hence we cannot appreciate the fears of those who argue that much damage will be the result of plowing an orchard. Like you, we cannot perceive why it should injure a tree to cultivate it any more than a crop of corn. We try to treat our trees and corn alike, and are benefitted in both just in proportion as we do it faithfully. Others are also, and we think all would be."

We (the Cor. Ed.) have tested this matter of culture very thoroughly in Wisconsin, and feel that we can heartily endorse as safe and profitable practice the above recommendation of the *Horticulturist*. Our advice has long been to keep the soil loose and mellow by free use of plow and cultivator, *ceasing to cultivate by first of August* that the growth may be checked and the wood ripen up seasonably.

The cherry and peach, *perhaps*, should be excepted in this treatment.

We have never found any objection to growing *hoed crops* in the orchard, but rather benefit, observing to *return to the soil an equivalent for the crop removed.*

We believe vastly more trees have been injured or destroyed by the growing of grass and grain, and by neglected culture, than by "high" or "over-culture."

The bark-louse (that pest of the orchardist in the northwest) is sure to be found on the stunted, grass-bound, grain-cropped trees.

Under such treatment trees make but feeble, sickly advancement. The new growth is none the hardier (as is claimed by some) because so small. In such starved condition the tree is not only fit subject to the depredations of the louse and borer, but also to summer's drouth and winter's cold. A. G. H.

Columbus, O., Aug. 1863.

MECHANICAL AND COMMERCIAL.

Commercial Economy.

BY A. K. SHEPPARD.

Next in importance to the science of political economy, or the knowledge of the relations of society to government, is a knowledge of the principles upon which commerce is founded, and of the proper relations existing between it and the various interests of society.

The most successful merchant is not always he who amasses the most money, but he who accumulates it in the proper observance of the immutable laws which govern the commercial and social as well as the physical world. The man who has neglected no other duties in the pursuits of commerce, nor suffered his moral nature to become dwarfed by a slavish subservience to money, is truly successful, whether his portion of worldly goods be great or small. That so few men succeed is a proof of the prevailing ignorance or disregard of the simple but important principles of commercial economy.

Consider for a moment the operations of Wall street; the bolstering up of worthless securities; the fictitious rise and fall of stocks, uninfluenced by any real cause. An "operator," by putting up a "margin," carries stocks to many times the amount of his capital, enough to have the decline of a single day sweep away his whole fortune. Or if the "bulls" are in the ascendant and a rise comes instead of a decline, he may become, as many have of late, a millionaire by the lucky investment of a few thousands. In neither case is this right. In the first instance we can readily discern the wrong, but can we as well in the second? Is it right that a reckless gamester, without the exertion of intellect, industry, or even adequate capital, should become the possessor of millions, with all the opportunities for good or evil which wealth bestows? Money, like any other good, (for it is *good*, and only ignorance or folly apply it to evil purposes,) should only be attained by exertion. The winning gambler is no more virtuous than the losing one. These suddenly acquired fortunes are the curse of this country.

Let a man of the most ordinary capacity, possessed only with the necessary recklessess, venture but a small "margin" in the stock or grain market. He makes his "calculations" and thinks he knows it all. By chance the market takes a favorable turn, (it might as easily have gone the other way,) and he has won. Behold his self-adulation and complacency. He can never after take advice. It is all through his "genius," "shrewdness," and "business talent."

He builds a large house; his conjugal partner, ever ready to assist in any expenditure that will excite the envy of her dear friends and neighbors, indulges in new carpets and mirrors and costly furniture. His family expenses increase. But his luck turns perhaps after he has well "spread" himself. (An expressive term if well considered.) His ventures are not so successful. His mind is always on the rack to provide the means for carrying on his schemes. Afraid of what Mrs. Grundy will say, he dare not reduce his style of living. Thus he continues under a hopeless burden, till the inevitable crash buries him. This is no exceptional case, but as statistics of business failures abundantly prove, it is only a type of a very large class of American merchants; the successful being the exceptional.

The cause of misfortunes like these is, evidently, too great facilities for obtaining credit. Probably nine out of every ten merchants "carry" property to even ten and twenty times the amount of their capital. Their risks are enormous, and *interest* is their bane. The young men of America have a great lesson yet to learn, viz.; that saving more than gaining is the true course to wealth. That prudence and economy (not meanness) always result in competence, besides leaving the mind and body in a healthful state; while a wild, speculative career brings upon its votary premature old age, a decripit body, an exhausted mind, and, at the close of life, generally an exhausted purse. Business, as most of our people practically interpret it, instead of being a means to an end, is made the grand end and aim itself, and every thing else subservient to it. Scheme is crowded upon scheme, project upon project, with no relaxation, no intermission. If recreation is sought, it is on the high pressure plan, at some crowded Saratoga or Newport, where the motto is, "the greatest excitement in the shortest time," that the treadmill may be again set in motion. This overdone business, this doing too much is eminently the fault of our commercial system, or more properly want of system and sound principles.

American society is a hothouse. It forces our business to overgrown proportions, with no real strength; it forces our men into (tobacco) smoke-dried dyspeptics, while they should be still vigorous, and it forces our girls into used-up belles, before they are out of their "teens." Conservatism is the element which we now need. We are like an overgrown schoolboy: weak in the joints and chest, and lacking muscle. We need to stop growing and to fill in and build up.

In this duty the business of the country should lead the way. Too often the merchant is a man of one idea. He can grow eloquent on the price of New York Central or of corn, but will not attempt to understand the science of trade. Hence he is often faulty in his own

judgment, mistaking recklessness for "business talent," and prudence for "fogyism." The merchant should be as highly educated a man as a member of any of the so called "learned professions," and the interests of his pursuits are certainly important enough to demand it. The true farmer is not simply the man who plods behind the plow, but it is he who understands the chemistry of the soil and its productions, the laws of nature and their relations to his trade. So the merchant should be the man of liberal education, versed in the *science* of his profession.

It has been truly remarked that a large proportion of business failures may be attributed to ignorance of bookkeeping and the science of accounts. And the number of merchants who are entirely dependant upon employes in this respect, and who are incapable of pursuing any sort of system of themselves, is very great. The "Revelations of a Stock Broker" show that some of the heaviest bank failures in the country are attributable to the gross ignorance and want of system of bank officers.

The fact is, business in this country is a sort of scramble in which the first is the best. Principles and rules are ignored. The wealthy men of to-day are the beggars of to-morrow; there is no stability in either men or fortunes.

Extravagance rules in business as in living. We cannot wait to increase our business with our capital. If we have $20,000, we stretch our credit to its utmost; we do as much business as $50,000 or $100,000 would warrant; our interest account eats us up. A few losses from a few reckless borrowers like ourselves, a fall in the market, and we are insolvent. We stagger along under the load of interest on borrowed capital, our risks are enormous, but we must keep in the treadmill. This is the life of very many of our merchants —*Merchants' Magazine.*

A Present for Mr. Ericsson.

The builders of iron vessels, after the plan of Captain Ericsson, have prepared for presentation to him a beautiful and appropriate present. It is a model of a monitor made of pure gold, 25 inches long, 5½ inches wide, and 1¾ inches deep, and is modeled on a scale of ⅛ of an inch to a foot. In every particular the model resembles the monitor vessel, except in size. It has a revolving turret, with guns in it, a smoke pipe, binnacle, steam whistle, etc. The machinery which turns the turret also sets an organ in motion which plays four tunes—Yankee Doodle, Star-Spangled Banner, Life on the Ocean, and a national air of Sweden, the country of Captain Ericsson. The cost of the model monitor was $7,000. It is to be exhibited in several of the principal cities before it is presented. John D. Benton, of Wilmington, Del., was the manufacturer.

SCIENCE, ART, STATISTICS.

A Question of Sex.

Since the commencement of the present war, the immense loss of life in battle and by reason of unaccustomed exposure, has occasioned serious queries in many minds as to the consequent preponderance of females in the population of this country. We have thought it well, therefore, to attempt to show that, for at least three important reasons, this fear is not well founded.

1. This presumption of a deficiency of males at the close of the war is based upon the established fact that in the world at large the total of males and of females, respectively, varies so little for any given time, or for a period of years, that there is never a serious preponderance of either sex. This presumption is correct; but it is not equally true that there is a numerical equality of the sexes in any and every given locality or country.

Thus, in Great Britain, there is to-day a decided excess of females, insomuch that political economists and socialistic reformers are devising ways and means for emigrating large numbers of young women to Australia, and other provinces of the British Empire. So, too, in many nations of the Old World. Indeed, it may be laid down as a general rule that in most of the old countries of the civilized world, whence emigration is considerable, there is a numerical excess of females.

If, therefore, the general proportion of equality be true, there must somewhere, and in the newer countries of necessity, be a deficiency of females and a corresponding excess of males. And statistics show that such is really the case.

Thus, according to the census of 1860, there were at that time, in round numbers, over *seven hundred thousand* more males than females in the United States of America.

The reason for this marked inequality is found in the larger influx of males, by immigration from other countries—a theory not only countenanced by the philosophy of emi-

gration, but remarkably demonstrated by the detail of facts established by our census returns from the individual States. For example, in Massachusetts, one of the oldest of the original States, the number of females was found to be, in 1860, 37,000 less than the number of males; while in Michigan there was an excess of 40,000 males, in Wisconsin of 43,000, and in Illinois of 92,000. In the still newer States, and in some of the territories, chiefly settled by enterprising pioneer young men who are not yet ready to marry, and by adventurous married men whose families are temporarily left behind in the older States, the disparity is still more surprising: as in Colorado, where the proportion of males to females is as *twenty to one.*

If, then, there was an absolute excess of males at the beginning of the war to the number of 700,000, it must be a very bloody and very protracted war that will overcome even this excess.

2. But there are causes and influences at work whose tendency is at once to counteract the unequalizing tendencies of the war. The most important of these is the constant influx of population from the Old World, inasmuch as a very large proportion of all who come to our shores—and more particularly is this the case now, during the progress of the war—are *men*, in the prime and vigor of manhood.

3. And then, there are correcting causes in operation whose effects, though more remote in time, are yet more certain. In time of war a majority of children born are males. It is philosophical that it should be so, and observation confirms it as a fact.

Just the nature of these causes and their *modus operandi* it is, perhaps, quite difficult to determine, since the relations between the psychological and the physiological forces are, as yet, imperfectly understood. There is no principle of psychological science more firmly established, however, than that mental causes have a mighty influence in determining physiological conditions. Especially is this true in its application to the offspring in the first stage of development, as at the time of conception and during the earlier period of gestation. And, if bodily form, cerebral conformation, and even extraordinary physical marks are determined, as we know they often are, by mental conditions of father or mother, or both, either at the moment of fecundation, or during the period of fœtal development, why may not powerful impressions begotten of masculine thoughts, emotions and desires, have something to do in determining the sex of the offspring?

Whether the sex be decided at the moment of conception, as is the popular notion, or whether afterwards, as is taught by Siebold, Ploss, Martegoute, Ducpetiaux, Le Play and others, is not important to this theory, since the cause referred to, if it be a cause, would operate alike in either case. The times are heroic, demanding, as never before, an unfailing supply of masculine force. This feeling is shared by the whole people, without distinction of sex, and the sturdy, manly qualities needed for the present struggle with rampant and powerful treason are craved by all, whether men or women. We believe that these psychological forces, taken in connection with possibly increased physiological impressibility, are of themselves sufficient to account for the important fact of an excess of male births at the present time, as stated above. But whether accounted for upon this hypothesis or another, the *fact* stands prominently forth, and it is that with which we have more especially to deal at this time.

May we not, in view of all the facts herein referred to, re-assure ourselves of these two truths:—first, that there is really no ground for apprehending a serious disturbance of the equilibrium of the sexes in this country on account of the war; and secondly, that all the great laws of nature are so characterized by wise adaptations and just compensations that we may always confide in them most implicitly?

Water-Lime for Pipes.

MR. EDITOR:—In your next issue of the FARMER, will you be so good as to give what information you can in regard to the use of water-lime for water-pipes. I should like to know if it has been much used for that purpose, and whether it is cheap and durable, and what amount of pressure it will sustain.

D. BALLANTINE.

PATCH GROVE, June 21, 1863.

Area and Population of Mexico.

Mexico is made up of twenty-one States, three Territories and one federal district, the names, areas, and populations of which were, in 1850, as follows:

	Square miles.	Populat'n.
Chipas	16,680	144,070
Chihuahua	97,015	147,600
Coahuila	56,571	75,340
Durango	48,489	162,218
Guanajuato	12,618	713,583
Guerrero	32,003	270,000
Jalisco	48,590	774,461
Mexico	19,534	973,697
Michoacan	22,993	491,679
Nuevo Leon	16,688	133,361
Oajacca	31,823	525,101
Puebla	13,043	580,000
Queretaro	2,445	184,161
San Luis Potosi	29,486	368,120
Sinaloa	33,721	160,000
Sonora	183,467	139,474
Tabasco	15,609	63,508
Tamaulipas	30,445	100,064
Vera Cruz	27,595	264,725
Yucaton	52,847	680,948
Zacatecas	30,507	356,024
Tlaxcala (Territory)	1,984	80,171
Colima (do)	8,020	68,243
Lower California (do)	60,662	10,000
Federal district	90	200,000
Total	829,916	7,661,520

EDUCATIONAL.

The Educational Conventions.

The meetings of the State Teachers' Association at Kenosha, on the 28th of July, and of the National Association at Chicago, Aug. 5th, are reported to have been, in respect of large and influential attendance, about the most successful that have yet been held. This argues well for the faithfulness and zeal of the noble profession whose end is the molding of the characters of the youth of the country.

It was our intention to be present at both of these conventions, but sickness prevented, so that we were only able to slip down to Chicago in time for the closing exercises of the National Convention on the evening of the 8th ult. We can't say that we were particularly edified by the numerous buncomb speeches on that occasion, but as it was the closing hour and the immense concourse of people who crowded Bryan Hall to its utmost capacity were in a remarkably patriotic mood, we are disposed to make but small account of what the *Times* considered as the mere vaporings of a town meeting.

The only two respectable speeches we heard were those by Hon. Lyman Trumbull, U. S. Senator, and Superintendent Pickard, of this State—the former an eloquent and patriotic statement of the great truth that the intelligence and virtue of the people is the only sure foundation of a republican government; the latter, a sharp and exceedingly pungent satire on the boastful and pointless speeches made by most of those who responded to the Call of the States.

We were informed that 1100 names had been enrolled on the list of regular attendants and that a number of very able papers were read during the progress of the Convention. The heads of some of the most distinguished universities and colleges were present, as were also a number of the State Superintendents of Public Instruction.

Whether managed in the best possible manner or not, it is, nevertheless, very certain that these reunions of the teachers of the country are calculated to promote the great objects for which they were inaugurated, and we rejoice to find that they are increasing in interest.

We learn that Mr. S. H. Peabody, of Fond du Lac, President of the State Convention, in his address at the opening of the Convention, discussed at some length, and with ability, the question of the State Agricultural College, strongly urging its importance to the State. We have not room in this No. for even a synopsis of his views, but shall take occasion to lay them before our readers at some future time.

THE HOME.

BRINGING WATER FROM THE WELL.

Early on a summer's morn,
While the lark was singing sweet,
Came, beyond the ancient farmhouse,
Sounds of lightly tripping feet.
'Twas a lowly cottage maiden,
Going, why let young hearts tell,
With her homely pitcher laden,
Bringing water from the well.

Shadows lay athwart the pathway,
All along the quiet lane,
And the breezes of the morning
Moved them to and fro again.
O'er the shadow, o'er the sunshine,
Passed the maiden of the farm,
With a charmed heart within her,
Thinking of no ill nor harm.

Pleasant, surely, were her musings,
For the nodding leaves in vain
Sought to press their bright'ning image
On her ever busy brain.
Leaves and joyous birds went by her,
Like a dim, half-waking dream,
And her soul was only conscious
Of life's gladdest summer gleam.

At the old lane's shady turning,
Lay a well of water bright,
Singing soft its hallelujahs
To the gracious morning light;
Fern leaves, broad, and green, bent o'er it,
Where its silver droplets fell,
And the fairies dwelt beside it,
In the spotted foxglove bell.

Back she bent the shading fern-leaves,
Dipped the pitcher in the tide—
Drew it, with the dripping waters
Flowing o'er its glazed side.
But before her arm could place it
On her shiny, wavy hair,
By her side a youth was standing!
Love rejoiced to see the pair.

Tones of tremulous emotion
Trailed upon the morning breeze,
Gentle words of heart's devotion
Whispered 'neath the ancient trees;
But the holy, blessed secrets
It becomes me not to tell;
Life had met another meaning—
Fetching water from the well!

Down the rural lane they sauntered.
He the burthened pitcher bore;
She with dewy eyes down looking
Grew more beauteous than before!
When they neared the silent homestead,
Up he raised the pitcher light,
Like a fitting crown he placed it
On her head of wavelets bright.

Emblem of the coming burdens
That for love of him she'd bear,
Calling every burden blessed,
If his love but lighten there.
Then, still waving benedictions,
Further—further off he drew,
While the shadow seemed a glory
That across the pathway grew.

Now about the household duties
Silently the maiden went,
And an ever radiant halo
With her daily life was blent.
Little knew the ancient matron,
As her feet like music fell,
What abundant treasure found she,
Fetching water from the well.

[From the State Journal.]

Sight-Seeing at the Metropolis.

NEW YORK, June 8, 1863.

Editors of State Journal: Since my letter of ten days ago we have about finished up the great city. We were wise enough to begin with such places as the Five Points and the Tombs, reserving the agreeable for later impressions. The lanes and alleys and rag population are said to have undergone wonderfully renovating changes in the past dozen years. As it is, notwithstanding the vast outlay of human and Christian benevolence expended in Industrial Schools, Mission Sabbath Schools, Homes for the Friendless, Guardian Societies, Bible Readers, the cheapness of soap and abundance of water, New York to-day spreads out a mission field from which no one need turn to the jungles of the Old World.

The magnificence of this emporium of the wealth and art of the American continent has been written all over. Have we, the little party of Madison people of whom I spoke in my last, seen it all? Haven't we! Every great building, bridge, manufactory; all the sights and secrets of the Navy Yard, including Admiral Paulding and the inside of one of the turrets of the *Roanoke* through the grand entrance of a port-hole; all the big machinery in town, to the almost live intelligence of the *Tribune* Power Press; all the [loyal] editorial sanctums and their inmates; Barnum and his babies; asked the price of everything at Stewart's and the India; looked at every thousand dollar shawl and pair of pretty baby shoes on Broadway; spent whole mornings at bookstores, afternoons at schools of design, and evenings at picture galleries; saw Cotapaxi as often as we could; had on all the diamonds in Maiden Lane once; yesterday, our last Sabbath in the city, said prayers in the morning amid the solemn chant and choral of Trinity, and in the evening found ourselves floating away into the most delightful of tranquilities by the music of vespers at the Church of the Messiah.

My trunk is packed and arrangements

made with some of our party for an early start, this morning for Washington. This, that has been just indicated, with ever so much that can never be written, has been three weeks in New York.

Does any one suppose that the city proper absorbed all of that just passed, precious three weeks? We who have been wide awake, with real western enthusiasm, retiring at two and rising at four, when we chose to, can tell of certain glorious days, and half days—days that seemed made on purpose for us to spend outside. We took the hint, a lunch basket, an old resident friend, an accomplished excursionist, and went,—where *didn't* we go?

The day we went down to Sandy Hook was my first experience on the ocean. Our steamer, the *Merrimac*, is one of the finest, and larger than most of the regular passenger lines. That day it carried banners and music and a great crowd of friends escorting Mr. Beecher to the *City of Baltimore*, upon which were already a party of missionaries embarked for their far missions of danger and good will. Among these were Mr. and Mrs. Smith, known to many of your readers. The sailing of this little band, the majesty of the great ship, the immensity of the great ocean, the perfect day of God's blue arch bending over all—these made an impression never to be effaced.

One of the pleasantest of our trips out of the city, was up Hudson river, to High Bridge. I will not attempt to give its dimensions, or speak specially of its structure. The memorandum made at the time, mislaid. Everybody knows it is a great stone bridge, over which, through pipes laid on the top, the water of the Croton, from thirty miles distant, is brought into New York, for the use of its hundreds of thousands of people. Does everybody know that the new reservoir, new Central Park, has an area of ninety-six acres, forty-five feet deep with walls of solid masonry, substantial, yes, more so than those of our proudest forts? God's forces, of which the cup of cold water is a type of the grandest, are mightier than any man can forge.

I wish I *could* tell all who have never seen it, about that bridge, so that they would seem to themselves to have stood, as we did, under its grand arches and sent Old Hundred up to the God of the mountain and the rock. I wish I could make all who have not been here, see some of the days, and westward gliding evenings, that we saw up bay, and river, and island, and shore, until our dreams were made up of the magnificence of earth's best of sky, and water, and wood.

The moments I had apportioned to this sketch are gone, and I have not yet spoken of Greenwood, our visit to Fort Hamilton and La Fayette, our sea bath, the *Great Eastern*, the Lee Avenue Sabbath School, and other things, some of which interested me more than anything I have mentioned, and which must have special notice hereafter.

Before many days, I will send you a word from the Capital. MRS. HOYT.

Nice Things for the Soldiers.

We hope that every good housewife in Wisconsin who has it in her power to prepare any nice thing in the way of delicacies, medicinal drinks, or disease-preventing food, such as wines, jellies, pickles, sauerkraut, &c., &c., will not allow the favorable season to pass without giving to our noble patriot soldiers this good proof of their sympathy and loyal devotion to the cause of the country.

With a view to this patriotic service, as also for your own advantage, we have published in this and the last numbers of the FARMER numerous approved recipes for preserving fruits and manufacturing medicinal wines and other delicacies.

Blackberry Cordial is an excellent remedy for dysentery; and Elderberry Cordial is a most grateful aperient or laxative.

Women of America! if to give a cup of cold water to a needy disciple was accounted by Christ as worthy of a reward, how much more shall ye be blessed if in this time of trial you remember to give of your best gifts to the heroes who are giving their lives a sacrifice to their country!

A LESSON FOR WIVES—OR HUSBANDS.

Love is fickle; sages say
Beauty cannot hold him;
Love will steal himself away,
Maidens, if you scold him.
Love, he will not live with strife,
Even turns from beauty,
If the lady plagues his life
With her household duty.

You can have him in your power,
Ladies, if you try it;
Use him as you won him first,
Love, he can't deny it.
Do not fret and scold and pout,
Aggravating trouble;
Beauty kicking up a rout
Makes misfortune double.

HEALTH AND DISEASE.

Health of Children in Summer.

There is a way to kill children, and a way to keep them in health; but, unfortunately, many mothers unwittingly choose the way to kill; and this is the reason of such sad mortality among them.

If you would kill your children, keep them pent up in the foul air of the nursery; feed them on impure milk, on constipating food, salted and putrescent meats, bathe them only about once a month, and call in the doctor with his drugs every time they wince or complain of the colic.

If you would insure their health and the attainment of vigorous manhood and womanhood, indulge them much in the open air, despite the tanning suns, feed them on brown bread, plain-seasoned vegetables, and good ripe fruits; bathe them often in soft, tepid water, and beware of the poisonous disciples of Æsculapius. So say the wisest and more honest of the medical professors, and so say we.

Cure for the Bite of a Mad Dog.—The following is worthy of the attention of all, particularly as the season is coming on when dogs are no longer safe:

Mix one pound of common salt in a quart of water, and then bathe with and squeeze the wound with the same one hour, then bind a little more salt on the wound for twelve hours.

The author of this receipt was bitten six times by mad dogs, and always cured himself by the above mixture, and offered to suffer himself to be bitten by any mad dog in order to convince mankind that what he offered was a real truth, which numbers could testify.—*New Haven Register.*

Cure for Poisoning by Ivy.—In case of poisoning by ivy, plunge the part affected in hot water—as hot as can be borne—holding it there sometime. The unpleasant itching and burning sensation will be removed, and two or three applications are a sure cure—at least this has been the case with our informant.—*N. E. Farmer.*

DOMESTIC ECONOMY.

To Put up Fruit Without Self-Sealing Cans.

Prepare a cement of one ounce rosin, one ounce gum-shellac, and a cubic inch of beeswax; put them in a tin cup, and melt slowly—too high or quick heat may cause it to scorch. Place the jars where they will become warm while the fruit is cooking. If they are gradually heated there is no danger of breaking.

As soon as the fruit is thoroughly heated, and while boiling hot, fill the jars full, let the juice cover the fruit entirely Have ready some circular pieces of stout, thick cotton or linen cloth, and spread over with cement a space sufficient to cover the mouth and rim of the jar. Wipe the rim perfectly dry, and apply the cloth while warm, putting the cement side down, bring the cover over the rim and secure it firmly with a string; then spread a coating of cement over the upper surface. As the contents of the jar cool, the pressure of the air will depress the cover, and give most positive proof that all is safe.

The cheapest as well as the most suitable jars for this use (quart size) cost $1.50 per dozen. Queen's or yellow ware has imperfect glazing, and the moisture is forced through the sides of the jar. Self-sealing cans that have failed can be pressed into service: stone jars, common bottles, tin cans, and various vessels that every housekeeper has on hand can be made to answer only be sure that the fruit is boiling hot, and the cover is properly adjusted.

Many think that sugar is essential to enable the fruit to keep. This is not so. "Berries and peaches" are better put up without it. Sugar strewn over them an hour before eating, gives them more the flavor of fresh fruit. Cook only sufficiently to fill two jars at once, to avoid crushing tender berries. Pears and quinces are best cooked in water till tender, putting in as many as will cover the top of the water at one time; when clear and tender, and to the water add sugar to taste; as soon as boiling hot put in the fruit, and when it is penetrated with syrup, put it in jars, and fill it up with syrup boiling hot. Seal as directed. Apples the same way, or cooked in water only, and secured. Let them be in quarters, for, if mashed, the pulp will hold so many air-bubbles it will not keep.

Grapes. Pulp and cook till the pulps are

melted; strain out the seeds; put in the skins, and when well cooked, add sugar to taste. When the syrup is sufficiently thick, seal.

Plums are put in with or without pits, as one chooses.

Tomatoes are cooked till all the lumps are dissolved, and the mass quite thick.

Sweetmeats of any kind, secured in this way, will keep for years. If required for transportation, perhaps it would be well to use close fitting corks, cut off even with the cemented cloth, otherwise corks are not necessary.

Vegetables. Squash is steamed in pieces.

Cauliflower cooked as for the table; fill jars while the articles are hot, and fill up with boiling water; let the jars remain in a kettle of boiling water for a while to expel any air that may have lodged while filling. When no air escapes, seal up with jars in the kettle; when cool remove them.

Green Peas and Green Corn seem to possess a fermenting principle, which is not destroyed by a degree of heat sufficient to secure them apparently as well as fruit. To keep these, I have tried various methods; all fail except drying or putting in salt.

By this method of self-sealing, provision can be made in years of plenty for those times when fruit fails, and with less labor and a certainty of success that no other method possesses.—*Godey.*

CURRANT JELLY.—Pass the currants between rollers so as to burst each currant, and press out the juice. (Any other method will answer to break the fruit, but this is most convenient.) Place the juice in a perfectly clean copper or brass vessel over the fire, and heat it slowly until it simmers, being careful not to permit it to boil, or much of the aroma of the currant will be lost. Skim the juice until the scum ceases to rise; then pour the hot juice on to loaf sugar broken, and placed in a wooden vessel. Stir it until the sugar is melted by the hot juice, then pour into tumblers or other convenient vessels; when cold, it will be found thickened to a firm, bright colored and high flavored jelly.

ELDERBERRY WINE.—The berries when ripe are picked by the stems, then stripped with the hands, or trimmed with shears. Next they are mashed fine, which can be done by means of a pounder similar to those used for pounding clothes. Let them remain until the next day when the juice is pressed out in a cheese press, or any other convenient way. Next, boil the juice twenty minutes; skim it, and add four pounds of sugar to the gallon. When milk-warm add a small piece of bread crust that has been dipped in yeast. Let it stand three days, remove the crust, and the wine is ready for bottling. Age improves it. Some add spices to the liquor when boiled.

BLACKBERRY WINE.—The following is a recipe which was given at a late meeting of the Farmers' Club, New York, by Mr. R. G. Pardee:—"Add three pounds of refined sugar to each half gallon of the pure juice, and one quart of water, and let it ferment and work off freely at the bunghole. Care must be taken to keep the cask full. I would not recommend adding over fifty per cent. of water to the juice of any fruit to make wine. The great fault is over-watering. Some grapes will make wine without sugar, but there are few that will answer. Use more juice and less water, and give your wine age. Don't sweeten your must until you make syrup when your intention is to make wine. I have lately tasted wine made of blackberries that was equal almost to the very best imported grape wine; it was well worked in a barrel by keeping it constantly filled up, so that all the froth and matter rising with it would go over, until fermentation ceased, and then bunged tight, and stood till a convenient time in winter or spring to draw off and bottle. It must be corked tight, sealed, and laid down till two years old, when it becomes a truly excellent wine."

WIT AND WISDOM.

AN OLD SAW NEW-SET.—

"Come wife," said Will, "I pray you devote
Just half a minute to mend this coat,
Which a nail has chanced to rend."
"'Tis ten o'clock," said his drowsy mate;
"I know," said Will, "it is rather late,
But it is never too late to MEND."

☞ Morality, *without religion*, is only a kind of dead reckoning—an endeavor to find our places on a cloudy sea, by measuring the distance we have run, and without any observation of the heavenly bodies.

☞ A country doctor announces that he has changed his residence to the neighborhood of the churchyard, which he hopes may prove a great convenience to his numerous patients.

☞ "It is very difficult to live," said a widow, with seven girls, all in genteel poverty. "You must husband your time," said a sage friend. "I'd rather husband some of my daughters," answered the the poor lady.

☞ "Have you dined?" said a lounger to his friend. "I have, upon my honor," replied he. "Then," rejoined the first, "if you have *dined upon your honor*, I fear you have made but a scanty meal."

☞ Somebody once remarked that the Englishman is never happy but when he is miserable; the Scotchman is never at home but when he is abroad; and the Irishman is never at peace but when he is fighting.

☞ The great obstacle to progress is prejudice.

WHY A DOG WAGGLES HIS TAIL.—Lord Dundreary tells his friends the solution of this difficult riddle: "Because the dog is stronger than the tail; if he wasn't the tail would waggle the dog."

☞ No man, "living," should say an evil word against the doctors.

☞ Neither mind nor body can long endure incessant toil. Relaxation is therefore a Christian duty. No man has a right to destroy himself by labor, any more than by poison. The bow that is always bent loses its elasticity; the mind that is never relaxed either will wear out the body or become insane.

☞ Curran was once asked by one of his brother judges, "Do you see anything ridiculous in this wig?" "Nothing but the head," was his reply.

☞ The man who made an impression on the heart of a coquette has taken out a patent for stone-cutting.

☞ At a printers' festival the following toast was given: "The Editor and the Lawyer—the devil is satisfied with the *copy* of the former, but requires the original of the latter."

☞ A wag says of a woman—to her virtue we give love; to her beauty, admiration; to her hoops the whole pavement.

MISCELLANEOUS.

OUR SHIP OF STATE.

Sail on, O Nation strong and great!
Humanity with all its fears,
With all the hopes of future years,
Is hanging breathless on thy fate!
We know what master laid thy keel,
What workmen wrought thy ribs of steel,
Who made each mast, and sail, and rope,
What anvils rang, what hammers beat,
In what a forge and what a heat
Were shaped the anchors of thy hope.
In spite of rock and tempest's roar,
In spite of false lights on the shore,
Sail on, nor fear to breast the sea.
Our hearts, our hopes are all with thee,
Our hearts, our hopes, our prayers, our tears,
Our faith triumphant o'er our fears,
Are all with thee,—are all with thee!—*Longfellow.*

THE GRASSHOPPER.

Happy insect, what can be
In happiness compared to thee?
Fed with nourishment divine,
The dewy morning's gentle wine!
Nature waits upon thee still,
And thy verdant cup doth fill.
Thou dost drink, and dance, and sing:
Happier than the happiest king!
All the fields which thou dost see,
All the plants belong to thee;
All that summer hours produce,
Fertile made with early juice,
Man for thee does sow and plow;
Farmer he, and landlord thou!
—*From the Greek of Anacreon.*

Sound Reasons.

Daniel Archer, Esq., of Springfield, Wis., gives the following substantial reasons why tobacco should be *es*chewed. We commend them to all who indulge in the "vile weed:"

1. God made man with a clean mouth, from which the inference is that he meant he should *keep* it clean.

2. Science and experience concur in teaching us that tobacco is positively injurious to the bodily health, if it is not, indeed, corruptive of a pure taste and good morals; the which being true, we cannot indulge in its use without sin, without becoming suicides in fact.

3. By using tobacco we disregard the positive injunction, "Whatsoever ye eat or drink or whatsoever ye do, do all to the glory of God." No man will have the hardihood to say that he believes he may glorify God by a criminal indulgence in what he knows to be at war with his health of body and purity of soul. "To him that knoweth to do good and doeth it not, to him it is sin."

4. It is a miserable, filthy habit, offensive to all persons of really pure and uncorrupted taste, and every man is bound to pay a decent respect to his neighbor's comfort.

A ROTHSCHILD ON THE REBEL LOAN.—Dr. McClintock writes from Paris as follows:—"A gentleman was transacting some business with the Frankfort head of the house of Rothschild. After the business was finished the conversation turned toward American affairs. "How is it," asked the stranger, "that the Confederate loan is not quoted in Frankfort?" "Because we do not believe in the loan, and because we do not believe in the cause." "But the loan was negotiated here by the house of Erlanger." "Yes," replied Rothschild, "but you do not find it held here, to any extent, except by that house. No Jewish house of any character or wealth has touched that loan, nor will they touch it.'" This shows that Jews are wiser than Christians, in lucre.

TRUE PATRIOTISM.—"I wage war because it is a duty and because I desire the preservation of the Government and Union." We are fighting battles not of hate or vengeance, but upon the principles of honor, for a cause, not

for blood, but for freedom and the institutions of civilization."

"This war will give us future permanence and greatness."—*John J. Crittenden.*

LOSSES IN THE RUSSIAN CAMPAIGN.—A writer in the Washington *Chronicle* contends that "Americans know nothing of military disaster," and proceeds to fortify his assertion by a statement of the losses suffered by the French in the famous Russian campaign. The grand army of invasion consisted of 301,976 men and 103,854 horses. During the short campaign of nineteen weeks and two days, the losses of the French, purely military, amounted to the enormous number of 247,000 men and 92,000 horses! These statistics are derived from official statements of the War Office of Paris. But other French armies, besides that under the immediate command of Bonaparte, entered Russia, and took part in and prolonged the campaign. The total force numbered 647,000 men, of whom 600,000 were combatants. The number of those who got out of Russia was 85,000. The loss of the French, then, during that brief campaign of twenty-five weeks, was 562,000 men and 900 cannon.

YOUTH'S CORNER.

THE WASP AND THE BEE.

A wasp met a bee that was buzzing by,
And he said, "Little cousin, can you tell me why
You are loved so much better by people than I?

"My back shines as bright and as yellow as gold,
And my shape is most elegant, too, to behold,
Yet nobody likes me for that, I am told."

"Ah, cousin," the bee said, "'tis all very true:
But if I had half as much mischief to do,
Indeed they would love me no better than you.

"You have a fine shape and a delicate wing,
They own you are handsome, but then there's one thing
They cannot put up with, and that is your *sting*.

"My coat is quite homely and plain, as you see,
Yet nobody ever is angry with me,
Because I'm a humble and innocent bee."

From this little story let people beware;
Because, like the wasp, if ill-natured they are,
They will never be loved if they're ever so fair.
—*Jane Taylor.*

Names of the Months.

The names of the months were given by the Romans as follows:

January was so called from Janus, an ancient king of Italy, who was deified, from the word Janarius.

February is derived from the Latin word *februo*, to purify; for in this month the ancient Romans offered expiatory sacrifices to purify the people.

March was anciently the first month—is named after Mars, the ancient god of war

April is named after the word Aprilus, or opening, because in April vegetables open and bud.

May is derived from the word *majores*, and was so called by Romulus as a mark of respect to the senators.

June is named from the word *junius*, or the youngest.

July was named in honor of Julius Cæsar.

August was named in honor of Augustus, by decree of the Roman Senate.

September was named from the word *septem*, or seven, being the seventh month from March.

October from the word *octo*, or eight, it being the eighth month.

November from the word *novem*, nine, it being the ninth month.

December was named from the word *decem*, ten, it being the tenth month from March, which was anciently the first.

Never tell a Lie.

How simply and beautifully has Abd el Kader, of Ghilon, impressed us with a love of truth in a story of his childhood. After stating the vision which made him entreat of his mother to go to Bagdad and devote himself to God, he thus proceeds: I informed her of what I had seen, and she wept; then taking out eighty dinars, she told me, as I had another brother, half of that was all my inheritance, and she made me swear when she gave it to me, *never to tell a lie*, and afterwards bade me farewell, exclaiming—"Go, my son, I consign you to God; we shall not meet until the Day of Judgment."

I went on till I came near Hamandal, when our kafilah was plundered by sixty horsemen. One fellow asked me what I had got.

"Forty dinars," said I "are sewed under my garments."

The fellow laughed, thinking, no doubt, I was joking with him.

"What have you got?" said another.

I gave him the same answer. When they were dividing the spoil, I was called to an eminence where the chief stood.

"What property have you got, my little fellow?" said he.

"I have told two of your people already," said I. "I have forty dinars sewed in my garments."

He ordered them to be ripped open, and found my money.

"And how came you," said he, in surprise, "to declare so openly what had been so carefully concealed?"

"Because," I replied, "I will not be false to my mother, to whom I promised *I never will tell a lie.*"

"Child," said the robber, "hast thou such a sense of duty to thy mother, at thy years, and I am insensible at my age of the duty I owe to my God? Give me thy hand, innocent

boy," he continued, "that I may swear repentance upon it."

He did so. His followers were alike struck with the scene.

"You have been our leader in guilt," said they to their chief; "be the same in the path of virtue."

And they instantly, at his order, made restitution of the spoil, and vowed repentance on his hand.

Trapping a Tiger.

A most ingenious mode of tiger-killing is that which is employed by the natives of Oude. They gather a number of the broad leaves of the *prauss* tree, which much resembles the sycamore, and having well besmeared them with a kind of bird-lime, they strew them in the animal's way, taking care to lay them with the prepared side uppermost. Let a tiger but put his paw on one of these innocent-looking leaves, and his fate is settled. Finding the leaf stick to his paw, he shakes it, to rid himself of the nuisance, and finding that plan unsuccessful, he endeavors to attain his object by rubbing it against his face, thereby smearing the ropy bird-lime over his nose and eyes and glueing the eyelids together. By this time he has probably trodden upon several more of the treacherous leaves, and is bewildered by the novel inconvenience; then he rolls on the ground, and rubs his head on the earth in his effort to get free. By so doing he adds fresh bird-lime to his head, body, and limbs, agglutinates his sleek fur together in unsightly tufts, and finishes by hoodwinking himself so thoroughly with leaves and bird-lime, that he lies floundering on the ground, tearing up the earth with his claws, uttering howls of rage and dismay, and exhausted by the impotent struggles in which he has been so long engaged. These cries are a signal to the authors of his misery, who run to the spot, armed with guns, bows and spears, and find no difficulty in dispatching their blind and wearied foe.—*Routledge's Illust. Nat. History.*

NEWS SUMMARY.

INDUSTRIAL AFFAIRS.

Our Enterprising Neighbors Illinois and Iowa are working hard to make their respective exhibitions eminently successful. We admire their energy, wish them an abundant reward and would urge our Wisconsin farmers and mechanics to make all reasonable effort to attend them both. This they can easily do, as they occur in two successive weeks.

The International Agr. Exhibition at Hamburgh.—In the Stock Department there were 4,000 entries; 1,700 entries of sheep alone. The United States were but meagerly represented.

The following is the list of awards to American exhibitors as far as made public—no official list having yet appeared:

1. C. H. McCormick, of Illinois, for the introduction and perfecting the best reaping and mowing machine, a gold medal.
2. Seymour & Morgan, of New York, for an improved reaper and mower, a large siver medal.
3. Thompson and Avery, of Pennsylvania, for an improved horse power, with a threshing machine, a silver medal.
4. John Kelsey of Pennsylvania, for an improved harrow and other implements, a large bronze medal.
5. George Campbell of Vermont, for Willard's patent root cutter, a large bronze medal.
6. Whittemore & Belcher of Massachusetts, for an assortment of agricultural machinery, a large bronze medal.
7. John Vanderbilt of New York, for an assortment of agricultural machinery, a large bronze medal.
8. James A Saxton of Ohio, for Ball's mower and reaper, a large bronze medal.
9. Solon P. Hubbell of New York, for an improved broadcast sower, a large bronze medal.
10. John W. Free of Indiana, for a superior fanning mill, a large bronze medal.
11. L. P. Rose of Michigan, for a superior and elegantly finished set of garden implements, a large bronze medal.
12. E. C. Taintor of Massachusetts, for improved machinery for plaining, mortising, and tenoning, a large bronze medal.
13. Hale and Spier of Pennsylvania, for an improved new frame plow, a bronze medal.
14. Johnson & Co. of New York city, for washing and wringing machine, a large bronze medal.
15. Geo. Campbell of Vermont, for Spanish merino sheep, first prize of fifty thalers for the best buck; one prize of twenty-five thalers for the second best buck; one first prize of fifty thalers for the best ewes.
16. H. G. Hotchkiss of New York, for the two best samples of essential oils, a large bronze medal.
17. Hale Parshall of New York, for a sample of the oil of peppermint, a bronze medal.
18. John H. Redstone of Indiana, for improved lumber and timber sawing machine, a bronze medal.

A model of an improved machine, for gathering and pitching hay, an invention of Mr. Fowler of New York, was exhibited to the committee; also a model of an improved hay and cotton press, by Mr. H. A. Schuermau of Louisiana, which would have received medals but for the rule excluding models from the list of premiums.

As to the Gold Medal awarded to Mr. McCormick, we find the statement in foreign papers that it was "an honorary distinction conferred on that gentleman as being the introducer of reaping machinery on to the Continent, and not, as some suppose, awarded in connection with the trial of reapers which took place."

The correspondent of the New York *Evening Post* has the following remarks on Mr. Campbell's sheep prizes:

"Mr. Campbell of Vermont wins premiums for the best ewe and the best two bucks, and in consequence of some dissatisfaction on the part of European exhibitors, Col.

Needham, the Vermont Commissioner, proposed a sweepstakes premium of $100, himself to pay $10, Mr. Campbell $10, and each of the dissatisfied German and French exhibitors to pay the same. A jury was then to be selected by the Association, and the sheep to be sheared on the ground, in the presence of the jury, and the sweepstakes to be awarded to the heaviest fleece, allowance being made for the respective weight of body; but the complaining exhibitors declined this proposition, thus practically acknowledging the justice of the decision of the jury in favor of the American sheep."

The correspondent of the *Tribune* says on the same subject: "The entry of twelve American sheep was made public through the press of Germany several weeks before the Fair, and it was regarded as a great joke that America should for a moment think of competing with Germany in sheep. But the competition has been eminently successful—and the long faces of the other exhibitors indicate their mortification and disappointment."

Another Universal Exhibition is to be held in Paris, in the year 1867. The Emperor has issued a decree, fixing the period between the 1st of May and the 30th of Sept., of that year, and intimating his determination to make it more universal than any hitherto held. May we not hope that ere that day the United States will be prepared to make an exhibition of its industrial capacity and genius that shall be worthy of its high rank among the great nations of the world?

State Fairs for 1863.

Ohio	Cleveland	Sept. 15—18
Indiana	Indianapolis	Sept, 28—Oct.3
Illinois	Decatur	Sept. 28—Oct. 2
Iowa	Dubuque	Sept. 22—25
Michigan	Kalamazoo	Sept. 23—26
New York	Utica	Sept. 15—18
Upper Canada	Kingston	Sept. 22—25
Vermont	Rutland	Sept. 8—11
California	Sacramento	Sept. 26—30

County Fairs in Wisconsin.

Winnebago	Oshkosh	Sept. 16, 17
Columbia	Lodi	Sept. 22—24
Vernon	Viroqua	Sept. 22—24
Green Lake	Berlin	Sept. 23, 24
Sheboygan	Sheboygan Falls	Sept. 23, 24
Polk	Osceola	Oct. 7, 8
Monroe	Sparta	Ooc. 8, 9
Pierce	Prescott	Sept. 25, 26
Sauk	Baraboo	Sept. 30—Oct. 1

La Fayette Co. Ag. Soc.—We learn from a communication received by this office during our absence at the East, and unfortunately mislaid so that we could not publish it in the last No., that this Society is actively at work, making arrangements for the purchase of land for permanent Fair Grounds. &c., &c. At the election held June 27th, the following officers were elected for the current year:

Hamilton H. Gray, Pres.; B. F. Buckmaster, V. Pres.; A. F. Dickinson, Sec'y; Silas R. Davis, Treas; together with six additional members of the Ex. Committee. Haven't learned when the Annual Fair is to be held.

The Markets, Aug. 25.—*At New York.*—Wheat dull and a little disposed to decline. Mil. Club 87@1,15; red western winter 1,13 @1,21. Corn scarce and 1c better; mixed western for shipping 71@72; western yellow 75@76. Oats heavy, declining; western, 47 @52. Gold, 1, 23½, unsettled and disposed to decline still further.

At Chicayo.—Leading markets continue firm and active. Prices of wheat (No. 1 spring) 93@96; corn in ear, on track, 52c per 70 lbs.

At Milwaukee.—Flour very quiet; sales of 300 bbls. of Hiawatha spring extra at 4,50. Wheat declined 3@5c; sales of 300 bushels of No. 1 spring in store at 94c; 7,000 bushels do at 92c; 300 bush. at Higby's, old No. 2, at 90c; 1,000 bush. at Smith's, old, at 85c; 2,100 bush. at Smith's, new, at 90c; 700 bush. No. 2 and No. 1 delivered at 88@96c; 400 bush. do. at 87@94c.

But little is doing in the wool trade in any part of the country. Buyers and holders are alike firm. Prices vary from 50@75c, according to locality and quality.

NATIONAL AFFAIRS.

The glorious old Stars and Stripes are every day being borne further and further into the territory of the Rebellion. Rosecranz is pressing down upon Bragg's army, which is constantly being weakened by desertions to our side; while the fleet and land force at Charleston are gradually compelling the surrender of that stronghold of the enemy. Fort Sumter is already pretty well knocked to pieces, its guns silenced, and the dispatches now warrant the hope that ere this No. of the FARMER shall have reached our readers, the

city itself will have fallen. This is one of the towns we want to have blotted from the face of the earth. Always a hot-bed of treason, and the spot where the Rebellion began, it deserves to be summarily and utterly destroyed.

Lee's army and Meade's still confront each other on the Rappahannock; neither party feeling confident of its ability to destroy the other.

In Kansas a force under the rebel Quantrell have been committing ravages and perpetrating atrocities more wanton and infernal than any others recorded in modern history. Lawrence has been burned and many of the inhabitants were either buried or burned in its ruins. At last accounts Jim Lane had overtaken Quantrell and killed a number of his men.

The Draft is quietly progressing in New York and several of the other States. Negro regiments are being continually organized in the South, and it is expected that nearly 100,000 black troops will be in the field by the 1st of January. The President's order guaranteeing to them, equally with the white soldiers, the protection of the Government, in case of capture, has given a new impetus to enlistments.

POLITICAL.

The Democratic Convention which met at Madison Aug. 5th, placed in nomination for the various State offices, the following gentlemen:

Governor—Henry L. Palmer, of Milwaukee.
Lieut. Governor—Nelson Dewey, of Grant.
Secretary of State—Emil Rothe, of Jefferson.
State Treasurer—Charles S. Benton, of La Crosse.
Attorney General—Eleazer Wakeley, of Dane.
Bank Comptroller—Henry S. Pierpont, of Manitowoc.
Superintendent of Public Instruction—Volney French, of Kenosha.
State Prison Commissioner—John R. Bohan, of Ozaukee.

The following are the resolutions adopted by the convention:

Resolved, That we re-affirm and adopt the address issued by the State Convention held September 3d, 1862, and the resolutions of the Mass Convention held in Milwaukee, June 25, 1863, as the settled doctrine of the Democratic party of this State.

Resolved, That we hail with delight some manifestations of a desire on the part of the people of some the seceding States to return to their allegiance to the Union, and hold it to be the duty of the administration cordially to co-operate with the people of such States for their restoration to the Union with all the guarantees of their rights and interests contained in the Constitution.

Resolved, That while we would not withdraw our armies from the field, or in any manner recognize the so-called Confederated States, yet if such manifestations should become general throughout the seceded States, we believe that the offices of peace should supercede those of war, and that it would in such event be the duty of the administration to encourage the holding of a Constitutional Convention of all the States to restore to peace, maintain the Union and support the Constitution.

The Republican Convention held on the 19th ult., adopted the resolutions subjoined, and put in nomination a Union ticket.

RESOLUTIONS.

Resolved, That this Convention cordially approves the following propositions, contained in the call under which it assembles:

That the Union be preserved in its integrity;

That the Constitution and laws of the United States be enforced throughout the whole national domain;

That the rebellion be suppressed, not by compromises with or concessions to traitors, but by the sword whose agency they have themselves invoked;

That the national administration should be heartily and generously supported in its efforts to put down the rebellion.

Resolved, That the dignified, courteous and patriotic manner in which the Hon. Edward Salomon has discharged the duties of the office of Governor, devolved upon him by the decease of Governor Harvey, at a most important period in our political history, meets our cordial approval;

Resolved, That this Convention, following the example of the Union Conventions of Ohio, and other States, present to the loyal people of Wisconsin the names of the persons this day nominated, as Union men, not as partizans, without reference to their political antecedents, and ask for them the support of all loyal men, without distinction of party.

Resolved, That we deplore the partizan hostility which has been and is being awakened against the Government by interested politicians and designing demagogues of the North, believing that it can only tend, by encouraging rebels to protract the war; and instead of kindling the patriotism, to arouse the animosities of our people, and to occasion elsewhere the same riotous, diabolical, and anar-

chical scenes, which have already disgraced the commercial metropolis of the nation.

Resolved, That the warmest thanks of the loyal people are due, and are hereby tendered to the brave and devoted soldiers who have rallied to the defence of the old flag, and nobly and persistently fought the battles of the country, and met and vanquished on so many fields the hosts of rebellion, seeking to destroy our national life, and that we pledge ourselves, before Heaven, to sustain them, by filling up their thinned ranks in the most expeditious manner, until the end of this rebellion shall come and peace be restored to the land.

Resolved, That we admire and reverence the steadfast loyalty of the Union men of the South, which, amid so many temptations and persecutions, has kept them faithful to the old flag, that in their sufferings they have our profound sympathy, and that it is the duty of the Government at the earliest possible moment to deliver them from rebel oppression.

Resolved, That we recommend to the loyal people of the several districts and counties of the State such a re-organization of committees as will ensure a more perfect Union organization between loyal Republicans and Democrats in political action.

Resolved, That the loyal people of Wisconsin, friendly to the maintenance of Republican institutions upon the North American continent, cannot look with indifference upon armed intervention by European powers, and the establishment of an empire upon the ruins of our sister Republic of Mexico, and that in due time, of whatever duties and responsibilities God in His providence shall cast upon the Republic of the United States, growing out of such intervention, Wisconsin will be ready to bear her full share.

The following is the ticket nominated:

Governor—James T. Lewis.
Lieut. Governor—Wyman Spooner.
Secretary of State—Lucius Fairchild.
State Treasurer—Samuel D Hastings.
Superintendent of Schools—Josiah L. Pickard.
Attorney General—Winfield Smith.
Bank Comptroller—Wm. H. Ramsey
State Prison Commissioner—Henry Cordier.

EDITORIAL MISCELLANY.

A Premium.—A copy of "Randall's" Fine Wool Sheep Husbandry" will be sent to any one who will send us THREE dollar subscribers; each subscriber being entitled to the STRAWBERRY premium.

The Pittsbugh, Fort Wayne & Chicago R. R. & Det. & Mil. R: R. the best routes to the East, have lately made a very considerable reduction in passenger rates.

Editorial Notes of European Travel.—A GLIMPSE AT SOME OF THE GERMAN STATES—HEIDELBURG, *continued*.—But the town! The University has so absorbed me that I had well nigh forgotten everything else. In truth, so far as it relates to the town itself, there is not much else here worth looking at; at least, its two or three principal streets, lined with old, dingy, and rather slipshod stores, workshops and saloons, do not so impress me as to awaken much enthusiasm on its behalf. Heidelburg is, nevertheless, distinguished for several important events in history—prominent among them the signing, in 1384, by the Emperor Wenceslas, of the celebrated union of Heidelburg, as a result of which the different leagues of German cities were united in one.

In the Heidelberg of to-day, that which interests me most is the query as to how the people subsist. Literally speaking, the question is easily enough settled, for at any hour of the day, and almost any hour of the night, not less than about one half of the entire population may be seen in the numerous restaurants, demonstrating their respective capacities for beer! But, unlike the Yankee, who slides into the whiskey shop, swallows his poison, and then either goes out to his business or staggers into the gutter, the Germans sit over their beer for hours at a time, jabbering, playing at games of chance, and smoking their monstrous pipes. The question of how they secure the means to live is therefore still in doubt, being but partially solved by the discovery that they live much more simply and inexpensively than do the people of America. One moderate roll of hard-baked bread and a few quarts of beer is ample satisfaction for a full meal here, while the Yankee must have three kinds of meat, other things in proportion, and five courses of pastry and knick-knacks to finish off with. The true mode of living lies between these two extremes. If people will drink beer, and may be allowed to congratulate themselves on a superior quality of that article, then blessed are these Germans, for no better beer ever

flowed into the bottomless pit of the most lucky Teutonic stomach than is perpetually foaming in the great liberal mugs of this beer-making and beer-drinking city.

So much for the old *town* of Heidelburg. My visit shall next be to the fine old Castle, the ruins of which are famous the world over. Who has not seen pictures of this interesting relic of bygone ages, crowning the rugged brow of the hill which overlooks the time-bedinged city, the picturesque valley of the swift Neckar below, and the distant valley of the Rhine—its turrets, walls, and arches yet standing, representative of every style of architecture in favor during the three successive generations of its building, and yet all blended, with a beauty of harmony that makes the whole, as it stands to-day, so perfectly enchanting? Including the inner, open court, the castle occupies several acres, and the site being so difficult of access with the massive stone which compose its structure, it must have cost an immense amount of labor.

I have already taken the upward winding path which leads to one of the entrances, have passed the portal and stand amazed and awed within the inner court. Many of the walls have tumbled down, and most of the apartments not destroyed are the habitations of owls and bats. Some of those which front the town are nicely fitted up, however, and occupied by a family with whom live several of the more romantically inclined students of the University. Have seen all there is on the surface and have gazed upon the enchanting landscape from the summit of the towers; and now descend into the dark subterranean passages and apartments designed for secret conclaves or for the concealment of lordly occupants in times of peril. I am alone, and wander as long as I please in labyrinthine halls, as dingy, musty and grim as the feudal times they represent. I shall not be lost, for I have, as is my wont, unconsciously noted my turnings and so can retreat, should there be no secret door the other side of the hill. I commune with the Past, and yet hardly shudder at the thought of the dark wrongs recorded of those barbaric times when the power of Might was stronger than the law of Right; for is not that even true of to-day? Yea, the world of men and of nations is barbarian still! But it is struggling for the light with ever-increasing earnestness, and so we may well continue to hope. At length I grope my way less doubtfully, and finally walk in a light whose increasing strength convinces me that I shall soon re-establish my relations with the outer world. Creeping on hands and knees through an opening in the rubbish of a broken-down wall, I stand once more in the light of glorious day. Give me, after all, the noon of the 19th century! is my first utterance.

A few fragments of the red sandstone of which this once magnificent castle was built, and other mementoes of my visit, and good bye to Heidelberg!

Hence my way is yet further by rail down the valley of the Rhine, across the line of Baden, and through Hesse Darmstadt to the illustrious free city of Frankfort-on-the-Main. On my left are Mannheim, and Worms, famous as the place where Martin Luther in the days of his persecution *would* go and confront the prelates and other dignitaries of the Romish church, "though the devils should be as thick as the tiles on the houses!"

At length we approach

FRANKFORT

The city of all others in Germany remarbable for its historic associations. It was here where, for many years, the Emperors of Germany were crowned—where the greatest of German poets, Goethe was born—where the immortal Luther, the world's greatest reformer, lived and wrote—and it is here where that peculiar enterprise, so characteristic of the American people, has made its way more effectually than in any part of the continent I have yet seen. The streets, the architecture of the more recent buildings, the sale-shops and public houses constantly suggest to the American traveller New York and other cities of the United States. It is a free town, with

70,000 inhabitants, and the seat of the German Diet.

The evening shades close around me, and yet I have visited none of the distinguished public buildings, none of the fine promenades so characteristic of Frankfort, none of the several private residences remarkable for their asscіation with some of the greatest men of the dead past; I have thus far endeavored simply to gain a just general idea of the city as a whole. But the streets are bright with the light of burning gas, and I must improve the hours between this and midnight, for in the early morning I turn my face westward.

Have seen the *Domkirche*, where the Emperors of ancient Germany were crowned—a fine old cathedral, the last remaining specimen of the ancient German style of architecture—have walked round and round the monuments of Goethe and Guttenberg in the Hop Market; have stood before the modest old two-story mansion in the Hirschgraben where Goethe was born, and thought of the wonderful sway of Poetry over the human mind in all generations; have sought out the quaint old house of Luther, with its three stories and high steep roof, each story projecting over the one below, and throwing the upper windows so far over the narrow street that one could almost shake hands with his third-story neighbor on the opposite side; paused at the dwelling in the Judenstrasse where Rothschild and his children were born, and at the present counting house of Rothschild, ruler of all the money kings and dictator to the thrones of Europe; have lunched and slept, and am now on my way down the picturesque valley of the Main and through the famous vineyards of Hocheim, source of the popular Hock wines, to

MAYENCE, MAINZ, OR MENTZ,

On the Rhine. I had intended to visit Wiesbaden, capital of the Duchy of Nassau, famous, like Baden-Baden, for its baths and hot springs, and likewise interesting to me as seat of the chief Agricultural Seminary of Nassau, and of the splendid Laboratory of the great Dr. Fresenius; but the narrowing limit of time within which I must again be at London, will not permit.

Mayence has a population of near 40,000, and is the most important fortress of the German Confederation. The garrison, half Austrian and half Prussian, numbers 10,000 men. The first thing which strikes me is the magnificent view here possible of the Rhine, the Taunus mountains, the vineyards of Hocheim, and the valley of the Main; one of the rare pictures which can never be effaced from the memory. My second thought is of the peculiar style of its architecture. Most of the public buildings are of red sandstone and some of them have stood nearly a thousand years.

Among the many statues and monuments erected to the memory of the great men whose history is linked with that of the city, the most interesting to me is the monument to Guttenburg, the inventor of the art of printing with movable types, who is claimed to have been born here in 1397. Whether he was really born here, or in one or more of the half dozen other cities which contend for the honor of having brought this great gift into the world, is to me a matter of much less account than is the fact that he was actually somewhere born, and with a genius which has done more than almost any other to advance the great world in civilization. Aye, thou wast born, O Genius of Printing! and Guttenberg was thenceforth a name to be spoken with gratitude by the enlightened people of all nations through all coming time! Whether this statue, by the great Thorwalden, shall stand in the Guttenberg-Platz admired and revered, for one century or for twenty, is to thee, and to me of but little moment; the Press, the Press is thy monument now and forever!

Here also, and not far away, I find the monument erected in 1843 by the ladies of Mentz in honor of their favorite, Meissner, the minstrel, who sang so successfully the praises of women, and sang nothing else. *Frauenlob* they called him, and with that tender name, with the aid of Schwanthaler's artistic genius he goes down the ages, a precious heir-loom to

the grateful Darmstadt women of the future, and a generous encouragement to all the *Frauenlobs* who may come after him. If he told the women of his fine old town that they were as stout as unicorns, plump, healthy, prolific of robust, sturdy children, industrious without stint, and fond of just praise, I shall not quarrel with his verse; but if he worshipped them as the representatives of those glorious Homeric ideals which have for ages been the admiration of the world, then I must beg to demur.

The old Electoral Palace, with the museum of Roman and other antiquities; the Town Library of 100,000 volumes—among them the first Psalter ever printed; the grand ducal Palace, originally the house of the Teutonic Order, and once occupied by Napoleon I; the bridge of boats across the Rhine, and a great many other objects challenge the traveller's attention. But the most interesting of them all are the relics of Roman power which carry one back through the long interval of seventeen hundred and ninety-five years, when the Legion of Titus, after the conquest of Jerusalem, came to this place and established a garrison which was to impose upon the Germans the government and institutions of the Great Empire. It was from the very Wiesbaden I see in the distance, that, in times a little later, the hordes of native warriors poured down upon the Roman Eagles and drove them beyond this province of the Rhine, and thus began the war which, after many alternate defeats and victories, resulted, at last, in giving these rich valleys of the Rhine and its tributaries to the Germans for an undisputed inheritance. Thus waneth the power and the glory of one empire that another, better fitted, for some reason, to fulfill the designs of Providence, may be built up on its ruins. Thus it hath ever been, and thus will it ever continue to be.

Our Thanks are hereby tendered to those County Ag. Societies which have so liberally used the *Farmer* for premiums. It's a good plan and helps three parties at one and the same time.

The State Fair—Explanation of Postponement.—It was our intention to give a full account in the August Number of the circumstances which led to the postponement of the State Fair the present year; but the columns were running-over full before we were aware of it, and as full notice and explanation had been published in most of the newspapers, we did not think best to delay the press and put back the number for the purpose of reiterating what had already been so generally advertised.

We are glad to find that disappointment is felt by a good many friends of the Society and of agriculture in the different portions of the State on account of the decision made by the Board. It shows that there is some vitality still left in the farming community, and augurs well for the future. It is to be regretted that this positive sentiment did not make itself apparent on the occasion of the meeting of the Executive Committee on the 16th of July, when it might have been of more avail.

It was our own desire that an attempt should be made to hold a Fair, even at that late date, and we accordingly looked with a hopeful anxiety to the council that should be held on that day. Each of the 15 members of the Board was requested to attend the meeting and to come prepared to represent the sentiment of his section of the State as to whhether we should attempt a Fair. But *one* reported favorably, and the minority present, had they been of one mind and for the exhibition, should hardly have been willing to take the responsibility. But even that small minority were not all clear as to the possibility of a successful exhibition before the meeting was called, and after the adverse reports from the majority who did not attend, it seemed to them a settled matter that, under the circumstances of general indisposition—of the lateness of the day, giving but little time to advertise and wake up the people, to select and prepare grounds, and none at all to prepare crops, stock and machinery for the exhibition—of the general absorption of the

public interest in the affairs of the war—of the approaching draft, and of actual and threatened resistance in many portions of the country,—we say, under all these circumstances and others which we will not stop to enumerate, it seemed not only best, but almost necessary to again postpone the State Fair. The four members present at the meeting are willing to be held responsible for the decision they seemed forced to make, and which we so reluctantly announced in the August No., but they should not and must not be held responsible for the postponement itself.

And is the Society therefore dead? Not at all; though we confess it has the appearance of having composed itself for a comfortable nap. The exhibitions which are accustomed to be held by the various agricultural societies of the country should be regarded as merely the outward showing of the real work that is done through their agency. They are like the experiments which accompany the instruction of the chemical professor. Their office is to illustrate while that of the Society is properly to *teach* and to *stimulate*. To suspend operations, therefore, altogether—to discontinue the crrespondence and the book exchanges so difficultly begun and laboriously continued—to relinquish the plan for all those scientific investigations, such as have been made with so eminent advantage by similar societies in some of the older States—to leave our prospective State Agricultural College to the fate of struggles between zealous, self-sacrificing individuals and a Legisature almost invariably short-sighted and perverse—in a word, to relinquish the general industrial interests of a young but giant commonwealth to their own fate and the faithful unremunerated help of one laborious agricultural journal, seemed to us, if a necessity, yet a most forlorn and sad necessity. But the feeling that the financial condition of the Society and the consequent public sentiment of the State would require it had been expressed by agriculturalists, outside and inside the Board, and the Secretary was not the man to draw pay for services under such circumstances and so, himself, proposed that his salary be discontinued from and after the date of the meeting until the Society shall again determine to resume active operations. This motion was amended by fixing the date of discontinuance on the 1st of October, and, after some discussion, as thus amended, passed. This is a plain and full statement of the whole case.

The amount of money now in the Treasury of the Society is some $3,000; an amount which on the return of more settled times will of course enable the Society to resume the work of holding exhibitions with more certainty of success than if it were that much in debt. Meantime, we, the Secretary, still stand by our guns, powder or no powder.

The State Agricultural Rooms will still, as heretofore, be open to the public, and all correspondence shall receive faithful attention.

Transactions Wis. State Ag. Society.—One or two complaints as to the distribution of the last volume of Transactions W. S. A. S. lead us to make the following explanation:

The volume in question should have been issued in the spring of 1861, and would have been so issued but for the failure of the State Printers to do the work. As Secretary of the Society we could only furnish the copy, and had no control whatever over those whose duty it was to do the work. Consequently they took their own time, and did not commence printing until late in autumn of that year, and even then allowed the work to drag along, making it incidental to everything else, without other cause than, as was said, because by an unexpected interpretation of the law by the State they were compelled to do the printing and binding at several hundred dollars less than cost. In December the Secretary became the victim of a severe attack of congestion of the brain that well nigh proved fatal, delaying the work, and resulting, it is feared, in some annoying errors in that part of the volume (the "Industry of Counties") then going through the press. Finally, about the first of April, 1862, and not until we were

obliged to leave for Europe in discharge of our duties as Commissioner to the International Exhibition, a few copies of the Transactions were delivered to the Legislature. But it was on the very morning of our departure, and it was with much difficulty that we succeeded in spiriting away 3 copies for certain institutions in Europe. Of course it was impossible to forward to contributors and others in this State who were especially entitled to them. We had provided, however, by resolution, that each County Ag. Society should get several copies, and this, together with the fact that the Society's Office was accessible and provided with a clerk during our absence, seemed to furnish assurance that none of the class of persons referred to would fail to secure them.

When we returned, there were but very few copies left undistributed, and it was believed that the claims of public Agricultural Libraries, of which there were more in number than we could possibly supply, should rank first.

In conclusion, we desire to say to any and all who, being especially entitled to copies, have not received them, Send in your names, and from the few dozen copies reserved for such demands, you shall be supplied so long as they last.

The Farmer's Premium Strawberries will be sent to subscribers direct from the grounds of Mr. Prentice at Watertown, where they are produced. The distribution will commence on the 1st of Sept., and continue so long as it will answer to transplant.

The State Ag. College Lands.—We are gratified to learn that Messrs. Reed and Hammond, commissioners for the location of lands for the Ag. College, as provided by the act of the last Legislature, are meeting with better success than was anticipated. They report considerable tracts of very valuable lands in the St. Croix District, and it is believed that good lands yet unentered will be found to the full amount of the 240,000 acres to which this State is entitled.

Shall we make the Farmer a Weekly?—In these fast times the question often comes to us, "can't you send us the *Farmer* oftener? A month seems a long time to wait; and in spite of all the publishers can do, some things of interest," especially market reports and current news, must necessarily be behind the times."

All this we have felt repeatedly, but thus far we have not deemed it judicious to make the change. If the great crops and an abundance of money have made the farmers feel so liberal that they are willing to pay twice as much as now for the weekly visits of a better agricultural and family newspaper than has yet been published in this country, let them say so. We are ready to do our part.

Words of Cheer.—[The following cordial greeting, thongh by some accident mislaid for a time, is still in order. We thank the author for her kind wishes and most heartily reciprocaie them. It is such words of cheer that lighten our labors and keep up our courage in these times of embarassment to agricultural editors.—Ed.]

Mr. Hoyt:—

How nice it is that every body can sit down and have a familiar chat with the editor—for of course, the editor likes every body, and every body likes him (excepting, perhaps, some who do not.) But let me tell you, sir, that every one in this cottage likes the editor of the *Farmer* and the editor's wife—and while my larger and stronger half is going to send you a word a two, I want to just let you know how much pleasure we big folks and little folks have derived from the perusal of your publication since we have been its subscriber. While one portion of our family is interested in stock growing and corn raising, the other portion culls from the *Farmer* all the hints on gardening, flowers, house designs and the receipts and the youths' corner. We all had a delightful chase after "mousie," and "Uncle William" edifies us much. We followed with a great deal of interest Mr. Hoyt's journey in the Old World, and Mrs. Hoyt's romantic and

almost fatal excursion. Hope she is restored to health, and will continue to remember the little folks in the secluded farm houses of Wisconsin.

Since we have made Wisconsin our permanent home and farming our constant occupation, we have hailed with much pleasure the appearance of a periodical devoted to the benefit of the farmers of this State—we make her interests our interests, and feel to-day God speed to whatever tends to her elevation and improvement. Mrs. T. T. Holmes.

Hope Cottage, Wis.

Capt. Curtiss.—We are pleased to learn that our old-time friend and correspondent, D. S. Curtiss, Esq., late of the Oconomowoc *Free Press*, and subsequently a Lieutenant in the army of the Potomac, has recently been commissioned as Captain in Col. Baker's Regiment of Mounted Rangers, now organizing at Washington. This is good proof of the high estimation in which he is held, as the "Rangers" are organized for special and very important service and under commissions direct from the Secretary of War. Col. Baker is a brave and able officer, with many years' experience in the most dangerous service of the U. S. in Oregon and California, and is to operate independently and wherever he can do the enemy the most harm. The regiment is to be composed of select men of good habits and unquestionable courage, armed with sabres, 6-shooter revolvers and 15-shooter carbines, and mounted on the fleetest and most powerful horses that can be found.

Capt. Curtis has his own company already formed and in active service, making raids into Virginia, killing and capturing rebel raiders and recovering property stolen by them. We predict for him and the noble regiment to which he belongs, a brilliant and highly useful career.

We shall be there, "no preventing Providence"—at the Sauk and Green Lake Co. Fairs, on which occasions we have promised to talk to the people.

NOTICES OF NEW ADVERTISEMENTS.

Sugar Cane Apparatus.—We call the attention of all parties interested in the manufacture of sorghum syrup and sugar to the new mill offered for sale by Powers & Sherwin of Madison. We have never seen this mill operate, but the plan of its construction seems to warrant the assurance in advance that it will do excellent service.

Drake's Sine Qua Non Evaporator is likewise advertised. We know nothing of it from personal observation, but many who have tried it in Ohio, award to it the merit of decided superiority.

See C. M. Saxton's advertisement of "Randall's Fine Wool Sheep Husbandry," now ready for delivery. This work has been looked for with great interest, and will not fail of very extensive demand.

D. D. T. Moore, editor *Rural New Yorker*, Rochester, also advertises this valuable book.

Messrs. Bateham, Hanford & Co., proprietors of the Columbus (Ohio) Nurseries, have two new advertisements in this No. With the best stock in the western country, and with the advantage of an extensive northwestern experience in fruit growing, this excellent firm are eminently worthy of the very liberal patronage they are receiving from all the States west of New York.

Ramsay & Campbell, dealers in Hardware, Madison, keep constantly on hand the very best of everything in their line, including Sugar Cane Apparatus (Olmsted's Evaporator,) which they offer at the most reasonable rates.

The "Falkner Nurseries" advertised in this number are well recommended.

A. Jones, of Leeds Centre, advertises a superior lot of Spanish Merino Bucks.

See Skinner's advertisement of Mendota Agricultural Works. This is a good establishment, and deserves a large patronage. The Climax Sugar Cane Mill and Cook's Evaporators are manufactured there. Both have been favorably noticed heretofore.

STATEMENT

OF THE

Madison Mutual Insurance Co.

FOR THE YEAR ENDING

DECEMBER 31, A. D. 1862.

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		$327,464 67
ASSETS.		
Unimpaired premium notes of policy holders	$281,000 07	
Cash on hand and due from policy holders and agents for cash premiums	45,464 60	
Office furniture and fixtures	1,000 00	327,464 67
Whole No. policies issued		22,061
Am't of outstanding risks thereon		$15,962,090 00
Number of policies issued in 1862		7,706
Am't of outstanding risks thereon		$6,069,813 00
Am't premium notes thereon		108,323 93
Am't cash premiums thereon, less commissions to agents		45,727 80
Am't interest received		972 18
Total am't losses reported during 1862		$17,744 16
Total am't losses paid during 1862, 89 in number		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due		none.
Losses adjusted and not due		none.
Losses unadjusted		292 35
All other claims against the company		97 50
Am't paid for advertising and postage		1,763 66
Am't paid for printing		540 50
Am't paid for policy stamps		600 00
Am't paid taxes to Com'r Internal Revenue		82 02
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses		7,290 98

Comparative Statement of the business of the Company for the years 1859, 1860, 1861 *and* 1862.

	1859.	1860.	1861.	1862.
Total amount of accumulations	$30,080 95	$110,389 49	$216,865 76	$827,464 67
ASSETS.				
Premium notes of policy holders	$35,462 46	$92,497 27	$180,124 63	$281,000 07
Cash on hand and due from policy holders for cash premiums	2,986 02	10,509 74	35,408 66	45,464 00
Amt secured by mortgage and judgment	332 47	332 47	332 47	1000 00
Office furniture and fixtures	300 00	1,000 00	1,000 00	22,051
Whole number of policies issued	4,807	8,579	14,857	$15,962,000 00
Amt of outstanding risks thereon	$2,409,950 49	$5,451,115 49	$10,320,789 00	21,413 97
Total amt of losses paid and settled	2,409 45	5,903 31	8,450 01	* 2,000 00
Losses reported and awaiting further proof *		499 58	7,351 12	7,700
Whole number of policies during the year	1,187	3,722	5,778	$6,069,813 00
Amt of outstanding risks thereon	$1,140,076 00	$3,916,115 49	$5,315,173 00	108,323 93
Amt of premium notes thereon	17,109 82	68,789 45	93,944 06	† 45,727 80
Amt of cash premiums thereon	11,059 04	85,761 88	43,377 36	
Amt of commissions paid to agents	3,317 70	10,339 18	7,460 84	
Amt of expenses paid, including all compensation of officers, printing, advertising, postage, and all other incidental expenses	3,317 71	5,847 44	9,071 89	7,250 98

* Resisted as frandulent.

† Deducting agents' commissions.

DIRECTORS FOR THE YEAR 1862.

J. W. BOYD, Walworth Co.
D. WORTHINGTON, Waukesha Co.
DAVID ATWOOD, Dane Co.
G. R. MONTAGUE, La Crosse.
ASA KINNEY, Green Lake Co.
H. H. GILES, Dane Co.
LUTHER BASFORD, Grant Co.
B. F. HOPKINS, Dane Co.
ORRIN GUERNSEY, Rock Co.
FRANK H. ROPER, Dodge Co.
J. H. WARREN, Green Co.
TIM. BROWN, Dane Co.
S. D. HASTINGS, Trempeleau Co.
DAVID TAYLOR, Sheboygan Co.
S. R. McCLELLAN, Kenosha Co.
J. T. LEWIS, Columbia Co.
JOHN TOAY, Iowa Co.

OFFICERS.

JOHN W. BOYD, President.
B. F. HOPKINS, Vice President.
S. D. HASTINGS, Treasurer.
D. WORTHINGTON, Secretary.
G. F. HASTINGS, General Agent.

LOSSES PAID BY THE COMPANY IN 1859.

S H Colman, Juneau, Dodge Co	$10 00
J H Seaman, Richland, Richland Co	10 00
Fanny Plummer, Mauston, Juneau Co	15 00
Geo F Taylor, Madison, Dane Co	15 00
Nelson Sickles, Waterloo, Jeffersen Co	690 00
A L Beebee, Dunn, Dane Co	650 00
J H Barber, Juneau, Dodge Co	68 00
Jas H Main, Juneau, Dodge Co	403 57
Thos Mayhew, Merton, Waukesha Co	27 00
W N Seymour, Madison, Dane Co	20 00
Wm Edwards, Sugar Creek, Walworth Co	400 00
Leonard Hatch, Kenosha	100 00
	$2,409 45

LOSSES PAID IN 1860.

J S Wilmarth, Sun Prairie, Dane Co	$314 50
Cyrus S Davis, Menominee Falls, Wauk Co	5 00
J W Cook, Dane Co	15 35
Lewis Thompson, La Prairie, Rock Co	172 52
Henry Johnson, Somers, Kenosha Co	12 50
Pliny Putnam, Rubicon, Dodge Co	5 00
E B Thurtell, Jamestown, Grant Co	500 00
A A Anderson, Delafield, Waukesha Co	7 00
Jas T Walkin, Eagle, Waukesha Co	20 00
C Sutherland, Fitchburg, Dane Co	10 00
Harrison Koonz, Concord, Jefferson Co	400 00
Owen Garity, Sullivan, Jefferson Co	6 00
C P Churchill, Waukesha Co	5 58
Caleb Jewett, Town of Madison, Dane Co	17 51
Mary La Follett, Primrose, Dane Co	115 00
Wm A Stowell, Cottage Grove, Dane Co	1,041 71
Sam H Sabin, Windsor, Dane Co	18 00
Abel Strong, Marcellon, Columbia Co	382 71
Quartus Towry, Johnstown, Rock Co	5 00
Robert Hornby, Fairffeld, Sauk Co	496 05
Thos Stevens, Dane, Dane Co	200 06
John Wightman, Berry, Dane Co	751 80
Douglas Oliver, Glen Haven, Grant co	1,000 00
Josiah Pierce, Pardeeville, Columbia co	400 00
	$5,903 23

LOSSES PAID IN 1861.

L D Lateer, Janesville, Rock co	$499 53
Edward Walsh, Centre, La Fayette co	306 80
Nathan Kellogg, Madison, Dane co	15 00
Henry A Chapman, East Randolph, Col co	20 00
Jared Bishop, Jamestown, Grant co	371 00
Allen Hoxie, Porter, Rock co	1,000 00
O C Burdic, Christiana, Dane co	2 00
Samuel Ceossett, Juneau, Dodge co	13 50
Albert Gaston, Cottage Grove, Dane co	11 13
Stephen Young, Somerset, St. Croix co	380 00
A L Beebee, McFarland, Dane co	699 01
Alfred Taber, Delavan, Walworth co	350 00
Lydia D Crocker, Lake Mills, Jefferson co	2 00
John Feller, Bear Creek, Sauk co	646 65

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : EDITOR.

VOL. XV. MADISON, OCTOBER 1, 1863. No. 10

"God and our Native Land."

It was a maxim of the great Napoleon that "God is usually on the side of the heaviest battallions." Buonaparte was right. God does help them most who most help themselves.

We do not mean to deny that there have been signal cases in the history of the world in which the Almighty has, for a time, suspended the operations of natural laws, and signally interposed for the triumph of the Right, but rather, to assert, as forcibly as words will permit, that God is *not wont* to abrogate or even temporarily set aside the immutable laws by which he governs both the material and the spiritual worlds. His law is inexorable, and, no matter what our cause, or how much the good of mankind may demand its success, it will only succeed in proportion as they who have it in charge are true to their trust. If the American people and government had believed this truth, and, from the first, had acted upon its conviction, like a government and people thoroughly honest and earnest, there is little room for doubt that the monster Rebellion which has despoiled the nation of more than two billions of treasure, of almost a quarter of a million of lives, and shaken the temple of Republican Liberty to its very foundations, would have been crushed months ago.

But regrets are unavailing, except as they shape our conduct in the future; and, besides, for the present, our notes should be those of rejoicing.

The cause of American liberty never promised so much for the people of this continent and the anxious, struggling peoples of the Old World as it promises to-day. Groping in darkness and defeat for more than two years, the dawn of a better day than our young Republic has ever yet enjoyed is upon us.

It may be that we have not even yet drank the very dregs of the cup of humiliation, and that trials more severe and defeats more galling that any we have hitherto suffered await us in the future, ere the angel of Peace shall have dethroned the demon of War; but God has certainly, within the past three months, vouchsafed to us a new and glorious hope. Treason is surely doomed, and only awaits with trembling the deep damnation it deserves —a damnation not purgatorial—it is already enduring that—but final and eternal. This is as fixed and certain as if it were a written decree of the Almighty.

Nor is this all. With an unprecedented bounty the great Giver of Good is filling the lap of the North with such plenty and prosperity as the world never saw. Our mines are yielding up their accustomed treasure; our agriculture is feeding and clothing us as never before, and filling the world's granaries with food; and our multiplied manufactories are teeming with a most wondrous activity. The nations of the Old World are filled with astonishment, and even we who have known, or who thought we knew, the inexhaustibleness of the resources of this new mighty empire, are ourselves compelled to acknowledge that we had scarcely dreamed of their immensity.

A nation that can carry on so stupendous a war as this without borrowing a dollar from other nations, that can, by its industry, safely continue that war until it shall end in a manner at once consistent with its own highest present honor and the future security of its fundamental law, is worthy to rank as the United States henceforth *will* rank, first among the great powers of the earth. God grant that our execution of the sublime and sacred trust he has placed in our hands may entitle us, as a people, to the glorious destiny which the present so visibly foreshadows.

October's Work.

"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."
—*Mrs. Hoyt.*

October has ever been our favorite month, because it is really the most generous, bountiful and beautiful month in the calendar; filling the lap of provident man with all needful luscious foods; coloring the field and wood with gorgeous hues; toning the cool invigorating air with a soft autumnal haze; and filling the souls of all grateful men with thanksgiving and hope.

But October is not alone the time for the indulgence of poetic and religious reflections. These are well, and should not be omitted, for they serve to make richer and better the lives of men; but they are not all. The farmer is not yet ready to hang up the implements of husbandry for the year. He may rest; but he must also *work*. And surely there never comes a better time for out-door labor.

This is at once the season for *ingathering* and *preparing*.

THE INGATHERING.

The fruits, the garden vegetables, the roots and potatoes and, towards the close of the month, the corn crop—all these will need your attention.

As to fruits proper, it may be remarked that they will pay for careful handling. Those expected to keep through the winter must be taken off with the hand.

All vegetables and roots should be secured in dry weather and put away in dry, well ventilated *heaps* or cellars. Neglect of this precaution costs many a farmer a large per cent. of the crop he blunderingly attempts to keep.

Corn intended for seed—as we have urged from year to year—should be selected this month from the best stalks and best filled ears, traced up and put away in a dry place. Husking should be despatched, if possible, before the wet weather of November and the cold, stormy weather of winter is upon you. Crib in dry, well ventilated, rat-proof cribs.

See that everything that will answer the purpose of cattle feed is saved—corn-fodder, straw, pumpkins, &c.

THE PREPARATION.

This word is full of suggestions, reminding the provident farmer

Of the soil to be cleared, plowed, and, as far as practicable, *drained*, preparatory to the crops of the coming spring; [See "Reasons for Fall-Plowing," in this No.];

Of seed to be selected from the best for field and garden crops;

Of Nursery stock for the garden and orchard;

Of stables, sheds, and snug covered pens for horses, cattle, sheep and swine;

Of iron mills for grinding, and straw and root cutters for chaffing and chopping their feed;

Of agricultural boilers for cooking roots, potatoes, meal and other kinds of food, so as to make their use as economical as possible;

Of hogs to be fattened for the earliest market.

Of sugar cane syrup to be manufactured;

Of cider and vinegar to be made;

Of butter to be made and firkinned for winter;

Of ice-houses to be built;

Of buildings of every description to be painted;

Of agricultural machinery to be put under

cover, oiled and painted, ready for spring's use;

Of the roads to be repaired previous to the rainy season;

Of the school-house to be looked after, and furnished with everything necessary to the comfort and progress of the neighborhood children;

And finally, of a thousand other things too numerous to mention in detail.

O, ye farmers! neglect none of these duties.

British Colonies at the Great Exhibition.

NO. II.

Next in order, after Canada, we find an interesting display of wheat, oats, barley, Indian corn, grass seeds, agricultural implements, furniture made of native woods, Indian baskets, leathers, furs, and bear skins. in the court of

PRINCE EDWARD ISLAND.

Situate in the Gulf of St. Lawrence, and between the 45th and 47th parallels of latitude, its climate is necessarily somewhat rigorous; and yet the enterprise of its eighty thousand people has already made it an island of some importance. Extreme length, 130 miles; greatest breadth, 34 miles; area, 1,365,400 acres, divided up into 67 counties. Agriculture, the mechanic arts, commerce and educational enterprises report themselves favorably.

And here also is larger

NEWFOUNDLAND

Further out in the Gulf—the most ancient of the British colonies. Fish and oils are the chief attraction in this court. Codfish and capulin of course. Is there so *fishy* a place anywhere else in the world? The Superintendent tells us that the annual British catch is ten million fish, the French catch, five million. The universal Yankee, whether counted in or not, undoubtedly makes a good haul. Seal oil is shown in great abandance, as also a new kind of stearine made of it and much used for soap.

Sundry minerals, in proof that Newfoundland is not all fish and blubber—samples of grey oxide, peacock, and yellow copper ores; argentiferous lead; vitreous, ruby, and chloride of silver; quartz, rich in silver; iron ores and marbles.

Touching the mainland again—which we do here in the Exhibition by turning a few steps to the right—we come first upon

NOVA SCOTIA;

A province, just now a shining point on the map of the great world, on account of its many promising gold mines. This court is distinguished by a magnificent coal trophy, consisting of a shaft or pillar of coal 34 feet high; showing the actual vertical thickness of the famous Picton coal-bed. Here are likewise several other shafts of lesser height, each illustrating the thickness and character of the bed to which it belongs.

In the side court—the entrance to which is guarded by a noble representative moose—there is a fine collection of the minerals of Nova Scotia, together with a series of samples of gold to the value of $20,000; also several varieties of building stone and marbles; specimens of fish, illustrative of the importance of her fisheries; of birds, fruits, vegetables and cereal grains.

The discoveries of gold were not made till just last year (1861); since which time no less than one hundred places have been found to contain auriferous deposits. The gold is found in quartz rock, and whether the mines will prove sufficiently rich to warrant another grand rush of the gold-diggers is a matter of doubt. Judging from the descriptions we have seen of the geological formations in which they occur, and from the specimens here displayed, I must declare that I have no great faith in their richness.

Iron and lead are also found in Nova Scotia. But after all, and especially in view of the fact that Halifax, her principal city, is a sort of halfway house between the two continents, her coal mines are probably more important than any other.

Next in geographical order we have the next-door neighbor of the peninsular province,

NEW BRUNSWICK—

The second colony of the British crown in North America.

At the beginning of this century, New Brunswick was a wilderness. To-day, nearly a million of acres of land are under cultivation, cities and towns have sprung up in great number, mines of coal, iron, copper and lead, and quarries of marble have been opened, factories have been erected and railroads have been built. Not much in the way of *rapid* progress for a Badger to contemplate, but a good deal for an offspring of John Bull in a territory mountainous in parts, a dense wilderness in others, and with a climate not the most kindly, and a soil a good deal less productive than ours.

The articles on exhibition are miscellaneous; consisting chiefly of agricultural implements and produce, native woods, cabinet ware, minerals of ordinary quality, marbled manufactures in iron, woolen manufactures, some models of a suspension bridge, a railway train, sawmill, &c., and preserved fish and lobsters.

Grouped all together, these several Anglo American colonies constitute quite an empire. The Queen of England may justly be proud to reign over them, and the mildness of her government proves her to be what all nations with one accord acknowledge she is, a wise and liberal sovereign.

If from the Canadas we cross the Great Lakes and the Rocky mountains, on the 50th parallel of latitude we shall find, on the coast of the Pacific, another British colony; which, though restricted in its limits by the waves of old Ocean, to a narrow boundary, is, nevertheless, rich in its resources and prosperous in its growth. It is a part of British Columbia, and is known as

VANCOUVER'S ISLAND.

It has a superficial area of about 16,000 sq. miles; being 25 to 75 miles wide and 275 miles in length. It would seem to be too far north to warrant very considerable expectations of its agriculture, and yet here we have fair samples of wheat, barley, oats, field peas, timothy seed, all sorts of garden products, including apples and cherries, demonstrative evidence of what the science of Physical Geography teaches, that the western coast of North America is much warmer than the eastern.

The wheat on exhibition is above the standard weight—being 64 lbs. to the bushel—and the yield large enough to make some of you Wisconsin ten and twelve bushelers open wide your eyes. Winter wheat of superior quality at 36 bushels to the acre is a good crop.

And then here we find splendid specimens of timber—oak, pine, fir, spruce, hemlock, maple, &c—and of minerals, including copper and gold. Vancouver is a flourishing young member of the great colonial family, and deserves credit for her spirit in coming so far to show us what she is doing on the far off Pacific coast.

TASMANIA.

At a single step we have crossed the great American continent, strode the stormy Atlantic, the burning sands of unexplored Africa, the wide expanse of the Indian Ocean, passed the new world of Australia—a distance more than two-thirds of the way round the globe—and planted our feet, for the first time, on the island of Tasmania, formerly known as Van Dieman's Land. In the Exhibition it is distinguished by its lofty trophy of spars, which rise almost to the roof of the Transept, 100 feet high. There also fine specimens of coal, furs, fibres, wool and other agricultural products. The wool crop of last year was over 5,000,000 pounds; a fact of much importance as showing the wool-producing capacity of the island.

The woods used in the construction of the trophy are remarkable not only from the fact that many of them are different from any with which we are acquainted in America—for instance, Blue Gum, Ash or Swamp Gum, Stringy Bark, White Gum, Silver Wattle, Muskwood, Blackwood, Huron Pine, &c.—but likewise for their beauty of color and great intrinsic value for economical uses.

Tasmania has an area of about 25,000 sq. miles; its average length being 165, its width 155 miles. The central portion consists of a table land some 3,000 feet above the level of the sea, and is dotted with beautiful lakes, which are the sources of several rivers of considerable magnitude. The whole island abounds in coal, and is likewise favored with valuable mines of galena lead, copper, iron and gold. Altogether, it is quite an attractive point, and within the next ten years will acquire a large population. Number of inhabitants now, about 90,000.

With her immense mineral and agricultural resources, and with a climate exceedingly favorable, Tasmania is destined to rank high in the family of British Colonies.

The Wheat Aphis.

[The following communication from the pen of Prof. Glover, of the Maryland Agricultural College, Entomologist to the Agricultural Department, and one of the most learned men in his profession of which this country can boast, will be read with interest by all who are not already familiar with the character and habits of the insect which threatened so much damage in some portions of this State just before harvest.—Ed.]

Department of Agriculture.
Washington, D. C., Aug. 11, 1863.

J. W. Hoyt, Esq.:—The insect you mention as being very destructive to grain is most probably the

Aphis avenæ, (Fab.) Grain aphis or plant louse.

Eggs probably deposited by the unwinged females in the autumn upon late sown wheat, rye, &c., where they remain all winter, and hatch the following spring.

Insects live solitary at first upon the leaves and stems of oats, wheat, rye, &c., before the flowers or heads are formed; where, by means of their suckers, they drain the sap from the plant. At this time only females are found, which are of a green color, and bring forth their young alive. When, however, the flowers and heads are formed they discontinue their solitary habits and cluster in great numbers at the base of the chaff which envelops the grain, and, inserting their piercers into the plant, extract the juices which should form the grain, causing the kernels to become more or less shrunken and light of weight. When feeding upon the juices of the young grain the plant lice change their color from green to a yellow orange and orange brown. These clusters or communities of plant lice at the base of each grain consist of winged females and their young; which last shed their skins several times before attaining their full size.

During the summer, female aphides give birth to living young, without pairing with the males. These young, when perfectly developed, produce young, likewise, without pairing, and so on for several generations.

The males appear later in the season, when they pair, the impregnated females flying to the late sown wheat, &c., to deposit their eggs which remain uninjured all winter and hatch the following spring.

Dr. Fitch mentions this insect in his valuable report for 1860, as having been found all over the New England states, in New York, Canada and Pennsylvania. Last year it was very destructive in Maryland, and during the present summer literally swarmed upon a field of oats you saw at the Maryland Agricultural College, so that I had a good opportunity of observing its habits.

FOES OF THE GRAIN APHIS.

The Lady Bugs (*coccinellidæ*)—small round red beetles, spotted on the back more or less with black—are also very numerous in the grain fields, and, in both the larva and pupa state, feed voraciously upon plant lice, and, therefore, ought to be protected by the farmer.

The maggot-like larvæ of the *Syrphus*—small yellow and black banded, two-winged flies which may be seen hovering in the bright sunshine over flowers—feed also upon plant lice, and may be considered as benefactors.

The larvæ of *Chrysopa*—delicate greenish flies with golden eyes and wings like the finest gauze—feed likewise upon plant lice. These

last mentioned flies may, perhaps, be better known to farmers from the fact that many of them, when crushed in the hand, emit a most powerful and nauseous odor.

Several extremely minute Hymenoptera flies, with four transparent wings, also destroy the plant lice by depositing an egg in each living plant louse. This egg produces a grub which devours the interior of the louse and changes into a pupa in the hardened skin, and, finally, when changed into the perfect or fly state in the body of the louse, gnaws its way out of the empty skin, and, after pairing, flies away to find other victims in which to deposit its eggs. The skins of the aphides or plant lice destroyed by these flies may easily be recognized by their brown and dry appearance and by the round hole through which the perfect fly has made its escape; although the hard and indurated skin to the casual observer presents the same shape as the living plant louse, and clings to the leaf or plant in a similar life-like manner.

In greenhouses plant lice may be destroyed by fumigating with tobacco smoke; also by syringing the plants with tobacco water, or whale oil soap mixed with water; but such remedies will only answer on a small scale, and not in fields of several acres. And, as one of the objects of this office is to collect the best information about the remedies for injuries caused by insects, and the diseases of plants, will you be kind enough to write if any of your neighbors have succeeded in destroying them; and if so, what, *in your opinion*, is the *best* remedy?

I remain your obd't serv't

TOWNSEND GLOVER.

Surface Application of Manure.

The *Mark Lane Express*, in commenting upon the various experiments of Prof. Voelcker, states that the Prof., judging from the results of these numerous trials, leans to the opinion that the spreading of farmyard compost on the surface of the soil, for even a considerable period before it is plowed in, is by no means so injurious a practice as farmers have been led hitherto to suppose. He says that "on all soils with a moderate proportion of clay, no fear need be entertained of valuable fertilizing substances becoming wasted if the manure cannot be plowed in at once. Fresh, and even well rotted dung contains very little free ammonia; and since active fermentation and with it the further evolution of free ammonia, is stopped by spreading out the manure on the field, valuable manuring matters cannot escape into the air by adopting this plan." If this is a reasonable conclusion, it goes far to remove the dread of losing, on such soils, the better portions of farmyard manures by top-dressings. As the season will soon be here when these dressings are commonly applied to grass, it will be useful to remember this fact.

The best time for applying the manure is held by the great Cheshire grass farmers, to be in the end of September or the beginning of October, particularly in a showery period, as the grass soon covers it, and renders it less liable to be damaged by the sun or drying winds.

Great Crops in 1862.

It's a good thing for Wisconsin credit that we visited Europe last year instead of this; for the statistics of our great wheat crop of 1860, then and there published to all the nations, as the largest crop ever yet produced by any one State, have since been beaten by the great state of Ohio.

Our crop was 27,316,306½ bushels; that of Ohio in 1862 is reported at 29,883,651.

Nor is this all. That noble agricultural State does equally well in many other fields of agriculture, as will be seen by the following quotations from her imposing table of statistics of the chief crops:

Wheat—number of acres	2,090,047
" " bushels	29,883,651
Rye " acres	67,440
" " bushels	883,092
Barley " acres	59,178
" " bushels	1,221,170
Corn " acres	2,175,531
" " bushels	73,014,314
Buckwheat—number of acres	13,508
" " bushels	173,657
Oats—number of acres	574,047
" " bushels	11,633,058
Potatoes—number of acres	81,069
" " bushels	5,128,756
Meadow—number of acres	1,571,765
" " tons of hay	2,073,398
Flax—number of acres	53,488
" " bushels of seed	383,900
" " pounds of fibre	2,389,877
Sorghum—number of acres	30,872
" " pounds of sugar	27,486
" " gallons of syrup	2,696,159
Maple sugar—pounds	9,204,820
" gallons of syrup	542,400
Butter—pounds	33,078,750
Cheese—pounds	20,788,074

But Wisconsin is still ahead on the acreage of her chief products. The average of wheat per acre in Ohio was only 14½ bushels; ours was 24¼.

We may, with some degree of propriety, therefore, boast of our superiority as a wheat growing State—especially since there are good calculators who figure our crop of this year up to 30,000,000 bushels. When we come to sow as many acres as she does, Ohio will be nowhere.

A Plea for Farming.

From the "Introductory" of a pamphlet recently published, entitled "A Plea for Farming," we extract the following:

Well directed efforts in farming are always crowned with success. Individual competence for every one, and a nation's peace and prosperity must be born of agricultural successes. All institutions of civilization rest upon the basis of farming, and these institutions totter and fall, or stand firm and strong, according as the resources and pursuits of agriculture are weak and neglected, or are healthy and vigorous.

Mechanics and manufacturers keep pace in progress with the increase of productions that come from the farmer s hand. The institutions of useful knowledge are developed with the increasing wealth of a nation's agricultural riches. The germ of financial morality, and the antidote for all financial woe that now covers the earth, is yet to be developed by well directed efforts in agricultural pursuits. There is a long outstanding debt of attention and respect yet unacknowledged that the business men of the world owe to agricultural efforts, and the time is not far distant when this debt will be acknowledged and will be paid. And the wreck and the ruin of the property of trading millions, that now sweeps through the financial ranks of men, is but a warning to take heed of this indebtedness. Men who are the shrewdest, and have had the most experience in trade, see and know the injustice and almost criminality that is incident to "legal" trade; they are satisfied of the injustice and the uselessness of nine-tenths of the time and effort bestowed thereon.

Farmers, manufacturers and mechanics feed and clothe the world. Traders work in an opposite direction; they take the food and clothing that others have produced, to live upon, without producing anything that contributes lawfully to the end of their temporal existence. It is a just demand of nature that every healthy man, should, by his efforts, contribute something to his own support—be useful and do good in the world—and thus it seems a just retribution from the powers that rule our existence, that "ninety-nine tradesmen in every hundred fail in business." They fail to maintain their own prosperity, because they actually do nothing to support it. Every tradesman is unwittingly the agent himself that undermines his own successes.

Let tradesmen, nineteen out of twenty, turn from their unhallowed, unproductive, speculative pursuits, to the honest, useful, healthy business of farming, whereby the necessities and luxuries of life shall be produced, and they will lend a helping hand to the true end of existence. Then,—when this shall be,—"man's inhumanity to man" will be lessened and the world will be turned in the direction of the millennial age. It is the desire of all to better the present condition of living. This can never be done by the increase of labor and effort that is unproductive and useless; but it may be easily done by the increase of labor and effort that is productive and useful.

The Wheat Mania—Threshing, &c.

Ed. Farmer:—It seems to be the lot of this world to be made up of extremes; and the present generation can have no rival. I have lived long enough to witness two past extremes since my boyhood and youthful days. Then wheat was only raised on a limited scale as a rotation crop, with barley, oats, peas, clover and various other seeds. The grain had all to be threshed out by hand, and the precious straw all fed out on an equality with hay.

I have myself passed through the ordeal of hand-threshing, and know the value of *new straw*. The cattle in those days could always remind the owner that the straw was not relished beyond a week or two from the flail. But time seems only to have passed away as the morning dew. Before we seem to have arrived at the other extreme, we seem to have got to a part of the world and an era of time when the watchword is wheat! wheat! wheat! and the greatest leviathan threshing machines a yearly song from January to April—a perpetual inquiry, What is wheat worth a bushel?

No sooner is the grain deposited in the ground, in April, than the old song is resumed until harvest; when that arrives, it is generally expected to be little else than wheat. Now, if every sixty pounds of wheat contain eight pounds of sugar, twenty-eight pounds of starch, fourteen pounds of gluten, and the

balance oil and water, where is the marvel that a succession of wheat crops should impoverish the land?

Secondly; the way threshing is conducted renders it a perfect confusion instead of a comfort. It is remarkable that every man that invests so much money in one single article can but have one object in view, that is, to meet all demands, and reap as great a profit as he can. Consequently horses have to be driven beyond humanity to achieve the object.

Thirdly; in the hurry and flurry, various kinds of wheat, as a consequence, must be mixed, so that to get a pure sample is out of the question.

And, lastly; the straw is rendered a perfect loathsome mess, unfit for animal consumption; and, as a matter of consequence, the evils can only be removed by a perfect revolution.

Threshing never can be beneficial to the farming community under a system of speculation. We must have a reconstruction of stationary machines, adapted to the wants of farmers generally. We know that it can be done, for I myself have seen the six-horse power saw reduced within the limits of a pony to operate, cutting three-inch plank into brush-backs; and the six-horse power grist mill can grind corn, and the Little Giant can do the same. We will suppose, for instance, that a farmer with eighty acres of land (and no one ought to have less, in order to keep what he ought to possess, and to include a patch of timber). Of course, a man so situated needs one pair of horses, and if he could own a threshing machine for two horses that could thresh six wagon loads or a small stack in one day with his own force, and if this could be done no faster than a boy ten years old could hand the bundles, it would be all that would be required, and the benefits would be combined with the advantage of choosing a right wind (which is no small matter) and a favorable opportunity to clean the grain and put away the straw in quantities that might be sheltered and kept dry for all purposes.

DANIEL ARCHER.

SPRINGFIELD, Walworth Co., Wis.

Reasons for Fall Plowing.

1. The farmer has more time in the autumn than he can possibly command in the spring.

2. For this reason he will plow deeper and better in the fall.

3. The condition of the soil is more favorable to easy and advantageous plowing.

4. If deferred until spring, the land must often be plowed, if at all, when it is too wet; the result of which is that it becomes stiff and lumpy, unfit for cultivation.

5. Fall plowing exposes the minerals in the soil to the action of weathering, whereby such elements as are needed for the succeeding crop are decomposed and better prepared for assimilation by the plant.

6. Fall plowing exposes to the destructive agency of frost a host of insects and other vermin which would otherwise remain in the soil undisturbed until the season when their ravages begin.

7. It insures early planting or sowing, which are usually essential to the best success.

8. For all the reasons above named, *fall plowing insures a larger and better crop.*

Unfairness of the Game Law.

EDITOR FARMER:—I would like to say a word about our Game Law and its operation in certain respects.

We have Game Laws, protecting certain kinds of animals, birds, &c., amongst which are prairie chickens. Now, game laws are first rate, and we should have them by all means; but I would like to have a little alteration in regard to prairie chickens. The time for killing them commences, if I am not mistaken, on the 12th of August, just the time that farmers are the busiest, and could not leave their work to hunt even were the fields full of buffaloes. Now farmers will notice that just so soon as the time arrives for killing chickens, the fields are full of chaps and dogs every day, killing what they can, (and very many are good shots), and frightening the balance away from the fields, so that, by the time a farmer gets a little leisure to hunt,

where are his chickens? In the barnyard, says one. Granted; he has chickens in his yard, but some *plow-joggers* like the sport of hunting occasionally as well as *white* folks; and as the farmer raises a portion of the food that chickens devour, it seems no more than fair that he should have a chance at the game.

Therefore, I say that the game law, in respect to prairie chickens, should protect them until, at least, the 1st of September, to give all an equal chance. S. N. TAYLOR.

BURNETT, Aug. 24, 1863.

STOCK REGISTER.

[From the Wool Grower.]

Selection of Sheep Flocks.

BY H. S. RANDALL.

Carcass.—In a climate like ours, and under a general system of sheep husbandry like ours, carcass is unquestionably the first point to be regarded even in the fine wooled sheep—because on the proper constitution, or the proper structure or connection of its parts depends the health, vigor and hardiness of the animal; and without these, all other qualities are houses built on sand. Plump medium size, for the breed or variety, is the most desirable one. The body should be round and deep, not over long, and both the neck and head short and thick. The back should be straight and broad, the bosom and buttock full, the legs decidedly short, well apart, straight and long, with heavy forearm and fullness in the twist. The "pony-built" figure, as farmers term it, indicates a hardiness, easiness of keep, and predisposition to take on flesh.

Skin.—The skin should be of a rich, deep rosy color. The Spaniards ever justly regarded this a point of much importance, as indicative of the fattening or easy keeping properties of the animal, and of a normal and healthy condition of the system. The skin should be thinnish, mellow, elastic, and particularly loose on the carcass. A white skin, when the animal is in health, or a tawny one, is rarely found on a high bred Merino. A thick, stiff, inelastic skin, like that found on many badly bred French sheep, is highly objectionable.

Folds.—The Spanish, French, and German breeders approve of folds in the skin, considering them as indications of a heavy fleece. The French have bred them over the entire bodies of many of their sheep. I have seen two hours and a half expended by an active and skillful shearer, in my barn, in getting a fleece decently off a ram of this stamp. This might do better in a different climate, and in countries where labor costs nothing, but the additional quantity of wool will not pay for it in this. Besides it is unsightly, because excessively unnatural. A deep, soft, plaited dewlap on both sexes, and some slight corrugation on the neck of the ram, were all our older breeders of the Merino desired in this way. The fashion has extended to heavy neck folds, particularly on the ram, a short fold or two back of elbow, and some small ones round and on the roots of the tail, and on the breech—the latter running in the direction of lines drawn from the tail to the stifle. Gentle corrugations over the body, which can be pulled smooth in shearing, are also tolerated.

Fleece.—Wool long enough to do up in the fleece is not desirable on the nose, under the eyes, or on the legs below the knees and hocks, though a thick coat of shortish wool on the latter, and particularly on the hind legs is regarded as a good point. The armpits and most of the base of the scrotum must necessarily be bare; but these cavities should be as small as the freedom of movement permits; and all the other parts of the bodies and limbs should be densely covered with wool of as uniform length as is attainable. It is a specially fine characteristic to see it of full length on the belly, forehead, cheeks, and on the legs as far down as the knees and hocks.

The wool should stand at right angles to the surface, except on the inside of the legs and on the scrotum; it should present a dense, smooth and even surface externally, dropping apart nowhere, and the masses of wool between those natural cracks or divisions which

are always seen on the surface, should be of medium diameter. If they are too small they indicate a fineness of fleece which is incompatible with its proper weight; if too large, they indicate coarse, harsh wool.

The good properties of wool are too well understood to require many words. *Length* is no longer an objection to the finest staple, as it once was. The maximum, both of thickness and length, cannot be attained on the same animal, and the object of the breeder should be to produce that particular combination or co-existence of these properties which will give the heaviest fleece.

Fineness.—The grower knows his market, and must produce an article adapted to it. In the American market there is a much larger demand for medium than fine wools, and the former commands much the best price in proportion to the cost of its production. It is to be hoped, however, that the demand for fine wools will increase. Whatever the quality aimed at, it should be the same throughout the flock, so far as is practicable.

Evenness.—Evenness of quality in every part of the fleece, so far as this can be obtained, is one of the first points of a well bred sheep. Jar is very objectionable, but not so much so as what the Germans term dog's hair —hair growing out throngh the wool on the thighs, the edges of the neck folds, about the roots of the horns in rams, or scattered here and there through the fleece or inside the legs. This indicates bad blood or a defective course of breeding.

Trueness and soundness.—Wool should be of an equal diameter from the root to the point of the fibre. It should especially be free from any finer or weaker spots or "joint" in it, occasioned by a temporary illness or other low state of the animal. This can often be detected by the naked eye, and always by pulling the fibre. Wool is said to be sound when it is strong and elastic.

Pliancy and Softness are considerations of the first importance, not only as indicia of other qualities, but intrinsically. If we can suppose two lots of wool exactly to resemble each other in every other particular, but that under the same treatment one is comparatively stiff and hard to touch, while the other has a silky pliancy and softness, the latter is decidedly the most valuable, because it will produce manufactured articles far superior in beauty and for actual use. But in point of fact full blood wool is almost invariably soft in proportion to its fineness, and is always so in proportion to its marketable value. A practiced buyer can decide on that value in the dark.

Style is, perhaps, a word which has rather vague boundaries to its meaning; but it includes that combination of useful and showy properties which gives value to the choicest wool, viz: fineness, clearness of color, lustre, uniformity and beauty of curving, and that peculiar mode of opening on the body, or disposition of the fibres on the sheared sheep, which indicate the last extreme of pliancy and softness. These qualities, in combination, present an appearance at once, without a sufficiently close inspection to discover the separate fibres, or even without a touch of the hand, to point out the best fleece in the pile.

Yolk.—This, in its most usual form, is a semi-fluid, unctuous secretion from the skin, found in wool of various breeds of sheep, particularly in that of the Merino. Sometimes there is only enough of it to lubricate and make a shining coating on every fibre. In others, it appears additionally in little brilliant globules among the fibres. It others still, it forms a separate, visible and abundant mass in the lower parts of the wool. In some instances it is as thin as the most delicate oil; in others, pasty and viscid; in others it has the spissitude of soft wax, and appears in concretions of considerable size within the wool; and when it is sufficiently abundant in the fluid form to ooze constantly to the outer extremity, it catches and retains dust, the pollen of hay, &c., and gradually inspissates into that black gummy mass now so eagerly sought for by a class of Merino breeders.

Vauquelin, a celebrated French chemist,

found that various specimens of yolk contained about the same constituents:

1. A soapy matter with a basis of potash which formed a greater part of it.

2. A small quantity of carbonate of potash.

3. A perceptible quantity of acetate of potash.

4. Lime, whose state of combination he was unacquainted with.

5. An atom of muriate of potash.

6. An animal oil, to which he attributes the peculiar odor of yolk. He found the yolk of French and Spanish Merinoes essentially the same.

This substance is, then, substantially a soap —and the usual terms of grease, oil, &c., are not correctly applied to it. It washed freely from the hands, except that an unctuous feeling is left by the trace of fatty matter in it. The hands of shearers, kept covered with it for a number of days, grow perceptibly softer and whiter at every washing.

With a few hours previous soaking, it will wash almost entirely out of the wool in soft, warmish brook water, except, perhaps, the external black gum. Let sheep be exposed to a warm rain long enough to *wet through* the wool, and let them be thoroughly washed the next day in soft water falling in a swift, heavy current over a mill-dam, or from an aqueduct, and the owner will find (perhaps to his consternation) that even his black gum has disappeared, unless, perhaps, an old ram's, and a few incorrigibly dirty and "gummy" ewes'. Yolk of any form that will remain in visible masses in the wool after such a washing, is improperly there; and he who cultivates it pursues an illegitimate line of breeding. Few or none of our farmers wash their sheep thus, on the ground that buyers will make no adequate compensation for the cleaner and lighter condition of the wool.

In the hard water of the limestone regions, wooll washes much less cleanly. And I am informed by experienced wool buyers that much more yolk appears in the same wool and sheep in some regions than in others. Ohio and Michigan fine wools are said to be ten per cent. freer from yolk than New York wools, and New York ten per cent. freer than Vermont wools. I know, by my own experience, that sheep driven from the wheat soils of Onondaga become lighter colored in Cortland county. Taken back, the same sheep again resume their dark color.

There are some incidental and easily explainable reasons for a part of this. On wheat lands sheep are put on stubbles, and become dirtier. The heaviest fleeced flocks of Vermont, from which high-priced breeding sheep are sold, are sheltered in summer as well as winter from rain, and thus all their natural yolk is retained.

Facts About Milking.

As a general rule cows should be milked twice a day.

The times of milking cows should be invariable all the year round, at six in the morning and six in the evening.

If in the early state of milk, after calving, it should be found that a cow's bag becomes too full, it may be desirable to reduce the bag in the middle of the day, in which case eight o'clock in the evening will be late enough for the last milking.

Too great eagerness to relieve the overpressed bag of the cow may have an injurious effect by weakening its power of retention.

It is the custom in Yorkshire to give cows something to eat during milking, to keep them pleased and quiet during the process.

In milking, the hands should be dry and clean, as wet hands crack the teats in cold weather, and dirt injures the skin.

In milking take care that all the last of the milk is drawn off, as the last pint is richer for the production of butter than two quarts at the commencement of milking.

Imperfect or slovenly milking will dry off cows prematurely.

Annoying or disquieting cows while milking has a tendency to diminish the quantity of milk.

Milk as quickly as possible, and never leave the cow during the process.

An active milker may milk five cows in an hour.

Six weeks before a cow is to calve, commence to dry the cow by milking once a day for three or four days, which will diminish the quality; then cease milking for three days which will diminish the quantity.

All milking of cows ought to cease at least one month before the time of calving.

In finally drying up a cow's milk, care must

be taken not to leave a quantity in the bag to be absorbed, as it may produce disease.

Let the milker keep his temper and treat young cows kindly, for young animals never forget ill treatment, and a recurrence of similar circumstances will remind the cow of former punishment.—*Farmington Chronicle*

To Cure "Stretches" and "Blackleg."

MR. EDITOR:—Now that I have sent my regular dollar, I beg leave to answer one or two queries. First, then, of

"SCRATCHES" IN SHEEP.

The cause of this scratching or itching is, as near as I can ascertain, costiveness or ticks. In either case, thoroughly mix one pound of sulphur with four quarts of salt; place it in a trough where the sheep have free access to it. It is also a preventive of a complaint commonly called "smottles." If the sheep are not bad, half a pound of sulphur will do.

THE BLACKLEG.

Two years ago I lost four head by this disease, and supposed there was no remedy. This spring one of our neighbors had a young cow taken with it. I drew about four quarts of blood from her neck, and gave her quite a quantity of soap and milk. In two days she was well. In the June No. of the FARMER a remedy is given which probably is equally effectual.

Farmers, as the editor has given us an invitation to send him our thoughts, let us not be so backward in responding to his reasonable request. I am sure the result will be good.

J. F. BARKER.

CASSEL PRAIRIE, Sauk Co., Aug. 15, 1863.

FEEDING OATS TO HORSES.—The same quantity of oats given to a horse produces different effects according to the time they are administered. I have made the experiments on my own horses, and have always observed there is in the dung a quantity of oats not digested when I purposely gave them water after a feed of oats. There is, then, decidedly a great advantage in giving horses water before corn. There is another bad habit, that of giving corn and hay on their return to the stable after hard work. Being very hungry, they devour it eagerly and do not masticate; the consequence is, it is not so well digested and not nearly so nutritious. When a horse returns from work, perspiring and out of breath, he should be allowed to rest for a time, then given a little hay, half an hour afterwards water and then oats. By this plan water may be given without risk of cold, as the oats act as a stimulant.—*Journal d' Agriculture.*

Mean Dogs in Ohio.

It appears from a carefully prepared report of the agricultural statistics of Ohio, taken by the town assessors, under the direction of the Secretary of the State Board of Agriculture, that the *dorgs* of the good old Buckeye State are a mighty scaly set of canines—prowling around by day and sucking ovine blood at night.

The number of dogs in the State is put down at 174,404!—a most extraordinary number, and, of course, including all the *purps*.

But behold the number of sheep whose crimson founts have been perverted to the base end of merely advancing the diabolical interests of the sausage market!—36,778 killed and 24,972 wounded; damage estimated at $136,347! And still, the miserable dog-loving Buckeyes howl like savages at the bare mention of a Dog-*law;* that sort of legislation is "an infringement of their rights that can not be tolerated."

Enough property destroyed in two years by worse than worthless curs to establish and endow an Agricultural College! Such dogs and such people are fit associates, and in the next life should be put upon some hot and confounded mean planet, all by themselves.

If this plan of disposing of them were to be adopted, wonder if Wisconsin would be much behind in furnishing her full quota of both dogs and dog-men? Not much, unless there has been a great reformation since we were around last time.

THE FATE OF HORSES IN AUSTRALIA.—Talk of the nobility of the horse! Why, we learn from reliable authority that Mr. Atkinson, of Sophienburg, has taken a contract to boil down 2,000 horses. There is no sale for these animals, and the owner wants to sell their oil, hides and hoofs, and thus get as much for them as possible. The fate of Dibdin's high-mettled racer was illustrious compared with the ignoble doom which awaits the horse stock of the interior. The wild charger of Australia's burning plains may well envy the European donkey his thistle.—*Illawarra (Australian) Ex.*

Wool-Raising at the West.

This branch of stock growing is receiving largely increased attention throughout our Western States; partly caused by the war and increased demand for wool, consequent and partly owing to the partial failure and low price of wheat, and to the fact that pork sells low compared with former years. In this increase of sheep, no hindering cause has been found and no new enemy developed. The present year has been a remarkably wet one, and yet sheep in larger numbers than ever before have pastured the prairie in perfect health.

Many farmers almost unacquainted with sheep and wool growing have invested in floccks the past summer. The coming winter may prove a dear "experience school" to them, and cause them to wish their money back again.

In sheep growing there are three distinct sources of profit sought, viz: increase of number by natural propagation, growth or increase in size and weight, and annual product of wool. The fattening of sheep for mutton exclusively constitutes a branch of business by itself.

The three objects above noted are the chief aim of Western sheep growers. The ewe used in breeding should possess as nearly as possible the points of excellence desired in the offspring. They should at least be one year old, of good strong constitution, have air, exercise and healthy diet. The lamb will thrive finely if the dam be strong, healthy, and a good breeder. Prairie storms are exceedingly severe on lambs, and they require good shelter, dry under foot. Those farmers who have discarded swine for sheep should bear in mind that a hog-reeve and shepherd are quite separate occupations. The hog, though native of a warm climate, will thrive, if well fed, without shelter; the sheep will suffer far more, and its increase frequently perish. The ewe, healthy, well fed and sheltered, will generally realize the fond hopes of the shepherd for increase. Growth afterward is natural, easy and rapid. Good health is necessary, which requires dry pastures, and proper food—subjects for study not easily exhausted.

The annual product of wool depends much upon the health of the sheep, both for strength and beauty of fibre, and also weight of fleece.

The three sources of increase above named, closely looked after, and there will be small chance of failure in making sheep or wool growing a remunerative branch of Western husbandry. We have the summer range without limit and winter forage superior and more abundant than any other portion of the earth visited by us. Let it no longer be said the prairies are unsuited to the production of sheep and wool.—*Stock Journal.*

Early Training of Horses.

During my long career among the Arab tribes I have seen and watched the breeding of mere than ten thousand colts, and I am certain that all those whose education did not commence very early, and was not directed, moreover,on good principles, turned out faulty, vicious, and, in general, good for nothing. So much am I persuaded of the necessity of early instruction, that invariably, in my travels, when I was under the necessity of buying horses, I refused those which had not been mounted at the age of eighteen months.

"How has thy horse been bred?" was always my first question.

"My lord," replied the city Arab, "this gray jewel of the river has been reared like one of my own children; has always been well fed, well nursed and well taught. I only mounted him when full four years. See how sleek his skin, and how glossy his mane!"

"My friend, keep thy horse. He is clearly thy own and thy family's pride; and shame upon my white beard were I to deprive thee of him."

"And thou," I then addressed a son of the Desert, sunburnt from head to foot, "how hast thou bred thy horse?"

"My lord," he answered, "from his earliest youth I have accustomed his back to the saddle and his mouth to the bridle. While still young he carried me far, far into the Desert; many days without drink, and many nights without food. His flanks look naked, it is true; but, believe me, should you ever meet false friends on the road, he will not leave you in trouble."

"Halloo! servants, tie the chestnut horse to the tent, and entertain my Arab friend."—*The Horse of the Sahara.*

Cribbing in Horses.—A correspondent of the *Agriculturist* says:—I found myself cheated to the amount of $50 by the purchase of a horse sold as "sound," but which proved to be an inveterate cribber. Various remedies were recommended and tried without success. Finally I found a preventive if not a cure. I have arranged the stall so as to leave nothing against which he can press his teeth. He is fed from a low box which is pushed into the stall from a passage-way, and the box is withdrawn when not in use. (It is said that a horse cannot crib with his head down.) The opening for air and light is placed too high for him to reach it.

Stretches in Sheep.—In conversation with an intelligent sheep breeder, recently, he informed us that he cured the "strctches" by administering an injection composed of tepid water and castile soap. In one instance he used nearly half a pailful before the desired results were obtained.—*N. H. Jour. Ag.*

THE BEE-KEEPER.

End of the Beehive Controversy.—Mr. Lee's Reply.

[Glad as we are to have the important subject of Bee-Culture thoroughly agitated, we nevertheless regret that the discussion should have degenerated into a mere controversy as to the comparative merits of two rival hives. The question of hives is, no doubt, an important one; but then, after all that has been said by parties interested and disinterested, we are not yet convinced that the style of the *hive* is everything. A person who thoroughly understands the principles of bee-culture will find it easy to make honey even in a straw hive or hollow tree. It is *knowledge of the bee*, more than of the thousand patents which now compete for the public favor, that the bee keeper needs.

In the March No. of the FARMER we published a challenge from "A Bee Keeper of the Northwest," who has been using the "old box hive," to any and all friends of the patent hives, proposing to prove the merits of each respectively. But, for some reason, none of the champions of patents thought best to accept the challenge. *We* believe in the superiority of some of the patents—particularly of the movable-comb hives—and would have been glad to record the results of their competition with the "old box." It would, no doubt, be difficult to make such a trial perfectly fair and even, in all respects, and yet, inasmuch as such vast superiority is claimed for the patents, it was reasonable that the public should have looked for an acceptance of the challenge.

As to the merits of the two hives in controversy, we declare our inability, without actual trial of them both under like circumstances, to say which is the better. We have no doubt that both will, in most respects, meet with the approbation of all reasonable bees, and we find not the least difficulty in satisfying ourself that we should not very bitterly protest against a good liberal box of honey made in either of them!

Mr. Stebbins' article in the August number, under title of "The Langstroth Patent," was unquestionably calculated to damage the credit of the Lee Patent, and we cannot, therefore, with justice, decline to publish the response of Mr. Lee; although we would have preferred that he should have confined himself to a bare refutation of the charge of "infringement." And, inasmuch as we propose to end the controversy in this No., so far as this journal is concerned, we shall ourself correct two or three errors in the reply of Mr. Lee, to which Mr. Stebbins would otherwise be inclined to make rejoinder.

In the first place, the article on "Scientific Handling of Bees," to which reference is made by Mr. Lee, was *not* "written by the redoubtable J. M., himslf," but by our own hand while in Washington And here let it be understood, once for all, that the Editor of the WISCONSIN FARMER writes his own editorials, even to the brief notice of an advertisement. There can be no misapprehension as to this on the part of those of our readers who know how exceedingly jealous we are of any single line or word getting into our columns as editorial that was not either veritably written or dictated by *ourself*. We hate all humbugs in others, and are not disposed to practice them either for our own benefit or that of other parties.

Secondly; Mr. Lee, and every other inventor, should know that it is not necessary to send to Washington, at an expense of "$5.00," for a copy of an inventor's claims, or other information of that sort. All this is published from week to week by Messrs. Munn & Co., of New York, in that most admirable and invaluable weekly journal of science and the mechanic arts, the *Scientific American*—the subscription price of which is only $2.00 a year.

Both of our correspondents are well qualified to enlighten the reading bee-keeping public on the important subject of management, and we doubt not that, now they have each had their say on the hive question, they will be pleased to give us of their large information.—ED.]

"INFRINGEMENT."

MR. EDITOR:—I noticed in the August No. of the FARMER an article headed "The Langstroth Patent." On looking it over, I saw that the Rev. J. M. Stebbins had opened his battery upon me in good earnest, and that, too, "without any interest in Mr. Langstroth's patent except an individual right." Wonderfully generous and disinterested *for the General Agent of the State of Wisconsin for the Langstroth Hive!* (See July No. of the FARMER, article on "Scientific Handling of Bees," evidently written by the redoubtable J. M., himself. Ah, Elder! that was an unlucky stroke of the pen, wasn't it?—that "scooped up in *our* bare hands." But then, who would suspect that anybody but *Editors* make use of the first person plural?

He seems to know all about other people's business, and mine in particular. He reminds me of the man in the fable, who had a hoe-handle so long that it was easier to work in his neighbor's garden than in his own.

He states in his article that "many honestly think that Mr. Lee is infringing on the Langstroth Patent." I don't doubt it; from the fact that Mr. Stebbins has spent the most of his time, for the last eighteen months, travelling through this and other States, crying, "Infringement!" "Prosecution!" "Humbug!" &c. And all, too, "without interest!" From such talk people not understanding the matter would *honestly* think that I am infringing. Again: he states that the first important step has been taken by Mr. Langstroth towards prosecution for infringement, in the re-issue of his patent. It does not follow, by any means, that because Mr. L. has obtained a re-issue of his patent, he is preparing to prosecute any one. That *gas* has been burning these five years. Friend Stebbins would fain make the public believe that Mr. Langstroth has an exclusive right to the frame itself. Now if the Elder will look a little closer on the other side of the question with a little "interest," he will find half a score of patents granted on the movable frame. And if he will trouble himself to pay the Patent Office another five dollars for a copy of my claims, he will find in my late patent of June, 1863, a claim on the frames and also on the sharp bevelled lower edge of the top bar of the frame, &c. Mr. L. has patented no device to compel the bees to build their combs straight within the frame; hence, in his frame as patented, the bees are quite as likely to build their combs at right angles with the frame. To obviate this, he makes use of a triangular strip which is nailed to the bottom of the top-piece of the frame, without which *his* frame would not be worth a straw. But unfortunately its use is a direct infringement, and every purchaser of the Langstroth hive is liable to pay an extra fee of $5. Of course, the "General Agent for the State of Wisconsin for Langstroth's admirable hive" will studiously avoid the mention of such a disastrous truth to the *poor* public, whom he proposes, with such unparalleled generosity, to furnish with the means of self protection.

And now, in conclusion, let me say that I want it distinctly understood by all parties that my patent hive is no infringement upon any hive whatever. And I trust that my bee-keeping friends will give themselves no uneasiness on account of the empty threats of interested parties, more especially of those who attempt to hide their selfish interest under a show of "public generosity."

WALTER M. LEE.

ROSENDALE, Aug. 10, 1863.

Italian Honey-Bees

MR. EDITOR:—In answer to the numerous letters of inquiries pertaining to this new species, allow me, through the columns of your paper, to give a description of this peculiar kind of bee.

When they were first introduced into this country, I regarded them more of a humbug than an improved species of honey bee, and no doubt but others have come to the same conclusions. But after due consideration and experiments for the past three years, I have become fully convinced of their superiority over the native bee. They seem to be a very

tough, hardy bee, will stand the cold of our northern winters better, collect honey much faster, work earlier in the morning and later at night than our native kind. The queens are more prolific and will brood much faster than the common species. They will collect honey from some species of flowers which other bees pass by. Their proboscis seems to be a trifle longer, and being stronger and more active, they will frequently tear the anthers of flowers open to obtain the sweets, which the common bee will never do, and, as has been frequently alledged, *will* collect honey from the smaller species of red clover Their size is governed by the size of the cells in which they are reared. If comb of other bees' make is used, they will be about the same size as our common bees. But if they are allowed to build their own brood comb, they will be considerably larger.

It has been frequently asserted that the Italians have no weapon of defence. This is an error, as I learned in the early part of my experiments. I then thought they had instruments of warfare of unusual length. By careful management, I find they are much less liable to sting than the old kind. Bee-keepers who are not thoroughly acquainted with the nature of bees, would do well to use a *Fumigation Pipe*, which will render any swarm perfectly manageable in less than ten seconds. They can even be shook out of the hive, and not a bee will resent it.

They seem to differ very materially in color as well as in the shape of their body from the common kind. Their bodies seem to be somewhat longer, and taper to near a point. The workers are all marked by a series of gold bands, encircling their bodies just under the wings. The drones are not so strongly marked. The workers resemble the common yellow wasp quite as much as they do the common kind of bees. The queens vary in color; some of them are a dark brown, others are quite light, approaching to near a gold color; but the progeny of a dark queen bear the mark quite as plain as a light colored one.

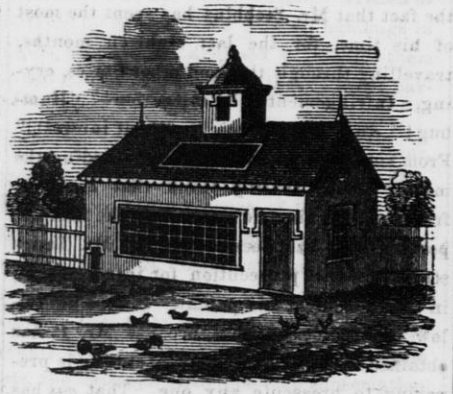
In regard to their moral habits, I cannot speak very favorably, unless it is for the robbery of our common stocks. In that capacity, they will excel anything I have ever seen. Being very smart and active, they will make their way into any common hive and get a load of honey and make their escape unharmed. They will have a full hive whether it is a good honey season or not, and I have frequently had them fill two hives, by placing on the top of the other.

I would advise all persons who engage in their culture, to make the entrance of the hive containing the native species, very small, to prevent being robbed by them. The entrance of the Italian swarms should also be contracted, to prevent their robbing neighboring apiaries. The Italians are not so liable to rob their own species. Amateurs just commencing the culture of bees would be greatly benefitted by purchasing some good treatise upon their nature and habits.

K. P. KIDDER,
Practical Apiculturist.

BURLINGTON, Vt.

THE POULTERER.



Poultry Houses.

[The following is from the pen of a correspondent of the *American Stock Journal*, and one of the best authorities in the U. S. on the subject of Poultry. Read it.—ED.]

Every householder knows the value of fresh eggs, and an abundance of good fat poultry the year round. But few know how to obtain

them without having them cost twice as much as they are worth. But with proper management and conveniences for them, they are among the most agreeable, useful and indispensable objects in country life

We will now mention a few points requisite for the successful managing of poultry. The sailor commences housekeeping by getting a wife, and then a house; but as this system has its inconveniences, we recommend to begin with the house. First get the cage, then the bird; or, in other words, first prepare the house, and then procure the fowl.

Whether fowls are suffered to run at large, or are confined, there should always be a poultry-house and yard, where they can be regularly fed and cared for. Previous, therefore to getting a stock of fowls, a suitable place should be prepared for them.

The confinement of fowls will be found a most necessary arrangement, as on many occasions it is highly requisite they should be confined, as at planting time, or at some other periods when they are particularly troublesome. Close confinement in a room or shed would interrupt their laying, and make them sick, but a yard on a plan we are about to describe, would answer every purpose, and be found very advantageous in securing the eggs of such fowls as had contracted a habit of laying away and hazarding the loss of eggs.

In order to unite all the advantages desirable in a poultry-yard, it is indispensable that it be neither too cold during winter, nor too hot during summer; it must be rendered so attractive to the hens as to prevent their laying in any chance place away from it. The extent of the place should be proportional to the number of fowls kept, but it will be better too small than too large, particularly in winter, for the mutual imparting of electricity and animal heat. There is no fear of engendering infectious diseases by too much crowding; and it is found, in fact, that while fowls have been kept apart they are much less prolific.

Having settled all preliminaries, we will now give a plan, as illustrated at the head of this article, simple and unpretending—for utility rather than show—and can be erected at no great expense. It is designed to accommodate from twenty-five to thirty fowls, and that is as many as any common sized family would find it profitable to keep, unless they have a wide range. If restricted in their freedom, a yard of one half of an acre would be sufficient, provided a portion should afford grass, and a dense shade of low trees and shrubs, to which the fowls may retire in hot weather, where they will bask in the dust, and spend much of their time in a sociable and agreeable manner.

In the first place, the location of the house should be on a dry, gravelly or sandy soil, and the surface sloped and so drained as to avoid all stagnant moisture, so destructive to chickens. The house, if there be a choice, should have a southern aspect, and the yard on either side, as taste and convenience may suggest; but so long as the ground is uncovered, the fowls would enjoy a range on the south, and would be benefitted by coming to the ground. The house, to accomodate the aforementioned number of fowls, should be 12 feet long, 8 feet wide, and 8 feet posts.

Interior Arrangement.—The house must be airy and well ventilated. The floor must be made of some hard material, so as to allow the droppings to be scraped away, and the floor strewed with fresh sand, loam and spent ashes, which should be done daily if possible. Cleanliness is indispensable; and to insure the destruction of insect vermin the whole interior of the building, with its fixtures, nests, roosts and all, must be thoroughly whitewashed, at least once or twice a year.

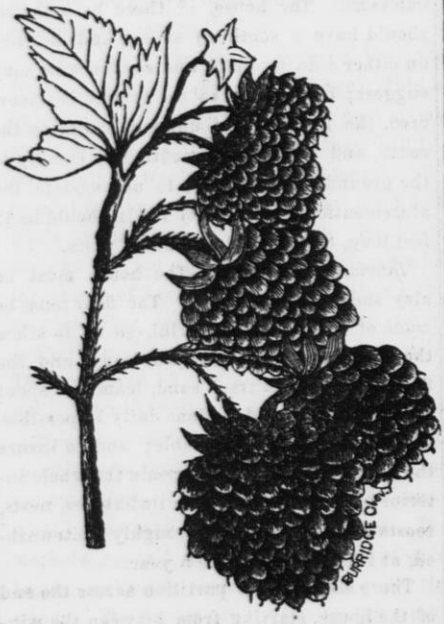
There should be a partition across the end of the house, starting from between the window and the door, forming a hall, or narrow room for storing feed, &c. There should be a door in the partition opening into the main room. Nest boxes may be placed against the partition, one tier on the floor, and another tier about three feet high, over them, which should be not larger than will accommodate a single hen. The roosts should be placed cross-

wise of the gable over the entry or feed-room, commencing at the top or peak, say one foot from the end of the building, the second about 18 inches distant and 12 inches lower, and so on, ending with a hen ladder to the floor, which will accommodate the larger and more clumsy fowls, which often injure themselves flying up or down from the roosts. A door 7 inches wide and 8 inches high, for the ingress and egress of the fowls, should be made, at least three feet from the ground, which will insure the safety of the fowls from the depredations of animal enemies—cats excepted.

C. N. BEMENT.

THE HORTICULTURIST.

A. G. HANFORD,.....CORRESPONDING EDITOR.



The Horticultural Prizes for 1864.

By reference to the 4th page of cover of this number, it will be seen that we have a plan for doing two good things at once—increasing the circulation of the FARMER, and furnishing the farming public with approved varieties of the most desirable fruits. And in order that those who are unacquainted with the qualities of such varieties as are offered respectively, we herein give concise descriptions as furnished by the most reliable authorities; reserving more elaborate and illustrated descriptions, with methods of culture, until the winter months, when our columns will be less crowded with matters of *pressing* importance.

THE PREMIUM GRAPES.

The Clinton is esteemed less for the real value of the grape than for the *perfect hardiness* of the vine and the profusion with which it bears. Clusters and berries, small, black; colors early and is quite tart until fully ripe, on which account it is liable to lose with many the reputation it really deserves.

Isabella—One of the best old-fashioned grapes and generally popular. Clusters and berries large, juicy, sweet, and pleasantly musky. Vine vigorous and productive, but only moderately hardy; requiring some winter protection, except in favored localities, to render it perfectly safe during our cold winters.

Hartford Prolific—Hardy, vigorous, and very productive. Matures in latitudes where Isabella will not ripen. Berry, large, black, with thick skin covered with bloom, sweet and juicy, ripens ten days earlier than the Isabella, and the "earliest of the good grapes."—Grapes liable to fall as soon as ripe; though this fault is said to lessen with superior cultivation.

Concord—Eminently *the grape for market;* being a very vigorous grower, exceedingly hardy and prolific. Clusters large, compact; berries, large, almost black, thickly covered with bloom, flesh moderately juicy, sweet, rather tough.

Diana—A popular seedling of the Catawba, is vigorous, hardy and productive. Clusters large; berries resemble the Catawba, though not quite so large; flavor superior and much esteemed. Fruit easily kept for winter use.

Delaware—The best grape in the world.—Vine very hardy, a moderate grower and moderately productive. Clusters small, well formed. Berries small, of a beautiful flesh-color, and very translucent, exceedingly tender,

juicy, but sprightly, aromatic, sweet and *perfectly delicious!* Nothing that we have ever tasted in the way of grapes can be said to approach the Delaware as *a grape to eat.*

THE PREMIUM RASPBERRIES.

Antwerp Red.—Moderately strong, the better for winter protection. Berry, large, long conical, dull red, with rich, sweet flavor. Ripens early.

Hudson River.—Fine market variety. Not so vigorous or hardy as Antwerp Red, but produces finer fruit, which is large, red and juicy.

Cincinnati Red.—Much esteemed by some, not known to editor personally.

Belle de Fontenay.—A great grower, moderately hardy and a good bearer. Fruit large, purplish, rich; ripens late.

Black Cap.—Very hardy, vigorous grower, very productive. Berry, almost black, round, flattened, firm; ripens late, profitable for market. All in all, one of the very best raspberries for our cultivation in the Northwest.

Brinckle's Orange.—Moderately hardy, but vigorous, and an immense bearer. Fruit, large, ovate, of a splendid orange color, delicate texture and delicious flavor.

Kirtland.—Hardy, bears well. Fruit red.

Purple Cane, or Red Prolific.—Only moderately hardy, productive. Fruit, red, of delicate texture, sweet.

White Cap.—Great grower, productive; canes yellowish. Fruit, yellowish, early.

Allen.—Hardy, not very productive Fruit reddish-black, good.

The Raspberry is very easily cultivated, and even the tenderest varieties may be grown with success by simply laying down late in the fall and covering with coarse litter and earth.

THE PREMIUM BLACKBERRY.

We have offered simply the *Lawton*, because we believe it to be the best of any of which we have personal knowledge. As of almost all other fruits, there are different opinions as to its merits—some maintaining that it is entirely faultless, and others throwing it out of their gardens in disgust. All agree, perhaps, that it is a profuse bearer, and that the fruit is large and luscious—the ground of complaint with some being simply that it is not sufficiently hardy. It is, nevertheless, our opinion that it is worthy of even more care than any one claims it must have.

If grown in a cool, moist, well mulched soil, and properly laid down for winter, it is about as sure of doing well as most other fruits.

Hardy Spring Flowering Bulbs.

Every one loves the spring flowering bulbs, with their early brilliant beauty. Their culture is easy and simple, and the first cost comparatively trifling. All may enjoy them who will.

First the Snowdrop and Crocus, then the Hyacinth, Narcissus, Tulips, Iris, &c. *All* pretty, many beautiful and fragrant.

A few things need attention in order to the best results; these we will briefly note.

Select, when practicable, a position for planting sheltered from northerly and easterly winds, open to the sun.

A light soil to be preferred; if close and heavy, mix with it clear road or river sand, and enrich with well decomposed fine manure; turfy loam and woods earth are also good.

Spade full eighteen inches deep. The beds or border should be prepared a week or two before planting, to afford opportunity for the soil to settle, and should then be a few inches

higher than the paths, and slightly rounded to carry off superfluous water.

All hardy bulbs may be planted any time during October, November, or December. The best time is October or early in November. When several beds are made, it is well to vary the time of planting, thus prolonging the season of flowering.

The rows may be ten inches apart, and the bulbs three to six inches, according to variety, and should be set two to five inches below the surface—Hyacinths 4 inches, Crown Imperials and Polyanthus Narcissus 5 or 6 inches, Tulips, Narcissus and Iris 3 inches, Crocus and Snowdrops 2 inches, always measuring from the top of the bulb.

A handful of coarse sand over each bulb will serve as a protection from excess of moisture. Just before winter sets in apply 2 or 3 inches of leaves, or coarse, strawy manure, as a protection against severe freezing; this should be removed *early* in spring.

Procure good bulbs—not necessarily the largest, but sound, firm, heavy; these acquirments attained, *then* the larger the better. This is particularly applicable to the Hyacinth of which the imported bulbs are generally the best, especially when intended for growing in pots or glass.

Home-grown bulbs are much cheaper than the imported, and will flower nearly as well in the open ground. When intended for forcing in the house, always give preference to the imported.

The same varieties from different growers differ much in value, and there is a large difference in price too—the most expensive being really the cheapest.

In July, after flowering and the tops have become dry, Hyacinths should be taken up and dried in the shade. Wrap in paper or pack in dry sand, and keep in a dry place until time for planting again.

The Tulip is the gayest of all the gay flowers of spring. It lacks the fragrance of the hyacinth, but is equalled in brilliancy by no other flower.

The varieties are very numerous, comprising all shades of color from pure white—yellow, rose, scarlet, crimson, and purple. All are very hardy, and succeed well in any light, rich, well drained soil. Move every 2 years.

Crown Imperial—A stately growing plant with dark green foliage, crowned with large, showy, bell-shaped, pendulous flowers early in spring. The varieties embrace all shades of yellow and crimson, are perfectly hardy and thrive in any good garden soil, need not be lifted oftener than every fourth or fifth year, and then should not be kept long out of the ground.

Narcissus—A popular and favorite early spring flower, white and yellow, single and double, all pretty and highly fragrant; will thrive in almost any soil or situation. Need not be moved oftener than once in three or four years.

The *Polyanthus Narcissus* is the most desirable, but it is not hardy. It requires to be planted full five inches deep, and well protected. They bloom quite early, and are very fragrant. Will do finely in pots and glasses, treated like the hyacinth

Snowdrop—A modest little single white flower, of drooping habit, very pretty and the earliest in bloom. They look better when a number are planted in one spot. Should be taken up every third year, and planted again in September.

Crocus.—Next to the Snowdrop the earliest of spring flowers. Admired for its brilliant blossoms—white, golden yellow, blue, striped. Should be planted in groups or small beds on the lawn; fine for edging. May remain a number of years without moving. A. G. H.

COLUMBUS, Ohio.

New Remedy for Bark Lice.

J. W. HOYT, ESQ.:—As your Magazine is open to all to contribute, I thought I would send you a few lines for the benefit of its readers and the world at large.

What I want to disclose is a recipe for the extermination of bark lice on fruit trees. Last fall I had two apple trees that had green lice all over the leaves and small limbs. I had

heard of vaccinating (?) lousy calves with unguentum (blue ointment), to kill the lice, and the thought occurred to me it might do with fruit trees. I tried mine, and in less than three days the lice were dead and gone.

I have a fine young orchard of about 150 trees which is affected more or less with bark lice. This spring, (some four weeks ago), I applied the ointment to some four or five of the worst trees. The result is the lice are all loose on the bark, and you can rub them off with your hand.

My mode is to slit the bark up and down the body, about one inch long, in two or three places, raise the bark with the point of a knife on each side, and put in the ointment; also apply to some of the largest limbs, and your work is done. SEYMOUR CARVER.

HOMER, Wis., June 15, 1863.

Gardening by Ladies.

[We had the pleasure last summer of visiting the delightful residence of "Sam. Slick," on the banks of the upper Thames, near Richmond, and can thus, from personal observation, corroborate the complimentary statement of the *Gardener's* correspondent. "Sam." was not there, but the beautiful garden and the fair gardener were. Would there were more such gardens, and more such women.—ED.]

A correspondent of the London *Cottage Gardener*, describing the residence of Mr. Justice Haliburton, the "Sam Slick" of literary notoriety, says:

"I paid a visit to these gardens about a year since on the occasion of a fancy fair given for some charitable purpose, and never do I remember to have seen bedding done so well or so choice a collection of plants brought together in a place of so limited an extent. I was given to understand by a florist of some celebrity who was present, that the arrangement of the beds and the selection of the plants were in the hands of the lady occupier herself.

"Their taste for the harmonizing of colors I consider natural in all women of refined education, only unfortunately many of them display their taste in decorating themselves more than in ornamenting their gardens.

"But if ladies were to follow gardening more usually than they are apt to do, how much oftener we should see the cheek resemble the rose in place of the lily; and how soon also we should perceive the lighter tints made use of in decorating the inside of the bonnets. They would soon be aware that glaring coloring was not suited to their complexions so well as the more subdued shades.

"Moreover, God has given us health that we may enjoy the blessings he sends, and depend upon it, that where a lady gardener resides it is there the physician's carriage seldom stops."

The Gaillardia.

This is a representative of another species of magnificent plants, with bright, showy flowers of several shades of color. It blooms profusely, and the flowering continues a long time.

Fruit Trees—What are Hardy.

This question, which has received the earnest attention of professional fruit growers in the West during the past five years, is one upon which opinion is variously divided, according to the extent of observation and experience, as well as the peculiar location of the grower.

We think it is often decided upon very limited observation—upon a single experiment perhaps, or that experiment based upon some mistake in the names of varieties; this latter especially is common. The tendency is to enlarge the list of "hardy" to a degree which

may, by-and-by, prove fatal to the hopes of many a new beginner in tree planting.

When we look over the Reports of various Horticultural and Pomological Societies, also individual and catalogue lists of those recommended for general culture, we find very few of the old favorites "left out in the cold," and the conclusion would be, that after all our terrible experience of 1856, we still can trust the favorite lists of New York and Ohio in the changeable climate of the Northwest.

But we reason differently; what has been may be. During the twelve years previous to 1856, we saw the favorite Greening, Swaar, Baldwin, &c., as well as apricots and quinces, peaches by the hundreds of bushels, and many beautiful shrubs now discarded, all apparently at home in Wisconsin; but what followed we need not repeat. Tree planters were seized with excessive fear, followed by excessive caution, which has now been replaced with a just confidence, which we hope never to see relapse into a reckless run after every fancy picture and worthless assurance of the "far-fetched" tree agent.

The object of the tree planter is, first, *food;* then *money;*—to which may be added occasionally the amateur's desire for show.

But for home use or market, what is wanted is, almost universally, those varieties that are first *sure*, then *good;* and as these two qualities certainly can be conbined in a list of 20 or more varieties, new and old, of apples, and half as many of pears, we would repeat the word of caution to every nurseryman and tree planter in the Northwest.

Confusion of names has led many an honest fruit grower to recommend tender varieties as "good and hardy." And a prolific source of this wrong nomenclature is the wholesale importation of good looking hardy trees of passable fruit, mislabelled with all the dear old fruit of Egypt (New England). But wide-awake tree planters will look out for this old "hand" every time.

The tendency to enlarge the list of "hardy" varieties, or those recommended for general culture is, we fear, indulged in without due consideration. In the September issue of the FARMER, one nurseryman, through a second person, recommends, among others, the C. Red June, K. Codlin, Fall Wine, and White Winter Pearmain,—names we would not place in the *hardy* list, and which should be recommended with a caution or proviso attached; and the same of Maiden's Blush.

The Corresponding Editor, in same number, "fully endorses" the list of pears of a Massachusetts Horticultural Society, containing the Bartlett, Louise Bonne de Jersey, Duchesse and others of doubtful utility—varieties which do not possess that hardy constitution which adapts them to general culture in the Northwest Especially the last two named varieties we pronounce comparatively worthless in Wisconsin.

True, isolated cases occur in which many of these discarded varieties fill the highest hopes with a crop of luscious fruit, but the tens of thousands invested in them yield only the seven hundred per cent. discount, from a blight equalled only by that of rebeldom.

Professional fruit growers, do not lower the standard! But while we propagate in our nurseries every good variety of fruit practical, yet we should remember the public at large want but few of them for general planting, and that few of the "every time sure" class.

J. C. PLUMB.

LAKE SIDE NURSERIES, MADISON, WIS.

[From an address before the Fruit-Growers' Soc. of Western N. Y., by H. T. BROOKS, Esq., President.

History of the Apple.

Geology, an acknowledged chronological authority, informs us that the order Rosacæ, to which the apple belongs, is a little older than man. As if conscious of the coming of her lord, the earth blossomed with unwonted flowers, and strewed his future home with golden fruit.

Whether apples early became prominent as food we do not know, but there seems reason to suppose they should at once assume the place they prove so fit to fill.

Solomon among inspired, and Homer among profane writers, 1000 B. C., mention the apple. Joel speaks of the apple tree 200 years later.

Some Biblical critics assume that since the apples of Sodom are known as indifferent

fruit, the glowing descriptions of the sacred writers would better suit the citron, quince, etc., than the apple. Whoever will take the pains to observe the apple tree in blossom or bearing, must admit that its beauty and fragrance fully answer the description of the Sacred Volume. I can, perhaps, enlighten the pomology of these critics, by informing them tnat the present condition of the apples of Palestine is a very poor index of what they were 3,000 years ago—all vegetable products improve or deteriorate by good or bad management.

"And God saw everything that he had made and behold it was very good." Such, doubtless, were the apples of Adam's time, but the nomadic character of succeeding generations would insure the general deterioration of fruit; yet, in exceptional cases, very good apples may have reached Solomon's day. If the wise man's apples were "crabs," when he says, "Comfort me with apples, for I am sick of love," we must admit he was driven to desperate expedients.

Beyond all doubt, the Crab or Wilding was the prevailing type for several centuries anterior and subsequent to the Christian era. At the bottom of the Swiss lakes have been found the remains of a people so ancient as to have no metallic instruments—older than Rome—but among their stores was an entire black and shrivelled crab apple. The ancient Germans, Tacitus informs us, satisfied their hunger with wild apples (*Agrestia poma*), among other things. The word for apples, in several languages, traced to its root, signifies fruit in general; but as this fruit has appropriated the generic term, it has proved its antiquity, universality and importance. Herodotus, Theophrastus and Virgil speak of the apple. Pliny treats it largely, and says that the Crabs or Wildings "have many a foul word and shrewd curse given them on account of their sour harshness." He mentions several improved varieties introduced by Cestine, Manlius, Claudius, and others.

Grafting was introduced previous to this time. Columella, who wrote before Pliny, describes several methods, and Virgil, born 70 B. C., says, (as translated by my friend, Prof. Morse, of Wyoming), "And we oftentimes see the branches of one tree inserted in another without injury,—the apple ingrafted upon the pear," etc. Christ, also, alludes to grafting.

The Api or Lady's apple is believed to be the Appiana, and by some the Petesia of Pliny.

The dark ages was a dark time for apples, but it is known that Agriculture and Horticulture were kept alive by religious establishments, endowed with lands by princely patrons Cultivated apples doubtless owe much to their fostering care.

The ancient Celts knew the apple, calling it Abhail, Aval, Avel, in different dialects.

In 973, King Edgar, "while hunting in a wood, lay down under the shade of a wild apple tree." In 1175, Pope Alexander III confirmed to the Monastery of Winchombe "lands, *orchards*, meadows," &c. The fruiterer's bill of Edward I, in 1292, mentions the "Poma Costard," which was grown so extensively that the retailers of it were called Costard mongers. The Costard is now rarely found in England, but the Winter Pearmain, that has a still earlier record, being cultivated in Norfolk in the year 1200! is still extensively grown and highly esteemed. (See Bloomfield's History of Norfolk). The Pippin, the Romet, the Pommeroyale, and Marigold, are very early spoken of. In a note-book, kept in 1580 to 1583, "the Appell out of Essex, Lethercot, Russet Appell, Lounden Peppen, Pearmeane, Grenlinge, Bellabone," etc., are mentioned. The "Husbandman's Fruitful Orchard," published in London in 1597, enumerates Pippins, Pearmains, John Apples, Winter Russetings, and Leathercoats.

John Parkinson, who wrote in 1629, was the first English author who gave anything like a satisfactory account of Early English apples. He enumerates fifty-nine varieties, with "twenty sorts of Sweetings, and none good." Either he was very sourly disposed, or the best sweet flavors were very coy and slow to come out, discriminating very unmercifully against the ancients and in favor of us. Rea, 1665, mentions 20 varieties, 16 of which were not mentioned by Parkinson, from which we conclude that the popularity of some sorts was of short duration, as is the case in our day. Meager, 1670, gives 83, and Worlidge, 1676, gives 92 varieties. From this period there were sorts enough, the world knows, Coxe, in 1816, enumerates 133 varieties; Downing 182; Hogg's "British Pomology" enumerates 942, and yet our "New American Encyclopedia" takes the trouble to tell us there are over 200 varieties.

It is well known that apples were introduced to this country from England by the first settlers. "The Governor and Company of the Massachusetts Bay in New England" introduced apple seeds in 1628. Governor Winthrop was granted Governor's Island, in Boston Harbor, April 3, 1632, on the condition that he should plant thereon a vineyard or orchard—I suppose he planted it. Orchards were planted near Pawtucket, R. I., 1636, and at Hartford, Conn., 1645. Mr. Henry Coleman says, "An apple tree growing in Kingston, Plymouth county, and planted 1669, the year of King Phillip's War, bore, in 1838, thirty bushels of good fruit." Pretty well for a tree 169 years old—it was a "High-Top Sweeting," a favorite apple with the Colonists.

The apple, like the pear, is tenacious of life; our best varieties, with their owner's permission, will last from fifty to eighty years, and some hardy and vigorous trees have reached at least two hundred years of age.

There was recently standing in Prince George county, Maryland, a Codling tree sent there by Lord Baltimore over a century ago.

The interest that our fathers took in fruit is further witnessed by the liberal premium of £10 awarded in 1768, by the Society for Promoting Arts, etc., to Thomas Young, of Oyster Bay, for the largest nursery of apples—the number being 27,123. The famous apples of the 17th century were the Pearmains, Codlings, Catsheads, and Red Streaks—the Golden Pippin, a small yellow apple of very fine flavor, though well known at that time, reserved its popularity for a later period. Miller, in 1724, records among others the following apples that are well known now, Juneating, Summer Pearmain, Sops of Wine, Gilliflower, Flower of Kent, *Go No Further*, which, being interpreted, means "I am as good as you can get."

Our own Newtown Pippin, of world-wide repute, dates back to the same period. The original tree was a seedling which grew near a swamp in Newtown, Long Island, about 1700, on the estate of Gershom Moore, and the fruit was called the Gershom Moore Pippin for a long time. The tree lasted over a hundred years, and finally died from excessive cutting, it having been much resorted to for scions to graft with.

The Baldwin, New England's favorite apple, originated in Wilmington, near Boston, more than a century ago, (if it started last year, I don't believe the Yankees would like it so excessively well); it grew on the farm of Mr. Butters, in the part of the town called Somerville, and was known as the Woodpecker's apple, (the woodpeckers having perforated the tree), being disseminated by Col. Baldwin & Sons, it was called Baldwin apple.

One of our old varieties, the R. I. Greening, tells its own birthplace and color. It deserves its high reputation.

The Spitzenburg and Swaar grew up on the Hudson, under Dutch patronage. We have borrowed some choice flavors from our neighbors on the other side of this beautiful Ontario—the Fameuse, St. Lawrence, Red Canada and Pomme Grise.

The Red Astrachan, that helps when we want help, having learned, like the Arctic corn, to grow quick, and the Duchess of Oldenburg, ice-bound Russia sends us greeting. Scientific Germany, rich in treasures of thought, makes us her everlasting debtor for the Gravenstein; while France, in the warmth of old friendship sent her Reinettes, Nonpareils and Pomme d'Ors.

Italy, with her Api or Lady Apple, weds the present to the past; and old Spain and her monks watch for mankind, through the world's eclipse the Pomological treasures of the East.

Britain, our fatherland, sent us all she had; and we return again more than we received. Our own neighborhood, the favored home of the apple, with pride points to its Melon and Northern Spy, while the Early Harvest and Rambo own to an American origin. The Primate I cannot trace Coxe does not mention it in 1819; Downing records it in 1845. The King of Tompkins County, born in the Jerseys, is an apple eminently fit to be eaten.—Hubbardson Nonsuch, of Hubbardson, Mass., and Jonathan, of Kingston, N. Y., are not unknown to fame.

The Pippins are as numerous as our celebrated family of Smiths, and seem to glory in being citizens of the world. I find enumerated in "British Pomology" 128 distinct Pippins.

It is too late to ask, "What's in a name?" Judas Iscariot has copyists enough, but no namesakes. The poorest child, even in South Carolina, would sooner go without a name than take Benedict Arnold. And yet, every Paul is not a saint, nor every Jefferson a patriot.

Apples sometimes take their patron's name, and if the apple be only a good one, that name bids fair for immortality. I would sooner trust the Roxbury Russet than any granite obelisk from New England quarries.

If great names would make apples, what may we not expect from *Gloria Mundi*, the glory of the world; *Nonpareil*, unequalled; *Sine Qua Non*, indispensable; to say nothing of the Kings and Queens.

Among the efficient friends of the apple, beside the old writers alluded to, I will mention Mr. Knight, President of the London Horticultural Society, who assiduously labored to correct the nomenclature and arouse an interest in the apple itself. The Society over which he presided, as well as our own American Pomological Society, now under the able presidency of Marshall P. Wilder, of Mass., have done and are doing a work for which the world should thank them. Mr. Robert Thompson, of England, Mr. A. J. Downing, of America, Diel and Van Mons, of Germany, and a host of others, have done a work beyond all praise.

The apple, famous for its many uses, was early found to make a pleasant drink. The ancient Hebrews made a drink from apples as well as from other fruits. The ancient Romans knew all about it; the African fathers Tertullian and Augustine took time to mention it, if nothing more; while the ancient Britons, like our own Yankee fathers, patronized it liberally. Hogg says that there was a large cider manufactory as far north as Richmond, in Yorkshire, in the early part of the 13th century. The "Husbandman's Fruitful Orchard, 1597, says:—"I have seene in the pastures and hedgerows about the grounds of a worshipfull gentleman, dwelling two miles from Hereford, called M. Roger Bednome, so many trees of all sorts that the servants drink for the most part no other drink

but that which is made of apples. The quantitie is such, that by the report of the gentleman himselfe, the parson hath for tithe many hogsheads of sydir."

The Britons, I judge, belonged to the "hard cider" party, for we read of a kind "not to be drank till two or three years old." They made a famous drink, called *Lambs-wool*, by putting the pulp of roasted apples into ale—victuals and drink, I should say.

The zeal of our Puritan fathers in the cider business is quite remarkable; the cider-mill early became one of the established institutions of New England, and other sections were not far behind

The specific gravity of the juice varies with different apples. The famous English cider apple, Red Streak, gives a specific gravity of 10.79, and other varieties are as high as 10.85 and 10.91—these latter may be considered pretty strong cider.

Favorite cider has been sold in New York for $10 a barrel, and I venture to say that good cider is better than poor wine. The flavor of the cider to a great extent comes from the skin; small apples, as having proportionately more skin, make the best cider. If we use cider at all, we will do well to study the best modes of making it, and select the best apples for the purpose; they must be mature, without decay, and must be made up when the warm weather is over, so as not to occasion excessive fermentation; and be sure and put it in sweet barrels.

If we would have good fruit, good culture is indispensable. It is a matter of extreme regret that the mass of our citizens are so neglectful of what, by general consent, makes the best return for labor and capital employed. Fruit trees need manure, and the right kind of manure. Well rotted barnyard manure, lime, ashes, charcoal and muck, are the leading fertilizers.

Columella treats of stirring the soil among fruit trees, and it is known that the Romans had tools similar in character to ours, including the spade, rakes, hoes or weeding-hooks, the *marra*, a hoe-mattock, etc.—and we know they used them sometimes, for Pliny informs us that the success of one cultivator, C. Furius Cresinus, was so great that he was accused before the Senate of practising magic, and justified himself by the exhibition of his tools, exclaiming, "these are the implements of magic which I use; but I cannot show you the cares, the toils, and the anxious thoughts that occupy me day and night." (See Loudon, p.24.)

This secret of promoting growth and productiveness by stirring the soil, so singularly divulged before the Roman Senate, eighteen hundred years ago, would seem to be a *secret* now, so far as the owners of many fruit orchards are concerned. But while we stir the soil, let us not destroy the roots by reckless plowing and spading.

In conclusion, I will only say that the apple, in my opinion, outweighs in value all other fruits together. It may not equal the exquisite flavor of the grape or pear; but as the every day food of the million, I believe it will yet rival the potato itself. Its best varieties in nutritive value equal the potato pound for pound, and can be produced at one-sixth the cost of the potato. My friend, Mr. J. J. Thomas, of Macedon, who generally honors us with his presence at these meetings, estimates, in Patent Office Report for 1850, the cost of producing apples at two and a half cents a bushel. Before seeing his estimate, I had calculated it at from three to four cents, good varieties; they are, therefore, the cheapest of all food for man, and, excepting grass, for beasts. Hardy and less exacting than other fruits, adapted to a wider range of soil and climate, more regular and more abundant in yield, they are God's best gift to man, next to woman.

MECHANICAL AND COMMERCIAL.

The Steal of the Paper Makers.

It was one of the grounds of the declaration of our independence as a nation, in 1776, that the British government persisted in compelling the purchase of none but *stamped* paper. But how much worse was that than the present abominable tax upon paper which the great reading and writing public are obliged to pay to-day in the form of two prices for every sheet of paper they use?

There is no scarcity of material—the price of rags being two to four cents per pound, according to quality—and yet the exhorbitant prices are kept up. There is no way to account for it except by the assumption that there is a league of paper-makers, to the end that they may make themselves rich without waiting for those slow and tedious accumulations by which the great body of business men and laboring people make themselves comfortable and independent after years of faithful effort.

Before the war, such paper as this on which the FARMER is printed could have been bought for about $7 per ream. For the past two years we have paid $14 to $18. We are paying $14 now, and without much prospect of early relief from so great a burden of expense.

The natural way in which an evil like this

should be corrected would be by the establishment of new factories by honest capitalists, or by men interested in a reduction of price. But this requires time and large means, and with all the contingencies of sudden fall and unfair competition, is so much of a risk that but few have been disposed to venture it.

It is not more factories of this sort that we want; there are probably enough already to supply the large demand. We want simply decent honesty on the part of manufacturers already in the business. For this we shall probably have to wait some time. There is no law against rascally combinations of this sort, except the law of common honesty and simple justice, which the robbers of these corrupt times seem but little disposed to regard.

The Pennsylvania Iron Business.

The iron districts are said to have made good progress within the past year, under the stimulus of a constant demand for iron at remunerative prices. The following is a condensed exhibit of this branch of industry for the year 1862:

Furnaces in blast in Lebanon Valley	6
Pig iron manufactured, tons	30,000
Furnaces in blast in Schuylkill district	17
Producing of pig iron, tons	80,000
Furnaces in Lehigh dist	20
Producing of pig iron, tons	175,918
Furnaces in Susquehanna Valley	10
Producing of pig iron, tons	56,000

Several extensive rolling mills have been added to those already existing. Amount of iron rolled in Pennsylvania during the year, about 280,000 tons. Value, $15,000,000, or nearly $3,060,000 more than in 1860.

Wisconsin Banks.—The statement of the Wisconsin Banks on the 6th of July was as follows:

Capital	$3,497,000 00
Circulation	2,436,109 00
Deposits	5,278,905 64
Specie	336,938 77
Cash items	160,508 85
Public securities	2,513,221 00

Bank of England.

The following comparative table will be of interest, affording as it does a view of the bank returns, the bank rate of discount, and the price of wheat in London during a period of three years corresponding with the date of our last returns, August 5th:

At cor. dates with w'k end. Aug. 5 '63.	1861	1862	1863
Circulation, including bank post bills	£21,084,700	£22,378,393	£22,340,809
Public deposits	3,843,773	6,151,358	5,577,268
Other deposits	11,818,980	15,232,959	13,790,855
Government securities	9,000,800	10,986,007	11,038,426
Other securities	17,909,650	19,079,200	19,153,801
Reserve of notes and coin	6,663,500	10,020,418	7,918,355
Coin and bullion	12,300,445	17,956,938	14,843,185
Bank rate of discount	5 per ct.	2 per ct.	4 per ct.
Average price of wheat	51s. 3d.	57s. 8d.	45s. 11d.
Rate of discount, 3 to 5 per cent.			

THE MINER.

Gold Mines of Nova Scotia.

It is reported that the gold mines of Nova Scotia, of which so much boast was made last year at the Great Exhibition, are proving themselves less valuable than had been supposed. In this we are not disappointed. They gave but little real promise then, in the estimation of competent, unbiassed judges. But then, the Exhibition afforded the zealous Scotians so good an opportunity for advertising the natural advantages of their bleak, trans-Atlantic province, and they could not resist the temptation to use it.

An Immense Iron Deposit.

In a late number the Lake Superior *Journal* says that recent explorations show the deposit of iron ore, embracing what is known as the St. Clair Mountain, on the Esconawba river, to be very much more extensive than was supposed. West of the river it not only skirts along on the south side of sections 1 and 2, but covers the entire north half of section 11, and also that of section 12, being nearly two miles in length and about three-quarters wide,

and rising from fifty to three hundred feet above the level of the surrounding country. On the east side of the river it has been found to extend over large portions of sections 5 and 6, comprising a length of about one and a miles, with an average width of over one-half mile, and rising from fifty to one hundred and fifty feet.

What the ultimate value of these huge deposits may prove to be, can only be fully established by more minute examination and practical tests; but from the specimens we have seen, there is hardly a question but that they will prove of the highest value, in location, they being only thirty miles from the lake, and in the quality of ore they contain; while they will be easily opened and cheaply mined, as the railroad within one year will pass up the valley of the Esconawba, directly between them.

But while iron is thus being found, and roads constructed to bring it to the lake, many more vessels must also be built, or it will be wholly out of the question to place it in the lower lake markets. Let there be a corresponding amount of work done in this direction.

NEW GOLD MINES.—By telegraph under date of August 15, accounts come via Los Angelos, of the discovery of a very rich and extensive gold mining region in the San Francisco Mountains, lying east of the Colorado river. The La Paz and onther recently formed mining companies on the Colorado have been deserted for the new mines. The latter are described as a new California.

EDUCATIONAL.

The Agricultural Schools of the Country.

AS SEEN BY THE EDITOR ON A RECENT TOUR OF OBSERVATION.

NO. II.

THE PEOPLE'S COLLEGE, N. Y.

It may be objected that this is not an *Agricultural* College, and should not, therefore, rank among institutions of that class. But inasmuch as one leading object of its establishment was that the youth of the Empire State might be furnished with the facilities for acquiring a more thorough fitness for the practical duties of industrial life; and since the institution is now especially pledged on behalf of Agriculture by the acceptance of the magnificent Congressional grant of lands for the endowment of schools for the benefit of Agriculture and the Mechanic Arts; and since, moreover, no one of the so-called Agricultural Schools of this country is strictly and exclusively professional, it has seemed to us that the People's College should rank with that class, and nowhere else.

This Institution was incorporated in 1854, but, by circumstances of one sort and another, was kept in abeyance until January 8th, 1857, when it was located at the village of Havana, in Schuyler Co. The organization was deferred until August 12th, of the same year, when Rev. Amos Brown was chosen President.

WHAT THE PEOPLE'S COLLEGE PROPOSES.

The distinguishing motives which have prompted to the organization of this institution are declared to be,

1. "The belief that a modification of the college system of this country is required, to adapt it more perfectly to the wants of the time."

2. "The complete success of Seminaries established in European countries for the promotion of the sciences and useful arts, on plans similar to that of the People's College."

3. The belief that "institutions of this class, generally established, would perfect our common school system, by affording ALL an opportunity of continuing their education while learning a trade or pursuing agriculculture; thus remedying the great evil which now compels a large proportion of our youth to discontinue their scientific and literary education at the age of twelve or fourteen years, in order to become farmers or mechanics."

In order that these objects should not be lost sight of they were definitely and pointedly named in the Organic Act by virtue of which the Institution acquired a legal existence, as will appear by the following quotation from section 8 of the original charter, to wit:

"It shall be the duty of the said Trustees to so arrange the business and courses of instruction in said college as to accomplish in the best possible manner—

"1. The dissemination of practical knowl-

edge, including chemistry, geology, mineralogy and those sciences most immediately and vitally essential to agriculture and the useful arts, * * * "

"2. To require that every pupil and teacher shall devote some hours each of five days in each week (excluding Sunday for worship, and Saturday for recreation) to bona fide labor in some branch of productive industry."

"3. To have Agriculture, with the various branches of Manufactures and the Mechanic Arts, systematically prosecuted within the college and its grounds, and as a part of its regular course; and no student shall be permitted to graduate with honor, until he pass a searching examination with regard to his proficiency in agriculture, or some branch of manufacturing or mechanical industry."

It will thus appear that the Farm and the Workshop are to be leading features in the course of practical instruction, and that to whatever profession the pupils may aspire, they cannot receive the honors of the Institution unless they have first learned the principles and familiarized themselves with the practice of at least one of the useful arts.

But the plan of the People's College does not confine the curriculum of study to the Practical Arts; it also embraces General Science and Literature. Witness the Act of Incorporation, by which the trustees are required "to make ample provision for instruction in the classics," as also the Circular issued by the Board of Trustees, wherein it is declared to be "the intention of the Trustees to make this Institution not only the best, so far as practical knowledge is concerned, but to afford opportunities to all who may desire them, for obtaining as thorough a knowledge of all that pertains to Science and Literature as any other institution in the world. The People's College is to be eminently an educational institution, and, as such, it will seek the attainment of its purpose by means which experience has proved to be the most appropriate. * * * There will be taught, as means of mental discipline, full courses of study in pure and mixed Mathematics, in the ancient and modern Languages, Geography, History, Astronomy, Mechanics, Æsthetics, Mental and Moral Philosophy, and the Bible."

So much for the plan. Now let us see

WHAT THE PEOPLE'S COLLEGE HAS ALREADY DONE.

It was a part of the original plan of the People's College that it should not only be *for* the people, but that it should be endowed and sustained by *voluntary contributions of* the people of the whole State—the capital stock of the corporation to consist of not more than $500,000; the said stock to be in shares of *one dollar each*, and each stockholder to be entitled to one vote in the choice of trustees, or in other matters determinable by the votes of the stockholders. In accordance with this provision, the Farm Site and a portion of the College Edifice have already been secured, and subscriptions are in hand sufficient to put the Institution in actual operation within a very short time.

The Location for the College appears to us to have been well chosen. For, although not altogether central to the State, yet it is sufficiently accessible from all parts thereof, and it possesses the important advantage of being in the midst of picturesque scenery and of a section of country which very well represents the State in its entireness. Havana is situated near the head of lake Seneca, on the Chemung Railroad, 18 miles north of Elmira—the point of its intersection with the N. Y. & Erie R. R.—and 51 miles southeast of Canandaigua, where it connects with the N. Y. Central. The Chemung Canal also passes through the place. On either side of the village, east and west, there rises a range of hills; the one on the east being bold, precipitous, rocky, and clad with dark evergreens; the one on the west sloping handsomely eastward, and clothed in summer with cultivated crops of grass and grain.

At the date of our visit, in the month of May—a time when water channels are usually full—the rocky bluff was jewelled with several beautiful cascades that came tumbling down from their lofty heights with the flash and roar of young Niagaras.

The Farm, on which the college is located, lies partly within and partly without the corporation lines of the village, and embraces some two hundred acres of good land with

varied surface and soil. But little has been, as yet, done towards putting it in condition for a model farm, such as it ought to be before the institution is fairly opened for pupils.

The site of the College, upon the Farm is high, commanding a fine view of the village, of the Chemung valley for several miles, and of lake Seneca.

The College Edifice has been planned on a magnificent scale, commensurate with the breadth and liberality of the educational scheme of the institution. "Its length of front will be 320 feet, its width 52 feet. Height four stories above the basement. At either end will be a wing 206 feet long, 52 feet wide and four stories high. From the centre will be a wing projecting rereward 68 feet; 64 feet wide, and three stories high. The building will be surmounted by a cupola of an octagonal form, 36 feet in diameter, and extending over 50 feet above the apex of the roof. A cupola is also to be placed on each of the end wings. The basement walls to be of stone, the remaining portion of brick."

When thus completed, this building will contain a chapel large enough to accommodate 1300 persons, 16 lecture rooms, 47 rooms for the Faculty, and 220 rooms for pupils each student's room arranged for two persons. It will also contain a culinary department, with appropriate rooms for the Steward and his working force. Estimated cost, complete, $175,000.

The portion already built is the main front, with the central wing in the rear. The joiners', plasterers' and painters' work was nearly completed when we were there, and we were able, therefore, to bring away a correct daguerreotype upon the memory of the various interior arrangements; which, we may say, in a word, appeared both tasteful and convenient.

FUTURE PROSPECTS OF THE COLLEGE.

If the Act passed by the last Legislature, giving New York's share of Ag'l College Lands to the People's College, should be approved by the Governor and thus become a law, this will then be among the best endowed Institutions in America. Or, if the Executive veto should result in a fair and equal division of those lands between the People's College and the State Agricultural College of New York, still the endowment, added to the funds already accrued and accruing, will be a munificent one, and insure to the People's College a course of great usefulness.

Could the entire amount accruing from the sale of the scrip to which New York is entitled by the Law of Congress, be poured into the treasury of one institution, it would undoubtedly insure to it the early provision of larger educational facilities than if it were divided; and we are frank to say that we would be glad to see at least one industrial school in this country even more nobly endowed than that. Still, it is a question whether more good would be accomplished by such concentration than by the division referred to. The decision of that important question we leave to the wisdom of those with whom rests the responsibility.

The People' College is demonstrably founded upon a true and noble idea, and whatever the embarassments with which it may still have to contend, we look upon its steady growth and future greatness as a foregone conclusion.

The Agricultural College Lands—Letter from Commissioner Reed.

STEVENS POINT, Wis., Aug. 31, 1863.

PROF. HOYT:—*Dear Sir:*—My promise, though long delayed is not forgotten. I might with propriety plead that my duties as Commissioner exonerated me from any correspondence not specially called for.

Since I last saw you, I have been in the counties of St. Croix, Polk, Eau Claire, Dunn, Buffalo, La Crosse, Monroe, Juneau, &c., &c. I have taken many notes on which I propose to draw at some future time.

But, in the first place, I know that you are anxious to hear from the Agricultural College —its present attitude and future prospects; so far as the location and quality of the two hundred and forty thousand acres that are to be set apart for its endowment may affect the general object.

The lands are not all located. But over thirty thousand acres have been selected in the Eau Claire land district—the larger portion in Chippewa county. In the St. Croix land district about sixty thousand acres were chosen, that for timber, soil, water, and all the elements that are requisite to make good farms were found more valuable than we expect ed; but the most desirable locations yet made are on the branches of the Chippewa river, in Chippewa county, not far from the flourishing town of Eau Claire. These entries are mostly covered with beautiful groves of red and white oak, ash, elm, sugar maple and white pine. Specimens of the latter and of white oak can be seen on these lands that are rarely excelled in any country.

Oak of this description, suitable for the manufacture of staves, heading, &c., is already in demand, and must, as the country rapidly improves, command remunerative prices. The uniform testimony of the pioneer settlers is that wheat and all the crops usually grown in this parallel, flourish here; and that the native grasses, which are very nutritious on this description of timbered land, spring up and are fit for pasturage at least a fortnight earlier in the spring than upon the adjacent prairies; and, from actual examination of the premises, I have no doubt that they tell the truth. Judging the balance of the lands by those already selected, the "Wisconsin Agricultural and Mechanical College" needs only to be inaugurated by the adoption of a liberal and enlightened policy, and placed under the care of suitable officers, to prove a success and permanently silence the clamor of its enemies.

There is little of interest in this part of our State. Lumbering—the great interest of middle and northern Wisconsin—is *jubilant* over the present high water and high prices. The fearful tragedy at Buena Vista, in this county, is already being forgotten by all except the large and influential circle of those more immediately connected with the deceased.

We often hear it remarked that the like has never happened in this latitude before; that such tornadoes belong to tropical countries, &c. But are not such expressions the offspring of a want of information? Have not these sublime manifestations of invisible power left a handwriting, too legible to be misunderstood, in the native forests that cover so much of our country? Who has visited these woodlands beyond the confines of civilization and not observed long lanes cut through the very heart of the wilderness, and every tree both small and great either broken off or torn up by the roots by similar wind-storms? "What has been, may be."

Yours Truly,

WM. N. REED.

The Noble Example of Kansas.

The State of Kansas has verified the saying, "For the first shall be last and the last first." The last to come into the Union, she is the first to put into operation an Agricultural College begotten of the Act of Congress making donations to the several States for the endowment of institutions of that class.

Behold the way in which she has accomplished this great work in so short a time.

At Blue Mount there was a literary college already in operation and under the management of what was legally entitled the Blue Mount College Association. This Association owned, in addition to a fine college edifice, with library and apparatus, one hundred acres of land—the value of the whole being not less than twenty to thirty thousand dollars. The institution already existing was in a prosperous condition; but the Association had wisdom enough to see that an endowment of 90,000 acres of government land added to what the College already possessed would insure the establishment and maintenance of an industrial college that would probably be of greater value to the State than two half endowed institutions could possibly be; and so they magnanimously offered their favorite college, with all the land thereunto belonging, to the Regents of the State Agricultural College, with the simple condition that the said Agricultural College should be located at that place. The offer was accepted, and the work

of transformation commenced; and to-day Kansas has the beginning of an institution such as can hardly fail to be an incalculable blessing to the industrial interests and social life of that State.

We had long been revolving a scheme of this sort in our mind for the Agricultural College of this State, and are glad that we are to have the advantage of so remarkable a precedent.

For the present we submit the simple question whether there are not several institutions of learning in Wisconsin, the general educational objects of whose organizations, as well as the special interests of the localities where they are, would be largely promoted by the adoption of a policy like that of the Blue Mount College of Kansas. The time has not come when the offer should be made, but it soon will come, and we hope this suggestion will be of service in shaping the thoughts and plans of the friends of industrial education in all parts of the State.

MISCELLANEOUS.

The New Post Office Law.

The following are some of the features of the Post Office laws which took effect July 1:

Section 3 absolutely prohibits the delivery of any letter, newspaper, pamphlet or package whatever, until the postage charged thereon shall be paid.

Box-rent must be paid in advance.

Unclaimed letters will be returned to the Dead Letter Office one month after the date of their advertisement.

Letters bearing request to "return to writer," are not advertised, neither are drop letters.

The postage on letters returned from the Dead Letter Office is reduced to three cents.

The weight of mailable matter is limited to four pounds.

The postage on letters to the Pacific coast is reduced to three cents per half ounce.

Drop letters are charged with two cents postage per half ounce, but the carrier's fee is abolished.

Letter postage will be collected on any newspaper or periodical so marked or written upon as to give any other information than that contained in the print. The same rule applies to other mailable matter.

All letters not duly franked or prepaid, (except soldiers' and naval letters), and all printed matter except that sent to regular subscribers, and all miscellaneous mail matter reaching the office of delivery without prepayment, is charged at double the usual rate of postage.

If the postage is partly prepaid, the unpaid postage is charged at double rates.

In all cases where the failure to prepay postage is evidently intentional, such letters will be forwarded with other "unmailable" letters to the Dead Letter Office.

Letters bearing request to "return to writer," will, if no time be specified, be returned at the expiration of thirty days after their receipt. They should be returned promptly at the time specified when the request is made in any form. A business card on a letter is not, however, regarded as a request to return.

The Registration fee will be, in future, twenty cents, besides the regular postage, but the sender receives the receipt of the party addressed, and other measures are taken to afford greater security to registered letters.

The maximum standard weight for the single rate of postage on printed and miscellaneous mail matter, is fixed at four ounces avoirdupois. The postage on transient mailable matter is fixed at two cents per rate (four ounces or less), and four cents per rate for books.

Three circulars pass at the same rate of two cents, when enclosed in one unsealed envelope

No extra charge is made, as heretofore, for any business card or address printed on the wrapper of a circular or newspaper.

Only weekly newspapers can hereafter be delivered free within the county where the paper is published.

The rate of postage on regular papers will

be the same within the State as from one State to another.

Small newspapers may be sent in packages to one address at the rate of one cent for a package not exceeding four ounces, and one cent additional for every additional four ounces, &c.

Publishers may enclose in their publications sent to regular subscribers the bills for subscription thereto without additional charge, and may write or print the day of expiration of subscription with the address.

Route agents may carry and deliver packages of newspapers on steamboats and cars, at such rates as may be agreed upon between the publisher and postmaster, subject to the revision of the Postmaster General.

All mail matter not sent at letter rates of postage, embracing books, book manuscripts, proof sheets and other printed matter, and all other mail matter, except seeds, must be so wrapped or enveloped with open ends or sides as to enable the postmaster to examine the package without destroying the wrapper, otherwise such packages must be rated with letter postage.

The franking privilege is restricted to the heads of the various departments and members of Congress.

All correspondence addressed to any executive department, or any officer in it, must now be prepaid, except official communications written by some officer of the department, or an officer under its control or responsible to it, and in such cases, under the words "official business" on the envelope, the officer must sign his name with his official designation.

All other persons, and all persons writing to departments with which they are not connected, must prepay their postage.

Postmasters can frank only official communications to the department and to each other.

RATES OF POSTAGE ON PRINTED MATTER.

Transient matter of all descriptions per rate (4 oz. or less)	2	cents.
Books, per rate, (4 oz. or less)	4	"
Unsealed circulars	2	"
" " 3 to one address	2	"
" " 6 to one address	4c.	&c.

REGULAR NEWSPAPERS.

Not exceeding 4 *oz. in weight.*—Weekly 5c; semi-weekly 10c; tri-weekly 15c; daily 30c; semi-monthly 6c; monthly 3c; quarterly 1c.

Not exceeding 8 *oz. in weight.*—Weekly 10c; semi-weekly 20c; tri-weekly 30c; daily 60c; semi-monthly 12c; monthly 5c; quarterly 2c.

Not exceeding 12 *oz. in weight.*—Weekly 15c; semi-weekly 20c; tri-weekly 45c; daily 90c; semi-monthly 18c; monthly 9c; quarterly 3c.

The privilege of publishers to exchange is restricted to one copy, not exceeding 16 ounces in weight, sent direct from one publisher to another.

IN THE BATTLE.

The following spirited lines from the *Continental Monthly* for February, are by a Boston lady, Miss Lucretia Noble:

The drums are beat, the trumpets blow,
The black-mouthed cannon bay the foe,
Dark bristling o'er each murky height,
And all the field is whirled in fight.

The long life in the drowsy tent
Fades from me like a vision spent;
I stand upon the battle's marge,
And watch the smoking squadrons charge.

Behold one starry banner reel
With that wild shock of steel on steel;
And ringing up by rock and tree
At last the cry that summons me.

I hear it in my vibrant soul,
Deep thundering back its counter roll;
And all life's ore seems newly wrought
In the white furnace of my thought.

No dream that made my days divine
But flashes back some mystic sign;
And every shape that erst was bright
Sweeps by me garmented in light.

High legends of immortal praise,
Brows of world heroes bound with bays,
The crowned majesties of Time
Rise visioned on my soul sublime.

Dear living lips of love and prayer
Come chanting through the blackened air;
And eyes look out of marble tombs,
And hands are waved from churchyard glooms.

"Charge! Charge!" at last the captains cry;
We pant—we speed—we leap—we fly—
I feel my lifting feet aspire,
As I were born of wind and fire.

On, on! where wild the battle swims,
On, on! no shade my vision dims;
Transcendent o'er yon smoky wreath
I see the glory of great Death.

Come flashing blade, and hissing ball!
I give my blood, my breath, my all,
So that on yonder rocky height
The Stars and Stripes may wave to-night!

☞ It is said that printed declarations, with blank forms, are to be used by young ladies who have lovers too modest to propose. The lady herself fills out the blank, and, of course, no sensible man can refuse to sign it.

Greek Fire.

Gen. Gilmore has been throwing shells into Charleston charged with Greek fire, and Gen. Beauregard has remonstrated against the use of this "villainous compound." The secret of the preparation and use of Greek fire was preserved by the Romans of the east for 400 years, the direst vengeance being imprecated upon whoever should divulge its composition. The Mohammedans finally obtained the secret and turned it against the Christians in the holy wars of Syria and Egypt. It appears to have been a compound of bitumen, sulphur and pitch, poured from caldrons, or projected in fire-balls, or on arrows or javelins, around which flax was twisted, saturated with the inflammable compound. The fire went through the air like a "winged, long-tailed dragon," perhaps not unlike our sky rockets.

Greek fire used also to be called liquid and maritime fire, burning even under water and that with even greater violence than out of it, being only extinguishable with vinegar mixed with sand, or by covering it with raw hides. It takes its name from being first used by the Greeks, in the year 660.

The inventor was an engineer of Heliopolis, in Syria, named Callinicus, who first applied it in the sea fight near Cyzicus, in the Hellespont, and with such effect that he burned the whole fleet of the Saracens, wherein there were 30,000 men. Its use was continued till about the middle of the 14th century, when the compound of nitre, sulphur and charcoal effected a revolution in the art of war and the history of mankind. An old writer describes the composition of Greek fire as formed by mixing over the fire the charcoal of willow, nitre, rosin, brandy, sulphur, pitch and camphor. A woolen cord is plunged into the mixture and made into balls. The subject is fully treated in the work by Scoffen, published in London in 1858, called "Projectile weapons of War, and explosive Compounds," in which he names several liquid mixtures that spontaneously ignite, and may be used for the same purposes as Greek fire.

The generic name of Greek fire has been given to all kinds of incendiary compounds inclosed in shell and thrown into cities for the purpose of firing them. There are several patents out for these compounds, and the exact methods of mixing and using them are known only to the inventors. But the basis of them all is said to be phosphorus dissolved in bisulphide of carbon. The latter is a very curious liquid, having all the apparent purity of distilled water, and a very high refractive power, but evolving, on evaporation or combustion, the foulest stench known to chemical science—a science which positively revels in nauseous odors. It has the extraordinary property of dissolving phosphorous freely and preserving it in a fluid state for any length of time when kept from the air. The compound kindles at a heat as low as phosphorous alone. When the shell charged with this "villainous" mixture explodes, by the percussion or otherwise, the dissolved phosphorous is set on fire and scattered far and wide. Wherever it strikes it burns for a long time with an almost inextinguishable flame, and ignites all combustible materials that it touches. At the same time the bisulphide of carbon throws out its abominable odor, and assists in keeping meddlers at a respectful distance.

LOVE IN AUTUMN.

All day with measured stroke I hear
From threshing-floors the busy flail;
And in the fields of stubble near
Incessant pipe the speckled quail.

All golden ripe the apples glow
Among the orchard's russet leaves;
Southward the twittering swallows go
That sung all summer 'neath the eaves.

Across the far horizon's line
In splendor autumn mists are drawn;
The grapes are purple on the vine,
The sunflower shines upon the lawn.

And stretched athwart the burning sky,
The spider's threads of silver white,
Like netted vapors to the eye,
Hang quivering in the noonday light.

A year ago to-day we stood
Beneath the maple's crimson glow,
That, like a watchfire in the wood,
Gleamed to the yellowing vale below.

Calm was the day, without a breath,
An all-pervading stillness deep;
A calm that seemed the calm of Death—
A silence like to that of sleep.

And only on the listening ear
Through the wide wood the hollow sound
Of dropping nuts, and sweet and clear
The spring that bubbled from the ground.

Close at our feet the brook slid down,
Past tangled knots of sedge and weed,
And under leaves of gold and brown,
To sparkle through the level mead.

A lock of hair—a ring—a flower—
The latter faded, old and sere;
Mute records of that vanished hour,
Memories that my heart holds dear.

Like one who in a pensive dream
Sees long lost friends around his bed,
I, gazing on these treasures, seem
To hold communion with the dead.

The whispered vow—the lingering kiss—
The long embraces, cheek to cheek—
The silence that proclaimed our bliss,
Beyond the power of words to speak.

All seem so near—then home we went
Through meadows where the aster grew,
While overhead the hues were blent
Of sunset with the melting blue.

O fire that paints the autumn leaf—
O calm that knows no quickening breath,
O winds that strip the ungarnered sheaf,
Ye are to me the types of Death!

Ah! soon these groves shall lose the glow,
And yonder sun his heat and glare;
And blasts that through December blow
Shall leave the branches bleak and bare.

—*Harpers' Monthly.*

THE HOME.

THE OLD HOMESTEAD.

When first the skies grow warm and bright,
And flush with gold the hours,
And in her pale, faint robes, the Spring
Is calling up the flowers;
When children, with unslippered feet,
Go forth with heart of glee
To the straight and even furrrows
Where the yellow corn must be:
What a beautiful embodiment
Of ease, devoid of pride,
Is the good old-fashioned homestead,
With doors still open wide

But when the happiest time is come
That to the year belongs,
Of uplands bright with harvest gold,
And meadows full of songs;
When fields of yet unripened corn,
And daily garnered stores,
Remind the thrifty husbandman
Of ample threshing floors—
How pleasant from the din and dust
Of the thoroughfare aloof,
Seems the old-fashioned homestead,
With steep and mossy roof.

When home the woodman plods, with axe
Upon his shoulder swung,
And in the knotted apple tree
Are scythe and sickle hung:
When light the swallows twitter
'Neath the rafters of the shed,
And the table on the ivied porch
With decent care is spread—
Then hearts are lighter and freer
Than beat in the populous town,
In the old-fashioned homestead,
With gables sharp and brown.

When the flowers of Summer perish
In the cold and bitter rain,
And little birds with weary wings
Have gone across the main;
When curls the blue smoke upward
Toward the bluer sky,
And cold, along the naked hills,
And white the snow drifts lie—
In legends of love and glory,
They forget the cloud and storm,
In the old-fashioned homestead,
With hearthstone large and warm.

Fireside Angels.

Angels are ministers of God—divine messengers, who revealed many things in ancient times to the frail sons of men. Angels are dwellers in the "Celestial City;" they guard the gates of Paradise, and welcome the children of time, when, careworn and weary, they arrive at the closed portals of Eternity.

When Night casts her shadows over earth, and Sleep closes the eyes of Humanity, they visit us in dreams, fanning our brows with pinions bathed in the glories of perpetual beauty. And when Day comes with its glare and glitter, although etherialized so as to be invisible to our earth-blinded vision, they hover near, whispering kind words of solace when the ear will bend to listen.

We hear music in the murmuring stream—the sighing breeze, and call it the melody of Nature, not thinking that it may be voices from the far off distance. We hang upon the walls of Memory rare pictures of unreal beauty, and fancy that we fashioned them, when they were sketched and tinted by angelic hands, which found their prototypes in heaven.

But, dear to us as are such messengers, they are invisble, and our earth-trained natures seek something more tangible—something upon which the eye can dwell and the heart rest at all times and seasons. We need fireside angels to be the guardians of home, sweet home. And we have them without number; sitting at our hearthstones, coming and going with us in every walk of life. Their names are as household words, but grown so familiar that we forget their divine origin.

Kind words are fireside angels; and with their twin sisters, Smiles, they pluck many a thorn from the brow of Care, and cover the wound with freshly budding flowers. Their praises are sung by all, but their true mission is best known by the wayworn heart to which life seems full of bitterness. Gentleness, Patience, Meekness, and Forbearance are all of heavenly birth, and although clad in earthly guise have hidden wings which we shall see by-and-by.

Love is a fireside angel, nearly akin to the one which fills all heaven with joy. Its mission is to unite the great band of human brotherhood. Faithful and true, it binds husband and wife, parent and child, brother and sister, each to the other with a bond so delicate as to be invisible, but firm as clasps of steel.

Hand in hand with Love, comes Truth, the brightest of the train,—sitting with us at the fireside, kneeling at the altar, and casting a halo of glory about the humblest spot, and making home a hallowed place. We see our type of the beautiful on earth, the beautiful in heaven.

CARRIE.

HOME COMFORTS.—Wealth is not essential to neatness. We have visited a large, showy house, in disorder from cellar to garret—nothing homelike, nothing inviting; and on the other hand we have seen a low log cottage, whitewashed outside, and embowered with roses, a model of neatness and comfort inside, with its white window curtains, and every article of furniture handsomely arranged. This was owing to the excellent housewife. But while skill and labor within are so important in this great element of high civilization, namely, HOME COMFORT, the surroundings of the house, under the care of the owner, should never, for a day, be forgotten.

Remember—the highest mark of civilization is attention to domestic comforts, domestic happiness and to elevating the condition and character of the female members of the family.—*Country Gent.*

COURTESY AT HOME.—Almost any one can be courteous in a neighbor's house. If anything goes wrong, or is out of time, or is disagreeable there, it is made the best of, not the worst; even efforts are made to excuse it, and to show it is not felt; it is attributed to accident, not to design; and this is not only easy but natural in the house of a friend. I will not, therefore, believe that what is so natural in the house of another is impossible at home, but maintain without fear that all the courtesies of social life may be upheld in domestic society. A husband as willing to be pleased at home as he is anxious to be pleased in a neighbor's house, and a wife as intent on making things comfortable every day to her family as on set days to her guests, could not fail to make home happy.

☞ Always punish your children for wilfully disobeying you, but never punish in anger.

Never let them perceive that they can vex you or make you lose your self-command.

If they give way to petulance and temper, wait till they are calm, and then gently reason with them on the impropriety of their conduct.

HEALTH AND DISEASE.

Utility of the Bath.

How many—that is what proportion—of the whole people of this or any other country fail of even one thorough bath per annum? Probably not less than one-fifth, while there are multitudes in city and country who never enjoy this great luxury—this essential, for it is essential to the health of the body—any more than as though they had a chronic hydrophobia!

On this subject of the use of water the learned Dr. Smith discourses as follows:

"The are in the human body 2,700,000 glands, and 7,000,000 pores, from 2,000 to 3,000 to the square inch, and one-eighth of an inch in depth, making twenty-eight miles of human drainage.

"Five-eighths of all that is eaten passes off through these pores, and but one per cent. of all perspirable matter consists of solid substances. The change in the muscle, tissue, and bones occurs in from one to two years, and in the entire body in from six to seven years. If this old matter be retained, it causes disease—it is a real virus.

"Some diseases are relieved almost instantly by opening the pores. Diarrhœa is frequently cured, matter from the mucous membrane is expelled through the skin; tobacco, opium and mercury have been thus exuded. Whatever through the skin the body can expel, it can absorb. Hold the end of your finger in spirits of turpentine; it is absorbed, goes through the system and may be detected by its odor. Constant handling of arsenic has produced death by absorption.

"Perspiration is eliminated from all parts of the body, and the excretions cutaneously forced may from some parts of the surface be re-admitted to the circulation, and if poisonous or injurious, whenever the blood visits it, it must carry disease. Nature keeps her side of the interior clean and soft, and demands an unobstructed exterior, and exudes to the surface the refuse matter for removal by bathing and evaporation. A light, dry powder, mixed with sweat and oil from the glands, and dust, clogs up the pores. As all parts of the cuticle has pores, as well as the face and arms, all the body should be bathed at least one-third as many times as those are.

"On board a slave ship the small pox suddenly broke out. Medical aid was powerless. Every morning the dead in great numbers were thrown overboard In the midst of terror and anguish the negroes cried out, 'Let us do as we used to do in our own country with the sick.' Permission being given, they gently lowered their sick companions into the sea, letting them remain a few minutes, and then raised them and placed them in the sunlight on deck until dried, and repeated the process several times, when the disease left them and they were cured.

"Cold water is used and prescribed much more than formerly, though many would think a physician not worth sending for who should prescribe so simple a remedy. Abernethy's advice to one of his wealthy patients was:—'Let your servant bring to you three or four pailsful of water and put it into a washtub; take off your clothes, get into it, and from head to foot rub yourself with it, and you'll recover.' 'This advice of yours seems very

much like telling me to wash myself,' said the patient. 'Well,' said Abernethy, 'it is open to that objection.'

"Dr. Currie used fresh water generally, and by long and careful experience he found that bathing prevented or cured most diseases."

Good people of the country, don't be afraid of pure cold water; your occupations subject you to the necessity of frequently perspiring profusely, and likewise to an almost constant accumulation of dust upon the surface of the body. In this way, the pores, which should be always open, are clogged, and the health is liable, in consequenee, to serious derangement. If *cold* water be repugnant, as it will be in most cases where it has not been in customary use, take the chill off, so that it shall not be uncomfortable. It is not necessary that it should be as cold as ice; indeed it is sometimes better that it should be a little warm, or even hot. But ordinarily, in health cold is better. It is the best tonic in the world.

Just when the bath should be especially cold, and when hot or warm, cannot be explained in this connection, without making our article too long. Of all this at another time. Meantime don't be afraid of the bath. *There is not the slightest danger in keeping perfectly clean.*

DOMESTIC ECONOMY.

Useful Recipes.

Sweet Apple Pudding.—One pint of scalded milk, one-half pint of Indian meal, one teacup of molasses, one teaspoonful of salt, six sweet apples cut in small slices. Bake three hours.

Muffins.—Three tablespoonsful of butter melted in three pints of milk; when cold stir in six eggs, one teaspoonful of salt, two tablespoonsful of yeast, flour to make them as thick as you can beat it. Should rise in 3 hours.

Boiling Potatoes.—There are many ways of boiling potatoes, but only one best way, and this is the formula: Let each mess be of equal size. Let the water boil before putting the potatoes in. When done, pour off the water and scatter in three or four tablespoonsful of salt; cover the pot with a coarse cloth, and return it to the fire for a short time. In five minutes take out and serve. Watery potatoes are made mealy by this process.

Pickle for Beef.—To one-half barrel of beef, 1½ pails of water, 6 quarts of salt, 4 quarts of saltpetre, 4 lbs. sugar; sprinkle 4 quarts of the salt on the beef as you lay it down, boil the rest, skim and pour over the beef while hot.

Hock.—One lb. of rump steak, 1 lb. of pork steak, half a loaf of bread, chop all together like sausage meat, add two beaten eggs, and season with salt, pepper, and sage or summer savory; bake like a loaf of bread—to be cut in slices and eaten cold.

Apple Jelly.—Boil 1 peck of apples—quartered but unpeeled and uncored—soft in three pints of water; then put them in a bag to strain. Take as much sugar as there is juice and boil this 15 minutes; add the juice of 2 lemons; pour into moulds to cool.

Washington Cake.—One pound of sugar, one pound of flour, three-quarters of a pound of butter and five eggs, a small cup of sweet milk, a teaspoonful of saleratus, cinnamon and cloves to your taste, one pound of raisins, one wine-glass of wine and another of brandy.

Plum Pudding.—One cup of molasses, one cup of milk, one pound of raisins chopped, one teaspoon of soda, one of powdered cloves. Mix with flour about as stiff as pound cake. Melt half a cup of butter and stir it in. Steam in a dish over boiling water four hours, and eat with a hot sauce.

WIT AND WISDOM.

☞ A physician has discovered that the nightmare in nine cases out of ten is produced by owing a bill for a newspaper, and that the best cure is to pay up.

☞ A noble life is but the development of a noble thought.

☞ Those who walk most are generally healthiest; the road of perfect health is too narrow for wheels.

Why is dough like the sun? Because when it rises it is light.

How is it that the wheels of a carriage give evidence of great feebleness? Because they are *tired* before they start.

When was Napoleon most shabbily dressed? When he was out at Elba (elbow).

☞ Red noses are light-houses to warn voyagers on the sea of life off the coasts of *Malaga, Jamaica, Santa Cruz and Holland.*

☞ Scrutinize a lawyer when he tells you how to avoid litigation, and a doctor when he drinks to your health.

☞ The Italians have this proverb: "Women are wise on a sudden, foolish on premeditation."

☞ The light of the world comes chiefly from the sun and the student's lamp.

☞ Weakness in a General is the demoralization of an army.

YOUTH'S CORNER.

THE BRAVER BRAVE.

TO WAR-BOYS.

BY MRS. HOYT.

Little boys, high and low,
Little boys who want to go
Where the battle rages so,

Boys so big you scarce can wait,
Boys so little you must wait,
To be soldiers of the State,

You might now be, if you would,
Soldiers very brave and good,
Staunch as any ever stood

Where the bullets fall like rain,
Where the flag is shot in twain,
Where they rally once again.

You may think it would be fun,
Standing each beside your gun;
I think most of you would run.

War is dreadful. Shot and shell,
Which kill most? ah, who can tell?
Not the soldier-boy who fell.

Now you little bits of boys,
And you somewhat bigger boys,
Listen to me, all you boys.

It is noble, it is grand,
In the Union blue to stand,
Fighting for your native land—

Grand to bear the flag on high,
And while beaten rebels fly,
In that holy cause to die.

But a nobler thing is done,
And a grander triumph won
By many a little one,

Every time a boy like you,
Though not dressed in Union blue,
Tells a story, straight and true—

Tells the truth in time of danger,
Tells the same when out of danger,
Just the truth to friend and stranger.

It is brave to nobly die;
'Tis a famous victory
To live and tell no lie.

Willie Turner's Story.

A few weeks ago I was down in the country, and went to visit the Pa and Ma of little Willie Turner.

Who is Willie Turner? Don't you know? He is a boy about as old and as tall as you are, and has hair and eyes just like yours—that is, if you are about six years old, are a very little higher than the table, and have blue eyes and brown hair.

Where does he live? I told you he lived in the country, and, since you live there too, and are so near his age and size, I am sure you ought to know him better than I who live in the city, and am much larger than he, besides being as old as four or five of you all together. But I see that you don't seem to know much about him, so I will just tell you a few things, and you may call it a story about Will, and he may call it his story.

I will begin by telling you what he did the most of the time I was there. You must be very much alike, for he did what you do nearly all the time. He ran around after the butterflies, not to catch, to chase them—climbed some trees, not after bird's nests, but to see if he could; and waded round in the grass, sometimes on his head, sometimes on his feet, and all for the fun of it.

I don't know as I am right in saying he spent most of his time in this way. He must have busied himself a part of that bright afternoon in looking up the very prettiest flowers, the largest bunches of currants, the plumpest gooseberries, and the mellowest apples he could find. How do I know? How does anybody know, when you go out to the garden and orchard and come back with your hands full, that you have been looking for these things. Willie came with *his* hands full a good many times, and gave them to me every time.

Maybe you think I tell you this so that when I come to your house you will do the same. Well, I can't help it if you do. It is so pretty to see little children ready, and all because they want to, bringing the prettiest and the

best of flower and fruit to others, instead of keeping it themselves, that I wish they were all like Willie. I think, too, that I should be just as glad to see this if the flowers and currants and gooseberries and apples didn't come to me, but were given, with a happy face, to some one else. Still it is very pleasant to have a nice little boy or girl, come in, every now and then, while you are talking with the grown folks, and, without making any noise to disturb the conversation, drop these good things into your lap.

That afternoon I had so many that, besides eating all I wished, and giving some all round, a whole row of red and yellow apples stood over the large glass in the parlor, very much like the "apples of gold in pictures of silver," that, the Bible says, are like to good words. When we went to come away, just as the carriage was turning from Willie's home to my home, I said, "Oh, I musn't forget my apples!" Willie heard this and ran back as fast as he could and brought them. They filled my pocket quite full. I carried them home and laid them up, in the bright sun, in my window. Every time I ate one, I gave one away, for I remembered how Willie had given them to me.

But we had not gone yet. We staid all night. When Will was sent to bed in the evening, he looked as if he would rather not go, but he didn't say a word, or pull back, or kick. He went, as a good soldier goes to battle, bravely.

The next morning, when Willie's Ma told him that this was the lady who wrote "Little George and his Hatchet," "Little Big Man," "Bumble Bug," &c., I saw that he did not run out doors so much, but staid a good deal in the house with us. I expect he thought that in all that talking there would surely come a story after a while. Did we big folks stop talking when he staid in the house? No, indeed! Why should we? Do you suppose Willie made so much noise that it disturbed us? Do you suppose he talked much himself, saying "Ma! ma!" every few minutes, or pulling his father by the sleeve? He did nothing of the kind. Willie is a small boy. I don't think he has been to school much. He isn't large enough. But there is one lesson he has learned already—has learned very well, and didn't forget once while I was there. It is this: "LITTLE FOLKS SHOULD BE SEEN AND NOT HEARD."

The only thing I remember to have heard him say, except to answer when he was spoken to, was, "Wouldn't Mrs. Hoyt write him a story?" He asked this of his mother, who said "Perhaps, if you will be a good boy." I said "Willie *is* a good boy, and I will write him a story some time." So here it is, all about himself. But I don't think it is much of a story, after all. Do you? How could it be? he is such a little fellow.

Next month will be November, that ugly time, when there is neither green grass nor snow to frolic upon out doors, but rain and shiver and stay in the house. I am always sorry for children at such times, and will have a story ready for all the little boys and girls in the State. I think you will like it, and you may each one call it MY STORY.

NEWS SUMMARY.

INDUSTRIAL AFFAIRS.

The State Fairs, so far as heard from, have gone off pretty well. Next month we shall give brief sketches of some of the most interesting. Competent reporters will particularly furnish our readers with accounts of the State Fairs of Iowa, Illinois, Ohio and New York.

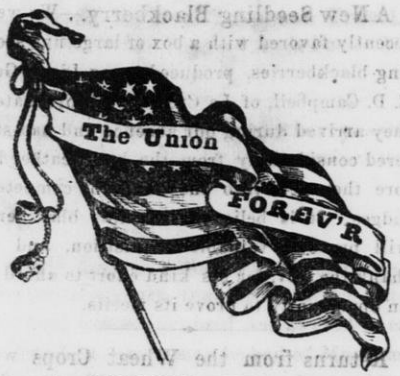
STATE AFFAIRS.

Nothing of much importance has transpired in the industrial world. County Fairs generally successful. The "Loyal Democracy" of Wisconsin met at Janesville, Sept. 17, adopted an "Address to the People," and a series of resolutions, for neither of which we have space in this journal. It is sufficient to say they were denunciatory of the "Ryan Address Democracy," and full of expressions of devotion to the country and of a determination to sustain the administrative head of the government.

FOREIGN MATTERS.

Rumors of intended intervention and recognition are still afloat in Europe. France seems more likely to make us trouble than any other power at this time; though it is not our opinion that even she will intervene right away.

Maximilian, of Austria, to whom Napoleon offered the throne of Mexico, has not yet accepted.



NATIONAL AFFAIRS.

Nothing of great importance has transpired in the East. The Army of the Potomac is no further than Culpepper Gilmore has gained possession of Morris Island, including Forts Wagner and Gregg, and is now about bombarding the city of Charleston.

In the South, events of great importance have transpired. Grant is in command at New Orleans, and Banks has sailed with a strong force for some unknown point—probably the mouth of the Rio Grande, where his services are likely to be needed to protect the frontier of Texas.

Rosecranz has pushed into Georgia, and has just had a terrible battle with Bragg's army, re-inforced by Joe Johnston and troops from the army of Lee.

Two of Rosecranz's divisions are reported to have given way, compelling him to fall back to Chattanooga, near which place the battle occurred. Reports from Washington assure us that Burnside, who has been carrying every thing before him in East Tennessee, has reinforced him and that he will be fully sustained.

Gold has gone up to 1.39.

EDITORIAL MISCELLANY.

The Prizes for 1864.—The attention of everybody who would be glad to promote the worthy and important objects for which this journal is published is directed to our new offer of premiums, as found on the 4th page of cover, and to the description of prizes in Horticultural Department.

It seems absurd that the farming public should need anything in the way of prizes to induce them to take a cheap and valuable paper devoted especially to their own interests; but if by these means we may the more thoroughly insure the wide diffusion of practical knowledge and correct social sentiment among the people, we are ready to offer rewards, though it be at the sacrifice of much that we are entitled to as a legitimate return for our labor—on the principle that it is ten times better to do good to ten thousand farmers than to one thousand.

To such friends of the FARMER as are influenced by that State pride which actuates us, in part, we will state, for their gratification, that the FARMER is going ahead splendidly Some two thousand names have been added to our subscription list within the past few months, and there seems to be a growing disposition to give it the support it deserves It is true, however, that it does not afford the Editor and publishers anything like a fair remuneration for the effort necessary to keep it up to even its present standard of excellence. Nor can it, indeed, so long as the cost of its publication is so great as now, unless the subscription list is further increased by the addition of some thousands.

We have several plans for making the FARMER yet more valuable than it is, but we can hardly afford to make these improvements solely, or even temporarily, at our own expense, and pecuniary ruin. Will not one-fourth of the 80,000 farmers of Wisconsin interest themselves more warmly than now in their own Home Agricultural Journal?

The prizes themselves will prove to be of more worth than the price of the FARMER, and if we are to make not one cent, by reason of a too liberal distribution of favors, it will, at least, afford us great pleasure to have furnished to all parts of the State the beginnings and the guides to an industry that is sure, in the progress of time to result in the increased happiness and economical advantage of the great public of our favorite Northwest.

Fine Ag. Soc. Diplomas.—We are indebted to Mr. Pulcifer, late editor of the Columbus *Journal* for samples of the beautiful Diplomas executed by J. Sage & Sons, Buffalo, N. Y. We know of no place in this country where work of this sort is done better or cheaper.

To the Growers and Manufacturers of Flax and Hemp.—Congress having, at its last session, placed in the hands of the Commissioner of Agriculture an appropriation of $20,000 "For investigations to test the practicability of cultivating and preparing Flax and Hemp as a substitute for cotton," the Commissioner, after consultation with members of Congress and with manufacturers, determined to place the whole matter in the hands of three Commissioners, and accordingly appointed Hon. J. K. Morehead, of Pittsburg, Penn.; John A. Warder, of Cincinnati, Ohio; and William M. Bailey, of Providence, R. I. The Commissioners met, at the Department, on Thursday, September 3, 1863; chose Hon. J. K. Morehead Chairman; appointed O. A. Stafford, of the Department, their Clerk; and passed the following resolution:

"*Resolved*, That the Commissioner of Agriculture be requested to issue an advertisement by circular, or otherwise, calling upon manufacturers and experimenters to send to this Department, on or before the 20th day of November, samples of the fibres and fabrics prepared by them, to be accompanied in all cases by precise statements as to the various processes, and with estimates as to the probable expense per pound of the preparation of the material and of the proportion of fibre that may be produced from a given quantity of the stalks or straw of flax and hemp."

All packages of specimens or samples, and all letters on this subject, should be addressed to the Commissioner of Agriculture, with the endorsement "For Commissioners of Flax Culture. ISAAC NEWTON, *Com'r.*

Dept. of Agriculture, Washington, Sept. 1863.

The University Commercial School.—We are pleased to learn that this excellent institution continues to flourish notwithstanding the hard times. The course of instruction is full and thorough, and the expenses are about one-fourth less than in any other similar institution of which we have knowledge. Gentlemen or ladies desiring to acquire a mastery of the science of book-keeping and its collaterals can hardly do better than to attend the University Commercial School.

For full particulars, address D. H. Tullis, Madison.

A New Seedling Blackberry.—We were recently favored with a box of large fine seedling blackberries, produced by ex-Lieut. Gov. E. D. Campbell, of La Crosse. Unfortunately they arrived during our absence and had suffered considerably from the hot weather before they fell into the hands of competent judges. It is believed that this blackberry will prove a valuable acquisition, and we thank the Gov. for his kind effort to afford us an opportunity to prove its merits.

Returns from the Wheat Crops were scarcely ever more encouraging. The crop in this State was but little damaged by insects, and though harvested in some counties with great difficulty, owing to its *lodged* condition, the *catching* weather and the scarcity of laborers, still there is reason to believe that it will fall but little short of the great crop of 1860. The aggregate may possibly be greater, but the average per acre has not been so large.

Prizes.—What is the reason newspaper men all offer prizes to induce new subscribers to take their publications, and none to keep the old ones on the track? R. C.

[Because they know that the subscriber gets his money's worth *in the paper alone;* and being honest themselves, they are slow to believe that any who have once read and profited by their teachings would wish to get more than *they pay for.*—ED.]

"The Wheeler & Wilson Sewing Machine is constantly gaining in popularity." All right; it deserves very great popularity. The sale room of Geo. R. Chittenden, Esq., General Western Agent, at Chicago, is one of the finest establishments of its kind in the United States The machine which it represents stands *first* in Europe and America.

"Chester County White" Hogs.—Who has them to sell? Enquiries are frequent, and yet no one advertises. Do men who keep stock to sell understand the value of the FARMER as a medium?

Editorial Notes of European Travel.—"Down the Rhine" again crowded out. Will appear in next No.

Farmer's Premium Strawberry.—Orders received since Sep. 10th, will receive attention in the spring.

[Advertisement.]

South Downs.—MR. EDITOR:—Please say to your sheep-men that South Down bucks and buck lambs, pure bred, and as good as can be found anywhere may be had of Mr. James Davis, of Waukesha, for less than half the price usually charged by Eastern breeders.

I know the history of these sheep, and feel entirely safe in saying they are every way *superior*. I saw the flock in June: every animal was a fine one and in excellent condition. Mr. Davis, I think, does not care to part with any ewes at present, but can spare half a dozen or more bucks. A. G. HANFORD.

BOOKS AND PAMPHLETS.

FINE WOOL SHEEP HUSBANDRY. By Henry S. Randall, LL. D., author of Sheep Husbandry of the South, Practical Shepherd, &c., &c. C. M. Saxton, Agricultural Book Publisher, New York, will accept our thanks for a copy of this valuable little book; we have already noticed it in advance of publication, in book form, and are none the less willing to recommend it after a re-perusal.

PREMIUM LISTS of California State Fair.—Amount of prizes, $10,000.

TRANSACTIONS of the Rhode Island Society for the encouragement of Domestic Industry—a handsome pamphlet of 93 pages.

FORTY-SECOND ANNUAL REPORT N. Y. Mercantile Library Association.

ANNUAL REPORTS N. J. S. Agricultural Society, for 1862 and 1863.

Thanks to the worthy Secretary for copies of the "Proceedings of the American Geographical and Statistical Society of New York.

To the Chicago and Northwestern R. W. Co. for a copy of their Fourth Annual Report, submitted to the Annual Meeting of the Bond and Stockholders, held at Chicago, June 4th, 1863—and of which a full notice will be given our next No.

NOTICES OF NEW ADVERTISEMENTS.

THE BLOOMINGTON NURSERIES, advertised by Mr. Phoenix, will, doubtless, be remembered by our readers as having been advertised and noticed before in these pages. He offers a variety of bulbs. See article in Horticultural Department.

SOUTH DOWN BUCKS are offered for sale by James Davis, of Waukesha. Read also the endorsement of Mr. Hanford, of Columbus, O. Mr Davis also offers for sale a full grown buck, whose pedigree is given in the advertisement.

STATEMENT
OF THE
Madison Mutual Insurance Co.
FOR THE YEAR ENDING
DECEMBER 31, A. D. 1862.

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		$327,464 67
ASSETS.		
Unimpaired premium notes of policy holders	$281,000 07	
Cash on hand and due from policy holders and agents for cash premiums	45,464 60	
Office furniture and fixtures	1,000 00	327,464 67
Whole No. policies issued		22,061
Am't of outstanding risks thereon		$15,962,090 00
Number of policies issued in 1862		7,706
Am't of outstanding risks thereon		$6,069,813 00
Am't premium notes thereon		108,323 93
Am't cash premiums thereon, less commissions to agents		45,727 80
Am't interest received		972 18
Total am't losses reported during 1862		$17,744 16
Total am't losses paid during 1862, 89 in number		21,413 97
Am't claimed for loss, resisted as fraudulent		2,000 00
Losses adjusted and due		none,
Losses adjusted and not due		none.
Losses unadjusted		292 35
All other claims against the company		97 50
Am't paid for advertising and postage		1,763 66
Am't paid for printing		540 50
Am't paid for policy stamps		600 00
Am't paid taxes to Com'r Internal Revenue		82 02
Expenses paid, including all compensation to Officers and Directors, stationery, extra clerk hire, fuel, lights, and other incidental expenses		7,290 98

Comparative Statement of the business of the Company for the years 1859, 1860, 1861 *and* 1862.

	1859.	1860.	1861.	1862.
Total amount of accumulations				$827,463 67
ASSETS.				
Premium notes of policy holders	$38,462 46	$92,487 27	$180,124 63	$281,000 07
Cash on hand and due from policy holders for cash premiums	2,986 02	16,519 74	35,408 66	45,464 00
Am't secured by mortgage and judgment	332 47	332 47	332 47	
Office furniture and fixtures	300 00	1,000 00	1,000 00	1,000 00
Whole number of policies issued	30,080 15	89,359 49	216,865 76	327,464 07
Am't of outstanding risks thereon	4,807	8,479	14,357	22,081
Total am't of losses paid and settled	$2,409 960 49	$5,451,115 49	$10,320,789 00	$15,962,000 00
Losses reported and awaiting further proof *	2,409 45	5,903 31	8,450 01	21,413 07
Whole number of policies during the year		499 53	7,351 12	* 2,000 00
Am't of out-standing risks thereon	1,187	3,722	5,778	7,706
Am't of premium notes thereon	$1,140,076 00	$3,916,115 49	$5,315,173 00	$6,069,813 00
Am't of premium notes thereon	17,109 82	68,789 45	93,944 06	108,323 93
Am't of cash premiums thereon	3,317 70	10,339 18	43,377 36	† 45,727 80
Am't of commissions paid to agents	11,059 04	35,761 88	7,490 84	
Am't of expenses paid, including all compensation of officers, printing, advertising, postage, and all other incidental expenses	3,317 71	5,847 44	9,071 89	7,290 98

* Resisted as frandulent.

† Deducting agents' commissions.

DIRECTORS FOR THE YEAR 1862.

J. W. BOYD, Walworth Co.
D. WORTHINGTON, Waukesha Co.
DAVID A WOOD, Dane Co.
G. R. MONTAGUE, La Crosse.
A A KINNEY, Green Lake Co.
H. H. GILES, Dane Co.
LUTHER BASFORD, Grant Co.
B. F HOPKINS, Dane Co.
ORRIN GUERNSEY, Rock Co.
FRANK H. ROPER, Dodge Co.
J. H. WARREN, Crem n Co.
TIM. BROWN, Dane Co.
S. D. HASTINGS, Trempeleau Co.
DAVID TAYLOR, Sheboygan Co.
S. R. McCLELLAN, Kenosha Co.
J. T. LEWIS, Columbia Co.
JOHN TOAY, Iowa Co.

OFFICERS.

JOHN W BOYD, President.
B. F. HOPKINS, Vice President.
S. D. HASTINGS, Treasurer.
D. WORTHINGTON, Secretary.
G. F. HASTINGS, General Agent.

LOSSES PAID BY THE COMPANY IN 1859.

S H Colman, Juneau, Dodge Co	$10 00
J H eaman, Richland, Richland Co	10 00
anny Plummer, Hauston, Juneau Co	15 00
Geo F Taylor, Madison, Dane Co	15 00
Nelson Sickles, Waterloo, Jefferson Co	690 00
A L Beebee, Dunn, Dane Co	650 00
J H Barber, Juneau, Dodge Co	68 00
Jas H Main, Juneau, Dodge Co	403 57
hos Mayhew, Merton, Waukesha Co	27 00
W N Seymour, Madison, Dane Co	20 00
Wm Edwards, Sugar Creek, Walworth Co	400 00
Leonard Hatch, Kenosha	100 00
	$2,409 45

LOSSES PAID IN 1860.

J S Wilmarth, Sun Prairie, Dane Co	$314 50
Cyrus S Davis, Menominee Falls, Wauk Co	5 00
J W Cook, Dane Co	15 35
Lewis Thompson, La Prairie, Rock Co	172 52
Henry Johnson, Somers, Kenosha Co	12 50
Pliny Putnam, Rubicon, Dodge Co	5 00
B B Thurtell, Jamestown, Grant Co	500 00
A A Anderson, Delafield, Waukesha Co	7 00
Jas T Walkin, Eagle, Waukesha Co	20 00
C Sutherland, Fitchburg, Dane Co	10 00
Harrison Koonz, Concord, Jefferson Co	400 00
Owen Garity, Sullivan, Jefferson Co	6 00
C P Churchill, Waukesha Co	5 58
Caleb Jewett, Town of Madison, Dane Co	17 51
Mary La Follett, Primrose, Dane Co	115 00
Wm A Stowell, Cottage Grove, Dane Co	1,041 71
am H Sabin, Windsor, Dane Co	18 00
Abel Strong, Marcellon, Columbia Co	382 71
Quartus Towry, Johnstown, Rock Co	5 00
Robert Hornby, Fairfield, Sauk Co	496 05
Thos Stevens, Dane, Dane Co	200 06
John Wightman, Berry, Dane Co	751 80
Douglas Oliver, Glen Haven, Grant co	1,000 00
Josiah Pierce, Pardeeville, Columbia co	400 00
	$5,903 23

LOSSES PAID IN 1861.

L D Lateer, Janesville, Rock co	$499 53
dward Walsh, Centre, La Fayette co	306 80
Nathan Kellogg, Madison, Dane co	15 00
Henry A Chapman, East Randolph, Col co	20 00
Jared Bishop, Jamestown, Grant co	371 00
Allen Hoxie, Porter, Rock co	1,000 00
O C Burdic, Christiana, Dane co	2 00
Samuel Goossett, Juneau, Dodge co	13 50
Albert Gaston, Cottage Grove, Dane co	11 13
Stephen Young, Somerset, St. Croix co	380 00
A L Beebee, McFarland, Dane co	699 01
Alfred Taber, Delavan, Walworth co	350 00
Lydia D Crocker, Lake Mills, Jefferson co	2 00
John Feller, Bear Creek, Sauk co	646 65

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : EDITOR.

VOL. XV. MADISON, NOVEMBER 1, 1863. No. 11.

New Mexico.

[The following letter from Hon. J. G. Knapp, U. S. Justice for New Mexico, touching the climate, agriculture, horticulture, &c., of that far off territory, will hardly fail to interest every class of our readers.—ED.]

ED. FARMER.—Every kind of agriculture is here conducted on so different a scale from what it is in the States, that you can form no idea of the manner. You draw the water out of the land by drains and underdrains: we put water on the land to produce moisture, in order to induce vegetation. You are blessed with showers and rains from the heavens, and dews bedeck every plant, or fill the newly stirred earth with needed moisture; here, but one inch of rain has fallen in the valley since the beginning of the year. You talk of wells and cisterns, and make comparisons between hard water and soft; we drink and use the water of the Rio Grande, glad to take it as it runs, nearly as muddy as the Missouri. All water found in the ground is charged with salts, and one might as well use glauber salts as such water. For myself, I have constructed a cheap filter with a common barrel, and by that means get a good supply of clear water, nearly soft, by using the river water as a basis.

Since the first of June the thermometer has every day reached 90° some time during the day, and not unfrequently it has reached 105° in the shade. Vegetation of certain kinds is enormous where there is a supply of water, and other things are forced to an almost premature ripeness. The castor oil bean, which came up from seeds lying in the gronnd the last of April, is now eight feet high, and will grow two months more this summer, when it will live over the winter and be ready to grow again next summer. But the sun-flower ripened its seeds in July, and is dead. The old colony sweet corn made roasting ears in June, and was unfit for use the 20th of July. The early bush beans matured in July, and would raise a second crop; but the Limas, after making from ten to twenty feet of vine, and maturing what would be a full crop, are still growing and blooming as vigorously as if they had just began to bloom. Water melons are past their prime, and musk melons with me are going. Field corn is at all stages, from hard corn to plants a foot out of the ground. The cotton woods and willows have made more growth than I have ever seen before; but they are almost valueless for timber, and yet they are the entire timber of the valley. The musquit (mus-keet) is a mere bush, seldom found ten feet long or three inches through; but there is a large root just under the surface, which is dug out and makes excellent fuel or charcoal. This and the screw bean are varieties of the *accasia* (locust); and the musquit resembles the black locust found sometimes in Wisconsin, in the leaves and flowers, though the pod is not flat, but nearly round, and if picked when green it is filled with a sweet substance, which is often used by the natives, and is eaten with great avidity by horses and mules, both dry and green. The beans are eaten by all kinds of stock, even after they fall out, and are very fattening.

The Mexican grants to the lands in this valley, required all the grantees to plant fruit trees and vines, and though the non-compliance with this condition forfeited the grant, it has, in almost every instance, been neglected, and fruit is almost unknown, even such as they might have. From El Paso, Mexico, come apricots in June, pears and moscatel grapes in July, peaches, pears and El Paso grapes (dark variety,) and sweet apples in August, peaches, pears and grapes in September, and in October peaches, pears and pomegranites are produced, and sometimes oranges find their way here from Chihuahua.

All the grapes of the Rio Grande are raised in the same manner. The vine is planted and allowed to grow at random, only trimmed by cutting off the branches about two eyes from the main vine for a foot or eighteen inches from the ground, where the whole is cut off. This portion is covered in the winter by drawing the earth up around it with a hoe, and is expected to bear grapes the third year from the cutting. The vine grows with strong reeds, but short, seldom reaching more than six feet, and about two inches from joint to joint. A small branch, or, as the vine-dressers call it, "a thief" starts at every leaf. This, and the fact that the vine is allowed to produce as many vines as it may happen to have eyes, which are allowed to run over the ground in every direction, without any support or training, is undoubtedly the cause of the deformed condition of the vines, and their small yield of fruit. I have no doubt but that if these vines were properly cared for, trimmed and watered, three times the amount now produced might be obtained.

There are three varieties of the grape, probably all of foreign origin. The moscatel is a white grape—color, a light green, almost water colored—sweet, sugary, with a slight flavor of musk, just enough to give them spice. The El Paso is a black grape, sweet, and without any musk or other flavor. When dried they resemble small raisins. These are the great source of the wine, making a red wine of great body. The other is a grape about the size and color of the catawba, but as sweet as the black grape and much resembling them in flavor. This is also an excellent wine grape. El Paso wine, pure juice, sells at two dollars a gallon, by the barrel, in the early winter months, and some vineyards have been known to make as high as 300 gallons to the acre, of fermented wine. With these figures, and cuttings to be had for the asking, yet the Mexicans will not plant vineyards

The apricot, when cared for, makes one of the prettiest shade trees in the country, and will give its fruit in four years from the pit. Both it and the peach grow very rapidly, not unfrequently making a length of limb of six feet in a summer, and adding two inches to their diameter. And notwithstanding these may be had for planting the stones in proper locations, and protecting them from the depredations of the goats for but two years, the Mexican has so little care for the future that he will not even put the pits of the peaches he has eaten into the earth, lest they might make him a tree, and he eat of the fruit thereof. The peaches and apricots are all poor, as no care has been taken to improve them. The pears are all spontaneous productions, and may be pronounced unworthy of cultivation. This is certainly true of the apples. Hard, tough, sweet, and about as edible as the bark of the tree on which they grow, they are picked long before they are ripe, and never become ripened.

I have learned many facts about the agriculture and gardening of the country which I knew not before. I do not think the tap roots can be relied upon as a sure crop, though were the ground properly manured and prepared, I think they would be a success The Mexicans never raise them. Onions are the great crop. They are sown early and transplanted in May, in rows, at proper distances. I have 75 onions growing upon a bed four feet by eight, among which are several that now measure fourteen inches in circumference, and all are large, fine roots. To make such a crop requires irrigation once in four days during the heat of summer.

Next to onions, perhaps before it, is to be placed by the Mexicans *chile* (red pepper.) This is eaten green and ripe, and at nearly every meal. I have seen a man eat a half pint of green, full grown peppers at one meal of bread and chile.

But the country has its pests. In early Spring it swarms with black birds, which prey upon almost every herb which springs out of the ground. To these succeed bugs and worms. The worst pest of the gardener is the plant louse, and especially the one which infests the brassica (cabbage) tribe, and often destroys a whole plantation in a few days. Next to these is a *chinche*, an animal when full grown three-fourths of an inch long, and one-third as broad as long. These infest the vines. By them I lost all my choice winter squashes, and my cucumbers were badly injured. They committed their depredations in June, and by withholding the seeds until after the ground has given a crop of early peas, the vines would escape their depredations, as I see is the case with late planted vines. The *larvae* of a red-spotted bug, a little larger than the half of the largest pea, does great damage to the bean crop by eating the leaves and thus destroying the plants. Early planting is the surest remedy against these. Wheat has no enemy but the black bird, which eats off the plants in the Spring, and if properly watered is a sure crop. It may be cut in May, in time to plant corn on the same ground, though it is seldom done. Corn meets with two difficulties. The first is in getting up after planting, and the second is the worm in the ear. The first may be remedied by care, and for the second I know of no remedy, as there are no birds to take the worms before they enter the ear.

This country, abounding in mines as rich as California, wants people—Yankee people in the valleys, with Yankee tools to make the soil, rich and inexhaustible as the Nile, produce what it can. Cotton grows well, and ripens a full crop. Rice would grow as well, and especially the upland variety. Sorghum ripens its seed in August, and the grinding season might be extended from the middle of August to the middle of November. But it wants men who have the will and know how to develope the soil. The mines would then take care of themselves.

Secondly, it wants seeds and fruits. You boast of apples named by the thousands; plums, peaches, cherries and apricots in large catalogues; small fruits in almost countless varieties. Here there is not a blackberry nor a mulberry in all New Mexico, to my knowledge. There is a small red raspberry growing on the mountains. No strawberries, no currants, in fact, nothing which the inhabitants of Yankee land consider, not luxuries, but necessaries, of life, and every summer comforts.

I can think of nothing which a humanitarian could do which would conduce so much to the comfort and well-being of New Mexico, as the introduction of American apples, (no fear of tender varieties,) plums, cherries, peaches and pears in varieties, with all the small fruits, blackberries, raspberries, currants, high bush cranberries and strawberries, all of which I believe would flourish finely, as they can be supplied with any amount of water. The locusts, maples, and white willow would be valuable as timber trees, and no time should be lost in their introduction; so the walnut, hickory or pecan, and the butternut, would thrive luxuriently if introduced. None of these are here. Roses and flowering shrubs are strangers, and only the first is ever seen. The Mexican has seldom planted a vine, and a tree, never. There is a fig tree in Mesilla, of two summers' growth, which is twelve feet high, and four inches in diameter two feet from the ground, yet nobody plants the fig, even for its fruit.

I have already written to my friends of the Rock Terrace Nursery to prepare me something of all their varieties, which I propose receiving by mail to experiment with.

J. G. KNAPP.

MESILLA, Aug. 14, 1863.

The cultivation of fruits is characteristic of a civilized people alone.

November's Duties.

As the seasons stop not in their course, but ever unresting, yet never hastening, move on in their unending circle, so must the husbandman know no end to his provident care and faithful endeavor. There are times when he may have relief from the severity of his labors, when by means of relaxation, travel and study he may reenforce himself for the labors that lie in his way, in order to their better performance; but his labor must not be postponed when the time comes for it to be done. He must strike at the right time, or suffer for his procrastination. Nature will not wait.

And now, that

> "Summer, sighing, has fled the plain.
> And waiting Winter guant and grim,
> Sees miser Autumn horde his grain
> And smiles to think it 's all for him,"

while the plow of preparation stops not in the furrow, there are a thousand little things, as well as other larger labors, that must not be neglected. Many of those suggested in October should be understood as reiterated here.

In a word, as to all practical duties on the farm, November is, in this climate, simply a prolongation of October—a special favor to the husbandman, in order to the more thorough completion of his work of gathering and storing his crops, laying down and covering with straw and earth the vines and plants that so enrich and beautify his home, in providing ample food and shelter for all his dependent animals, in gathering up all the odds and ends of everything, and in thus preparing himself to sit by the family hearth during the long evenings of winter with perfect immunity from reproaches of neglect and with larger facilities than heretofore for intellectual advancement and social happiness.

And then there is one other duty falling this year within November. It does not refer itself directly to either the farm or the garden, or to any other branch of farm work, though it does have an important indirect relation to them all. We refer to your duties as citizens,—as men clothed with the high privileges, honors and responsibilities of a sovereign people.

The right of suffrage in the control of the affairs of a great nation is a sublime and sacred trust, and carries with it an obligation equally sacred—an obligation which no man entitled to its exercise may reasonably hope to escape.

We do not say that you should support the nominations of this party or that. We have nothing to do, as a journalist, with political parties or party strifes. But as an indepedent friend of our common country, it is our prerogative to urge upon every one of our readers who is a constitutional elector, the faithful discharge of this sacred obligation at all times, and especially in these times of our national peril. Vote as your own best judgment and conscience shall dictate, but vote. That man is unworthy the name of a patriot who, when occasion comes, will not cheerfully sacrifice something of his own convenience and material interests for the good of his country.

The British Colonies at the Great Exhibition.

NO. III.—CONCLUSION.

From Van Dieman's Land we but step across the narrow strait which separates it from the New Holland of the old atlases, and we stand on the soil of that vast island, which, from being a prison place for the condemned felons of England, has, within the past few years, become a centre of most extraordinary interest.

Almost as large as the whole continent of Europe, Australia is at the same time endowed, to a remarkable extent, with many of the elements of material greatness. Of gold and wool it has already exported so much as to be entitled to rank first in the production of these great staples of commerce.

This entire island, destined in the progress of its civilization to be a galaxy of flourishing states, as yet has been divided into but six colonies, to wit: Victoria, New South Wales, Queensland—which three constitute the eastern portion of the island—and South, North and Western Australia, which together make up the rest of what is now known under the comprehensive name of Australia.

VICTORIA

Is the first colony we touch on landing from Tasmania or Van Deman's Land. Compared with the others it is small, comprising but 89,644 square miles, or about five-eighths larger than Wisconsin.

In 1836 its population was 177; in 1861 it had a total of 540,322 inhabitants—37 per cent. being English. The western portion of the colony is low, the eastern, mountainous. Climate remarkably mild—the average temperature in summer being 65° Fahr., the average of winter 48°. Soil in the main rather light, but admirably adapted to the production of sheep and other domestic animals.

Number of sheep in 1860, nearly 6 millions; amount of wool exported the same year, 244 million pounds! Number of cattle in 1860, over six hundred thousand; value of hides and tallow exported, about one million of dollars. A splendid showing for the pastoral industry of this new colony.

After the discovery of gold, the agriculture of Victoria languished for a time, but again revived, and is now going forward most prosperously. The magnificent trophy of wools, and the fair display of grains and fruits in this department of the Great Exhibition admirably illustrate this branch of her industry.

"But the gold of Victoria?" Ah, its representative monument is there, under the grand dome—a "Gold Pyramid," forty feet high and six feet square at the base, illustrative of the amount derived from that colony since the last exhibition in 1851, scarcely less than *five hundred and fifteen millions of dollars!*

As to the social and educational interests of Victoria, the library of works illustrative of the natural resources of the colony, and of the reports of institutions of learning, &c., give evidence that these keep even pace with the industrial.

SOUTH AUSTRALIA.

Here we find splendid samples of agricultural products—wheat weighing 69 lbs. per bushel, oats, barley, Indian corn and other cereal grains; also wool of excellent quality. But the most remarkable displays are of copper ores, which abound to an extent only surpassed by the gold of Victoria. Some of the green carbonates (Malachite) are magnificent —almost rivaling those of Russia. Here are, likewise, fine specimens from the silver-lead mines of South Australia. Beautifully executed photograph views, fine samples of silver work, samples of tannery, printed books, newspapers, maps, and various implements and wagon work made of South Australian wood, make up the collection in this department.

In the department of

WESTERN AUSTRALIA

The woods and minerals will most interest us. The principal timber trees are of the Eucalyptus or Myrtle species. Of those most valuable for ship-building, the "Jarrah" and the "Tooart" are the most valuable. Both are remarkable for their indestructability. The Jarrah is especially remarkable for its resistance to decay—setting at defiance time, weather, water, the white ant and the sea worm. The Tooart and Blue Gum constitute immense forests, and are equally valuable for ship-building. The grain is exceedingly close, the wood is as hard as box, and is found to endure a great amount of heat without cracking.

Sandal wood also abounds, and large quantities are exported.

The Casuarina or Shea Oak and the White Gum are used for axe handles, wagon spokes and felloes, and other purposes of that sort. The samples of manufactures illustrate their adaptation in this regard.

The minerals here exhibited illustrate the copper and lead of the colony, and are full of interest.

Here are, likewise, specimens of leather of different descriptions, of fine and coarse wools, of shells, of gorgeous feathers, and of the queer, fantastic weapons used by the natives —wooden spears, spears with quartz heads, double-headed spears, (*Gidji-man-gar*) the *kylis*, the native knife made of sharp-edged quartz, the throwing stick (*Dowak* and

D-yuna) throwing boards for the spear, hammers and shields

The colony of Western Australia includes all that portion of New Holland westward of 129° E. longitude; its greatest length being 1,280 miles from north to south, its width 800. It has a coast of 2,000 miles on the Indian Ocean. Lying parallel to the coast, and some twenty-five miles from it, is a range of hills, or low mountains, beyond which—20 to 50 miles to the eastward—are the undulating, grassy lands admirably adapted to the grazing of cattle and sheep. The climate is said to be one of the most healthful in the world—the average mortality since its occupation having been less than one per cent. —and favorable to the growth of not only maize, the potato and other field crops and fruits common in the temperate zone, but also the orange, the banana and the fig.

Coming over from West Australia through a but little explored and as yet unnamed territory of large area, extending from South Australia to the northern water boundary of the great island, we come at last to

QUEENS LAND,

On the north-eastern coast. This large and flourishing colony was separated from its parent colony, New South Wales, as late as 1859. It has an area larger than that of South Australia, and is more favorably situated in those matters which insure a successful agriculture and horticulture, as we shall see by the varied and interesting collection of articles on exhibition. The potato, the turnip, the carrot, maize, wheat, arrow-root, tobacco, sugar cane, coffee, cotton, the pine-apple, banana, orange, the grape, olive, tamarind, cocoa, are all here; also many of the most valuable spices, such as cinnamon, the nutmeg, ginger, allspice and the clove. Indigo and cinchona are likewise represented. Moreover the finest quality of silk has been produced, samples of it having a place, as you see, by the side of the fine Queensland cotton. Coal and copper are important articles in the mineral collection of the colony, and valuable woods abound in great variety.

Turning southward, down the Pacific coast, we next stand within the borders of

NEW SOUTH WALES,

The first discovered portion of the island continent, New Holland. The discovery was made in 1770, by Captain Cook, who gave it its present name because of the resemblance of its bold coasts and the broken outline of its inland mountains, to the coast of South Wales in Great Britain. The first settlement was made in 1788, on the present site of Sidney, but for many years, owing to the fact of its being a penal colony for exiled convicts, it had but slow growth.

The area of this colony is said to be 323,437 square miles—three times as large as England, Scotland and Wales, and more than six times as large as Wisconsin. Population in 1861, 350,860, exclusive of the military and aboriginal inhabitants. Sidney, its commercial city, contains a population of 94,000.

In pastoral industry New South Wales leads all the Australian colonies—the statistical returns for 1861 showing over six millions of sheep, nearly two and a half millions of cattle and a quarter of a million of horses. Wool, tallow and hides are great staples of commerce. In 1860 the export of Wool from Sidney was nearly thirteen million pounds; value over five and a half million dollars! Wheat, Indian corn of fine quality, the vine and most other crops grown in Victoria and Queensland, are likewise grown in this colony. The wines, of which we find so many samples, are of superior quality.

The mineral resources are immense, though not so great as those of Victoria. Amount of gold—of which here are fine samples—exported within the past ten years, over fifty-five millions of dollars worth.

Coal also abounds. The samples before us are of excellent quality—one 7 per cent. inferior to the best Welsh coal for steam, and several per cent. superior to many of the best English coals for its illuminating power when manufactured into gas.

The reports of railroad and telegraph corporations, of institutions of learning and

charity, of public libraries, natural history cabinets, &c., &c., on exhibition in this department, convince you, at a glance, that all the great industrial, educational and social interests are in a prosperous condition.

We have now made the circle of New Holland, and are certainly the wiser for all that we have seen. We had repeatedly read of the rich gold mines of Australia, but we had no adequate conception of the vastness of its total area, of the immensity and value of its mineral and agricultural resources, of the rapidity of its growth in population, and the degree of its social and industrial progress.

From New Holland and its several interesting colonies, we are next very naturally ushered into the court of

NEW ZEALAND,

Representative of another island several degress yet further to the southeast in the Pacific ocean, and about as far south of the equator as our Wisconsin home lies north of it. Area about 100,000 square miles; population 160,000. Natives originally of the Malay race, and until recently noted more for cannibalism and infanticide than anything else; but since the introduction of Christianity, making rapid progress in the arts of civilization, particularly in agriculture and commerce.

The articles here on exhibition, consisting of rude implements of husbandry and of warfare, together with a few products of agriculture and the more advanced mechanic arts, duly illustrate the condition and progress of this far off island colony of the British Empire.

If now we make our way into the crowded galleries above, we shall have as good as crossed the isle-studded waters of the Archipelago and of the China Sea and planted our feet on the fertile soil of

BRITISH INDIA,

A vast empire in itself, whose records of history go back to the first rude beginnings of the human race.

A splendid show is this of the timbers, fibres, seeds, gums, rosins, oils and other products of Bengal and the Northwestern Provinces; of the teas of Assam, Gurhwal, Kangra, Dehra Dhoon, of Sylhet, Darjeeling and of Cachar; of magnificent silks of various and brilliant dyes; of splendid cashmere shawls from Srinuggur, the capital of Cashmere, with floss silk embroideries and embroideries in gold and silver thread of unequaled beauty, from Delhi; of carpets of novel patterns and gorgeous colors; of handsome and very cheap manufactures in straw, from Monghyr; of plain and embroidered muslins and of wool and woolens, cotten and cotton cloths, from Bombay; of camel's and goats hair and its manufactures, from Shikarpoor and the Upper Scinde; of interesting specimens of the famous Daphne paper from Nepal; of lac work, cabinet work inlaid with ivory and other precious metals, silver filigree work, ornaments curiously wrought of ivory, blackwood and sandal wood; of costly and beautiful specimens of skill in the gold and silver smith's art; of paintings on ivory and on canvass; of photographs and other works of art from Lucknow; of beautiful samples of rich tin ore from Kassang, Malacca and Penang, and of iron, coal, earths and clays, and their manufactures, from Singapoor, Saigon, Borneo and Madras, and finally of a vast number of most wonderful articles in all these and in other classes which we have not time to examine in detail.

The shawls, the laces, the embroideries, silks and brocades, orkinkobs, and the inlaid filigree work are specially attractive, and many of them surpass every thing of the kind in the Exhibition.

If Great Britain will exercise a wise and liberal policy towards the Indian Provinces, she may make them a source of immense wealth and advantage.

A rapid glance at

THE IONIAN ISLANDS,

Seven in number, to wit: Corfu, Paxo, Santa Maura, Ithaca, Cephalonia, Zante and Ceriogo, where are the vine, the currant and the olive, and we touch upon the dark shore of

NATAL,

In the extreme south of the great African

continent—a modern encroachment upon that black, rude race, the Kaffirs.

The specimens of wheat, barley, maize, arrow-root, sugar cane, coffee, silk, flax, cotton and preserved samples of all the fruits commonly known in the north temperate zone, prove the capacity of this new colony for the production of the ordinary essentials and luxuries of life; while the skins, horns, tusks and even whole heads of the antelope, the gnu, the giraffe, the elephant, the rhinoceros, the hippopotamus, the wild boar, the lion, the leopard, the panther and tiger, and the feathers of the ostrich, surprise us with the number of the species of fierce and gigantic wild beasts that roam its jungles and forests.

Man is more than a match for them, and it will not be long ere subdued Natal will be studded with villages and covered with smiling fields.

At sea again, we touch at

ST. HELENA—

The hated, because cruel, prison of war's greatest hero, the mighty Napoleon. A bleak and rocky isle: let us tarry but to drop a tear at the grave of the world-conquering, but at last fate-conquered Titan whose great deeds have made so many names immortal.

THE BAHAMAS

Come next, though they lie across the Atlantic, between Cuba and the United States. Sugar, coffee, rice cotton and the cereals—these are here—not much else that interests.

Another ocean voyage, and we are again in the waters that lave the shores of England.

THE CHANNEL ISLANDS,—

including Alderny, Jersey and Guernsey,—lying in the British Channel between England and France, are chiefly distinguished for the attractiveness of their scenery and for the breeds of cattle which bear their names. They make but little display in the Great Exhibition, but are worthy of mention as completing the long list of British Provinces.

Look backward a moment; review the multitude of distinct departments of her vast empire as here represented; think of her inexhaustible resources, of her agriculture covering millions on millions of territory, of her countless mines of every known metal and mineral, of her fleets of ships weaving the web of commerce all over the seas; estimate the working energies of her hundred and twenty millions of people in all the departments of Industry, of Science, Art and Literature; take into account the slow but sure progressiveness of her social, religious and political ideas; and then you cannot refuse—even in these times of her unjust bearing towards the young Republic of our love and hope—to exclaim with me, Great is the Empire of Britain!

Iowa State Fair.

MR. EDITOR:—We reached this place last evening, via Mineral Point, where we propose to spend the week with the Iowa farmers, seeing and being seen, of course, with the rest of the world. The weather is beautiful; warm as June, and everything "looks" well for a "good time" coming. Entries are already well commenced, and considerable "stuff" already on the ground. Nearly 700 entries were made up to last night, and at dark sixteen car loads of stock, we hear, came in from the West, besides another arrival by boat from down the river. So we think that success will attend the efforts of those concerned. Evening finds us tired. The fair grounds all day exhibited a hurly-burly mass of men and women, making entries and arranging articles. Departments are generally filling up well.—Noticed some very fine stallions and trotting stock.

THE GROUNDS.

The grounds are favorably located about one and one-half miles from the busy part of the city. Sandy soil, and *now* would be improved by a sprinkling, not a light one either. Conveniencies thereon are well arranged, and are not very dissimilar to the fair grounds of our own State Floral Hall and the Hall of Fine Arts are situated upon an eminence commanding both a view of the city and adjoining grounds. At the foot of the hill or knoll

is the trotting course, and between the two is the ampitheatre, in front of which stands a well arranged speaker's stand three stories high. Adjoining the Ampitheatre on its rear is the LADIES' AID SOCIETY *Refreshment Stand*, gotten up in this wise: The good ladies of Dubuque, realizing the wants of soldiers families, gratuitously bring in of the stores of their homes, and here it is offered to the hungry public in as acceptable form as we will find at any first class hotels. No expense attends the entire operation, and the entire receipts go into the Aid Society. We have not had a larger bill of fare offered us in a long time, nor one that we found more palitable, than "roast pig and fixings," with a tip top cup of coffee.

The fair was favorably opened this P. M. by some timely remarks of the President and the "books are closed." We like the idea.—Instead of spending half the time in entering and fixing, one day winds the matter up and the fair is in running order. Wednesday is ushered in with bright prospects, and like its predecessor is likely to be very warm. A very good attendance, and committees commence work. The ground allotted to machinery is not as well covered as we hoped to see it. Kirby, Seymour & Morgan, J. H. & J. P. Manney's, and Quaker City Mower, comprises the class of reapers, J. H. Manney taking the premium on its class, and Seymour & Morgan as self-raker. Seed sowers and drills, quite a variety of corn planters, and two wheel horse cultivators make up their department, excepting the lesser lights of washing machines, wringers, &c.

The Fruit and Floral Hall now looks its best. In the former there are in all sixty entries, and cover a large space of table. We never saw finer specimens or better colored ones. Many were very large. Some Alexander apples are over fourteen inches in circumference. As a whole, we think the sample would be difficult to beat. The Floral Hall is more scantily filled. Indeed it hardly deserves to be called floral, so meager is the representation. Not a single rose bloom have we noticed, and very few choice plants. We think the Society is quite to blame for this, as they have not provided a suitable place to show them. It is at best but an open shed, where all the wind and dust blows uncerimoniously through, which no gardner much admires. The day was wound up with fast horses, both double and single teams.

An hour spent in the *Fine Art Hall* on Thursday, presented a scene for admiration. It is well filled with choice articles. The walls are decorated with numerous flags, many of them having seen service, and been too much shattered for further use and sent home. Five such are here suspended and many has been the groan and the sigh as friends have looked upon these mementoes.—Beside these are six rebel flags, captured by "Iowa boys."

The Ladies' Aid Society have here another grab, in trinkets for sale and "tickets in a game of luck." Now you know I am death on all such; but this morning as I passed the stand, two eyes, blacker than any bur oak coal in Wisconsin, so pleasantly, bewitchingly, and temptingly asked your humble servant to "buy a number in her album," with the assurance that she "thought and almost knew I'd get it," that my heart was brought into submission. An hour later and the prize was mine.———Not the black eyes, but the beautiful Album

CATTLE

Cattle are limited, being eighty-four entries only, in all classes; but some as fine as we often meet. A Durham bull, brought from Kentucky last spring, weighs 2,200 pounds, has many fine points. Another weighs 2,500 pounds. Two cows in same class, 3 and 5 years old, were coveted by many eyes.

SHEEP.

Sheep are quite plenty and varied in quality. A buck, Spanish Merino, two years old, sheered at eleven months, 21½ lbs. Much interest is shown in this branch, and a spirit of progess is awakening. Among the horses was a stallion, Royal Morgan, from Mass., admitted by all to be the finest specimen of

horse-flesh on the grounds, and attracted more attention than any othor, except Dr. Caldwell's, of Mich., whose "Baby" took the preference. A public exhibition of this horse took place on Friday, in the ring, driving him without lines, and thus turning him loose on the grass.

The good sight of to-day has been the procession around the ring of the running animals. It reached quite around the one-third mile track, and was an imposing sight. As the procession moved on, the noble animals seemed to receive new life, as an admiring throng earnestly watched their movements and now and then cheered them most lustily. Thus the fair is nearly to a close, not doing as well pecuniarily as was anticipated. Receipts are $2,200, and premiums offered are $2,000. The weather has been beautiful throughout. A heavy rain Wednesday night layed the dust and cooled the atmosphere so that overcoats were brought in use. The officers are social, and genial men, always ready to answer questions and give all desired information. To the secretary, Dr. Shaffer, we are indebted for complimentary tickets and access to his books, all of which has been gratefully received.

O. S. WILLEY.

Dubuque, Sept. 19, '63.

P. S.—The receipts at Ladies' Aid Society's tables, are about $1,200 net, which can help much to comfort the soldiers' families, as winter is coming on. W.

Farming.

Of all the occupations to which man may turn his attention, there is, in my estimation, none more worthy a thorough investigation than farming. However, I would not have you infer that every one who reads this article should immediately abandon his pursuit, and become a farmer, nor that every man is actually capable of being one.

It is a marked feature among the people of our day, to suppose any man competent to perform the necessary duties of the farm, regardless of whether he has a knowledge of the science of agriculture or not.

But my readers, agriculture is a science that deserves far more investigation and a greater amount of study, than many of you may really suppose, and it is to the deficiency in this knowledge that are owing the grand failures which are constantly being brought to our view. To prove what I have said, requires no great effort, for we have but to look about and observe the mistaken notions and the conglomerated mess into which the theories of some farmers are carried.

Here we may observe a straw stack in the field, placed here no doubt to get it out of the way, and after the proprietor becomes weary of ploughing around it he sets fire to it.—There we will notice a barnyard on the hill, where the rain may spare the laborious job of drawing out the manure. Yonder we observe one who has sowed the same crop on the same piece of land for years in succession—a practice which is as deadly to the soil as consumption is to the human frame. As we pass along we will observe others cutting their grain a week after it is ripe, when, had they cut it a few days before it was ripe, their grain would have been larger in bulk, and also weigh heavier, and yield more fine flour to the bushel. Because while the grain is in the milk, there is but little woody fibre, but as the grain ripens, the skin rapidly thickens, woody fibre being formed at the expense of the starch and sugar, which must obviously, in a corresponding degrce, injure the quality of the grain.

Readers, these are no vain ideas, founded upon individual theory, but they are facts, truths that have been told us by such men as Norton, and which have been verified by our own experience, and how much soever you you may discard them at first, after a thorough deliberation you must acknowledge them to be real. S.

Milton, Wis., Sept. 1st.

The Straw Question.

Editor Farmer:—I see in the last number of the Farmer your correspondent W. A. B. Bangs is in want of practical information

"how to make the stock eat the straw?" My practice for two years past has been to stack my straw as well as I do my hay, by laying the foundation of the stack its full size in the beginning, and to every layer of straw 10 to 12 inches thick, I scatter a peck of salt, and so on until finished. After the machine is removed, I rake the stack well and top it with the raking. I do not allow my stock to come to the straw stacks until winter sets in; then let the cattle go and help themselves. They never come to look for their hay night and mornings, as in former seasons, so long as the straw lasts. By the first of March I have been so eaten out of straw as to have no bedding for my horses.

Yours, &c., J. J. DAVIS.

STOCK REGISTER.

Sheep Husbandry—Breeding In.

One of the greatest evils connected with the culture of sheep is the custom of "breeding in." It is a law of nature, as well defined as that the needle points to the North pole, that the mingling of kindred blood will produce degeneracy and disease. In all civilized countries this principle is so well understood and recognized, that laws are enacted to prohibit marriage between kindred. On the other hand, it is a well established fact that the greatest races of men that the world has ever produced have sprung from an intermixture of remotest nations. England may be mentioned as a striking illustration of this theory. The great historian Macauley says, "early in the fourteenth century the amalgamation of the races was all but complete, and it was soon made manifest by signs not to be mistaken, that a people inferior to none existing in the world had been formed *by a mixture of three branches of the great Teutonic family with each other, and with the aboriginal Brittons.*" The rapidity with which our own country has progressed in the scale of nations, may reasonably be attributed to a mingling of races, while China, Japan and other countries that have for centuries refused to commingle with other nations, are strong proofs of the degeneracy that naturally follows such a policy. In the animal kingdom it is well known that all the superior breeds are the result of "crossing."

The thorough-bred horse, the great breeds of cattle, sheep and other animals are so conclusive proofs of this principle that not a word of comment is necessary. The same principle applies to the vegetable kingdom, where all the great improvements in variety are the result of the mingling of different elements, while the planting of seed in the ground from which it is raised, is believed to be the principle cause of the numerous evils that beset the cultivation of the soil, such as the "rot" in potatos, the "weevil," "smut" and "cockle" in wheat, &c. Some eight years since, it will be recollected, the wheat crop of Ohio was destroyed for several years in succession by the "weevil." This result is believed to have been caused by sowing wheat on the same ground from which it was raised, as it is well known that this was the common practice in Ohio at the time referred to. Finding their crops destroyed, the farmers came to the conclusion that the particular variety of wheat they had been raising had "run out," as they termed it, and sent to other parts of the country for seed wheat. The impression became very general that "Mediterranean" wheat was not subject to being destroyed by "weevil," which was true *simply for the reason that it was a new variety, and had been but a short time before introduced.* It had not, therefore, been "bred in-and-in" as that which was destroyed by "weevil" had been for years. *Any* seed wheat brought from other states would no doubt have proved equally as beneficial as the Mediterranean. We heard a gentleman from Ohio, a short time since, extolling a variety of wheat brought from California which had proved wonderfully productive, and free from the evils we have mentioned. If the farmers of Ohio will send to California or Maryland, Michigan, New York, Minnesota, or any other distant country *every year for their seed wheat*, they will, in our judg-

ment, find themselves relieved from "weevil," and from many other evils to which they have been subject. We noticed a short time since an account of disease having been developed in the silk worm in France to such an extent as to seriously threaten the destruction of the silk crop. The remedy proposed for this evil is suggestive of the sound philosophy with which the French people conduct their affairs. Their representative at Shanghai was directed to procure a large number of cocoons and send them to his government, and by thus intermingling a new element it was thought the disease would disappear. It is plain from these facts that the disease among the silk worms was believed to have been caused by degeneracy, produced by "breeding in," and there cannot be a doubt that the remedy proposed will prove effectual.

Nature left to itself, without the ingenuity of man in mingling varieties and crossing breeds, produces stinted growth and degeneracy in both vegetable and animal life. A few illustrations by comparison will serve to prove this fact. Contrast for example the wild strawberry with the immense garden varieties—the wild plumb with the "green gage"—the wild cherry with the "Oxhearts"—the crab apple with the "bellflower" and "golden pippin"—the wild pear with the "Bartlett" and "Virgaloo"—the wild peach with the "clingstones" and others—and the wild rose with the "moss rose."

In the animal kingdom, contrast the wild cattle of Texas and Mexico with the Alderneys, the Durhams, the Devonshires, and others—the sheep of Mexico and South America with the "Southdowns," the "Merinos," the "Leicesters," and "Cotswolds"—the wild horses of Mexico and Indian pony of our own country, with the "Glencoes," the "Eclipses," the "Herods," the "Bostons," the "Fashions," the "Lexingtons," the "Patchens," "Flora Temples" and "Idlewilds."

It is the mingling of different elements that produces the healthy and vigorous growth, both in the vegetable and animal kingdoms, and this principle cannot be too strongly adhered to by wool-growers, as disease is sure to accompany degeneracy, and degeneracy, it is believed, is sure to follow "breeding in." We are aware that in expressing this sentiment, we are treading upon disputable premises.—The Hon. H. S. Randall, whose writings upon the subject of sheep husbandry have a well-deserved and widely extended influence among intelligent wool-growers throughout the country, declares that "it is by no means true that it is either unsafe or improper to interbreed animals of any degree of relationship." He also says, "a majority of the most celebrated breeders and improvers of English cattle have been close in-and-in breeders." Such testimony from so high authority is entitled to great respect and consideration, yet we cannot believe but that the great cattle breeders referred to attained their success mainly in crossing the breeds. After having produced a distinct breed through the process of crossing they no doubt bred "in-and-in" to a considerable extent to preserve it, but without an occasional intermixture of new blood, we think the tendeney would be decidedly in the direction of degeneracy, and in this opinion we are confirmed by Mr. Randall himself, who says, "there comes a time generally when close in-and-in breeding between the artificial species which have been partly moulded by man, produces loss of vigor and degeneracy, and sometimes this fatal overthrow is but one step away from the pinnacle of apparent success." In breeding sheep it is not necessary to keep constantly crossing breeds, but a frequent change of rams of the same breed, and obtaining them from flocks as remote as possible, with occasional crossing, is believed to be the most effectual method of keeping up the vigor and health of the flock. In England the growers very rarely breed from an ewe over seven years old, and never before they are two years old. By a careful selection of the breeding parents a constant improvement is kept up, and there is no country in which crossing breeds has been practiced to a greater extent or with greater success, as we shall attempt hereafter

to show. The great object to be attained in our country, is to induce the farmers generally, and of the West in particular, where the facilities are greater than in any other part of the world, to try the experiment of adding sheep husbandry to their other agricultural pursuits. It is not expected that they will enter largely into the business at first. In all new enterprises it is well to feel the way, and we recommend that those who enter into the business should, by all means, adopt the policy of avoiding "in-and-in" breeding.—Its tendency is unquestionably to produce degeneracy, and by many judicious observers is believed to be the cause of "rot," and many other diseases to which sheep are subject.—*Economist.*

Remedy for "Grub in the Head" of Sheep.

MR. EDITOR:—Having noticed an article in the September number of the FARMER on worms in the head of sheep, and their treatment, and as I have had quite an experience for twenty or thirty years in the Eastern states upon said treatment, I thought I might perhaps, confer a favor on wool growers by giving my mode to the public. It is natural for the sheep fly to propagate it species by depositing its larvae in the nostrils of sheep at what is called the "bridge of the nose." As the weather begins to moderate towards spring, they become a maggot, or grub, and seek to crawl about. If the spring should turn out to be late, so as to prevent their seeking the open air, they will follow up the outside cavity of the skull to the brain, and thus destroy the sheep.

About the first of March, make a mixture of one quart of tar, one pint of spirits of turpentine, one pint linseed oil: simmer well, and when cool mix two ounces of black pepper ground fine. Make a small swab by winding tow or flax on a small, tough stick, dip it in the mixture and gently slip it up the nostril to the bridge of the nose. Go through the flock in this manner. If on the barn floor, you will find grubs there in a little while. The turpentine kills, the oil loosens, the pepper makes the sheep sneeze them out, tar is healing. I never knew a sheep to die of grub in the head after being treated as above, that season.

Preventive—Take the above mixture without the pepper, and go through the flock as above in October, or prior to putting them into winter quarters, as it will destroy all the parasites, and the sheep will do well through the winter.

Truly yours,

GILBERT ALLARD.

BERLIN, Sept. 16, 1863.

Remedy for Colic in Horses.

DR. HOYT:—*Dear Sir*:—The FARMER is a monthly visitor that is closely perused on its arrival, and always with the hope of finding some new idea. Life is too short to experience many things; therefore we depend on one another; and the FARMER is one of the sources whence comes the necessary information to us farmers. The whole of life's knowledge is made up of littles, experienced or acquired from others; therefore I endeavor to contribute my might.

A friend of mine on a visit with me, enquired about a fine horse I formerly owned, but which had died of colic, and said: "If you have another case of the kind, mix flour with water, (not very thick), and give him. If one bottle full does not cure, two will.

Since then, having had an animal taken with colic, caused by change of feed, I used the above remedy and it effected almost an instant cure; and others to whom I have recommended it have been equally successful. As many valuable animals are lost by this disease, the above should be known to all who use horses. The medicine is safe, at any rate.

Yours, Truly,

H. B. HAWLEY.

MILFORD, Jefferson county, Aug 30, 1863.

CURE FOR BOTS IN HORSES.—We know of no surer cure for this terrible, and too often fatal, disease than a strong sage tea, well sweetened. Administer warm, and about one pint at a time until relief is afforded. Have tried it repeatedly and always with success.

Spanish Buck—"Washoe."

Herewith is presented a correct portrait of the Spanish Stock Buck "Washoe," of the Atwood variety. Was selected and purchased from first class stock in Vermont, and imported to the West in October, 1862, by H. Hemenway, of Whitewater, Wis., the present owner. Was bred by S. W. Remele, of Middlebury, Vt., in a direct line from E. Hammond's Stock Buck "Sweepstakes," a pure Atwood sheep. Washoe's dam was bred by Remele from company (Hammond, Hall & Remele), Buck known as "Black Buck," bred by S. Atwood, of Conn. Washoe was four years old last spring, weighs 140 lbs. His last three fleeces, of one year's growth each when clipt, weighed, respectively, as follows:—first, 19 lbs. 8 oz.; second, 23 lbs.; third, 23 lbs. 4 oz.; weighing, when combined, 65 lbs. 12 oz.

Foot Rot in Cattle.

I had a number of cattle seized with the almost fatal disease known as foot-rot, which I could not cure, until in the spring of 1862, I noticed a fine young cow beginning to fail and standing in the creek which run through the field, and on getting her up and examining her legs, I found there was quite a high fever, and swelling in both hind legs and one fore leg.

I at once procured a wash of strong lye and bathed her legs effectually, from the knee to the hoof, and was very particular to wash in the clefts of the hoofs. I then wiped the legs dry with a cloth, and let her stand in a warm dry stable all night. Next morning I made a wash of strong vinegar in which was dissolved a good portion of blue vitrol; heated it as hot as I could bear my hand in it, and applied it twice a day for about two weeks, when the animal was cured and is now doing well.

J. SHEPHERD.

TO CURE CRACKS ON COWS TEATS.—After milking, rub molasses on the teats and in the cracks. Apply it for two or three days, and your cow's teats will be sound.

THE BEE-KEEPER.

Wintering Bees.

To winter bees successfully in our cold northern climate, is a *question* of great moment with the apiculturalist. There seem to be almost as many ways recommended as there are bee-keepers. Having had several years experience in this business in Northern Vermont, I have arrived at this conclusion, that Bees should have for their welfare in winter, a *dark, cool, dry, still* place, where the temperature is even as possible, and about *five* degrees above the freezing point, or 35 degrees Fahrenheit. In this temperature, the bees will remain very still and quiet, and will require but little honey to what they would if kept in a warmer place.

In the first of my experience, I was advised to put my bees into a tight dark room in the house. I did so, and the consequence was, I lost many of my bees before spring; during the warm days in the winter, the bees would become very lively and crawl out of the hives upon the floor, and if there was a ray of light, they were sure to find it, and would there perish; if shut into the hives, they would create such a heat in trying to get out that they would melt their comb and become drowned in their own sweets. This I found was owing principally to the outside temper-

ature being so changeable and the want of proper ventilation.

Wintering bees out of doors, as practiced by a large proportion of amateur bee-keepers, is always attended with bad results, as nearly one-half the stocks are frequently lost, and those that are not, are so reduced in number, that they will not swarm the coming season, there not being bees enough to permit of it, consequently are worth but little to their owners. When bees stand out of doors, every warm day during the winter they are inclined to fly from the hive, and thousands of them get chilled and are lost, and where there was a peck of bees in the hive in the fall, by spring there may be but a handful left. In the Middle or Southern States, bees can be allowed to stand out of doors during the winter with safety. In my more recent observations and experiments, especially in the Northern States, I have found no place to winter bees in, equal to a *dark, dry cellar.*

If the hives are rightly arranged, and the *cellar* ventilated by opening either a door or window in the night time, occasionally, there will be no loss of bees only what die of old age, and the comb will look nearly as white as in the fall previous. Bees when kept in a cellar of this kind, will not make a discharge to soil the comb during the whole winter, and will consume but a very few pounds of honey—say about a pound to a thousand bees; for ordinary swarms it would require from ten to twenty pounds of honey. At this low temperature, the bees will remain very quiet and still, and if the cellar is kept perfectly dark, they will remain so during the whole winter, and will hardly know when spring approaches, which will not be the case when kept in a room above ground or out of doors. Bees frequently receive more injury in being confined in the hive on the approach of Spring, than they will if allowed to fly out.

The time to put Bees into Winter Quarters depends somewhat upon the severity of the weather—usually the last of November or the first of December; if the weather is not too cold, they may safely remain out until near January. They generally suffer more in the latter part than in the beginning of winter.

Position of the Hives when placed in the Cellar.—If straw or the old fashioned board Hive, they should be turned bottom-side up with the bottom-boards removed. Their animal heat will then drive all the dampness and mould out of the hive. The only disadvantage in turning a hive bottom-side up, is, all the dead bees and particles of comb will drop among the particles of combs in the bottom of the hive. But if there is honey enough there will be no trouble resulting from it, as when the hive is carried out-of-doors, and placed right-side up, the Bees will readily clear it out. *If movable-comb Hives are used*, the cap, boxes, &c., should be removed and the hive allowed to remain right-side-up, with the entrance closed.

The Time to remove Bees from the Cellar depends in a great measure upon the forwardness of the spring, and care should be taken that the weather is warm enough that the Bees can safely fly from the Hive and return again, always observing to never set but a part of the Hives out the same day, and always place them as near as practicable on the same stand that they occupied the year previous, to avoid confusion and robbery.

After the bees have all made their excursion as they always will do on the first day, and discharge themselves, thousands of bees might then be saved by setting them back into the cellar again for three or four weeks, and at the same time supply each hive with substitute for Bee bread which is *Rye Meal* (or common flour will answer) as Bee bread or Pollen is the first thing the bees will visit the fields for, in early spring; by supplying them with this useful article the lives of a large number of bees will be saved which if allowed to stand out would be lost.

BURYING BEES IN THE GROUND,

Is a practice that some inexperienced bee-

keepers have resorted to, and not unfrequently with fearful loss. The object aimed at seems to be the low, even temperature that our cellar affords. In a light, loose sandy soil, if the bees are properly buried, there are instances where they have lived through it.—I have frequently heard it remarked by those who advocate this process that the hives were as heavy in the Spring as they were in the Fall before; should the Bees all perish as I have repeatedly seen, this theory might prove true. I have yet to learn if Bees can be wintered in any place Without cousuming some honey; it is true, if bees are kept in a damp place and should they survive the dampness, the amount of honey they would consume will be small, the weight of which would be balanced by the dampness and mould which the combs will take up, so that the hive would be nearly as heavy in the Spring as it was the Fall previous.

P. S.—If the reader desires more information on this subject, fuller information will be given on application with stamps for return postage. K. P. KIDDER,

Practical Apiculturist.

BURLINGTON, Vt.

THE HORTICULTURIST.

A. G. HANFORD,.....CORRESPONDING EDITOR.

Notes on Back Numbers.—Answers to Correspondents, &c.

Cleansing the bark of Fruit Trees.—Feb. No. —page 62. Sal Soda 1 lb. to 1 bbl. *should be* 1 lb. to 1 gll.

Dwarf Pear—page 147. We deem it of the highest importance that the point of junction of quince and pear should be two or three inches below the surface, especially in severe climates; besides the support mentioned by Mr. Chandler, the quince, when thus planted, is protected from the borer which is especially fond of this stock, and the roots are less liable to injury from severe weather. It used to be the practice to work the quince several inches above the surface, and we have seen imported French dwarfs with a quince stock full a foot high; in such cases we should remove the lower portion of the roots and tongue the stock, then plant as above. *Our* nursery practice is to open up the rows and work as near the natural surface as possible.

We also deem it important to mulch over the roots for several feet from the tree at the approach of severe weather, first raising a mound of earth fifteen inches high around the base of the tree.

Small Fruits—page 220.—Mr. Fairchild is growing something else for Yellow and Red Antwerps. The Antwerp does not increase from the tips, and *must be protected* in Wisconsin. The varieties referred to by him are probably the Red and White Cap, the latter sometimes called "*White American*," "*White English*," "*Yellow Cap*."

In size and shape of fruit, and habit of growth, it is like *Black Cap*,—fruit orange yellow with a peculiar and agreeable pine apple flavor. In unsheltered situations it is occasionly injured in winter.

Red Cap.—Is quite unproductive, fruit of fine flavor, but very soft and often imperfect.

Allen—It is now pretty well understood that two varieties were sent out by Mr. Allen, one very unproductive,—except in suckers, the other more productive and esteemed valuable in some localities. They are said to do better when planted together.

Cutting Back—All raspberry canes should be cut to within a few inches of the ground when planted, and not allowed to fruit the first season. (If planted in the Fall defer cutting back until Spring.) More than *Western* interest (*old style*) will be forfeited for all fruit grown the year planted.

Pear Blight—H. W. Wolcott, page 224.—Its cause to us seems still as much a mystery as ever, no theory yet adduced seeming applicable to all cases. Like some epidemic diseases in the human family, without apparent cause it breaks out in a neighborhood or district, taking a tree here or there, or badly affecting one orchard and passing by another; at other times

sweeping nearly all off and then disappearing for years. We know of no better remedy than that suggested on page 383, Vol. 14. (1862) "Cutting away the diseased part promptly, two or three feet below the blackened portions." When this fails, plant out two more for every tree that dies. Trees in deep and dry or well drained soils seem less subject to this disease. The *Bartlet* is one of the varieties which has seemingly suffered most from blight, while the *Flemish Beauty* is among the most exempt.

Suckers do not usually make good stocks —we should very much prefer seedlings; still, as you have these, try them. They will cost but the trouble of transplanting, and *may* do well. We should prefer to plant on a new piece of ground, simply because it will not be at all exhausted by previous growth of the same kind of trees.

Flower Seeds.—We have received a number of applications for seeds of the flowers described in the FARMER. We have placed these applications on file, and will take pleasure in sending to our correspondents of such as we may have opportuuity to save.

A. G. HANFORD.

COLUMBUS, OHIO.

The Concord Grape.

George Husman, of Herman, Mo., in the Horticulturist for August, claims the Concord as the *best grape for every body*. He says: "This is a bold position to take for any fruit, but I take it after trying it for seven successive years, and after comparing it with about sixty varieties I have in bearing, and also after due consideration of the pros and cons. Now let us see why:

1. The vine is a strong, healthy grower, and will succeed in any soil so as to give a fair crop under any treatment.

2. It is entirely free from disease, and entirely hardy.

3. It is, under proper treatment, a great bearer, and always ripens its fruit well.

4. It has a fine, large, handsome bunch and berry, which sells readily in market.

5. It is a good wine grape, as it makes a wine equal (to my taste and a good many others,) to the best Catawba, if not superior, and we pretend to know here what good Catawba is, having grown it for sixteen years. It also makes more of it than any other grape I know of, to the acre, as it is nearly all juice."

Tobacco, Fruit Trees, &c.

MR. EDITOR:—I have raised between six and seven acres of tobacco this season, and it has done well, being well matured and a fine growth. It is most all secured in the barn, and out of danger. Some of my neighbors have raised it this year, and where it has been properly attended to it has done well, and will prove very remunerating.

I have a very fine orchard which I wish to improve. Can you tell me where I can procure the best trees for this climate, true to their names? This year I set out some trees that came from Illinois, which I fear will not prove to be the right kinds.

Yours, &c., GEO. S. KEMP.

WAUPUN, Sep., 1863.

ANSWER.—We have confidence in the honesty of any and all our horticultural advertisers. If our Corresponding Horticultural Editor, at Columbus, O; J. C. Plumb, of "Lake Side Nursery," Madison; F. K. Phœnix, of Bloomington, Illinois, and the rest whom we have endorsed are not to be relied on, then we know of no nurserymen in the United States who are. —ED.

The "Fink" Apple—A Query.

DR. HOYT:—*Dear Sir:*—In regard to the "Fink" Apple described by Mr. Hanford, is it identical with the Tewksbury Winter Blush? Elliott gives "Fink's Seedling" as a synonym of the Tewksbury. I am not aware that it is propagated in the State, and would like to know if Mr. H. has it in his nursery.

Yours, &c., M. PAYNE.

[Mr. Hanford will please answer in the next No.—Ed.]

Wisconsin Fruits This Year.

It is a just cause for congratulation on the part of all who are interested in the progress of Wisconsin, that fruit-growing is making such rapid advancement in all parts of the State. At the present rate we shall soon rank No. 1. among the many fruit-growing states of the West.

Orchards are coming into bearing in almost every neighborhood, and their products are unsurpassed in quality. Everything commonly grown in the northern part of the North Temperate Zone, except peaches—and even these are getting in the way of showing their blushing cheeks at many of our County Exhibitions—is produced under circumstances that warrant the largest expectations for the future,

Better apples, pears, plums, grapes and other small fruits never grew than we have seen in all parts of Wisconsin, north, south, east and west, the present year. We only lack quantity, and this we shall not lack many years longer.

Too much credit cannot be awarded to those leading horticulturists of the Badger State who have skillfully determined and wisely recommended the most reliable varieties and the best methods of culture.

"Laying Down" for Winter.

Our most provident and hence most successfull fruit growers and floriculturists are getting in the way of "laying down" their grapes, raspberries and blackberries, and also all roses and ornamental plants not perfectly hardy in order that the weather of winter, no matter how severe and changeable, may not injure them. It 's a good practice, inasmuch as it costs but little labor and fulfills the motto, "Sure bind, sure find."

The process is perfectly simple, consisting in merely bending them over to one side—pliant vines may be *coiled*, where space is insufficient—and covering over with straw or marsh hay and enough dirt to keep the covering in place. A light covering like this will not, of course, prevent the freezing of the sap in the stems of the plants; it is not necessary that it should. But it will prevent that alternate freezing and thawing which is the cause of their death.

Hardy Varieties—Sound Advice from the Right Quarter.

In times past, the farmers of the Northwest have suffered so much from the foolish practice of planting varieties of fruit trees unscrupulously recommended by Eastern pedlars, or such as were favorites with the purchasers in other States, and without the least regard to hardiness, that further caution on this subject would seem to be unnecessary. Nevertheless, we find in our occasional travels through this State, that all have not learned the lesson suggested by the above caption.

It may be a nice thing to sit by one's fire in winter and eat the fruits which so pleasurably remind him of the good old time at the home of years gone by; but if in attempting to realize that luxury we should fail of having fruit to eat at all where will be the pleasant memories of *our* children as connected with apple-eating social enjoyment by the cheerful farm-hearth, such as now give us so much pleasure in the retrospect. In other words, what will be the advantage in sacrificing reason and sound common sense to a whim, if we are thereby to endanger the loss of fruit altogether?

There is nothing surer than that there are some desirable varieties of fruits which we cannot rely upon in this climate, while there are others equally good that have been proved to be *thoroughly hardy*. And we wish to say right here, that the people of this section of the country cannot too highly appreciate the persistent and faithful efforts of those resolute and skillful fruit-growers of Wisconsin, who for many years have kept up those careful experiments and periodical observations which have at last resulted in reliable information as to what varieties of the apple, &c., are most sure.

Among this class of valuable workers for the public good, none are more deserving than the worthy Corresponding Editor of this Department, and our highly esteemed contribu-

tor, J. C. Plumb, of this city; both of whose communications are always so well worthy of careful perusal.

These gentlemen, together with others, have repeatedly urged the importance of giving the most careful attention to the matter of varieties as above re-urged by us. Will not all our readers in their selections for next spring's planting give heed to their advice.

That there may be no doubt as to what kinds may be trusted, Mr. Plumb has kindly furnished us with a list of apples, such as have been found to be worthy of entire confidence. This list we publish below:

APPLES.

No. 1. Extra hardy list of well tried valuable Apples, for general planting in season from July to July again.

1—Red Astrachan,	11—Tallman Sweet,
2—Duchess Oldenburg,	12—Pomme Gris,
3—Fall Stripe,	13—Northern Spy,
4—Aut. Strawberry,	14—Winter Wine Sap.
5—Sweet Pear,	15—Perry Russett,
6—Fameuse,	16—Golden Russett,
7—Fall Wine Sap,	17—Raules Janet,
8—Colvert,	18—Canada Black,
9—Cider,	19—Red Romanite,
10—Sweet Wine,	20—Dumelows.

No. 2. Additional hardy list, not all as well tried, but most of them promise nearly equal in value to No. 1. In season order as preceding.

21—Sweet June,	31—Bailey Sweet,
22—German Bough,	32—Saxton,
23—Sops of Wine,	33—Fulton,
24—Williams Favorite,	34—Full Orange,
25—Bevan,	35—Seek-no-further.
26—St. Lawrence,	36—New York Pippin,
27—Early Red,	37—Vandervere,
28—Fall Queen,	38—Jonathan,
29—Utter's,	39—Minkler,
30—Rosseau,	40—Black Vandervere.

The Delaware Grape.

Mr. Goodale, in his Report, ranks the Delaware as the best grape for open culture in Maine. The editor of the New York *Horticulturist* pronounces it the "King of the Natives," —possessing, in an extraordinary degree, all the desirable requisites of a grape for general cultivation, hardiness, vigor, fruitfulness and quality. Upon this last point, the editor says: "all opposition to the Delaware fairly breaks down. It ought to be considered an impeachment of a man's good taste to doubt its excellence. We want a class of grapes of the first excellence, productive, and so hardy as to be suited for cultivation in all sections of the country; and the Delaware, in our opinion, possesses these requirements to a greater degree than any other grape we have. For this reason we shall adopt it as the *standard of excellence* by which to judge all new comers. It possesses the merit of being not only our best table grape, but also the best for wine. It is pleasant to find the great mass agreed on one point at least, in regard to the Delaware. Its melting tenderness, its delicious sweetness, and its delicate vinous spirit, gladen the heart of all who eat it. We claim for it the merit of being the first American grape to truly educate and form the public taste. But it may be said that all do not consider it equally good; we know there are some who, without denying its high qualities, think that it has been over-estimated. Its excellence has certainly been lauded in exalted terms, and we must confess that we delight to sing its praises. It carries us a long way up the classic mount, and makes us familiar with such food as the Olympians may be supposed to have delighted in. With it, we can be content till another shall give us a taste of something more celestial."

Pomological Terms Explained.

The American Fruit Culturist gives the following explanation of Pomological terms:

Alburnum—The sap wood as distinguished from the heart-wood.

Border—Artificial bed of enriched earth.

Callus—Ring or swollen portion formed at the base of a cutting by the descending cambium.

Cambium—The soft wood newly forming beneath the bark.

Canes—Long, bearing shoots; applied to grapes and raspberries.

Clipping—Trimming down to some definite shape.

Coxcomb—Applied to the form of strawberries when much compressed at the sides.

Crenate—Notched or cut around like rounded or blunt saw teeth.

Dwarfs—Trees made diminutive by grafting or budding upon stocks of small growth.

Espalier—A tree trained flat upon a trellis.

En quenouile—Training to produce fruitfulness, by tying the branches downwards.

Fibrous roots—The smaller, branching, or thread-like roots.

Forcing—The early ripening of fruits by artificial heat under glass.

Fore right shoot—The terminal shoot of a branch.

Head back—To cut off the limbs of a tree part way down.

Lay in—Applied to selecting and fastening to a trellis or wall, new branches or shoots.

Lay in by the heels—To bury the roots of trees temporarily in a trench.

Leading shoot—The longest or main shoot of a limb or tree.

Preserving Grapes in Millet Seed.—It is said that in Southern Russia grapes are gathered before they are fully ripe, and put down in alternate layers with well dried millet grains in earthen pots. The grapes must not touch each other, and the pots must be tightly sealed. They are said in this manner to keep an entire year, and to become very sweet.

MECHANICAL AND COMMERCIAL.

Russia and the United States.

That invaluable journal and prince of business monthlies, *Hunt's Merchants Magazine*, has an able article in the October No., entitled "Russia and the United States—Future Empires," showing the advanced position and prospects of these two mighty empires. We copy the following remarkable passage:

The United States have the greatest number of miles of railroad of any nation of the earth. They have expended in their construction $1,000,000,000, and by means of them a population, doubling every few years, is enabled to make available the products of the most fertile land in the world. The same agency, started by American engineers, is now spreading over Russia and producing results there only inferior to those mighty creations of wealth which we have seen from their operation here. Under the influence of those two mighty agents, steam and rail, aided by machinery of all descriptions, the two young, active, and growing Powers of the East and the West have but started on their career. The following figures show how they compare with Europe:

	Sq. m'ls.	Pop.	Debt.	Per h'd.	Gold per an'm.
Russia	362,074	75,148,690	1,248,900,000		$28,900,000
U. S.	3,250,000	31,445,080	1,500,000,000		65,000,000
Total.	3,552,074	106,593,770	$2,748,900,000	$27	$93,000,000
Europ & Gr. Br.	1,647,125	215,913,008	7,977,464,000	41	15,000,000

Thus the two empires have an area of virgin and prolific soil more than double that of the whole of Europe. Their population is nearly one-half that of Europe, doubling every twenty years, and will, in half a century, exceed that of Europe. The power of each country respectively grows in a ratio much greater than the mere increase of the population, as is manifest in the unhappy struggle now going on in the Union. In 1800, five millions of exhausted people came out of a struggle for their independence. In sixty years they have overtaken Great Britain in numbers, and have displayed a military power in two years at which the world may well wonder. One million and four hundred and ninety-five thousand men have been called into the field, and $1,500,000,000 of capital poured into the Federal Treasury to support the war, without apparently disturbing the course of events or checking the supply of food sent to make good the short harvests of Western Europe. Russia is developing similar powers, and it has become apparent that in fifty years—perhaps in the lifetime of the present sovereigns of France and England—the two great nations will completely have overshadowed the political power and commercial importance of Europe and England. The present importance of the latter consists in working up the raw materials and food of Russia and the United States into goods for sale in the general markets. But Russia and the United States will very soon rival her in ability to manufacture. In that hour the empire of commerce will pass to the new powers.

Labor Saving Machinery for Women.

Having patiently and hopefully bided her time, woman is at last beginning to be relieved from that severity of drudging toil under the doom of which she has rested hitherto.

The Sewing Machine, though so long in coming, is so wonderfully helpful as almost to compensate the race for the slow and tedious finger stitching of the centuries gone by. Nor is the blessing it has conferred confined to the immense saving of actual labor which it has so effectually secured; it will also prove an incalculable good in that it has, to an extent never before realized, led the inventive genius of man into this wide and interesting field.

Women have had less intellectual culture because the false sentiment of society has, in the first place, denied their need of it, and secondly, demanded such a use of their powers as must, necessarily, leave but little or no time for mental improvement. A more liberal sentiment is growing in favor, however, and with its advancement there will come those improvements in those material appliances which look to a lightening of her labors.

Knitting Machines have followed the sewing machine, and these have been succeeded by a good many others

But the object of this article was to call the attention of all housewives, and those who entertain a regard for this most important class of women, to a new machine for wringing clothes.

There is scarcely any kind of work connected with the operations of the household which lays so hard a task upon the muscular strength of women as the wringing of clothes for drying. And, unhappily, it is a task which always comes after the severe labor of washing, when the nervous energy is so nearly exhausted that the wringing is ten-fold harder than it would be otherwise.

Well, some merciful Yankee has kindly remembered them, and contrived a machine which is said to do the business most admirably. Indeed, patents have been issued to two or three parties for machines with the same end in view. We are unable to say which of them is absolutely the best; but we have been so often assured of the good qualities of the one above illustrated that we have felt it a duty to present it for the consideration of our lady readers. It is perfectly simple, consisting of a couple of india-rubber rollers operated by a crank. The clothes are introduced on one side, and by the turning of the crank carried through and dropped into the basket on the other. A child of twelve years can turn the machine, and the clothes are left in a good condition for drying. Price, &c., will be found in the advertising department.

THE MINER.

Mineral Wealth of Nevada.

In a remarkable discourse delivered in Chicago on Thanksgiving day, in August last, Bishop Simpson gave the following extraordinary account of the inexhaustible wealth of the mines of Nevada:

"While in California last fall, I thought I would visit the territory of Nevada to see something of the wealth of that country. * * * That wealth comprises what the nations of the world never yet have contended for. Were the debt of our nation to amount to 20,000,000,000 of dollars there is wealth enough there, when our debt is paid off, to give to every soldier who returns from our battlefields, muskets of silver in place of iron, [applause] and when our iron clads come back from the scenes of victory before Charleston and Mobile, and have swept away the defences of Wilmington—when the iron clads come back into our harbors, there shall be silver enough left to plate those boats more heavily than they are now plated with iron.

"I do not speak now from idle speculation, but I speak of that wealth from observation and actual calculation. When in California I visited the mines, and I thought the time would come when they would be exhausted; but in the mines of Nevada there were no such indications visible. The more the mines are worked the richer the yield. The extent of the ledges containing the precious metal no man has, as yet, been able to measure.

"I will mention a single instance to give you some idea of the inexhaustible supply. In what is termed the Oplin mine, a single *lead*, as it is called, is fifty-five feet in thickness, and inclines only at an angle of 5°. Think of the extent of that—nearly as far as from this altar to yon wall. This is all silver mingled with gold. There is more gold in value than silver, but more silver in weight than gold. * * * There is this peculiarity about it, that the deeper the mine extends, the richer and more profitable it becomes."

Mineral Wealth of Arizona.

It is not generally known that the recent discoveries of gold and silver at the San Francisco mountain, and on the Gila and Salinas rivers, are in the region now embraced in the territory of Arizona. The discoveries are among the richest ever made on this continent, and are attracting thousands of miners from California. Late dispatches from San Francisco state that steamers have gone from there to the nearest seaports, heavily laden with mining implements, and that there is a fair prospect that the new territory will soon be largely populated, and take rank with Ne-

vada and Colorado. We learn that the territorial officers of Arizona left Leavenworth last week, and will go through as speedily as possible. They were escorted by several companies of cavalry, and followed by an extensive train.—*New York Evening Post.*

EDUCATIONAL.

The Agricultural Schools of the Country,

AS SEEN BY THE EDITOR ON A RECENT TOUR OF OBSERVATION.

NUMBER III.

From Havana by steamer across Lake Geneva, the journey is brief and delightful. The world can boast of no finer little lake, and the country on either side is beautiful, most of it highly improved.

Some little time before reaching Ovid Landing, the eye is attracted by what at first appears to be a cluster of tall forest trees on the high lands beyond. A little nearer, and these apparent trees are transformed by clearer vision into what now are defined as chimneys on the top of an imposing structure hitherto concealed by timber nearer the lake. That building and the beautifully sloping lands on which it stands, are the visible representatives of

THE NEW YORK STATE AGRICULTURAL COLLEGE,

the object of this detour from our line of travel. As long ago as 1844, Judge Buel and other leading friends of agricultural education agitated the subject in the public journals and in the Legislature of the state. Nothing was actually done, however, towards the establishment of an agricultural college, until 1853, when an act of incorporation was passed, but without any provision for means to carry the act into effect. But in 1856, another act was passed authorizing a loan from the Treasury of $40,000, without interest, for twenty-one years, in aid of the enterprise; provided an equal amount should be raised by subscription; which condition was at an early day fulfilled, the required amount being chiefly subscribed by the citizens of Ovid and vicinity. So that a portion of the building was finished and the institution opened in 1860.

THE LOCATION.

A better location than the present one could hardly have been selected. Though not central to the State, geographically, still its ready accessibility from all points by rail and steamboat, renders that circumstance of but trifling importance. Seneca county lies in the heart of a fine farming district, between Seneca and Cayuga lakes, and the village of Ovid, whose western suburbs are the eastern boundary of the College Farm, is the elevated centre of the county, commanding a view of portions of several counties, and presenting to the eye as magnificent a prospect as it has ever been our good fortune to enjoy.

From the village, the Farm, which until lately embraced 700 acres, slopes gradually some two miles and a half westward to the border of the lake; the lower limit being over 500 feet lower than the upper. The soil is chiefly of a clayey character, though several varieties are presented, rendering the Farm on this account very desirable. The soil rests upon shale rock, limestone and slate; each of these cropping out at different places on the premises. The Farm is well watered by a living stream of sufficient magnitude to furnish a good mill power, now in use, and near the upper end there is a fine body of timber.

THE COLLEGE EDIFICE

stands upon a handsome swell about midway of the Farm, which is, unhappily, bald of all trees. When completed according to plan, it will consist of a central portion with two handsome towers, two wings with front lines parallel to that of centre, each 84½ feet in length, and beyond these two transverse wings, each 128 feet deep and 58 on front line —the whole, except the first named wings or "curtains," five stories high. It is designed that it shall be finished with all the improved modern facilities for ventilating, warming and lighting, and that it shall contain apartments for not less than 350 pupils.

The portion already completed is simply

the southern end, including the transverse wing and the "curtain" in its rear; or about one-third of the whole—sufficient for the temporary accommodation of 150 students. From its windows one has a glorious view of its charming lake and surrounding villages and country for many miles. All in all, there is probably no finer site for a college anywhere in either the old or new world, and the building is likely to be worthy of the site. There are also two or three other buildings, including a farm house and residence for the President, but not of great value.

THE EDUCATIONAL PLAN OF THIS COLLEGE

is different from that of any that have, as yet, been organized in the United States, in that it is more exclusively *professional*. The languages are excluded altogether, and the time which in the literary colleges is usually devoted to them is to be devoted to the study of the Practical Sciences and their applications to industrial pursuits. The course of instruction is limited to three years, at the expiration of which time the student may, if able to pass a thorough examination, receive the degree of B. S. A. (Bachelor of Scientific Agriculture.)

"*It is not intended to be a manual labor school*, still the student will be required to spend such time in the field as may be necessary to apply the theory to the practice of husbandry;" the law requiring that each shall be thoroughly instructed in all that pertains to the practical management of the farm, the dairy, and of the various kinds of live stock.

PRESENT CONDITION AND PROSPECTS OF THE INSTITUTION.

Although formally opened, as before remarked, in 1860, yet the embarrassment of its finances, together with the excitement and distraction incident to the present unhappy war, compelled a discontinuance of instruction in the fall of 1861, when a large number of the students, and even the patriotic President, Gen. M. R. Patrick, entered the service of the country.

The farm has been but little improved since the purchase, for want of funds, and even a portion of it—the eastern end—has been forced into sale for the liquidation of a mortgage debt incurred for the improvements already made.

New York proudly, and justly, bears the title of "The Empire State;" it remains to be seen how long she will deserve the reproach of allowing an enterprise of so great magnitude and importance as the endowment of an institution for the benefit of her large agricultural population to languish for want of means which, all summed up, would be utterly insignificant, whether as compared with her immense resources or with the noble and beneficent end to be accomplished.

We have not yet learned whether the Governor has approved the bill passed by the Legislature giving the scrip awarded to New York under the act of Congress granting lands for the endowment of agricultural colleges, to the People's College alone, but we have presumed that he would veto it; in which event the next Legislature will undoubtedly divide the amount between the two institutions—thus throwing into the hands of each scrip equivalent to nearly half a million of acres of the public lands. Should this not be done, then we trust the State will make an appropriation from its own treasury sufficient to set the State Agricultural College fairly on its feet. Farmers of New York! see to it that the Empire State does not longer remain a stumbling block in this regard to the several younger and lesser states now zealously at work for the advancement of Industrial Education.

War and Education.

While war is abroad in the land, compelling us to the most gigantic endeavors in defense of our national existence, it may seem idle, if not even unpatriotic, to expect any large measure of serious attention to the ordinary affairs of the schools. A mandate of Divine Providence has ordered us to the front rank of contending nations, and engaged us in a conflict which absorbs into its own terrible channels almost the entire currents of our industries and our ideas. A generation thus called upon to struggle for its life and liberties, might well be excused if forgetful, for a time, of the generations coming after it.

But the grand march of humanity stops not

in its course even for war. From the cradle to the coffin, the crowding columns move on with lockstep through the successive stages of life. Children cannot halt in its progress for returning peace to afford leisure for education. On into the years—to manhood, to citizenship, to destiny—it rushes, whether learning lights its path and guides its steps or ignorance involves it in error and conducts it headlong into vice. And if in peace the school is needful to rear our children to an intelligent and virtuous manhood, how much greater the need in war, which with its inseparable barbarisms, is drifting the nation from its onward course of peaceful civilizaton back to the old realms of darkness and of brute force.

The high and heroic aims of this conflict will doubtless mitigate the evils which necessarily attend an appeal to arms. To say nothing of the physical health and prowess that camp life and military discipline will develope, the love of country and love of liberty will rise again from mere holiday sentiments to the grandeur and power of national passions, and the Union, made doubly precious by the blood which its maintenance will cost, will attain a strength which no mortal force can shake or destroy. History will grow heroic again, and humanity itself will be inspired and glorified by this fresh vindication of its God-given rights and duties in this incarnation and triumph of the principles of constitutional and republican liberty. The too absorbing love of money which has hitherto characterized us, has loosened, somewhat, its clutch, and been won to acts of genuine benevolence, at the sight of an imperiled country; and the fiery demon of party sinks away abashed before the roused patriotism which lays life itself on the altar of liberty.

But with all this the barbarisms of war are too palpable and terrific to be forgotten or disregarded, and the wise and patriotic statesman will find in them a more urgent reason for fostering those civilizing agencies which nourish the growing intelligence and virtue of the civilized people. Against the ideas and vices engendered in the camps, and amidst the battle-fields, we must raise still higher the bulwarks of virtuous habits and beliefs, in the children yet at home. We shall need the utmost stretch of home and school influence to save society and the State from the terrible domination of military ideas and military forces, always so dangerous to civil liberty and free government.—Hon. J. M. Gregory, *Michigan School Report.*

The Agricultural College lands have at last all been located, and the Commissioners' Report gives evidence that the work has been well done. Better lands have been secured than it was supposed were yet vacant in the State.

MISCELLANEOUS.

A Glimpse at the Illinois State Fair.

Prof. Hoyt:—*Dear Sir*:—In compliance with your request, I will say a few things in relation to the Illinois State Fair, which I had the pleasure of attending.

Decatur, where it was held, is pretty well down south for the accommodation of the northern portion of the State, which, including Chicago, undoubtedly contains much the largest half of the fair-going population and to make the matter worse, the railroad arrangements were almost entirely incomplete and out of joint. Going down on the Illinois Central at night, parties had to lay over at Tolono, a little (less than a) one horse town, eight hours, and we understood the same was the fact on the St. Louis and Alton road, showing no arrangements whatever to accommodate the Fair—a sad oversight on the part of the officers of the Society, or lack of accommodation of the railroad companies. As the Fair is to be held there next year, it is to be hoped that the matter will be better attended to, as a stop of eight or ten hours in a place where not even a newspaper can be found, is a sad loss of time to one who is in a hurry and has only a little time to either use or waste. So much for the getting to the Fair, and now for what I saw there.

Decatur is a pleasant, scattering, western prairie town, claiming some four thousand inhabitants, split through by the Great Western Railway, on the track of which, about one and a half miles west of the city, are the fair grounds, situated upon an undulating, woodsey site, just cleared and fitted for the occasion.

The grounds are capable of being made very beautiful, and were finely fitted, having had some $10,000 expended upon and about them, making them in all things convenient for holding a fair. Good water, that all-important item, is supplied in abundance by a small creek and some fine springs. Also a good half-mile track, within the grounds and out of the way of every thing else.

Articles on exhibition were medium in

amount and respectable in quality. Illinois can make a good show in horses and mules—much better than she did make on this occasion; still, this branch of the show was fair. Among the more notable things was a genuine English dray horse, weighing over nineteen hundred pounds at five years old, with legs as large as a young elephant. One of his June colts, out of a large Pennsylvania mare, was as large as some two year olds of the small, common stock. Jacks fifteen hands high, big spans of mules, fast nags, &c., &c.

Cattle, sheep and pigs we saw but little of, and nothing extraordinary among them.

The machinery show was full middling, though embracing very little that was new. Some dozen or fifteen reapers and mowers, all of them familiar to our farmers already, with the exception of two or three of very little promise of future distinction. Grain Drills and Broadcasters in smallish show, and good ones scarcer yet; corn cultivators and shovel plows in abundance, most of them too unwieldly and awkward for our small cornfields; gang plows plenty and subject to the same objections. Corn shellers and separators, like small threshing machines, with two and four horse powers in abundance to drive them. Corn-growing and harvesting machinery in all its varieties is much more abundant in this great corn state than with us.

Sorghum was also well represented. Several mills were in operation on the grounds, and performed well, grinding the cane clean and expeditiously. The amount evaporated was small, and showed nothing new or remarkable. The interest taken in this department of the fair, showed that the subject of Sorghum is not loosing ground in public favor, but, probably, steadily growing, although this specially frosty season will dampen the ardor of the lukewarm.

The Halls of Manufactures, Fine Arts and Farm Products had little or nothing in them—less than we have usually seen at good county fairs.

The attendance was quite respectable for these times and the location; 20,000 were claimed to be on the ground at one time—probably twelve to fifteen thousand.

In the way of accommodations, only two small hotels, both kept by the same proprietors, twice full, and more, of course; citizens quite accommodating at their houses, at two dollars per day.

Finally, the Fair was a very decent affair for an interior location; but Illinois, to have a first class fair, and largely attended, must hold it at Chicago. Twice as many people and articles can be got on exhibition at that point as at any other in the State or West, and we have no doubt but good grounds could be found for it as well there as elsewhere, if common sense and honesty were exercised by those having the matter in charge. Chicago is naturally the great Fair-point of the Northwest. We hope ere long to see it fully developed and improved.

D. J. P.

What About the "White Willow?"

Friend Hoyt—*Dear Sir:*—At the request of several of my neighbors who are somewhat interested just at this time on the subject of White or Grey Willow for fence, I write you at this time.

1st. Do you know whether it will answer in this climate for a fence?

2d. Will it grow and form a body sufficient for a fence without trimming or pruning?

3d. Have you in any of your travels seen a fence grown from the willow, that in your judgment would answer the general purpose, or in other words, was the thing needed by the agricultural public? Or have you seen any person or persons in whom you have confidence, so that you have become satisfied that such is the fact?

An answer to the above, with any other informatian which may be suggested to your mind, would much oblige several of your subscribers near this place.

Please answer at your earliest convenience, as there are several who have purchased the cuttings sufficient for a mile or more each upon the representations of Agents who are

selling through this region; some of whom are beginning to fear least it should prove a second edition of the Multicaulis or something similar, and would much prefer to stop where they are, rather than incur the further expense of setting and cultivating two or three years, and then be compelled to abandon or dig them up. Truly yours,

EDWARD PIER.

FOND DU LAC, Oct. 12, 1863.

ANSWER.—In order to be able to give the most reliable answer to numerous interrogatories of this sort, we recently addressed a letter of enquiry on the subject of the White Willow to Hon. John P. Reynolds, Sec. Ill. State Ag. Society. It will be seen from his response herewith published, that our own views as freely expressed in this journal last spring, are in the main entirely confirmed. As to the nursery men who laud the willow so highly, we have good reason to believe that some have not been actuated by good motives in so doing. In fact, we have pretty good evidence that a few of them have made much money by selling the common *swamp* willow at high figures, for the new-fangled "White" or "Grey."—EDITOR.

LETTER OF SECRETARY REYNOLDS.

OFFICE OF THE ILLS. STATE AG. SOCIETY,
Springfield, Oct. 13, 1863.

PROF. J. W. HOYT, *Sec'y State Ag. Society, Madison, Wis.:*

DEAR SIR:—Your favor of the 9th inst. is received, and contents noted.

I have not been impressed favorably with the use of the White Willow for any economic purpose except to produce a poor quality of fuel rapidly, in situations where it is desirable to do so; and yet, as you know, many gentlemen of larger experience and better judgment than I, some of them leading Nurserymen, esteem it highly as a fence plant, &c., &c. * * * *

Very truly yours,
JOHN P. REYNOLDS,
Cor. Sec'y, &c.

The body of a guide, lost in 1844, has been found in the crevice of a glacier near Mont Blanc, in a perfect state of preservation.

An Effect of the War.—A Suggestion.

We see it stated in Eastern journals that in New York, New Hampshire, Maine and Connecticut, extensive manufactories are now devoted exclusively to the manufacture of stockings and socks for the army. Before the outbreak of the rebellion these factories had introduced knitting machines which they run by steam or water power, turning out such quantities, at so low a cost of manufacture, that the country was flooded with this class of goods, and socks and stockings were cheaper than ever before. But now these establishments are working entirely on government contracts, and as a consequence the supply of socks and stockings will be almost entirely cut off; jobbing houses and heavy dealers, in this city, with whom this class of goods is a leading feature, have very meagre stocks. The present prospects are that good fair socks will command from $5 to $6 per dozen this fall and winter, and that country merchants, and to a great extent our city dealers, must depend upon the home manufacturers for their supply. Very opportunely for the West, and for the country at large, family knitting machines are being introduced, especially in wool growing districts. Even at the present high prices of wool, those who make it into socks, instead of selling it in bulk, will realize fully three times as much as they could otherwise. We hope to see these machines introduced into farmers' families throughout the country, where they can be profitably worked by either the women or the children. Capitalists could profitably put a number of these machines in operation; and inasmuch as in several States they have been introduced with the best results into Blind Asylums, Reform Schools and State Prisons, we suggest the propriety of introducing them in similar institutions in the Northwest.

Woman's sphere is limited at best, and it is fortunate for those whose husbands and fathers are in the army, and who are dependent upon their own efforts for a livelihood, that they can accomplish this with ease and pleasure, by the aid of the knitting machine.—*Chicago Tribune.*

Returns of half-time industrial schools in England, that is schools of pupils who devote half their time to work and half to education, show that the mortality is reduced to one-third of what it is at the same age in the general population of England and Wales, showing the importance of preserving the balance between intellectual and bodily labor.

A German agriculturist says that before he plants his potatoes he washes them in chlorine water, and dries them in the sun. He says that this has saved them from potato disease during several years.

SCIENCE, ART, STATISTICS.

MR. EDITOR:—You often ask us to write for the FARMER, but every department is so crowed it is almost impossible to get an article inserted edgewise; however, there is nothing that beats a trial.

Aluminium appears to me to be one of the greatest desiderata to successful farming. Its properties, when amalgamated with iron and copper, fill a gap in agricultural economics—the iron becomes eight times tougher, thereby enabling us to dispense with much cumbrous weight in reapers, drags and plows—the copper becomes almost as hard as an adamant, thereby making it almost indestructable for machine bearings. When rolled into sheets, it will take the place of shingles and tin for roofing and make our roofs fire-proof. Tin, on account of its scarcity, must always be dear, while the aluminous deposits are universal.

True, aluminium is also precious, but the subtile forces of chemistry, which only unfold themselves to the seekers of truth, will make it as abundant as gold and silver in the days of Solomon.

Respectfully, J. EDI.

VERONA, March, 1863.

The Statistics of Europe.

A curious bird's-eye view of the political and social state of Europe is afforded by a heavy Blue-book just published by our government under the title of "Statistical Tables Relating to Foreign Countries." First, as to density of population, we find that while in England and Wales there are 352 inhabitants living in one square mile, in Russia there are only 10; in Norway, 12; in Sweden, 22; in Greece, 56; in Spain, 89; in Poland, 91; in Moldavia, 100; in Portugal, 104; in Denmark, 119; in Switzerland, 161; in Prussia, 165; in France, 176; in Brunswick, 194, and in Holland, 280 persons to the square mile. There are only two countries in Europe, at this moment, possessing a denser population than England and Wales, namely the kingdom of Wurtemberg, in which there are 373 inhabitants to the square mile, and Belgium, with 393 persons on the same space of ground. However, if we take the population of England alone, leaving out the Principality, the density is one of 377 individuals to the square mile, so that, in this case, Belgium is the only country in Europe more thickly crowded with inhabitants than our own.

In England, for the last few years, the proportion of marriages to the population has been one in 123, which is a higher rate than that of most European countries. In Norway, the proportion is one in 124; in Hanover, one in 128; in Holland and Denmark, one in 129; in Sweden, one in 135; in Spain, one in 141; in Bavaria, one in 160; and in Greece, only one in 174. Proportionately more marriages than in England and Wales are made in France and Belgium; in both countries the rate is one in 122; in Austria, where it is one in 117; in Russia, where it is one in 111; and in Prussia, where it is one in 106.

Rather more fixed is the proportion of births to population. It is one in 28 in England and Wales; one in 29 in Spain and Bavaria; one in 30 in Belgium, Holland and Norway; one in 32 in Sweden; one in 33 in Hanover, the Hanse Towns and Denmark; one in 34 in Greece; and one in 38 in France. Consequently the natural increase of population is lower in France, in spite of the high marriage rate, than in any other European state. More fertile than England are only Wurtemberg, where the proportion of births to population is one in 26; Russia, where it is one in 25; Austria, Saxony and Prussia, where it is one in 24; and Poland, where the proportion is one in 23.

The greatly varying sums which the different nations of the world pay for their government, form very interesting points of comparison. Great Britain, it is hardly necessary to say, stands at the head of all nations in this respect, the public revenue amounting to £2 18s per head of the population. Next in the list stands Holland, the best taxed country of the Continent, with £2 9s per head; and then follows France, with £2 0s. 8d. The inhabitants of Hanover have to pay £1 11s. 1d. each for being governed; while the subjects of King Leopold disburse £1 6s. 3d., and those of Queen Isabella £1 5s. 4d. per head for the same. In Prussia, despite its large standing army, the taxation does not amount to more than £1 2s. 3d. for each individual; while the revenue of the other states of the Confederation varies from £1 3s. to £1 per head of the population. In all the remaining countries of Europe, the burden on public taxation amounts to considerably less than £1 per head. The Danes pay 19s. 8d.; the Portuguese 17s. 4d.; the Greeks, 16s. 8d.; the mixed races inhabiting the Austrian Empire, 16s. 4d.; the Norwegians, 13s. 11d.; the Swedes, 9s. 2d.; and last of all the Swiss, only 6s. 10d. per head.

It is with something like awe and trembling that we approach a last subject of comparative statistics—the public debt of modern

nations. Here, again, Great Britain stands at the head of all other countries in the world. Our eight hundred millions of indebtedness, divided equally between the twenty-nine million inhabitants of England, Scotland and Ireland, give a share of responsibility amounting to nearly £28 to every soul. But the Dutchmen are responsible for nearly as much, the share in the public debt of Holland, per head of the population, being £26 11s 3d. France, the next in the list, has proportionately, less than half the debt of Holland, the share of every inhabitant amounting to not more than £12 3s. 9d. Now the figures sink rapidly. In Portugal the public debt per head of population amounts to £7 14s. 7d.; in Spain, to £6 13s. 2d.; in Austria, to £6 8s.; in Belgium, to £5 12s. 9d.; in Bavaria, to £5 14s.; in Saxony, to £4 10s.; in Denmark, to £4 9s. 1d.; in Greece, £3 14s.; in Russia, £3 9s.; in nearly all the states of the German Confederation, to from £2 to £3; in Norway, £1 1s. 9d.; and in Sweden, to 9s. 2½d. Switzerland, and several of the smaller German states have no public debt whatever.—*London Globe.*

Our Foreign Population.

It appears by census tables (not yet printed) that the entire population of the United States, born in foreign countries, was, in round numbers, in 1860, four millions one hundred and thirty-six thousand. This aggregate was distributed in states and territories, in round numbers, as follows: Alabama, 12,000; Arkansas, 4,000; California, 146,000; Connecticut, 80,000; Delaware, 9,000; Florida, 3,000; Georgia, 11,000; Illinois, 824,000; Indiana, 118,000; Iowa, 106,000; Kansas, 12,000; Kentucky, 59,000; Louisiana, 81,000; Maine, 37,000; Maryland, 77,000; Massachusetts, 260,000; Michigan, 149,000; Minnesota, 58,000; Mississippi, 8,000; Missouri, 160,000; New Hampshire, 20,000; New Jersey, 122,000; New York, 998,000; North Carolina, 3,000; Ohio, 328,000; Oregon, 5,000; Pennsylvania, 480,000; Rhode Island, 37,000; South Carolina, 10,000; Tennessee, 20,000; Texas, 47,000; Vermont, 32,000; Virginia, 35,000; Wisconsin, 276,000; Colorado, 3,000; Dacotah, 2,000; District of Columbia, 12,000; Nebraska, 6,000; Nevada, 2,000; New Mexico, 6,000; Utah, 12,000; Washington Territory, 3,000. Of this foreign population the natives of Ireland are the most numerous, amounting to 1,600,000. Germany, or the several German States come next, with over one million three hundred thousand; England follows with 431,000; British America had 249,000, Scotland 108,000, France, 107,000, Switzerland, 53, Wales 45,000, Norway 43,000, Spain 42,000, China 35,000, Holland 38,000, Mexico 27,000, Sweden, 18,000, Italy 10,000, Belgium 9,000, Denmark 9,000, Poland 7,000, West India Islands 7,000, Portugal 7,000, Russia, 3,000, South America 3,000, Asia, Africa, Australia, Atlantic Islands, Central America, Greece, Pacific Islands, Sardinia and Turkey are to be counted each by hundreds.

A Berlin professor finds that Europe contains 272,000,000 of inhabitants, Asia 720,000,000, Africa 89,000,000, America 200,000,000, and Polynesia 2,000,000—total, 1,283,000,000. Of this little crowd, about 32,000,000 die in each year, which is 87,761 a day, or 61 per minute. Another professor calculates that 36,627,843,275,075,855 people have lived on the earth since the creation.

Recent reports show that the average duration of life in England exceeds that in France by 11 years.

A chemical substitute for indigo has, it is said, been discovered in Paris which may largely affect the Indian trade in that article.

There are 24,856 male, and 13,100 female foreigners, natives of various European States resident in London.

About £400,000 of the old copper English coinage has been called in, leaving about £350,000 still in circulation.

There are 250,000 noblemen in the Austrian States, of whom 163,000 are in Hungary, Gallicia 24,900, and Bohemia 2,260.

The *Czas* of Cracow says that the torture is used in the citadel of Warsaw to force confessions. It consists of an iron ring, placed round the prisoners head, and tightened till the victim is driven to yield.

The mischievous practice of feeding horses and sheep with wheat is alluded to in English papers. Four horses were nearly, and some sheep quite, killed in Hampshire lately in this manner.

A man in London is getting out a patent for printing without ink. He charges the paper with some chemical substance, which being crushed by the face of the type, turns black.

Tides have recently been remarked in the Lakes of Geneva and Neufchatel—cause not known.

The next transit of Venus will take place in 1874, and the next afterward in 1882. There will be great preparations to take observations in all parts of the world, and it is expected that the sun will be found to be four million miles nearer to the earth than was supposed.

THE HOME.

MY WINDOW.

BY MRS. HOYT.

I have a window.
When I counted its panes a year ago,
To the eyes that asked "What have I here?"
There looked in a face that was pallid with woe,
And a voice replied, "It is dreadful here."

I barred the shutters; I brightened the fire;
I counted no more my window panes:
Mid the winter's storm and the battle's ire,
I counted instead,
How slowly, to Good, comes the balance of gains.

* * * * * * *

On the midnight hour of a later time,
Came a chime of bells:
To my barred window there came these bells.
'Twas the joy of millions beginning to climb
To a freedom, oh, sweeter than bells, bells, bells.

November had passed with its havoc and wraith;
The earth lay calm in a great repose;
And my soul was filled with its old-time faith,
As the New Year came,
Trailing its beautiful mantle of snows.

Ah, since that day, with my window unbarred,
What sights and what sounds!
As, daily, the King in his pomp has passed,
And nightly, with stars all his canopy starred,
Till we stand in this glowing Autumn at last.

Oh friends of these years
That, plan as we will, have their darkness of days,
Keep your souls unbarred; lean out to the light,
Lest the fair and the grand of God's wonderful ways
Find you doubting and blind in the valley of night.

Speak Gently.

"Gentle words are well-springs of joy, in whose crystal depths are mirrored life-pictures of gladness." They are like flowers strewn along our pathway of life to cheer us; like sun beams shining upon a dark horizon.

The cup of human trial and sorrow is running over, and we must all drink of it some time in life. Let us bear this in mind, remembering that gentle words will calm the troubled waters and make the contents of the cup less bitter.

Be kind to thy sister, for her love is of priceless value. Speak gently to thy brother, for his strong arm may shield thee from many a rough blow in the battle of life. Be nobly reverent to thy father, for in thy keeping are centered many hopes.

With thy mother deal lovingly and tenderly; she has kindly led thee through the opening portals of life: lead her as carefully through its closing gates down to the dark valley, and the remembrance will prove a sweet solace in later years.

Speak gently to the child; keep the clouds away while you can, for they will come soon enough—too soon for his peace or thine.

Speak gently to the aged, for their prayers may help to gain thee an entrance into Heaven. To the stranger, for ice encrusts too many hearts already.

Speak gently to all—all whom thou mayst meet at home or abroad—in the crowded street or in the lone by-paths, in the light or darkness, in the sunny arbor of smiles, or the shadowy vale of tears.

Speak gently to all, and then listen for sweet echoes; they will greet thee on every side, and no other music will be needed, no softer lullaby of love.

The angel upon thy left shoulder will have little work to do, while the one upon thy right will keep his silvery pen in motion all the while, and have no cause to bow his head in sorrow.

CARRIE.

MILWAUKEE, Oct. 8, 1863.

An Estimable Husband.

"Want your pickle tub fixed, do you, Mrs. Smith. Well, you are always wanting something done. If I should attend to all your wants our family would soon have to go to the poor house. Think if I were to attend to half of them the family would be more comfortable than now, do you? That shows how little judgment women have."

"Jones fixed his wife's pickle tub without asking."

"I'll warrant he did. I have no patience with such womens' men as Jones. If his wife wants a shelf put up, or a nail drove, or a tub fixed, he is in his element. A happy woman is she, and he a good husband! She

will be happy when she finds her family lacking for bread which his goodness will fail to procure. Why, only the other day I passed there and he was actually tending baby while his wife washed."

"Raining, was it? You are blessed with a good memory. Better be tending baby than spending time, and money too, at Brown's, hadn't he?"

"Insinuating, are you, Mrs. Smith? Do you not know that I detest that? Jones would have had the tub all ready for the pickles while I have been talking, would he? Mrs. Smith, I wish you to distinctly understand that I have the liberty of talking as much as I please and as long as I please in my own house. Wouldn't care how much I talked nor how long, if I would only work, too! Mrs. Smith, I am none of your milk-and-water men. You have provoked me forever, and I tell you now, once for all, that when my day's work is done I wish to rest without being ding-donged continually about your trifling jobs. They are of no account; and now I believe I will run over and take a smoke with Hamlin. You *do wish* I would fetch you cup of yeast. There it is again. No, I will *not.* [Exit husband, pipe in hand] ***

The Narrow Lot.

A little flower so lowly grew,
So lonely was it left,
That heaven look'd like an eye of blue
Down on its rocky cleft.

What could the little flower do
In such a darksome place,
But try to reach that eye of blue
And climb to see heaven's face?

And there 's no life so lone and low
But strength may still be given,
From narrowest lot on earth to grow
The straighter up to heaven.

Gerald Massey.

The love of God is the essence and perfection of religion. It is the love of all sublime and beautiful things; the love of all high thoughts; the love of all lofty purposes; the love of all noble feeling; the love of all elevated principles; the love of all holy and generous affections; the love of all magnanimous deeds. He, then, that has added to his permanent possession one image of beauty and nobleness, one sound principle, one just thought, one generous sentiment, one pure aspiration, one holy feeling, one right act, one unclouded gleam of truth, has taken no inconsiderable step towards the attainment of that love of God, which, while it is the perfection of religion, is also the perfection of humanity.

Let Us Try to be Happy.

"Let us try to be happy! we may if we will
Find some pleasure in life to o'erbalance the ill;
There was never an evil if well understood,
But what, rightly managed, would turn to a good.
If we were but as ready to look to the light
As we are to sit moping because it is night,
We should own it a truth both in word and in deed,
That who tries to be happy is sure to succeed.

Let us try to be happy! some shades of regret
Are sure to hang round which we cannot forget;
There are times when the lightest of spirits must bow,
And the sunniest face wear a cloud on its brow;
We must never bid feelings the purest and best,
To lie blunted and cold in our bosoms at rest;
But the deeper our own griefs the greater the need,
To try to be happy lest other hearts bleed.

O! try to be happy! it is not very long
We shall cheer on each other by counsel or song;
If we make the best use of our time that we may,
There is much we cand do to enliven the way.
Let us only in earnestness each do our best—
Before God and our conscience, and trust for the rest;
Still taking this truth both in word and in deed,
That who tries to be happy is sure to succeed.

It is the great event of life to find, and know and love a superior person; to find a character that prefigures heaven and the saints on earth. Such a one is left alone as the gods are. In all the superior persons I have met, I notice simplicity and distinctness, truth spoken more truly, as if everything like obstructions and malformations had been trained away. What have they to conceal? What have they to exhibit? Between simple and noble persons there is always a perfect understanding. They recognize at sight, and meet on a better ground than the talents or skill they chance to possess, namely, on their sincerity.—*Emerson.*

A Beautiful Thought.—Leigh Hunt says: "Those who have lost an infant are never, as it were, without an infant child. They are the only persons who, in one sense, retain it always, and they furnish other parents with the same idea. The other children grow up to manhood and womanhood, and suffer all the changes of mortality. This alone is rendered an immortal child."

HEALTH AND DISEASE.

Ventilate Your Bedrooms,

The importance of ventilating bedrooms is a fact which every body is vitally interested in and which few properly appreciate. We copy the following from an exchange, which shows the injurious effects which must arise from ill-ventilated sleeping apartments: "If two persons are to occupy a bedroom during a night, let them step upon weighing scales as

they retire, and then again in the morning, and they will find their actual weight is at least a pound less in the morning. Frequently there will be a loss of two or more pounds, and the average loss throughout the year will be more than one pound. That is, during the night there is a loss of a pound of matter which has gone off from their bodies, partly from the lungs and partly through the pores of the skin. The escaped material is carbonic acid and decayed animal matter, or poisonous exhalations. This is diffused through the air in part, and in part absorbed by the bedclothes. If a single ounce of wool or cotton be burned in a room, it will so completely saturate the air with smoke that one can hardly breathe, though there can only be one ounce of foreign matter in the air. If an ounce of cotton be burned every half hour during the night, the air will be kept continually saturated with smoke, unless there be an open door or window for it to escape. Now the sixteen ounces of smoke thus formed is far less poisonous than the sixteen ounces of exhalations from the lungs and bodies of the two persons who have lost a pound in weight during the eight hours of sleeping; for, while the dry smoke is mainly taken into the lungs, the damp odors from the body are absorbed both into the lungs and into the pores of the whole body. Need more be said to show the importance of having bedrooms well ventilated, and of thoroughly airing the sheets, coverlets and matresses in the morning, before packing them up in the form of a neatly made bed?"

Don't Eat Too Much.

Next to imperfect ventilation, excessive eating makes the most serious inroads upon our health. Prof. Hitchcock thinks we eat too much because we dine upon too great a variety of dishes, and suggests as a remedy that we should confine ourselves to one course. Several eminent men, among whom I may mention the distinguished Dr. James Johnson, urge that every person should watch himself while eating, and when he discovers that the pleasures of the palate begin to lessen, at that moment he should stop. An eminent American writer, who declares the conviction that, of the men, women and children in the United States, ninety-nine in every hundred eat to much, fears the evil will never be corrected until we adopt an expedient employed by some of the great philosophers—weighing our food

I do not believe in any of these plans. But I am confident that an expedient given in one of my former contributions will meet every want, namely, *taking upon one's plate, before one begins to eat, all that is to be eaten!*

No one with ordinary reason would eat too much under this plan. Gourmands may sneer. I have only to say that this rule has been worth thousands to me. Its adoption in a family of children would remove at once all difficulties in the management of children's diet. The dessert and the appetizing fascinations of a second and third course are thus avoided. While not one child in twenty, if allowed to eat without restraint, will stop when he has enough, nineteen children in twenty will observe the rule suggested without a struggle.—*Dio Lewis, M. D.*

DOMESTIC ECONOMY.

Pickle for Beef—A Query.

Dear Doctor:—As your title signifies an oversight of Domestic Economy, and especially in directions of health, I would simply call your attention to the recipe for "Pickle for Beef," on page 392 of the October No. of the Farmer, and ask the cost and effect of four qts. of saltpetre to one bbl. of beef, on those who should be so inclined to follow it and eat of the same? It is now war time, and would a person be considered patriotic and loyal if so extravagant in robbing Uncle Sam of so valuable an ingredient in making gunpowder to kill this monstrous rebellion?

Very respectfully yours,

A. M. Seymour.

Sauk City. Oct. 10, 1863.

Answer.—Your objections, friend Seymour, are well taken. As furnished to the printer, the recipe in question read "4 *ounces* of saltpetre;" and how in the world he made it quarts is a mystery, unless he was laboring under the inpression that the recipe was going south and might render important service in killing off the rebels. We were absent when the last "form" was made up and only had an opportunity to glance at the proof, else so gross an error could not have escaped our notice. A fortunate thing that the mistake was so palpable that no sane packer of beef could be in doubt that it was a *blunder*.

We also agree with you that the traitors in arms deserve all the saltpetre that we are likely to give them. Saltpetre here, and brimstone hereafter!

Bread Pudding.—Take one quart of sweet milk, three ounces of light wheat bread, (salt rising bread is best); soak the bread in the

milk until it is soft, then mash it fine, add two well-beaten eggs, a pinch of salt, a lump of butter about the size of a hickory nut, and a small tea cup of sugar. Season with nutmeg or a few slices of lemon; bake in a brisk oven over one hour: raisins may be added if desired.

Economy in Housekeeping.

In housekeeping a careless woman can always make a muss and keep one, but there is no one article more calculated to make confusion, or wherein more waste is involved in its use than flour, both before and after being baked. Careless handling, sifting or spilling the flour, careless mixing, throwing away the bits of dough, instead of working them into the bread, cake or biscuit. Most women put up their pan or tray covered with dough, and the rolling pin and kneeding board in like condition. Now, if you ever calculate to get that dough off, why not do it when you mix, while it is soft? As you finish up your bread or biscuit, or cake loaf, yon can rub it off with your hand, or with a spoon, and work it all in, and put away your things clean, ready for another time. Do not plead the want of time, and that you "can't take the trouble," &c. Do it in the right time, and it is done. Ten to one when you want to mix again you will be in haste, and your time precious; then you take a knife and dig your pan to pieces, and scrape your board, pin, &c., and run to the swill with it. O, it's but a little; of course it is! But all these littles every day or two, besides the loss of time, are wasteful, and if you had to earn these littles you would sooner find it out, I am thinking. And if in every department under your supervision you are thus regardless of the trifles, you are a poor economist, and far from a model housekeeper, whoever you are or whatever you may think.

And then the bits of bread that many throw away, and many of them made by careless cutting of the loaf, haggling it off one-sided, &c. Cut true, smooth pieces, and do not throw away the odd bits that are left. These can always be used in some way, if you can only "take the trouble." Extreme poverty is almost wholly unnecessary in this country. Look where you choose around you, and nine times in ten the poor are shiftless, wasteful, extravagant; and if a man works ever so hard, a thriftless woman can and will waste all he can earn.

A woman who "can't take the trouble" to use economically the material her husband gets to feed and clothe his family, is anything but a blessing to herself or the world.—*Cor. N. Y. Times.*

Hints on Bread Making.—Good bread cannot be made by merely mixing flour and water and yeast. The mass must be kneeded so as to be sure and bring every grain of flour in contact with its equivalent grain of water, and so as to diffuse the yeast uniformly throughout the mass, or else the resulting gas will be liberated in excess in one spot, and not at all in another. This is seen in badly kneeded loaves—in the holes they contain and in a crust that easily detaches from the crumb, as though it had been lifted up by internal force. The air-cells in a well-kneeded loaf are fine and uniform throughout the mass and all will be formed at the same time. If the flour and yeast are decidedly good, and the kneeding decidedly bad, the bread will give satisfaction. On the other hand, good kneeding, good moulding, and good baking, will make a second or third rate quality of flour almost equal to the best.

Dough-Nuts.—Everybody and his wife, and particularly his little folks, love the good, old fashioned "dough-nuts," or "nut-cakes," or whatever name you choose to call them. But many persons are troubled with "weak digestion," (dyspepsia,) and the large amount of greese absorbed by the said dough-nuts does not always "set well," but produces a "rising in the stomach." When this is the case try the following invention:—The dough-nuts being prepared as usual, just before immersing them into hot fat, plump them into a well-beaten egg. This will give them a thin coating of albumen, which will keep out the greese effectually. Furthermore, this coating retains the moisture, and keeps them in good condition much longer.

Daniel Webster on Cooking Potatos.—It would seem from the following extract from his published letters, that Mr. Webster was fond of good potatos, and knew how they should be cooked:

"Dear Fletcher:—I send a quarter of lamb to roast, and, if not too rainy, will come to dine with you. Tell Mr. Baker the hour.

"Potatos.—Let these potatos be peeled early and thrown into a basin of cold water until time to cook them. Let them be boiled in a good deal of water. When done, pour off all the water, shake up the potatos a little, hang on the pot again, and then bring them to the table. I remember when we heard Hannah Curtis shaking her pot, we knew that dinner was comming."

Potatos in Haste.—A nice dish of potatos may be made in five minutes if the water is boiling. Peel and cut some potatos in slices; pour on them boiling water enough to cover them, and let them boil till tender; skim them out, add butter with flour; let it boil up once, add a little chopped parsley and pepper.

Stuffing.—Take light bread or crackers, chop them fine, put in a small piece of butter or a little cream, with sage, pepper and salt;

one egg and a small quantity of flour; moisten with milk.

YOUTH'S CORNER.

Otho the Great.

Here is a king. What do you think of him? Very likely you may judge your father, your uncle, or your brother to be better looking. Well, I think he looks pretty well for a king.

For a king! Yes, that 's what I mean. Did you think all kings were handsome? That would be as great a mistake as to suppose they were all good. Kings are people who are born into, who are elected into, or who fight themselves into the possession of thrones; they usually have great power and wealth, and use them to make the people fear them; they are not often much loved.

Otho had a wise father who raised his little son to be so good a boy that, when he died, the people were quite willing to have him for their ruler. His father's name was Henry, and he was the first of the German kings by that name. Otho was the first of the Saxon German kings by this name. He became king on the death of his father, when he was twenty-four years old, and after many wars, in which he was very successful, and after he had worked hard to make the county strong and the people happy, when he was fifty years old, he was crowned Emperor, and called Otho the Great. This was nine hundred and one years ago. You are many of you old enough to count back and see just the year when this coronation took place, but you will be a good many years older than most of you now are before you will be able to judge whether he was as *good* as his people thought him *great*.

☞ A very pretty story furnished by Mrs. HOYT, and now in type, has necessarily been crowded over to next No.

NEWS SUMMARY.

INDUSTRIAL AFFAIRS.

The State Agricultural Exhibitions of the past season, so far as we have been able to glean from the reports of our own correspondents and from our exchanges, have hardly been up to the standard of the years before the war. It was scarcely expected that they would be; yet we have heard of no absolute failures.

IOWA

seems not to have been quite so successful with her Fair this year as some of the other States. A report of it will be found in the first department of this number.

ILLINOIS

is reported by Mr. Powers. [See Miscellaneous Department.] All things considered, this was certainly a success. Hon. John P. Reynolds, the able Secretary, writes us that the receipts were over $12,000.

During the progress of the Exhibition there was held an interesting meeting of the wool growers of the State, at which the following resolutions, reported by Hon. John Wentworth, chairman of the committe, were unanimously adopted:

Resolved, That the Legislature of this State be requested to provide, by early enactments, greater protection against the depredations of dogs and wolves by amply compensating from the county treasury for losses sustained from dogs, and by giving liberal bounties for the destruction of wolves. The Legislature can provide the means therefor by taxing or licensing dogs or otherwise.

Resolved, That, as long as the revenues of the cauntry are derived so largely from duties upon imports, as they now are, the same discriminations that are now made in levying those duties to protect the manufacturers of wool, should be extended to the growers of wool. If the argument is a good one that this country should patronize its own manufactures, it is equally good that the great staples of those manmfactures should be raised in our own country.

Resolved, That, while we acknowledge our obligation to the press of the country generally, we deprecate the

course of a few newspapers which quote from the New York Economist and other organs of wool speculators and monopolists, and thus deceive many of their too confiding readers into selling their wool below remunerative rates. No press can be true to the country that is false to its agricultural interests.

Resolved. That the wool-growers of the United States have a common interest, and should have a common organization to discover, expose, and protect themselves from the various combinations of speculators and monoplists, who are not only continually decrying the price of wool, but are laboring to reduce the tariff upon the wool which we sell, while they wish to raise it upon the cloths which we buy.

Resolved, That we do now form ourselves into an association to be known as the "Wool Growers Association of the State of Illinois," and that we will elect a President and Secretary, who shall urge the organization of similar associations in every state in the Union, and shall correspond with the same.

A permanent associatiion was organized, with A. B. McConnell for President, and David A. Brown, of Springfield, for Secretary.

Of the Minnesota and Michigan Fairs we have seen no report yet.

THE OHIO FAIR

was—financially, at least—a "big thing." Hear the *Ohio Farmer:*

"The State Fair which closed last week was, all things considered, one of the most successful Fairs ever held under the auspices of the Board. In the *first* place, it was pecuniarily successful—the receipts were sufficiently large to enable the Board to relieve itself of all inaebtedness—both of the amount carried over from last year, and that incurred for the current Fair. There are funds enough on hand to pay all the premiums awarded, all the current expenses, and to leave a surplus of several thousann dollars to commence another year.

In the *second* place, it was a success so far as attendance was concerned. It was visited not only by upwards of sixty thousand residents of Ohio, but was largely visited from adjoining States and Canada."

In several of the departments there were deficiencies, but these were accounted for by reference to circumstances over which the Society had no control. Ohio knows how to do great things, and not unfrequently does them.

NEW YORK STATE EAIR.

According to the *Genesee Farmer* the 23d Annual Fair "was a decided success."

Stock Department not so full as on some previous occasions, owing to the fact that some of the best breeders had nearly sold themselves out, and had not fine animals to bring! [Good thing for the West, which has been a large buyer.]

"Among the cattle, the Shorthorns, as usual, were the most numerous."

Sheep show not large but good; the Silesian breed taking the lead.

"The show of swine was confined almost exclusively to the large breeds."

Show of Cashmere goats and poultry very fine; dairy products good.

"The striking feature of the exhibition was the excellent show of agricultural implements and machinery."

Attendance and receipts very large.

THE INTERNATIONAL WHEAT SHOW,

at Rochester, was not so large as was anticipated.

First prize ($150,00) for best 20 bushels of white winter wheat, divided between J. W. Henderson, of C. W., and E. S. Hayward, of New York.

Second prize ($75,00) to R. Embury, of New York.

Second prize of $50 for best 20 bushels red winter wheat, to E. A. Hebard, of New York.

First prize of $40 for best 2 bushels of red winter wheat, to E. A. Hebard; the second of $20, to H. Jerrels, of New York.

PENNSYLVANIA FAIR

The correspondent of the *New York Tribune* votes himself disgusted with the prominence given at this Exhibition to the horse racing, which, even to a horseman, must have been very unsatisfactory, on account of the mediocre quality of the animals put upon the course, and yet which took away the attention from the other branches of the Exhibition, many of which were very creditable to the Old Keystone State.

THE COUNTY FAIRS

of our own State were some of them quite successful; others were just about failures if compared with what they might and should have been. A brief account of such as the Editor attended will be found under Editorial Miscellany.

The Markets have been doing the farmers better justice of late. Present prices quite respectable, although considerably below the true mark if compared with the outrageous prices of every sort of things he is compelled to buy.

Wheat still fluctuates. At Milwaukee, Oct. 28, No. 1, Spring, $1,06@1,07: No. 2, at $1,03@1,04. Oats; in store, 60 cts. Corn, delivered, 85. Barley steady: $1,20 for best. Rye, in store, 85@90. Small quantities of wool have been sold at 60@62. Farmers generally holding on.

NATIONAL AFFAIRS.

Military achievements few and unimportant during the past month. Meade and Lee have been playing "hide and seek" in the neighborhood of Manassas.

Gen. Rosecrans has been relieved of the command of the army of the Cumberland on the ground of a violation of direct orders from the Government, and of absence from the field of Chicamauga during the progress of that disastrous battle, and Gen. Thomas, who so gallantly led one wing of the army and saved the whole from utter route and ruin, has been placed in command of his army.

The President has issued the following proclamation, calling for 300,000 men to fill the places of the soldiers whose time will expire next year:

A PROCLAMATION.

Whereas, The term of service of a part of the volunteer forces of the United States will expire during the coming year; and whereas, in addition to the men raised by the present draft, it is deemed expedient to call out three hundred thousand volunteers to serve for three years or during the war, not however exceeding three years;

Now, therefore, I, Abraham Lincoln, President of the United States and Commander-in-Chief of the Army and Navy thereof, and of the militia of the several States when called into actual service, do issue this my proclamation, calling upon the Governors of the different States to raise and have enlisted into the United States service, for the various companies and regiments in the field from their respective States, their quotas of three hundred thousand men:

I do further proclaim that all volunteers thus called out and duly enlisted shall receive advance pay, premium, and bounty, as heretofore communicated to the Governors of States by the War Department, through the Provost-Marshal-General's office, by special letter.

I further proclaim that all volunteers received under this call, as well as all others not heretofore credited, shall be duly credited on and deducted from the quotas established for the draft.

I further proclaim that if any State shall fail to raise the quota assigned to it by the War Department under this call, then a draft for the deficiency in said quota shall be made on said State, or on the districts of said State, for their due proportion of said quota; and the said draft shall commence on the fifth day of January, 1864.

And I further proclaim that nothing in this proclamation shall interfere with existing orders, or those which may be issued, for the present draft in the States where it is now in progress or where it has not yet commenced.

The quotas of the States and Districts will be assigned by the Wrr Department, through the Provost-Marshal-General's office, due regard being had for the men heretofore furnished whether by volunteering or drafting, and the recruiting will be conducted in accordance with such instructions as have been or may be issued by that Department.

In issuing this Proclamation, I address myself not only to the Governors of the several States, but also to the good and loyal people thereof, invoking them to lend their willing, cheerful and effective aid to the measures thus adopted, with a view to re enforce our victorious armies now in the field, and bring our needful military operations to a prosperous end, thus closing forever the fountains of sedition and civil war.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this seventeenth day of October, in the year of our Lord one thousand eight hundred and sixty-three, and of the Independence of the United States the eighty-eighth.

ABRAHAM LINCOLN.

By the President:
WILLIAM H. SEWARD, Secretary of State.

Political.—The elections in Pennsylvania, Ohio and Iowa, all of which were held October 13, resulted in large Union majorities; Iowa, and Pennsylvania, about 15,000 each, and Ohio over 62,000 majority. By the laws of Ohio the soldiers in the army are allowed to vote and at the present rate of returns Brough's majority over Vallandigham will probably be about one hundred thousand.

Nevada, Nebraska, and Colorado territories have also given large Union majorities.

FOREIGN MATTERS.

News of vast importance from, England, Russia, Austria and other nations.

England has been menaced by an earthquake. The shock took place 22 minutes past 3, A. M., October 6th, and was sufficient to break windows in many places, set the dogs a-howling, and terribly scare the whole brood of wicked sympathizers with the Southern Rebellion

The foreign policy of England is becoming more liberal and just towards this country.

Earl Russel, Secretary of State for Foreign Affairs, recently made a speech, in which he discussed the subject of non-intervention in a most candid and honorable spirit, well calculated to promote the interests of peace. He says, in concluding his able speech:

"Such is the spirit in which I am prepared to act. Everything that the law of nations requires, everything that our law, that the Foreign Enlistment Act requires, I am prepared to do, and even, if it should be proved to be necessary for the preservation of our neutrality, that the sanction of Parliament should be asked to further measures. In short, to sum up, Her Majesty's government are prepared to do everything that the duty of neutrality requires—everything that is just to a friendly nation, taking as a principle that we should do to others as we should wish to be done to ourselves. But this we will not do—we will not adopt any measure that we think to be wrong. We will not yield a jot of British law or British right in consequence of the menaces of any foreign power."

Rev. Henry Ward Beecher, previous to setting sail for America, made a few speeches to immense English and Scotch audiences, with good effect.

Mason, the "Confederate" Minister, has

left England in disgust, and gone to Paris.

Russia, though still holding on to Poland, has, nevertheless, taken one more long stride towards a constitutional government, which alone seems wanting to insure to her a future of unrivalled greatness among the nations of the old world. This new ground of hope is found in the recent speech of the Emperor Alexander, on occasion of opening the Diet of Finland, at Helsingfors, Sept. 19, in which he intimates an intention to summon occasional meetings of the Diet, and to put that body on a sort of initiative constitutional footing. His speech ended with the following significant words, which have been interpreted to mean that he intends to place other parts or all of his dominions on a similar footing: "It belongs to you, representatives of the grand-duchy, to prove by the dignity, moderation and calmness of your discussions, that in the hands of a wise people, and one who are determined to labor in concert with their sovereign, and in a practical spirit, for the development of their prosperity, *liberal institutions, far from being a danger, become a guaranty of order and of prosperity.* I declare the present Diet opened."

Austria is considerably excited on the question of the acceptance by the Archduke Maximilian, of the crown of Mexico, so generously offered by Louis Napoleon. His possible Majesty received the Mexican deputation on the 3d ult. at Vienna, and graciously expressed his willingness to sacrifice his chances for the crown of Austria and rule over the Mexican republicans, if they (the Mexcan people) are unanimous in their wishes and the Great Powers of Europe will make him secure!

The Polish Struggle still goes on, and England and Austria have both declared their determination not to interfere. France, all the while anxious to unite those two powers with her, feels deeply insulted by the recent haughty and defiant answer of Prince Gortschalk, the Russian Prime Minister, to the remonstrance of the three Powers.

The Danish Government has commenced preparations for its probable struggle with Germany, and issued an order that the regimental lists shall be filled up to war strength by the 1st of October.

The Ionian Islands, for many years dependencies of England, are allowed to join the the Kingdom of Greece.

The Rebellion in St. Domingo still rages, but the accounts which reach this country are very indistict and confused. One story is that the Spaniards have already lost over 2,000 in killed and wounded, and that from 20,000 to 30,000 rebels are in the field.

The Condition of Mexico is truly deplorable. Bands of remorseless guerillas infest every part of the country, and are plundering and murdering friends and foes of the Republic without distinction. Jaurez is powerless to restore order. Ports blockaded.

EDITORIAL MISCELLANY.

☞ **The Editor of this Journal** will spend a portion of his time the coming winter in delivering *free public lectures* on Industry, in such localities as he has not visited hitherto. He has also in preparation several lectures on themes of general and national interest, for the delivery of which he is ready to make arrangements with such lecture associations as may choose to communicate with him. The following are titles of three of the lectures of the class last mentioned:

"Napoleon in Mexeco."

"England."

"Our Heroes."

The Farmer for 1864 will be richer in matter and in every respect more valuable than any volume hitherto published.

The practical departments will have the added help of several able writers who heretofore either have not contributed at all, or but seldom; while the interest of the general reader will be very much increased by a monthly budget of highly plesaing and instructive correspondence from some of the most interesting portions of the Old and New World.

We are not ashamed of the past, but pro-

pose to do still better by our subscribers in the future.

Standing on a platform like this, and fulfilling all our pledges, in spite of all the sacrifices we have made in these trying times of high prices of material, we feel that we are entitled to the hearty co-operation of all who are friends of the important objects it aims to promote, and we believe we shall have it.

Only this one word more. *Now* is the time when outside publications have their agents at work everywhere, and hence now is the time for the working friends of the FARMER to do what they can for the upbuilding of THER OWN HOME AGRICULTURAL JOURNAL.

Editorial Notes of European Travel.—Down the Rhine to Cologne, June 4.—Who has not longed for a midsummer voyage on this glorious river? Who that has read the pastoral poetry and the rich legendary literature of classic Germany, has not often dreamed of its full-flowing tide, meandering its way through castle-crowned hills and vine clad slopes to the Netherlands and thence to the sea?—of the warring strifes of feudal times—of the floral and autumnal festivities of later days? No matter who has *not*, I have; and here is the realization! Not the feudal strifes, nor yet the autumnal festive scenes: the one are long past; the other are only now in preparation. But here is the Rhine!—the same that vexed the Roman generals many long centuries ago, and has since been the witness of some of the greatest events of history. Born of Alpine snows, but hence flowing through gardens, and vineyards, and Elysian fields.

I have embarked, and am comfortably seated on the covered deck of the little steamer that is to bear me to Cologne. Mayence and Casel recede, and countless villages approach and are passed in succession. The river is broad from here to Bingen—in many places 2,000 feet wide—and its course is swift. Beautiful little islands are sprinkled along like tiny emerals in a necklace of pearls; some of them set off with handsome chateaux, and others rocky and but little changed from nature. Bold bluffs rising, now and then into the dignity of mountains whose lofty summits seem ambitious of a place in the clouds, shut in the swelling stream. Old castles in ruins, from the highest points on those hights look down from the dark past of ten centuries ago. Here and there a cleft in the interrupted range allows the favor of a glimpse of what lies beyond and within. Terraced vineyards, such as, for steepness, difficulty of making and the quality of the product, are found nowhere else in the world, astonish and delight all the voyagers. And the villages, little and large, are dotted in upon the slopes, at the mouths of smaller tributary streams and along the narrow beach, as though all Germany had made its abode on the borders of the favorite river.

An excitement among the passengers forward. No wonder; for just ahead, on our left, is the beautiful, oft-sung "*Bingen* on the Rhine!" Behind the town is a chain of mountains covered with wood, and beneath them is the *Bingerloch*. Ruined castles hang, as if by some supernatural force, defiant of gravitation, upon the rocky brow of the mountains; towards which the river rushes with a wild impetuosity, as though it would fain wash out the feudal wrongs they represent.

Off again, and more to the northward, for the black mountains now on our left, and receding, are sullen in their grandeur and would not be washed out of existence even by the lordly Rhine. More mountains, islands, vineyards and villages, with no possibility of tiring of the glorious panorama, and we are greeted in the distance by the lofty and formidable citadel of *Ehrenbrietstein*, the strongest fortification in Germany. A nearer approach affords us a fine view of the old town at the foot of the towering bluff on which the citadel is built, together with the famous old Roman city across the river, and with which it is connected by a bridge of boats. It is here that the Moselle empties into the Rhine, and since Coblenz is at once the strongest and the

most attractive town on my way to Cologne. I will stop for an hour or two, at least.

Thirty-six miles since we embarked at Mayence, and it is just a little past noon—almost 12 miles an honr, including numberless stops. Pretty well.

My two hours are up, and another boat is already at the wharf to take me on. Have seen all the public squares, and the principal public buildings, and sundry quaint old churches,—have crossed the beautiful Moselle by the long bridge; have crosed the Rhine on the bridge of boats, 485 paces in length, and clambered up the heights of Ehrenbrienstein, and am again steaming down the river. Does it take a Yankee all day to see all there is of general interest in two or three small towns, provided they lie close together? Not quite, if he is alone, is systematic and knows beforehand where to go.

Am well pleased with my dashing visit to the city of Coblenz,—most pleased with that to the cloud-capt citadel, the checkered history of which is full of romantic interest.—The fortifications there are armed with 400 cannon and cost over $5,000,000. But the view from the summit, that was glorious.—The several chains of mountains—the valley of the Rhine, and the Rhine itself with its islands—the navigable Moselle with its charming scenery—the city within the angle formed by their confluence—the Chartreuse on the vine-clad heights beyond, and the more than thirty towns and villages in the plane below! Few places in the world afford such a view.

The channel of the river widens here, but is soon shut in again by mountains. Neuwied and Andernach are announced—old Roman towns on opposite sides of the river. The latter still presents some interesting ruins of Roman gates and palaces. At length we reach Unkelt beyond which the Rhine forms another broad basin with delightful landscapes on either side. A multitude of little villages are seen scattered over the plain, the hills are clothed with vineyards, and in the distance the famous *Siebengebirge* (Seven Mountains) greet the eye; their majestic summits seeming to rise above the clouds. The highest is, nevertheless, but a pigmy compared with the Alpine mountains left behind. They have queer significant names, such as *Drechenfels* (Dragon's Rock) and *Wolkenburg*, (Castle of Clouds,) and on most of them are seen the ruins of old Castles, said to have been built in 368, by the Emperor Valentian.

Bonn!—another large town of Roman origin—famous for many remarkable events; famous also for its great University, and as being the birth place of the immortal Beethoven, one of the world's greatest musical masters. Here likewise I stop for an hour; viewing the ancient wonders, the University, the splendid gardens, and taking my bread and beer in the *Rhinegasse*, just spposite the house where Beethoven was born—a plain two-story dwelling with stucco finish outside, not looking a bit as though it had given so great a genius to the world. But, then, is this not the history of nearly all the remarkable men who have ever lived? Genius is oftenest born in obscurity. It is thus that nature renews her intellectual forces.

At last my feet tread the streets of Cologne. And here I may look backward, for I have already seen the best portion of this, the king of West European rivers. Taking its source in the grand old Alps—strengthened in its progress by the gathered waters of Switzerland—embracing the icy flow from 370 glaciers and 350 smaller rivers—now flowing slowly and wide through the broad valley of the upper Black Forest and encircling its thousands of little islands—now again narrowed down to a deep and strong current dashing its way through the rocky ramparts of Bingen and Andernach and bearing its majestic way through dark defiles in the Historic mountains of Rhenish Prussia—and hence more quietly, as if with assured greatness, through the rich garden lands of Holland to the Northern Sea—it is truly a glorious river, even to a native American, born in the valley of the Ohio and finally settled on the banks of the great Father of Waters. No wonder every German heart is proud of

the incomparable Rhine. The Yankee must make a thousand years more of history before his noble Hudson will outrival it.

A look at some of the County Fairs.—Usually it happens that the Fairs to which we have special invitations, are so jumbled together in time, that it requires a good deal of engineering to get around to them all; and even this year we were compelled to forego the pleasure of attending two others because they fell on the same days with our engagement to address the Society of Green Lake. Happily, however, the three Fairs which we did find it possible to attend came in regular order in the middle of three successive weeks.

THE GREEN LAKE CO. FAIR,

At Berlin, was held on the 23d and 24th. Left Madison at noon of 23d, and after a compelled rest of about 5 hours at Burnett Station (Berlin Junction) got into the goodly town of B. about 9 o'clock. An officer of the Society at the Depot, cleverly awaiting our arrival, and a warm welcome at the pleasant and hospitable home of our esteemed friend, ex-Senator Kimball.

Found the people of town and county pretty generally alive next morning, and the pleasant Fair Grounds all astir at an early hour.

The show of Horses, Cattle and Sheep, was fair, while swine and poultry of the county were mostly *not* there.

The display of fruit was really splendid—apples, pears, plums, grapes, ay, and *peaches!*

Messrs. Henry Floyd and V. C. Mason; of Waushara Co., (just over the line) especially made a magnificent show of some of the finest fruits of these several sorts, that we have seen in many years. Are there no other places in Wisconsin where the luscious peach may be made to grow? To these gentlemen, to Mr P. Newbert and others, and especially to Mrs. Judge Wheeler, of Berlin, who made a beautiful exhibition of apples, pears, plums and grapes of very superior quality, and from whom we had the honor, at the close of our address, to receive a nice basket-full of the choicest of them all, we feel ourself largely indebted for courtesies which, at the time, were very agreeable to the taste, and are since remembered with much pleasure on account of the good will they betokened.

Articles of domestic manufacture, chiefly from the country, and of good quality, were not so numerous as they should have been, and the mechanics and manufacturers of Berlin were scarcely represented at all.

In the department of fine arts, we found some of the finest photograps we have seen made in the State (they were executed by Mr. Jas. Tripp, of Berlin) and several other articles worthy of mention.

The trotting, and the horsemanship of the ladies were attractive features of the Fair.

The officers of the society are live men, and deserve much credit for their enterprise.

THE SAUK COUNTY FAIR

Occurred on the 30th September and 1st of Oct.—days of rough, bad weather; first, horrible dust and then rain. Nevertheless the Fair was in many respects a very good one, and the people turned out in large numbers to see it. The best men of she county were concerned in the exhibition, and few but the laggards and drones staid at home.

The show of stock was less than it ought to have been, and but for the Durhams, entered by our patriotic friend and whilom associate, Major C. H. Williams, would have been, in the cattle department, quite meagre. Horses and jacks of good quality were there, but few in number.

The Fruit Department was well filled with fine specimens; Messrs. Tuttle, Clark and several others doing themselves and county great credit.

In the Mechanical Department there was a pretty fair collection of plows, harrows, drills, washing and wringing machines, &c., &c.—prominent among them a very superior kind of fanning mill manufactured by ex-Senator Curtis, the inventor, of Delton. The peculiarity of this mill consists in it having a contrivance, by means of which, at the will of the operator, either of two different motions

may be had, according to the kind or condition of the grain to be cleaned. The Senator was there himself operating and explaining the peculiarities of the mill.

The Hall of Domestic Manufactures, dairy and other products was filled with many things of interest.

The rain came on just in time to sprinkle the fair equestrians and to test the courtesy and spirit of the large crowd of intelligent people who politely listened—some under umbrellas, and some in the storm—to what we had to say on the subject of "Some of the Political Relations of Labor."

We like the enterprise of the managers of the Sauk Co. Society, and regret that circumstances this year conspired to deny them that large success to which their efforts so justly entitled them.

On our return, via Sauk City and Mazo Manie, we were conveyed over the romantic bluffs which environ Devil's Lake by Mr. Wm. Johnson, one of the first settlers of Sauk Co., to his fine large farm on the border of that handsome and fertile tract of farming lands known as Sauk Prairie. We had never seen this beautiful prairie before in the day time, and felt ourself well repaid for the rather cold ride in the rain which afforded us this opportunity. In the morning at 5 o'clock, Mr. J. took us in his carriage and drove us five miles to the vineyard of Mr. Peter Kehl on the left bank of the Wisconsin, where we enjoyed the pleasure of seeing this pioneer in Wisconsin grape husbandry for the first time, and of eating of his excellent grapes on the bold and precipitous bluff where they grow in profusion.

Mr. K.'s vineyard at present comprises about 13 acres, and is constantly being extended. He has hitherto relied almost entirely upon the Isabella and Catawba, but is now going largely into the Delawares. Makes 300 to 400 barrels of wine per annum and sells thousands of pounds of grapes, the former at $1 50@$2 50 per gal., the grapes at 10 to 12 cts. per lb.

THE JEFFERSON CO. FAIR.

Was held at Lake Mills on the 7th and 8th ult. We went over "by land," taking Mrs. H. and other friends with us. A pleasant drive through a country to us entirely new. Delightfully entertained at the elegant and city-like farm home of our friend M. R. Clapp, Esq., President of the Society. Mr. C. resides about three miles from Lake Mills, and in the midst of a fine farming district. His farm of 200 acres is one of the handsomest we have seen, is provided with excellent buildings, and so abounds with the real comforts of country living that we shall be tempted to pass that way again.

The Fair showed the effects of an unwise difference among the people of the county as to where it ought to be located. Thinking of how long this county had been improved—of its many excellent farms—of its numerous cities and villages, including Ft. Atkinson, Jefferson, and Watertown, places of considerable magnitude—and thinking, too, of the many able and enterprising citizens of town and county, of whom we have long entertained a high opinion, we were prepared to see a grand exhibition, and a magnificent turn out of the people. Indeed we were so fully impressed with what we knew it ought to and probably would be, that we took a little pains in thinking up an appropriate speech for the occasion. To those were there it is needless to say, we were disappointed. Beautiful grounds—though merely enclosed by a poor rail fence and relieved by a small barn in the centre—were there, and there floated the good old flag of the Union! but the long line of pens of grunting swine and bleating sheep, the herds of lowing kine, the magnificent show of horses, of manufactured articles, the always attractive products of the handiwork and industry of woman, and the piles on piles of luscious fruits which so abound in the immediate vicinity were *not* there.

A fine herd of Devons and pens of Merinoes, exhibited by Mr. Richmond of Walworth Co.; two or three pens of Merinoes which Mr. Jones, of Dane, happened to have there on his

way from Vermont; a few trotting horses from Jefferson, Dane and Rock, a few nice grapes, shown by Mr. Atwood; 30 varieties of apples by Mr. Iverson, of Lake Mills; some fine two years' old apple trees, by J. C. Plum, of Madison; 14 varieties of pears, by Jas. Barr, of Jefferson; a half-dozen big pumpkins, turnips and beats; a few pairs of stockings and a couple of patch quilts; together with a fair collection of farming implements, made up pretty much the entire display.

The worthy President and other officers had labored to make the fair a success, but "nobody helped and nobody cared."

Under these circumstances it is needless to say that we felt a little provoked at the sleepy heads at home, and that, instead of making the regular speech we had intended, we took off our coat and gave them an off-hand blowing up. If therein we did wrong we would be pretty likely to do wrong again under similar circumstances. Jefferson is among our best counties, and her citizens ought to be ashamed of their lukewarmness in an enterprise which is demonstrably capable of doing so much for the progress of her industrial interests.

Distribution of the Strawberry; or how some of our friends have "killed two birds with one stone"—In distributing the Wisconsin Seedling Strawberries, they were in some instances sent by express to a single party, with the request to divide with the persons whose names were on the accompanying list. In most cases this method worked to the satisfaction of all parties concerned. But in one or two instances the recipient misapprehended our intentions and planted the whole lot in his own garden! thus disappointing neighbors, and bringing upon our heads undeserved curses. All persons entitled to the Strawberries, who have, in this or any other way, failed to get them this fall, shall be faithfully served in the spring.

A New Feed Rack, patented by a Mr. Streuve, was shown us, in model, at the Jefferson County Fair, by D. M. Aspinwall, of Farmington, General Agent for Wisconsin, Iowa and Minnesota. It appeared to us a capital contrivance, and we have secured electrotypes for its illustration in the next number.

A New Style of Cultivator was likewise at Jefferson County Fair, so constructed as that the narrow shovels constantly tremble with sufficient force to shake off the most tenacious soil. It ripped up the turf finely on the Fair ground where we saw it operate, and is evidently capable of doing good work anywhere. A Mr. Francisco is the inventor.

Our Special Aoknowledgments are due to Mrs. P. M. Putnam, of Neosho, for a basket of luscious peaches, grown in her own garden;

To Mrs. Judge Wheeler, of Berlin, for a basket of splendid pears, grapes, plums and apples cultivated by her own direction;

To Mrs. T. D. Plumb, of Madison, for delicious Doyenne Pears;

To Col. G. F. Hastings, Madison, for clusters of superior Catawbas;

To J. C. Plumb, of Lake Side Nurseries, Madison, for fine specimens of apples; and

To Mr. —— Atwood, of Lake Mills, for several pounds of Concord and Isabella grapes.

The Singer Sewing Machine has long been popular with manufacturers, and for some kinds of heavy work has perhaps ranked before all others. But the inventor not satisfied with their enviable rank, has devoted himself to the construction of a *Family* Machine which is claimed to have capacity for a greater variety of work and to possess more useful appliances for heming, binding, felling, tucking, gathering, gauging, braiding, embroidery, cording, &c., &c.

Parties interested can obtain further information by sending for a pamphlet giving a full account of the machine, to the Singer Manufacturing Company, 458, Broadway N. Y., or by calling at the office of either the Milwaukee Agent, No. 17, Newhall House, or of William Booth, Agent in Madison.

Prizes for Old Subscribers.—Some of our long-tried friends have been afraid they were to be left out in the cold. Not so, brethren, It's a prety tough case to have to pay a bonus to induce a man to read a good paper, itself worth four times—and actually costing very nearly—as much as we ask for it, that's a sure case; but then the press of the country has very foolishly got the reading public into the habit of being *paid* for doing their duty to themselves, and we are bound not only not to be outdone, but ourselves to outdo all others. It now remains to be seen whether pluck and generosity will be rewarded by a corresponding influx of subscriptions.

Nearly every paper and magazine, whose publishers are giving prizes has, itself, been raised in price. The WISCONSIN FARMER stands unchanged, exeept that it has steadily improved.

Old subscribers are referred to first paragraph under head, "For Single Subscriptions," in advertisement, on cover.

Many Friends Write Us that they have generously planned to do a *big thing* for the FARMER on election day. A good idea friends; we heartily thank you.

South Down Buck for Sale.—A Queer Mistake.—By some interference of the devil or somebody else, an advertisement of a fine South Down Buck, ordered published by Samuel Charlesworth, of Omro, appeared in the October number over the name and address of James Davis, of Waukesha. Parties interested will take notice.

NOTICES OF NEW ADVERTISEMENTS.

Interesting to the Ladies.—On the second page of cover, our lady readers will find an advertisment of Millinery Goods, for sale, in gross or at retail, by G. T. Winslow.

Mr. and Mrs. Winslow have been for many years in this branch of business, and have lately established themselves in Madison at the urgent solicitation of friends who have had personal knowledge of their popularity in their former place of residence in the East. There never has been so large and fine a stock of goods of this class in Dane Co. before, and ladies who know whereof they affirm, tell us that their goods are also of very superior quality, and at least ten to twenty per cent. lower priced than even at Milwaukee.

The Universal Clothes Wringer is noticed elsewhere. See Mechanical Department.

Short Horns of superior quality for sale by Maj. C. H. Williams, of Baraboo, one of the best breeders in the State.

J. C. McKinney, Attorney and War Claim Agent. From a personal acquaintance with Mr. McKinney's business capacity and integrity, we heartily recommend him to our patrons.

See advertisement of Farm for sale by Mrs. A. J. McFadden, of Dane Co.

J. C. McKENNEY,

ATTORNEY AT LAW,

77 DEARBORN STREET,

Chicago, : : : : : : Illinois.

SPECIAL attention given the collection of soldier's claims for

BOUNTY, BACK PAY, PENSIONS, &c.,

My former connection with the army enables me to prosecute claims *understandingly* and with promptness. Full instructions and *approved* blanks furnished to those who wish to act as agents, through me or otherwise, on reasonable terms. All letters asking for information, containing return stamp, will receive immediate attention. **All kinds of Collections attened to.**

Farm for Rent.

MRS. A. J. McFADDEN, of the town of Montrose, Dane Co., Wis., being about 18 miles from Madison, 2½ miles from Belleville, and about 7 miles from nearest station on B. & M. Railway, has a farm of about 150 acres of Plough land meadow, which she wishes to rent for a term of 5 years. Said farm has 30 acres of new ground on its. An orchard which this year bore about 350 bushels of apples, 7½ acres of winter wheat, and a good chance for wild pasture, and a large spring rising on and running through the place, from which the farm has the name of the "Grand Spring Farm." There are tools and team with it, but unless it is an object, she would not like to rent them with the place.

Address GEORGE McFADDEN,
Relleville, Dane Co., Wis.

MADISON BOOK BINDERY.

B. W. SUCKOW

Blank Book Manufacturer & Book Binder.

PORTER'S BLOCK - - MADISON, WIS.

ACCOUNT Books of every description made to order of superior paper and werkmanship at moderate prices, and warranted to give satisfaction in every particular.

All Kinds of Binding and Ruling

Executed to order, and in the best manner.

OLD BOOKS RE-BOUND IN GOOD STYLE.

The Subscriber, having had a long experience in the business, feels assured that he can give entire satisfaction to all who may favor him with their patronage, both in prices and workmanship.

Orders respectfully solicited.

B. W. SUCKOW.

THE WISCONSIN FARMER.

J. W. HOYT, : : : : : EDITOR.

VOL. XV. MADISON, DECEMBER 1, 1863. No. 12.

Hon. E. D. Holton in Switzerland.—Attends a Cantonal Fair.—The Swiss Enthusiastic for the North.

MY DEAR DOCTOR:—I ought before this to have acknowledged your kindness in forwarding to me the letters you did. I was very sorry indeed not to have been able to have gone to Hamburgh in July, when, I doubt not, the letter from the Wisconsin State Agricultural Society would have been of real service iu promoting my opportunities for observation. But I could not have gone there without having been obliged to have materially modified my route of travel, and having my family and others with me, I was obliged to give up the Hamburgh show. In Paris, I met Governor Wright, and spent a day with him, and learned that it was not only a grand occasion, but that Americans were sympathized with and found fair play, so that McCormick carried off the prize for reapers, and a Vermonter the prize for sheep. At Worcester, England, too, was a magnificent cattle show that I desired much to reach; but here, again, it could only be done by interfering with plans already laid. And so I have fallen in with no agricultural gatherings or shows until yesterday. I was pausing at Lausanne for a few days, (where I have placed our children for some months' stay at school), and learned that the five Swiss Cantons, speaking the French language, were to hold an agricultural fair at the neighboring village of Colombier, and was but too happy of the opportunity of looking in upon it, and so yesterday morning left home and came up. The week had been unpropitious, and as I left Lausanne, I hoped that the storm had passed. But no. It came on to rain, harder and harder. I however pushed on and found the place, and a very delightful one it would have proved, but for the rain.

The ground chosen was very beautiful and romantic. On the one hand was the charming Lake of Geneva while behind were the mountains and the quaint old Swiss town of Colombier, ornamented with the greatest taste, and labor, with festoons and wreaths of flowers running from door to door, and from window to window, along entire streets. Despite the rain, the good people would have music and flags, and a gala time of it any way, and their doors were liberally thrown open to all who came.

Within the grounds, the Managers of the Society had made expensive and ample arrangements for the comfort of man and beast. Sheds were duly provided for all the animals, and an extensive eating house had been erected with a cooking establishment on a large scale. To this I paid my respects first, for I had been obliged to leave Lausanne without my breakfast. A most admirable mutton chop with "pomme de terre," bread, butter, cheese, coffee and milk was supplied with lavish abundance, and I was charged the moderate sum of one and a half francs.

But now I was prepared for business. I was alone. A gentleman from Lausanne, who could speak both French and English, I had expected would accompany me, but ill health prevented, so I was not only alone, but had no interpreter, and was left to make my

way on my own hook. I knew that a horse was "cheval," that the cow was "vache," that the ox was "boeuf," that the bull was "taureau." I knew that "grande" was large, that "petit" was small; that "tres bon" was very good, and so on, and with this small stock of French I made my way, expressing quite freely my opinion of oxen, cows, horses, sheep, swine, poultry, fruits and agricultural instruments, finding much amusement in thus mingling with the cheerful and good natured Swiss people.

The show of cattle and horses was quite extensive; that of sheep and swine small. The cattle of this country are really very fine. The pasturage upon the mountains being very extensive, the cattle become numerous, and constitute one of the principal sources of subsistance and income. Butter, cheese and fat cattle are among the productions of Switzerland, and in the exhibition were some as fine cows as I have ever seen anywhere: and not only were they of symetrical proportions, but they were likewise of large size. I have seldom seen any Durhams of better size than were some of those Swiss cows. They were known as the Freibourg cattle. Their color was black, with white spots and lined back. I observed no working cattle or oxen in the exhibition, but many handsome bulls were exhibited. There was a large show of horses. The Swiss horse is an animal well adapted to the country. In a mountainous country like this, the beasts of burden must have strength and endurance above all else. Speed and fleetness are elements of less consequence. The Swiss horse is admirably adapted to his use, being very thick and low, with a splendid muscle. He is grey or sorrel, or bay or black as the case may be. I observed particularly, two very fine coal black stallions, that had more of the race horse build than the average, which would have passed with us as fine specimens of Black Hawks.

In sheep and hogs the show was very meagre. I can understand why hogs should not be raised to much extent in a country like this, which has no corn or other cheap cereal product, or cheap fat-producing esculent, but why sheep are not raised upon the Alps more, I have not been able to learn. I have observed but very few in the country.

The exhibition of poultry and fowls was extensive, but it did not interest me much, and as the weather was so inclement, I gave it but slight examination.

Fruits, such as apples, plums and peaches, were good, but pears were *very splendid*, both in size and quality. There is a large, blue plum, nearly as large as a hen's egg, which is very abundant in Switzerland and is a most delicious fruit. Its meat has as much consistency as that of the pear, and it is very sweet.

I marked with much interest the agricultural implements, for an American well knows how to prize this department of agriculture. The plow of the Swiss farmer comes nearer, in the principle of the instrument, to the American idea, than any plow I have seen. The immensely long-handled and heavy iron English plow seems to me a miserable concern when compared with the American plow. Of course, it is not to be forgotten that each country requires peculiarities in its instruments, and it frequently happens that different localities of the same country require, in some particulars, a difference. Take, for instance, the Elgin plow. You will remember what an immense desideratum this form of plow supplied to the farmer upon the black, sticky prairie soil. But while variety is given to the mould-board, the land-side and the point of the American plow, its general principles of compactness and lightness are preserved. The Swiss farmer builds his plow with a swinging mould board or a double mould board. The wisdom of this plan will be seen when it is considered how much of his land is upon the mountain side. Still, there is great room for improvement. His plow could be made much lighter, neither does it always need to be constructed with a shifting mould board, since he has more or less level land.

There were upon exhibition six different kinds of threshing machines, with as many different horsepowers. They exhibited good workmanship in both iron and wood, but were far behind such a machine as the "Pitt." There was, to one of the machines, a separator. That is, the thresher ran high up from the ground, say five or six feet, over a deep, large bin or box, into which the grain and chaff would, to a large extent, naturally fall. Besides, this bin extended beyond the the threshing cylinder say two or three feet, upon which space was a screen. Over this the straw passed and dropped to the ground. Doubtless this bin would catch most of the grain. I should judge, however, that more or less would be carried over by the straw, but would be found, if so, mostly sifted at the bottom, as the pitchers carried away the straw, which they must certainly do, as the machine run. Beyond this there seemed to be no attenpt to do more than to thresh, leaving grain and straw to fall together from the machine.

There was on exhibition a small sized mower, for one horse, cutting a two-foot swath, which seemed to me to combine the principles of that best of all machines in that line, known as the "Buckeye" machine. Reapers will hardly ever be wanted or used to much extent in so mountainous a country as Switzerland.

There were numerous small machines on exhibition, such as straw and root cutters, cheese and wine presses, &c, showing creditable ingenuity in invention, and skill in manufacture.

Having concluded my observations, I was about to depart, when it occurred to me that I would visit the "Bureau" and pay my respects to the President or Secretary and solicit a catalogue. I did so, using your general official letter as a sort of introduction. I found the President who at once extended to me an invitation to dine with him, together with a large company of the Cantonal and Federal officers and invited guests, to the number of four or five hundred. It turned out to be a very pleasant sit down. He was so polite as to seat me by the side of Mr. George Guillame, Counsellor of State for the Canton of Neufchatel, who could speak good English, and, by my small understanding of the French and his good offices, I became thoroughly informed of the many good speeches that were made.

In the course of the proceedings, and most unexpectedly to me, Mr. Guillame announced that an American gentleman, from the *North*, was present, and taking his seat with the sentiment that success should attend the arms of the free North, and that free labor should be established in America, he called out the house in most enthusiastic vivas,—"Vive l'Amerique Nord;" and being called for by the assembly, I could but return my thanks as best I was able, adding a few words about our State and country. This was so kindly received that gentlemen left their seats and came rushing from all parts, with wine glass in hand, to pledge their friendship and fraternity. I had no alternative, and so with tears in my eyes at this expression of profound love for my country, I stood up, and holding forth my glass received tip, tip, tip, tip, in long succession, from outstretched arms, and then drank well to the health and prosperity of the freemen of Switzerland.

Tell my teetotal friends they must excuse me this once. Under the circumstances I think I am entitled to absolution.

Yours respectfully,

EDWARD D. HOLTON.

NEUFCHATEL, Switzerland, Sept. 25, 1863.

Work for December.

Get redy to settle up with the whole world all annual accounts. If you can't pay all you owe, pay as much as possible and get the consent of your remaining creditors to defer payment of your debts to them. *At all events settle*, and so have a fair understanding and know just exactly where you stand. There 's nothing like beginning the new year with a clean account book.

Finish the construction of sheds and feed racks for stock. Put the sheep by themselves

and take good care that they are judiciously and regularly supplied with good hay, roots, water and salt.

Fatten your swine as early as possible and market. First prices quite as apt to be as high as any.

Stables—have them in good repair, warm and yet well ventilated and light, and provide for the saving of manures. Thorough cleaning, particularly of feet and legs, will be more needed now than in the colder weather of winter, when roads are hard and dry.

Odd spells of good weather may be well employed in cutting timber for lumber and fencing and wood for fuel, so that when the most favorable time comes for sledding they may be hauled in.

Rainy days, in threshing, cutting feed, greasing harness, looking and assorting over fruits and vegetables in the cellar and in reading the FARMER, other periodicals and books. KNOWLEDGE IS POWER.

If any vigetable roots—asparagus, strawberry or others—have not been properly covered with litter, attend to it at once.

Earth up around fruit trees to prevent damage by gnawing of bark. Tramping the successive snows about the trunk answers well, also.

Many other things will doubtless suggest thsmselves, on reflection, as necesary to be specially attended to this month; and we need only add, be sure that nothing of importance is neglected.

"Wild Oats."—A Nuisance.

MR. EDITOR:—I wish to say a few words to you in relation to a kind of grain, or foul plant, termed "wild oats." It has the appearance of oats, but is smaller, and has a fine, thread-like appendage attached to the tip end, and ripens much earlier than the common oats. It has made its appearance in the wheat fields here and threatens to annihilate the wheat, as it ripens earlier, falls off and disappears in the soil before the wheat is ripe; and the next season the whole of the seed thus sown appears to grow, and spreads with amazing rapidity. It has caused great alarm and uneasiness among the farmers. Can you enlighten us on the subject, or prescribe a remedy?

Very respectfully yours,

ARMINE PICKETT.

WEELAUNEE, Wis., Oct, 16, 1863.

ANSWER.—The oat-like grass to which you refer is undoubtedly a species of the *Holcus*, though it is impossible to determine, without more particular information as to the height and character of the stem the appearance of the leaves, flowers and roots, which particular variety. Please give us as complete a description as possible of every part of the plant, and we will endeavor to identify it and recommend a remedy.—EDITOR.

The Latin Nations at the Great Exhibition.

Passing hurriedly through the rich and beautiful collection of rare and embroidered silks, of inlaid and laquered furniture, of elegantly mounted saddlery, and a host of queer fancy articles of various descriptions from China, Japan and Siam, we have finished our survey of the products of Anglo Saxon and Mongolian industry, and are next prepared to see what the Latins have done and are doing.

SUNNY ITALY

Is here with an attractive display of minerals, including copper, lead, iron and zinc. Sulphur, too, in quantities sufficient to make one shrug his shoulders at even the bare *thought* of Pluto's quarters, down below. Fine samples of a hundred different raw cottons; beautiful fabrics of cotton, silk, linen and wool; Leghorn hats of every description; fire-arms of several kinds, but not extraordinary in quality; leathers, velvets, picture-frames, marbles beautifully polished; decorative furniture, such as inlaid tables, Florentine mosaics; Tuscan tazzas of alabaster, &c., &c.—the whole collection handsomely set off with a very fine display of jewelry, after antique models, and statues of bronze and marble interspersed.

The most attractive and one of the finest of the statues is Garrabaldi, the hero of Italian

unity and coming independence. Heroism appeals to the heart universal, and since thine, O Garibaldi, was heroism for that Liberty which is the hope and aim of all humanity, we reverently uncover our heads in thy presence.

In the gallery above are hundreds of samples of agricultural products, wines, woods, wools, raisins, figs and other fruits. And in department of machinery in motion we shall be interested in the electric loom and in a collection of quaint, clumsy agricultural implements, such as are used even to this day in the land of Virgil and Columella.

And here, also, is

ROME, THE ETERNAL CITY,

Represented, as is fit, by her inlaid mosaics, her bronzes, her skilfully wrought jewelry and cameos, lavas and precious stones, her marbles, carved and plain, by a few textile fabrics, but chiefly and magnificently by her works of art.

Her best two statues, "Cleopatra" and "The Libyan Sybil," are from the hand of our own gifted countryman W. W. Story, whose fame nobly supports that of Powers. Of both of these we have spoken already, under the head of "The American Court."

Rome is still, of all the cities of the world, first in the department of Art, but it is now, and has been for years, only by virtue of the transcendant genius of artists dead or artists foreign. Her ruins are not alone of palaces and temples, and the throne of universal dominion. When the nightmare of superstition is once and for all shaken off, will she not rise again into a new and beautiful life of intellectual, religious and political liberty?

PORTUGAL

Displays, in small space, but very neatly, fine samples of wool, raw silk, seeds, nuts, oils, fruits, green and preserved, cork, wines, silk and cotton fabrics, straw work, wax flowers and other articles of like character. She likewise presents fine specimens from some of her but recently worked mines of iron, copper and antimony, together with a good collection of building stones and marbles.

THE SPANISH COURT

Comes next, and attracts the visitor by fine collections of cereal grains and tobacco, fruits peculiar to the climate of Spain, such as raisins, figs, olives, acorn coffee, &c., &c.; woods, cork, wools, cottons, silks, and their fabrics; straw hats and mattings; specimens of copper and other minerals and their products. There are likewise good displays of silk embroideries, showing the fine taste and skill of the Castilian women.

The pianos are well made and remarkably fine-toned; the carved furniture, much of it is beautiful.

Spanish porcelain. But recently no crockery ware of any merit had ever been made in Spain, England having furnished them from time immemorial.

Here, too, are fire-arms, cannon and military equipments of Spanish manufacture. And better still, as evidence that Spain is not utterly dead, we shall find in the department of Civil Engineering, models and drawings of the Tudela and Bilboa Railroad—one of the most remarkable triumphs of the Engineering Art yet achieved. This road crosses the Cantabrian chain of mountains in the north of Spain, meandering its way up and down the sides of the mountains in a manner which leaves the Pennsylvania Central quite in the shade, and piercing the summit at the level of 2,163 feet above the level of the sea.

Who knows but that the spirit of improvement may yet be so enkindled in this ancient and once powerful kingdom as to give to it again a place among the acknowledged powers of the old world?

FRANCE.

Now we enter the most brilliant and tastefully arranged of all the National courts. It occupies the whole of the great rectangular space in the southwestern part of the palace, and the magnificent galleries which surround it on every side.

In the centre is a splendid ornament—part of the service of plate belonging to the Hotel de Ville, of Paris—allegorically representative of Paris, drawn in a golden ship by the

French eagle, while Naiads and Tritons are playing about the ship. The figures composing the group are all golden, and the sea in which they sport and are borne along is beautifully represented by an immense mirror plate of French glass. The entire ornament occupies a space about 10 by 20 feet, and is the admiration of every beholder. From this centre, avenues or aisles radiate in every direction after the manner of the Boulevards from the grand *Arc de Triomphe* in Paris; splendid glass show-cases of uniform height, and filled with articles of every kind and of incomparable beauty and elegance, being arranged on either side; while in the ample galleries are immense and unequalled displays of textile fabrics of wool, cotton, flax and silk, hosiery of every description, laces, embroideries, gloves, ribbons, trimmings, and ten thousand fancy articles, such as no people on the earth but the French can design and manfacture.

The silks are not more remarkable for their richness and costliness, than for the great variety of the new patterns by which they were woven, and the Gobelin and Beauvais tapistries are of course superior to everything of the kind in the world

Case after case filled with brilliant collections of jewelry and precious stones—pearls in profusion, (one exhibitor has six strings of pearls worth $18,000 each,) diamonds, rubies, emeralds, opals and sapphires. Other cases displaying most beautiful imitations of all these and others, made of *paste*, and yet so perfect in appearance that ninety-nine out of a hundred purchasers would not know the difference. Tables and elevated platforms covered with porcelains, ornamental glass, bronzes, China, clocks of every pattern and price. Then cases of wearing apparrel of every sort and for every possible use *a la mode;* toilet articles, fans, parasols, and every other thing in demand by a refined and enlightened people.

In the more solid branches of the French exhibition, and in the department of macinery in motion, we shall find convincing evidence that the French genius is not confined to articles of luxury and works of art. Gates of cast iron, implements of various kinds, manufactures of iron and steel, copper, brass, aluminium and other metals. Fine specimens of fire-arms and military equipments, hollow ware, some machinery, millstones, &c., &c.

In the department of Machinery in Motion there are looms, spinning machinery, machinery for working in wood and in the metals, and most conspicuous of all, magnificent railway locomotives, passenger cars, &c.

But there is one other department of the magnificent French court that we must not neglect, especially since it is not only prominent in itself as a part of the French Exhibition, but also the most prominent of its kind in the whole Exhibition. We refer to the department of Agricultural Products. This magnificent display of wools, grains, grasses, seeds, fibres, fruits, wines, nuts, and whatever else is produced by the agriculture of the Empire, occupies the whole of the space under two of the galleries, the space being divided off into alcoves and the articles put up in uniform and handsome glass jars, closely arranged on innumerable shelves.

It is certainly remarkable that a country in which agriculture has always lagged in the rear of every thing else, at least until quite lately, should have borne off the palm in this department of the Great Exhibition. No other nation approaches it.

It was said of the Great Napoleon that he always scorned to do things at the halves. In this element he is well represented by his nephew, the present Emperor, whose ambition is scarcely less universal or less intense in every special direction.

However selfish his aims, nothing is surer than that Napoleon III. understands what is the true basis of the material prosperity and glory of a nation, and he displays unusal wisdom in the application of his principles to practice. Scarcely any ruler in the nations of the world has done so much within so short a space of time to develope the resources of his Empire. Agriculture, mining, metallurgy,

manufactures, the fine arts, education, science, literature have each and all felt his fostering care and the infusion of his own restless energy. Since his accession to power, France has had a steady, systematic and rapid development, such as no other nation of Europe has had, England not excepted. Only this we have to record against him: he is a selfish, unscrupulous despot, worshiping Glory, as did his immortal predecessor, and blind also, as was he, to this great truth—that true Glory is alone attainable through Justice.

The Agricultural College Lands.

We are indebted to W. H. Watson, Esq., Private Secretary to the Governor, for the following interesting memoranda, drawn from the Report of Messrs. Reed and Hammond, Commissioners to select the lands devoted by Congress to aid in the endowment of an Agricultural College:

The lands selected by the Agricultural College Commissioners, lie in five separate and nearly compact bodies, in the northern part of the State. The following are their locations and general character:

1st SUBDIVISION—North part of Polk county:

Town.....37, R. 16 west.
Towns.....35, 36, 37, R. 17 "
Towns.....35, 36, R. 18 "

Town 36, R. 17—surface diversified, with natural meadows and beautiful lakes; land rolling, well watered, soil first rate. Timber—sugar maple, oak, pine, butternut, elm, ash, &c. Town 36 N., Range 18—same as preceding. Town 37 N., R. 16—land rolling; timber about the same; soil second rate, well watered. Town 37, R. 17, same. Town 35, R. 18 is within 10 miles of St. Croix Falls—surface rolling, not well watered; timber—aspen, oak, elm, ash and basswood; soil—rich loam mixed with gravel. Town 35, R. 17—about the same as the last, but better watered.

2d SUBDIVISION—Chippewa and Clark counties.

Towns.....28, 29, R. 4 and 5 west.

Lie on the tributaries of the Chippewa river. Town 28, R. 5.—Surface slightly rolling, well watered, heavily timbered with hard maple, oak, basswood, elm, butternut, ash and pine. Soil—deep vegetable mould, resting on gravelly loam. Town 28, R. 4—nearly the same as above, having an abundance of the finest hard wood timber. The selections in the other townships have the same general character.

3d SUBDIVISION—Marathon county.

Town.....31, Ranges 2, 3, 4, east.
Town.....32, Range 4 "

West side of Wisconsin river. Town 31, R. 4—well watered, and timbered with birch, hemlock, maple, pine, ash and butternut; surface gently rolling; soil—dark gravelly loam. These are the general characteristics of the whole tract.

4th SUBDIVISION—Marathon and Shawano counties.

Towns.....31, 32, Ranges 10, 11 east.

Streams flow over sandy, gravelly or rocky beds—numerous mill sites; timber—oak, maple, black birch, hemlock, pine and red oak. Soil—rich, sandy loam, inclining to gravel; subsoil rather tenacious. Some portion of the land rolling, but generally level. A beautiful stream of clear water cuts Town 31, Range 11 diagonally. Town 32, R. 11, is described as well wooded. Town 32, R. 10, has some of the finest "sugar camps" in that part of the State.

5th SUBDIVISION—Shawano county.

Town.....27, Ranges 12, 13 east.
Town.....28, Range 12, "

In Shawano and Oconto counties. Well watered, surface rolling; timber—maple, oak, basswood, hemlock, white pine, elm, ash, &c. Soil—dry, sandy loam. This is the general characteristic of the tract, except that in Towns 28 and 29, Range 18, the soil is a yellow, friable clay, mixed with sand.

From these memoranda it appears that the Agricultural College will not, as it was feared, be obliged to put up with refuse and worthless lands. We were, ourself, more sanguine than were many of the friends of the enterprise on this score; and yet the efforts of the Commission have been more successful than even we had dared to hope.

It now remains for the friends of Industrial Education to gird themselves up for the good work of completing the needed endowment and actually planting the institution in the best locality and at the earliest day practicable.

Cattle Sheds.

MR. EDITOR:—I send you an article on cattle sheds which may not be out of place at this season of the year. I think the two principal elements of success in stock raising are good feeding and proper shelter from both extremes of this variable climate. As to the latter, there seems to be much diversity of opinion, especially as it regards horned cattle. Some build expensive sheds and tie up all of that kind of stock in separate stalls, while others seem to think a stack of straw, or even an old rail fence, ample shelter for catt

I have no objections to the former mode when applied to old and matured animals, provided they have sufficient light and ventilation; but as for sheep, colts and young cattle, give them open sheds fronting to the south, and plenty of room for exercise. Some one has said it is better to have racks and feed-boxes under the sheds. I think he is right.

In the summer season, the shade of a tree during the heat of the day is a grateful shelter to most animals. In fields where there are no trees, the evil should be remedied as soon as possible by planting hardy trees of quick growth, which will not throw up suckers by cultivation, along the margin of the pasture, or field intended for pasture. They will not only make good shelter for stock, but will be highly ornamental and valuable in other respects.

The question which usually comes first in building is, what will be the best and cheapest kind of building? This depends somewhat upon circumstances. In extreme cases, crotches put in the ground, with poles or rails over them and a stack of straw over and around the whole, except one side. Sods of turf from the marsh will also answer for walls between the crotches, in the absence of straw. Next come log sheds with thatched roof, and better still, good posts set three feet in the ground with girths running horizontally between them with inch boards nailed vertically upon them, the roof made of inch boards, and the whole well battened. Any of these contrivances are better than none, but still not good enough for a genuine enterprising farmer, and, perhaps, considering all things, they are no cheaper than good, substantial buildings. A frame building with sills and shingled roof, and inch boards firmly nailed in a vertical position upon the sides, makes an excellent shed; but far the best and cheapest material we have yet tried is stone. Hundreds of farmers in this State have this material strewed in abundance over their farms, piled in fence corners and on the road side, rough, hard, ill-shapen blocks, which many farmers are at their wit's end to know what to do with. Yet even these can be worked up into beautiful walls by a good workman with a good steel hammer, and this, too, at but little more cost than the carpenter work on a wooden building of the same size. True, it is some trouble to draw them from different parts of the farm, but after they are walled up we have the satisfaction of seeing a monument to our perseverance which will stand for centuries, and as for utility, they are exactly suited to this climate—a warm shed for winter and a cool one for summer. Of course, such sheds need ventilation, which can be had, to our liking, by putting in trap doors and windows.

Stone buildings are especially valuable for swine and poultry, the thickness of the walls maintaining a moderate temperature throughout the year.

But for fear of trespassing upon the valuable columns of the FARMER, we conclude by urging upon farmers who have not already done so, to provide some good shelter for their stock, and surely they will find ample reward.

JOHN RHODES.

Cost of Fences.

Mr. Cornell, late President of the New York State Agricultural Society, in his address, makes the following remarks in regard to the relative cost of fencing land in large and small fields:

"To fence a farm into square fields of two and a half acres each, crediting half the fence to the adjoining field, requires forty rods of fence, or sixteen rods per acre, which, at $15 per thousand for rails, and $10 per thousand for stakes, will cost at least thirty cents per rod or $4 80 per acre, and entail an annual expense in the interest of money, natural decay of material, and labor for repairs, of nearly or quite $1 per acre. Fields of five acres each require eleven and a half rods per acre, costing $3 45 per acre. Ten-acre fields require eight rods of fence per acre, costing $2 40 per acre. Twenty-acre fields reduce the fence to five and a half rods per acre, at a cost of $1 65 per acre. Forty acres in a field require but four rods to an acre; and one hundred acres may be enclosed in one field with two and a half rods per acre, costing 75 cents per acre."

Take Care of Your Fodder.

All the signs, so-called, indicate that we are to have an unusually hard winter. All those animals whose promptings of instinct have been accustomed to be observed by the Indians, and now have established reputations for weather wisdom, tell us so, and the weather itself has thus far endorsed their prophecies.

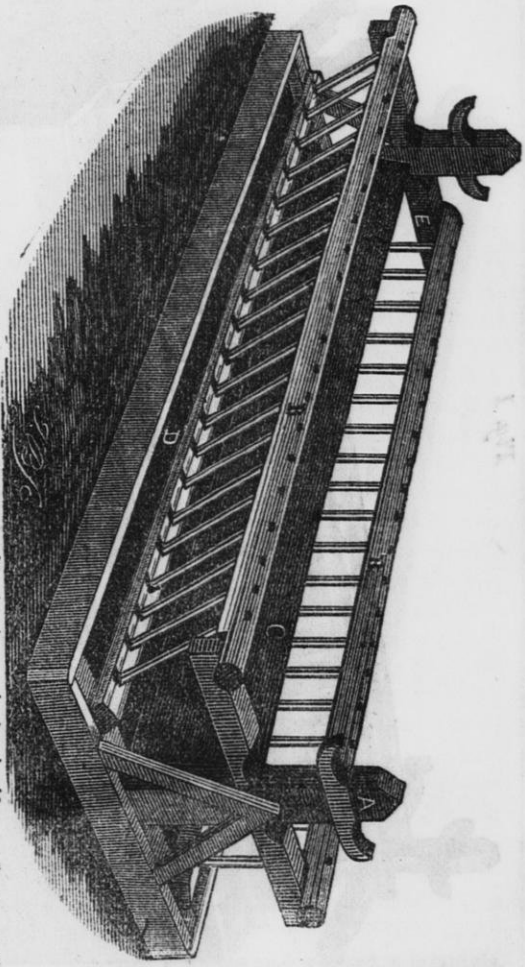
It is not presumable that our farmers, after two or three warm, open winters successively, and with a decided lack of help the past season, have made unwonted provision for their stock, and yet the amount of stock is increased. It behooves them, therefore, to make the best of what they have. The old, slovenly method of throwing out hay, corn-fodder, straw, &c., without care as to where it falls or how much of it is actually eaten, must be abandoned, and pains must be taken to make the stock of feed hold out as well as possible.

Sheds to diminish the amount of feed required, and racks to ensure economical consumption, should be constructed without delay.

There is no economy in half starving cattle and other stock, until they get run down in flesh, and then giving them more than otherwise to bring them up again.

Among the patent racks, of which there are so many here and there, for accommodating sheep and other stock, we have as yet seen none that have appeared to be so nearly *just the thing* as Struve's—the same to which reference was made in the last number of the FARMER. Illustrations of this rack are herewith published for the benefit of our readers, together with directions for the construction and use, as given by the inventor.

A. is the standard or centre post, 2x4 scantling; height 4 feet. B. is the rack, two feet wide; the slats 4 inches from centre to centre. C is the centre board, 16 inches wide, closes at the top, 8 inches apart at the bottom. D is the trough which catches the seed and fine stuff pulled out with the hay; space from



bottom of rack to edge of trough 4 inches. E is fhe arm, 42 inches long, to support the upper rail of the rack when thrown open; the entire width of platform 42 inches; side pieces to platform 5 to 6 inches. When the hay has been placed in it, the upper rails of the rack are pushed towards the centre post

into the groove which is seen near the post. The rack, when filled, lies pressing on the hay, thus preventing more hay being pulled out than is eaten. From the position of the feed to sheep when eating, there is no dropping of seed and dirt into the wool and eyes,

Fig. 1

which is the case with racks inclined the other way. The rack is to be hoisted to the upper pin or notch when the long hay has been eaten; then the trough affords an opportunity for the sheep to eat the seeds and the fine hay. The trough is also a good place in which to feed grain or salt.

These racks, constructed as above, may be made portable, and so put under the sheds during the summer. In this way they will last many years, and pay for themselves many times over in the saving of feed.

Nor does the question of economical feeding simply involve a consideration of the amount of feed saved. The *health* of the stock is not less important, and this also is involved. For nothing can be plainer to the farmer who takes the least pains to observe the habits and requirements of his domestic animals, than that they constitutionally demand that their food shall be clean and otherwise in good condition. The hog is the only exception, and we are not quite sure that he, too, is not better pleased to eat clean food in a clean place.

It is, no doubt, true that a cow or a horse will eat muddy hay, or poor straw, or even pull either of these out of the mud rather than starve. Indeed, we have seen poor creatures, driven to the very verge of desperation, picking straw out of a dung heap with apparent relish. But such extreme cases are nothing, in evidence against the proposition that those same animals would very much have preferred good sweet hay, nicely put up in clean, dry racks, and that they would have been in better plight had they been thus treated.

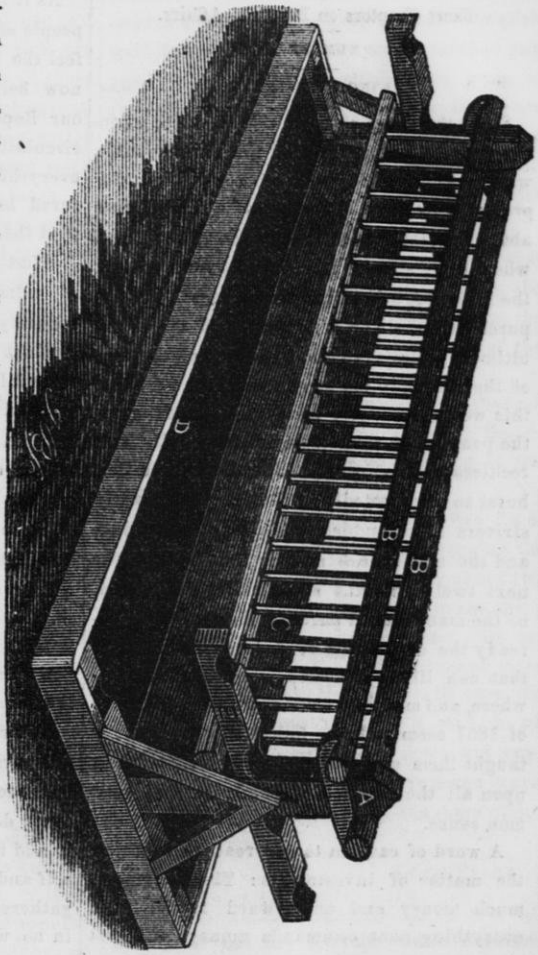
We are satisfied that here is a matter to which altogether too little attention is paid by the majority of farmers. We could not, ourselves, hope to maintain our own good feeling, comfort and health if daily compelled

to the use of food which, from the indecent way of its being served up to us, was calculated to disgust the appetite and produce an inevitable loathing. Well, there is much less difference between man and most of the gramniverous animals than we are wont to suppose.

Whatever will contribute to the relish and good feeling, in a word, to the general satisfaction of an animal, will in the same proportion promote health and facilitate fattening. This is a principle of feeding which should not be forgotten or ignored. And yet nothing is more common, even with those farmers who take the trouble to provide racks and troughs, as herein urged, than to allow the depositories of provinder to become foul and disagreeable to such an extent as to deprive them of a good share of the advantages they were intended to secure. But of this at another time. It was our purpose in this article to urge, first, the value of racks in general, and, secondly, to present the particular merits of the one illustratrated.

If any should find it impracticable to supply their stock with such racks, on account of the expense, let them resort to the use of forks and poles; for racks of some sort will assuredly pay.

Persons desiring farm, town, or state rights, may apply to D. M. Aspinwall, General Agent, Farmington, Jefferson Co., Wis.



A Tough Country.

You have all heard of our new Territory of Arizona, organized just recently by Uncle Samuel in a portion of New Mexico—of its inexhaustible mineral resources, &c. The mineral wealth it undoubtedly possesses, but, if some of the descriptions we have seen of Arizona be within cannon-shot of the truth, it is about the last country in the world for agriculture.

The San Jose *Mercury* thus sets it off:

"Take a large dry goods box, fill it half full of sand, and put in a few rough stones, throw in an armfull of "cactus," and a thimblefull of water in one corner, put in a horned rattlesnake, a horned toad, a lizard, a tarantula, a centipede, a scorpion and a wild thistle, then take a bird's-eye view of it, and you have in miniature a fair description of the beautiful, fertile Arizona—at least of the greater portion of it."

Ex-Governor Bashford, whose brother is Surveyor General of the Territory, and who is himself at least temporarily settled there

as attorney for a wealthy mining company, has promised us a communication on the subject of its agricultural resources, and we take this occasion to notifiy him that we would be glad to have some more favorable account than the above, unless the *Mercury* really tells the truth.

Short Chapters on Practical Affairs.

NUMBER I.

MAKING INVESTMENTS.

Since the times of high tide in 1856, when money was so plenty that the chief trouble was to know what to do with it; when the *price* of a lot of wild land or of a city lot was about the last thing that was thought of; and when even steady, plodding farmers caught the infection, and at most extravagant figures, purchased their own torment, and, too often, ultimate pecuniary ruin, by enlarging the area of their already too large farms, the people of this western country have been grinding out the penalty of their dizzy-headed folly and reckless extravagance. But the bubble that burst so unexpectedly in the grasp of so many strivers after sudden wealth, is re-forming, and the appearance now is that within the next twelve months speculation will, again, be the mania in all parts of the country. Already the disposition to indulge in luxuries that can ill be afforded is apparent everywhere, and men who went down with the crash of 1857 seem to have forgotten the lesson it taught them and to have turned their backs upon all the counsels of prudence and common sense.

A word of caution to our readers touching the matter of investments: These times of much money and an upward tendency of everything that commands money, will not always last. As a nation, we are piling up an enormous debt, and we have hardly yet begun to feel the burden it must necessarily impose upon the industry of the country. Wars usually operate as stimulators of the energy of a people, and when they do not devastate the country on whose behalf they are carried on, they sometimes, as in our case, give to it, temporarily, the appearance of increased prosperity. But it must not be fogotten that a protracted war is, after all, a weakener of national strength for the time, and is never, in any case a positive good except as it vindicates and confirms a principle or prunes a nation of some of its serious faults.

As it respects their property interests, the people of the North have not yet begun to feel the inevitable adverse effects of the war now being waged for the preservation of our Republic. The large increase of paper circulation and the extraordinary call for everything that can be produced or manufactured have thus far inflated rather than crippled the business of the victorious North.

What we wish to enforce is the importance of calmly and wisely looking this matter squarely in the face, and of so shaping our conduct and our plans as not to commit the same folly in the future from which we have suffered so much in the recent past.

To farmers especially we would say, be careful of your surplus funds. If not entirely clear of debt of every kind, avail yourselves of these flush and easy times to pay off the last farthing. For the next twenty years you will be expected to contribute something annually towards the liquidation of the national indebtedness, and you won't care to be hampered and harrassed by debts of your own at the same time.

If already out of debt, and your industry and thrift have brought you a little more than is needed for current expenses, see to it that every dollar is placed where it will most surely add to the comfort and advantage of yourself and family and bring an increase of fairly gathered gains in the future. These ends are in no way so easily and pleasantly made secure as in adding to the improvements of your homes and farms. Draining and more thorough cleaning up of cultivated fields; the enriching of the soil by all the economical means known to science and approved practice; the seeding down, for a short time of such fields as demand rotation and rest from exhaustive cropping; the planting of fruit

trees of approved sorts; the making of better fences and the putting up of labor-saving gates where only bars have been; the building or repairing of barns, cattle sheds, feed racks, pig pens, heneries, wood houses, &c.; the making of a nice and profitable garden; and last, but not least, attention to all those improvements of and about your dwelling which are so requisite to the convenience and happiness of wives and children—which are necessary to the very idea of *home*;—all these are legitimate uses for money, and such investments will pay you a thousand times better interest than lands which you cannot work and the payment of interest and taxes on which would more than likely prove a grievous burden if you had them all paid for.

Again we say, steady yourselves in these times of temptation, wisely economise in all your affairs, get out of debt and keep out, and put every surplus dollar where it will best contribute to your own secure happiness and the prosperity of the country.

STOCK REGISTER.

To Prevent the Shedding of Wool. and to Cure the "Scab."

Mr. Editor:—Mr. W. P. Underwood, of Richland, Minnesota, on page 327, September number of the Farmer, in an article on sheep-raising in that State, asks advice through the Farmer for feeding and sheltering sheep, so as to keep them fat without their shedding wool.

With thirty years' experience, I have not known high keeping cause wool to shed, that is, when properly done. My plan to keep the wool on would be to keep sheep *fat*. I think Mr. Underwood's sheep were not fed regularly, but if they were, they must have had the *scab*. If sheep run down from any cause, and are suddenly recruited, wool will start. All kinds of grain will do it; and I have known a sudden change from a next-to-no-feed pasture to timothy-and-clover full feed, start wool from a poor sheep.

Begin a little before the 1st of December with grain; commencing lightly, increasing gradually until you give them all they will eat, if you like, and the more they eat the tighter the wool will stick: provided there is no disease. Feed corn, beans, wheat, (?) rye, barley, oats. vegetables, or anything that sheep will eat that makes fat—anything you happen to have the best supply of, avoiding sudden changes. The wool will not only stick well, but you will have enough more to pay you well. Continue feeding your grain to the ewes all through the time the lambs are dropping, if you like, and after that until feed is so good that they do not care to eat it. You will raise more and better lambs with much less trouble.

Each kind of grain in its turn, by different persons, has been charged with taking the wool off, so that they have to stop to save the wool. I think it comes off for want of the grain, properly fed.

The best remedy that I know of for the *grub* in the head, is to rub on a little grain that is found in the troughs, before feeding in the morning.

I advise Mr. Underwood to put five lbs of tobacco and two lbs of copperas—steeping the mixture thoroughly in water—into about two barrels of the liquor. Into this dip the sheep thoroughly, not omitting any part. Do not be afraid to put the head under two or three times. This, thoroughly done, will cure the scab. If they have no scab it will do no harm, but kill every tick, if there are any. I have not seen one in my flock in seven years.

Fix you shed so as to fasten the sheep under when it storms.

Lewis Clark.

Beloit, Oct. 17, 1863.

Nilk Fever and Dry Murrain.—Queer Remedies.

Prof. Hoyt:—I send you a remedy for Milk Fever and Dry Murrain, (very apt to go together,) which I have used the past season.

I had a fine cow taken with the dry murrain and milk fever when her calf was about two days old, which is the usual time for an attack of the above named diseases. After a

failure of all my usual remedies, I thought of one I had heard of when a boy, and resolved to try it, which I did with perfect success.

I went and caught about ten common frogs and made her swallow them alive, by holding out her tongue with one hand and putting a frog as far down the throat as convenient with the other, and then letting go with both hands at once. He will go down without any difficulty. I afterwards recommended my remedy to a neighbor who had a cow very sick with the same diseases. He went home and gave her a dozen frogs, and the next morning he said she was "all right."

If you think it worth while to publish this, you are at liberty to do so.

Truly yours,

LUTHER RAWSON.

OAK CREEK, Oct. 18, 1863.

REMARKS.—Frog *broth* has been administered to not-over-squemish members of the human family from time immemorial, but not for diseases as malignant as the dry murrain. Without ever having seen the remedy of *twelve frogs* administered, we could almost predict that no sensible cow would venture to go on the sick-list very soon again, after being forced to bolt a dozen living, kicking, scrabbling frogs *seriatim!*

Query.—Was the remedy probably suggested by the ancient story of Jonah swallowing the whale? If so, there ought to be an everlasting feud between all the cows and the descendants of Jonah.—EDITOR.

KEEPING HORSES FEET AND LEGS IN ORDER.—If I were asked to account for my horses' legs and feet being in better order than those of my neighbor, I should attribute it to the four following circumstances: First, they are all shod with few nails, so placed in the shoe as to permit the foot to expand every time they move; second, that they all live in boxes instead of stalls, and can move whenever they please; third, they spend two hours, daily, walking exercise when they are not at work; and fourth, that I have not a headstall or track chain in my stall. These four circumstances comprehend the whole mystery of keeping horses' legs fine, and their feet in sound working condition up to old age.—*Miles.*

Origin of English Thorough-Bred Horses.

It is recorded that Spanish and Flemish horses were imported into England to serve as chargers; but there is no authentic history of the importation of an Arabian horse until the reign of James I., when a London merchant, Mr. Markham, sent to Constantinople for an Eastern horse, and sold him to the King for £500, or about $3,500. His stock proved too slow for racing. No further effort was made during the reign of James I. or Charles I. by way of introducing the Arabian.

The stud groom of Oliver Cromwell obtained an Eastern horse, appearing in the Stud-book as "Place's White Turk;" but nothing further is recorded of him. Fairfax's Morocco Barb, and Helmsly Turk, property of of the Duke of Buckingham, were crossed with four Barb mares, imported from Tangiers by Charles II, and known in the Stud-book as the "Royal Mares." Down to 1700 little more was done except the procuring of three Hamburg mares, taken at the siege of Vienna, and brought over in 1684. These, it is said by Stonehenge, are regarded as the foundation of English thorough-breds. Prior to this, however, England was in possession of race horses of fair speed, for the Arabs were beaten on the Newmarket race course 200 years ago at English races. It is not claimed that the imported horses were bred excusively with the Spanish horses; for most of the early pedigrees are imperfect. In the pedigree of Eclipse, there are two blanks, which may have been filled with mares of Eastern blood; but it is impossible now to remove this blot from the escutcheon of that noble horse, as English writers admit Stonehenge gives it as his opinion that the race horse of that day was imported from Spain, and bred from a cross of the Andalusian mare with the Barb, introduced by the Moors. He adds: "a fresh infusion of Eastern blood, therefore, was likely to 'hit,' as we know it did; and by care, and taking advantage of our climate and natural advantages, the fine breed we now possess was produced."

The Duke of Newcastle, after describing mares suitable to breed race-horses from, says: "Your stallion *must* be a Barb, for a Barb that is a jade will get a better running horse than the best running horse in England, as Sir John Fenwick told me, who had more experience in running horses than any other man in England. For he had more running horses, rare running horses than any other Englishman; and most of the famous running horses in England were of his race and breed. Some commend the Turk as a stallion to breed mares from, but they are so rare that I can give no judgment of them, and, therefore, I advise you to the Barb, which I believe is much the better to breed running horses."

The Duke insisted that the stallion should, ay, *must* be a Barb, for breeding race horses, though the same was not urged in regard to mares, though he placed no limitation on their breeding, it being evident from what he did say that he regarded their quality as important as do the most skilful breeders of the present day. Stonehenge says: I believe that the use of the Spanish, mixed, perhaps, with the native English blood in the mare, was the real cause of the success which attended the cross with the Barb; the mare being of greater size and stride than the horse, and giving those qualities to the produce, while the horse brought out the original strain of Eastern blood, which possessed the wind and endurance so peculiar to it. We may, therefore, conclude that the origin of the thorough-bred horse of the present day is to be laid in the following strains:

1. *Native Mares* used for racing, and bred from Spanish and English strains; the former descended most probably from the Barbs of Morocco.

2. *Markham's Arabian*, imported in the reign of James I., but proved to be good for nothing, there being probably now not the slightest strain of his blood extant.

3. *Place's White Turk*, extensively used, and to him most of our best horses can be traced through Matchem.

4. *The Three Turks* brought over from the siege of Vienna, in 1684.

5. *The Royal Mares* imported by Charles II., who sent his Master of the Horse to the Levant, specially to procure them. These are mentioned in all the best pedigrees.

In the early pedigrees, various other horses and mares are mentioned. In the time of James II., the Byerley Turk was famous, but of his importation nothing is known: and the same is true of Moock's Arab, the Morocco Barb, D'Arcy's Yellow Turk, the White D'Arcy Turk, Leedes Arab, the Brownlow Arab, Harper's Arab, Pullen's Chestnut Arab, Honeywood's White Arab, the old Bald Peg Arab, and the Arab sire of Makeless. Most of these names occur in the best pedigrees, the D'Arcy Turks being particularly conspicuous.—*Boston Cultivator.*

—The Cleveland (Ohio) *Wool Grower and Manufacturer* states that the clip of wool in Ohio this season will be 20,000,000 lbs., bringing 50 to 60 cents per pound.

—An English paper of late date deprecates the mischievious practice of feeding wheat to sheep, declaring that it has been known, in several cases, to prove fatal. How much truth there may be in this statement we are unable to say, but we fancy that so long as wheat brings $1 per bushel the sheep of Wisconsin are in but little danger.

THE HORTICULTURIST.

A. G. HANFORD,.....CORRESPONDING EDITOR.

Hints to Writers on Fruit Culture.

BY PELEG.

[The following singular and yet valuable communication, all the way from the south side of the Equator and written by a distinguished representative of the American Government, into whose hands a stray copy of the Wisconsin Farmer seems to have fallen, should be read by all who need caution on the important subject of which it treats. May "Peleg" remember us again.—Ed. Farmer.]

Mr. Farmer:—I have been taking your advice for some time and find it so uniformly correct and profitable that I begin to feel an anxious solicitude that in your career you do not fall into some of the fatal faults of your cotemporaries. A prominent one that now occurs to me, is that of admitting, without the closest scrutiny, the communications of correspondents who do not sufficiently understand their subject. For instance, "Fruit Culture" is an almost "unanimous" theme, which is too apt to drive the pen with more zeal than knowledge. This leads the inexperienced to failure, and consequently to a loss of taste for one of the noblest pursuits of humanity. It likewise diminishes the influence of "book knowledge" in these matters, which, after all that can be said against it, is the only sure road to even moderate success. A wise, and certainly very ancient lady of my neighborhood, gives me leave to say, in great confidence, that her idea of a good Horticultural Journal has long been, that it should be about equal to an old fashioned blue-*hose* Presbyterian Confession of Faith in certainty (?), and as easily understood (?) and agreeable (?) to follow as that famous and ever popular code known as the moral law.

Every one, therefore, who writes on these subjects without knowing personally and practically, from repeated experiments, whereof he affirms beyond a reasonable doubt, (I

write in her own words), is guilty of the crime of malicious mischief and should be punished without the benefit of clergy under the statutes of Moses in such cases made and provided—taken without the gates and *stoned*, and no more admitted into the congregation of the Lord—i. e. among the fruit growers. For, she says, nothing short of the imminent peril of such an infliction will keep some vain young farmers—generally esquires, constables, schoolmasters or retired peddlars—out of the public prints. I have no doubt but the old lady is in earnest in what she says.

Asking your pardon for obtruding my name before an appreciating public (being impelled to it in defense of a large and respectable class, to which I have the honor to belong,) I take my final but respectful leave by subscribing myself, in the bonds of faith in the Delaware grape and the platform of Dr. Grant, of Ionian Island, near Peekskill, New York,

Your friend, PELEG.

GANDER GREEN, Oct., 1863.

GARDENING IN GENERAL AND GRAPE CULTURE IN PARTICULAR.—AN EXAMPLE WORTHY OF COMMENDATION.

Every successive year finds us saying with added emphasis, What 's the need of our starving for fruit in Wisconsin, when nature has been so careful to provide everything really essential to the highest success?

A recent visit to the Nursery grounds of Mr. Isaac Atwood, of Lake Mills, raised this question, and became the immediate occasion of this present article.

The piece of land now occupied by Mrs. A.'s flourishing little nursery, garden and vineyard was, at the time of purchase by him, one half gravelly hill-side, covered with oak and hazel bushes and boulders; the other half was literally under water. Almost anybody but Mr. Atwood or an old country Dutchman would have laughed at the idea of making anything valuable out of such a heaven-abused tract as it was deemed. But the eye of a true gardener—which is always the eye of an artist—saw that here was the beginning of what could one day be made the envy of the whole laughing neighborhood, and Mr. A. bought it, paying the round price of something like $100 per acre! But even this, at that day—the time of fever-heat in Wisconsin speculation—in view of its lying within the limits of a (prospectively) great city, was considered *dirt* cheap; and the skill and industry of Mr. A. have made good the assertion in spite of the fact (admitted, we believe,) that Lake Mills is *not yet* a city of fifty thousand inhabitants.

The labor of redemption from water and stony wildness was long, and will be remembered by the engineer-and-all-hands who performed a good share of it; but the results are a sufficient compensation, and the story may be short. Draining and dyking did the business of removing a surplus of water, and grubbing, trenching and terracing have made the hill-side as beautiful as the banks of the glorious Rhine. So that, as this nursery now presents itself to the eye of the stranger, it looks just exactly as though God made it for that very purpose—embracing low, rich, mucky land for certain garden vegetables and plants requiring much moisture, handsome slopes and undulations for fruit trees of every appropriate sort, and gravelly terraces for the vine.

At the date of our visit (Oct. 8th) the appearance was really beautiful, and kindled our enthusiasm without a bit of difficulty. The fruit trees were thrifty and good, and the vines, though just relieved of the greater part of their rich, purple clusters, were still attractive by the mingled green and russet of their changing autumn leaves.

Mr. Atwood was kind enough to detail an account of how the thing had all been done; and in some future number we shall make the information thus gained the basis of an article on practical directions.

For the present we have only to assert our faith in water lots and worthless hill-sides, and to urge upon our sleepy, pork-and-potato-eating friends—if any such we have—the

scriptural injunction, "Go thou and do likewise.

Some day, if we should live *long* enough, we expect to see hundreds of our well-adapted gravelly hill-sides in Wisconsin smiling with vineyards which shall make glad the hearts of the rising generation.

Farmers, there is nothing of the nature of labor that will pay you better in all those things which are most desirable, than the making of good gardens and orchards.

That Raspberry—Hardy Pear.

MR. EDITOR.—Mr. Hanford rightly describes the kind of frut that I have supposed to be Antwerps, as I received them as such. "Red and White Cap." Thank you, friend Hanford, as we always like to be set on the right track

Will your Corresponding Editor, or Mr. Plumb, please give us lists of pears known to be hardy and able to endure our winters?—Let the lists embrace Summer, Fall and Winter varieties, adapted to cultivation in Wisconsin; dwarfs as well as standards.

L. L. FAIRCHILD.

ROLLING PRAIRIE, Wis., Nov. 1863.

The Yeddo Grape.

This is the name of a new candidate for popular favor, its claims being based upon the fact that it promises to be hardy; the quality of the fruit is excellent, its bunches are of medium size, berries of a brownish color, thin skinned, and the flavor all that can be desired, while it is supposed to be specially adapted to our climate. Messrs. Parsons & Co., of Flushing, New York, in a communication to the Horticulturist, represent the leaf as resembling that of the Delaware. This, we are assured, is an error. A gentleman who has some two hundred of the "Yeddo vines" under cultivation, informs us that the leaf is large, resembling the Catawba and Isabella, and wholly unlike the Delaware. It is said to be a very rapid grower, scarcely surpassed by any of our native sorts. If it is all that is represented it will certainly be a great acquisition to our present list of grapes. We hope the high praises lavished upon it may be well merited.—*Farmer and Gardener.*

SOMEBODY says the very best way to secure a *meagre* crop of strawberries is to allow the weeds to grow without stint after the crop has been removed. We have no doubt of this, and if many of those who complain of short crops will look to this matter they will find the cause, and learn how to apply the remedy. —*Farmer and Gardener.*

Transplanting Evergreens from the Woods.

MR. EDITOR:—I want to transplant Evergreens from the woods. When shall I do it, and how? Shall I select very small trees, or those of medium size? By answering the above questions you will confer a favor on several persons. D. J. QUIMBY.

DUPONT, Wis., Oct. 1863.

ANSWER.—Evergreens transplanted from the woods are more likely to die than live with any treatment. Remove in the Spring just before the starting of the buds, protect the roots with great care, plant in good rich soil with "sea-room," and mulch. *Old* manure in moderate quantities will do no harm. Forked in about the roots annually will quicken their growth. *Small* trees.

Clarifying Wine.

After grape must has undergone its first or great fermentation, and is barreled and stored away, a second or slow fermentation usually takes place, and is allowed to continue up to a certain point, which differs for different wines. As long as a particle of sugar remains and a particle of vegetable fermentive matter, this secondary or slow fermentation may, under favoring circumstances, take place. To whatever extent it may have gone, the resulting wine is turbid, because of opaque vegetable matter left floating in the condition of minute shreds. This vegetable matter may deposit, if sufficient time be given, or it may not, the result being dependent upon the nature of the wine. If it deposit naturally, the addition of finings may be dispensed with, racking into another cask sufficing to achieve the desired object; if otherwise, some sort of finings must be used for this purpose from time to time, such as white of egg, milk, gelatine, isinglass, &c. Whatever the clarifying material used in any particular case, the deposit should be allowed time to settle and the clear wine racked off.—*Scientific American.*

WINTER KILLING OF THE LAWTON BLACKBERRY.—It is a subject of complaint with many that the Lawton blackberry is subject to winter killing. Mr. W. D. Hall, of Hamden, Conn., obviated this difficulty by keeping down all shoots until after the first of July. The canes that start early and get thoroughly matured are the ones that are destroyed during the winter.—*Farmer and Gardener.*

THE BEE-KEEPER.

Wintering Bees.

K. P. Kidder, in the November number of the FARMER, recommends wintering bees in the cellar. I have wintered bees in five different cellars in this and New York State, and have not yet found one dry enough to prevent the combs moulding more or less where not occupied by bees. Where the cellar has been quite damp, it has nearly or quite ruined the stocks. Though bees winter much better with hives inverted with bottom boards removed, (if in box hives,) than in the old way of placing them right side up, as on their summer stands. Yet we opine that even then, few cellars will be found dry enough to altogether prevent moulding. Then, again, in transferring bees that have been wintered "on their heads," we have found much filth that the bees have failed to remove in the spring. They had spent much time in covering the filth that remained with propolis. If this accumulation should continue to accumulate year after year, it would be a serious objection to wintering bees in an inverted position. Another objection to wintering bees in the house cellar, is on account of their being so frequently disturbed by the admission of light. This disturbance may be produced by the opening of a door or by a light carried into the cellar. All apiarians agree that they should be kept as quiet as possible during the winter. Yet this is impossible, in the house cellar, where the various inmates are constantly visiting it for vegetables and other family supplies. Then does not analogy teach us that the cellar or underground rooms are unhealthy places for wintering bees. We know that mankind or animals, kept in damp, underground rooms, soon grow diseased. That the bee needs pure air as much as any breathing thing, is evinced by the instinct given them, to provide constantly a fresh supply of pure air by ventilation. How, then, can we expect that we can immure them in the impure air of a cellar, with decaying vegetables and dampness, always to be found in greater or less degree, and expect that they will come out unharmed in defiance of the general law? Reason teaches us better. At the same time, if we are so situated that we cannot do better, we may perhaps winter bees in a dry quiet cellar, and suffer less loss than we would by letting them stand exposed in our severe climate, without any adequate protection. If we go upon the principle, "choose the best of two evils," it may be advisable to put our bees in the cellar. But we cannot help regarding it as an evil to be endured only until we can make a better provision for wintering our industrious little subjects.

L. L. FAIRCHILD.

ROLLING PRAIRIE, Wis., Nov. 1863.

One Effect of the High Price of Sugar.

Nothing is more characteristic of our people than fertility of resource, and the readiness they display in adapting themselves to circumstances, favorable or adverse, is remarkable. This trait has recently been brought to our notice with great force, by reason of the immense numbers of *bee hives* inventors have forwarded to us, with the commedable design of stimulating, through better habitations and economical arrangement generally, the art of bee culture. In this, the shrewd observer will see a loophole of escape from the high prices of all kinds of "sweetening" which now prevail, and which are not so much due to the taxes imposed by Government as to the combination of unscrupulous speculators. Sorghum mills were at one time all the rage, and also other apparatus for defecating and granulating the sap of all sugar bearing plants and trees; but we think nothing is more noteworthy in connection with this subject than the efforts of our inventors to provide comfortable and profitable bee houses, whereby the crop of honey—a delicious substitute for molasses—will be largely increased during the coming year. If it tends to lower the price of the article, now far beyond its intrinsic value, the exertions of the inventors will not have been put forth in vain.—*Scientific American.*

A writer mentions the case of a swarm of bees leaving one of his hives. The bees staid in the hive some four days. On the fourth day the sun came out upon it very warm for the first time; and, he says, "they had made quite a lot of comb." He supposes the heat started the rosin in the boards and that the smell of it made the beees leave the hive. It is more probable that the *heat* itself drove the bees away.

MECHANICAL AND COMMERCIAL.

Mechanics Masters of the World.

A fine field for speculation and sober reflection as well, is afforded in the adoption of machinery in doing the work of the world. Paragraphists never tire of recounting the wonders of steam; essayists exhaust their rhetoric in recounting the wonderful deeds performed by iron and steel arms; statisticians enumerate and detail at length the saving obtained by the use of quick working and powerful tools instead of the slower methods of hand labor. But each and all of these fail of conveying that vivid and intense appreciation of the indispensability of machinery to the world, as exhibited in the daily economy of society. No more striking proof can be found of the rapid innovations mentioned, than the vessels of war now in use, compared with the bluff-bowed, dull-sailing, heavily-armed frigates of old. We do not claim it as an original assertion, but it is none the less true, that the naval battles of the world will soon be performed by engineers and machinists; and the brave captains and admirals will find their occupations gone. In place of the gallant frigate standing down upon her adversary, turning heavily in her course and full of shot holes, we have a long, low, lithe vessel, unsightly to the eye, but deadly to the foe. She draws near with incredible swiftness, delivers a crushing fire from one or two guns, every shot of which tells upon her adversary; instead of fighting for hours demolishes her antagonist in a few minutes or is disabled herself. In proof of which, witness the conflict between the rebel craft *Atlanta* and the Monitors in Warsaw Sound. No exhibition of seamanship avails against twin screws, which allow a vessel to turn almost upon her keel, and manoeuvre with the celerity of a dancing master; and it is not too much to say, in view of the continual improvement going forward, that in a short time our artillery will be so perfected that it will be impossible to render a vessel shot-proof and at the same time sea-worthy. It is, therefore, true that the art of succesfully resisting the encroachments of foreign powers, or of prosecuting aggressive measures, rests in a great degree upon the skill, energy, intelligence and inventive talent of the engineering and mechanical professions. Of what use is it for a mariner to safely navigate an iron-clad ship through perils by shoal and storm, if he falls into an enemy's hand at last through faults of construction?

Great guns are peace-makers. If they disturb public quiet they also aid in restoring it; the long arm of the 300-pound Parrott gun at Charleston reached over all the forts and struck heavily in the very citadel of the enemy. Here, again, are the science and skill of the engineer and mechanic made manifest. The enemy, in fancied security, lurked behind the protections *his* science taught him were secure: when lo! a stronger and greater than he reached over his guard and destroyed the illusion. So engineering science progresses. Possibly, in turn, the aggressor may learn from the assailed and be driven out; but now the engineer and the mechanic are the masters of the world, and in either event, the result will be due to a more perfect and thorough knowledge of the true principles of science and art.—*Scientific Am'n.*

The First Saw Mill.

The old practice of making boards was to split up the logs with wedges; and inconvenient as the practice was, it was no easy matter to persuade the world that the thing could be done in a better way. Saw mills were used in Europe in the fifteenth century; but so lately as 1555 an English ambassador having seen a saw mill in France, thought it a novelty which deserved a particular description.—It is amusing to see how the aversion to labor-saving machinery has always agitated England. The first saw mill was established by a Dutchman, in 1663, but the public outcry against the new fangled machine was so violent that the proprietor was forced to decamp with more expedition than ever did Dutchman before. The evil was thus kept out of England for several years, or rather generations; but in 1798 an unlucky timber merchant, hoping that after so long a time the public would be less watchful of its interests made a rash attempt to construct another mill. The guardians of the public wel-

fare, however, were on the alert, and pulled the mill to pieces.—*Bulletin.*

Enterprising and Generous.

We were glad to observe, on the occasion of the late Northwestern Fair at Chicago, that many of our Wisconsin manufacturers were handsomely represented by important contributions to the worthy object on behalf of which the Fair was held.

J. I. Case, of Racine, gave a splendid eight-horse power, with thresher and separator; E. W. Skinner, of Madison, one of his "Climax" sugar cane mills; Mr. Easterly, of Whitewater, one of his reapers and mowers. Other contributions were made, but these were the most prominent and valuable.

When enterprise and generosity go hand in hand we are always glad to see the enterprise richly rewarded; and it is on this account that we have great pleasure in giving the gentlemen above named the benefit of this notice.

Mr. Case is known throughout the West as the prince of manufacturers in his line, and as having made himself wealthy by a straightforward, honest course; first in getting up the best thresher and separator known, and secondly in turning out none but the most unexceptionable work.

Mr. Easterley makes a good reaper and mower, and a great many of them; while

Mr. Skinner has the high credit of making the best sugar cane mill yet introduced, and of carrying off pretty much all the medals at the State and County Fairs. If any body can beat the "Climax" we should like to see him do it.

THE ATLANTIC TELEGRAPH is again under contract. Mr. Cyrus W. Field, who was the prominent mover in the first attempt, has been spending sometime in England on behalf of the enterprise and has finally got it again under headway. The cable is to be made by a wealthy English firm who take the risk of failure. We have never doubted the practicability of this great work and are heartily glad that capitalists and men of science are deterdetermined to put it through.

SCIENCE, ART, STATISTICS.

Greek Fire.—Shell and Shot.

The statements which have been published respecting some incendiary shells stated to have been thrown into Charleston by General Gillmore, seem to have set the whole country in a blaze of excitement According to a very common mode of romancing adopted by letter writers, these shells have been denominated "Greek Fire;" but there is no resemblance whatever between them and the genuine Greek Fire of ancient times. It is related that the former was discovered in 660, by a Greek engineer named Callinacus, who in that year destroyed a large fleet of Saracen vessels with it; and it afterwards became a terror to the whole Mahommedan races. It is described to have consisted of resin, saltpetre, sulphur, pitch and camphor, mixed with turpentine and made into balls with flax It was ignited, then fired from arrows or thrown by javelins on board of the Saracen vessels when they were engaged with the Greeks in the hand to hand contests of those days. The compound was very imflammable, but its chief danger consisted in being capable of burning in water. Tradition conveys exaggerated ideas respecting its destructive effects. It would not produce much fear or very formidable results on board of modern war vessels. The incendiary shells now called Greek Fire were first brought to public notice during the Crimean war, by J. Macintosh, who made experiments with them at Shoeburyness, England, and set inflammable material on fire at a distance of 800 yards. A patent was secured for the invention in 1855, and the composition is described in the specification as follows:—"I fill diaphragm shells with naphtha, mixed with phosphorus and bisulphide of carbon, having a bursting charge sufficient to open the shell. When fired, the bursting of these shells scatters the contents in all directions, and the shower of inflammable material falling among troops ignites spontaneously, causing their immediate disorganization Fired into shipping, these shells bursting on the deck below, scatter the inflammable material, and the spontaneous combustion which results causes injury to the crew, who are driven overboard, and the vessel itself is speedily consumed. Fired into harbors, dockyards and towns, the result is alike destructive and decisive."

A little volume forwarded to us by Captain J. Norton, from Rosherville, England, 1860, contains the following description of his incendiary shell for infantry:—"A leaden rifle shell is first nearly filled with bisulphide of carbon, then small bits of phosphorus are dropped into it, and the mouth of the shell is then closed with a cork projecting like that of a bottle. A leaden shell thus charged and

adapted to the military rifle, will continue to burn for ten minutes, with an intense flame which cannot be extinguished with water." Such are the descriptions of the modern incendiary shells called by some persons "Greek Fire." As phosphorus was unknown to the ancient Greeks, of course it is sheer nonsense to credit them with the invention of this fire. Thus far such incendiary shells seem to have caused but little mischief. An officer of the United States artillery recently informed us that he had made experiments and found them of no utility, owing to the imflammable liquid being so scattered when the shells burst. He believed that if a considerable quantity of the inflammable liquid could be held together and thrown into one place, it would prove destructive, but this could not be effected with any of the incendiary shells which he had tried. For producing destructive results by setting wooden vessels, buildings and other combustible materials on fire, red-hot shot is more to be depended upon than liquid fire-shells. The modern method of producing such shot is to fill shells with molten iron, then fire them from guns. A small cupola has been put upon one of the English iron-clads for melting pig iron, thus to fill shells; but against armor-clad vessels, of course, such shot would be useless, as they would spatter against iron plates like balls of clay. —*Scientific American.*

MISCELLANEOUS.

Sorghum the Past Season.

Mr. Editor. —As many are enquiring about the results of Sorghum-growing the past frosty season, and inasmuch as I am meeting and conversing with many in the course of my business who have been engaged in its cultivation and manufacture more or less extensively, allow me to talk a little upon the subject in this, your closing number for the year.

The amount of Sorghum that was grown and manufactured in Illinois and Iowa during the season of 1862, and the handsome profit it yielded those who managed well, together with the general awakening upon the subject, induced our farmers to plant much more the last spring than hitherto, and but for the peculiarly dry, bad, early season, and more frosty late season, large crops of it would have been grown and handsome results been realized by the cultivation.

This is amply proved by the few who planted properly for a dry season, and upon sufficiently elevated lands to mainly escape the frosts. Among the many, we know a number of such, who have grown good crops, and obtained handsome yields of excellent syrup from the same.

One gentleman in this vicinity, informed us, that he obtained over two hundred gallons to the acre, of very thick and superior syrup. We have also heard of several others who did as well.

Over Two Thousand Gallons have been made by another farmer near this city, from his own and his neighbor's cane, and all of it, except a couple of barrels made in the first start, we are assured is of the very finest quality; a sample of it we have seen we know is, in fact it is one of the best samples we have ever seen. We understand the gentleman, that much of it was made from quite inferior cane; but that he had no trouble in making a good article from it, and that he has readily marketed all his syrup at an average of six shillings per gallon. He states that he was occupied *a little less than a month*, in the entire operation, though running but a small set of apparatus; and that it paid him very handsomely indeed. He thinks he shall secure the planting of one hundred acres in his neighborhood next season, feeling that it will be but little more personal trouble to him to make from ten to fifteen thousand gallons than two or three thousand, only requiring a little heavier machinery and a few additional hands. He is the man that can do it here if he tries. But as he has promised to get up a statement of his operations, for publication, I will not refer further to the matter myself, except to illustrate in some small degree, from what has been done what may be done by good resolute farmers in cane growing, compared with corn and wheat growing.

The past has undoubtedly frightened some of that faint-hearted class, who are always scared at shadows, especially in all new things. Such men seem to forget that the frost even the present season, has hurt the corn crop more than the Sorghum, almost invariably,

and that they must abandon corn planting, as readily, at least, as Sorghum, if they propose to dodge the frosts.

I have seen twenty-six creps ripen in Wisconsin, and do not remember but one or two seasons as bad as the past. In at least nine cases out of ten, corn has made a fair crop, and sugar cane of the early and proper varirieties, would and has done the same, when planted. It is at least twice as safe a crop as wheat. Still, farmers persist in sowing a good deal of wheat. We throw out these remarks merely for the benefit of those who get easily frightened, and come to hasty conclusions on single experiments, and individual cases.

I know from actual experience, that an acre of Sorghum can be raised, and got ready for the mill, as easy as an acre of corn, and an average crop, will yield 160 gallons of *good, thick, clean syrup*, worth at wholesale, in any western market, at least fifty cents per gallon, and seventy-five cents at retail, making the net product, when manufactured on equal terms, $40 per acre. Now an average crop of corn would yield from thirty to thirty-five bushels to the acre, which at the ordinary price of 23 to 25 cents per bushel, would be just about one-third of the net amount of the acre of Sorghum, saying nothing about the cane seed, which, when mature, is worth nearly or quite one-half as much as corn.

Well, now, I don't wish to have any one think, that I would have them abandon corn-growing and substitute Sorghum entirely, by any manner of means. Not at all; but what I would advise is, simply, that every neighborhood grow Sorghum enough at least for its own supply and consumption, and as much for export further North and West, as would supply the demand. I would advise this as a matter of economy, not to each family but to community, for nothing is more certain than that all Southern sweet products will continue, as now, very high for some time to come. In fact, we expect to see those prices go higher and higher, even after the war is over, until some new system of labor is established To illustrate: half an acre of Sorghum, after being manufactured at the halves, will yield forty gallons, for a family's use, at an actual expense of not over twenty-five cents per gallon. Half an acre of corn, on the other hand, will yield, at most, ordinarily, seventeen and one-half bushels, which at 35 cents per bushel, amounts to $6,13 cents, which, invested in Southern syrup, at 80cts. per gallon, only buys between seven and eight gallons, or less than one-fifth as much. The same is the result, if wheat or any other common crop is substituted for corn.

Well, now, this difference, when applied to all the consumers of the State, amounts to a sum of money, by no means small, probably counting up hard on to millions. Such matters of economy, are well worth the consideration of individuals, communities and states, and just such items of waste and extravagance, in almost all our western farm operations, are what keep so many families poor and shabby. So many riding to town in lumber wagons, so many wives and mothers doing without sewing machines, clothes wringers and other articles of indispensible economy and comfort in every well regulated household.

The Profits of Manufacturing Sorghum, either upon shares, or for pay, has also been well demonstrated the present season in many cases, notwithstanding the unfavorable season. Men with machinery have cleared from $200 to $500 and even $1,000 in from four to six weeks, and in doing so, have as it were, just learned the trade; and feel sure that they can do much better, especially with good cane, another season. I have hardly met with one, who does not mean to try it over another year, with enlarged facilities. Numbers, who run machinery this season, that made but 100 gallons per day, intend to make from two to four hundred per day next season; thus they will go up, as they have in thrashing machines, from little two-horse treadles to eight and ten horse machines, that will rush through a days work, and pay well for having a smart and capable man to see to it.

In Sorghum-making as in threshing, it is not probably best, for any farmer to have a *a little shiftless rig*, to work up his crop. One good set of machinery in each neighborhood, that can rush the work right through, with all the improvements and facilities for doing good work, is what is wanted, and where is there a school district, that would not do well to plant among them from 30 to 50 acres.—Enough to make a good job for a week, and where is there such a neighborhood, that has not some good stirring worker in it, who, if he had the assurance of having the cane grown, would not obtain and start the requisite machinery to work it up profitably for all parties. That is the proper way to do it.—Then each farmer is not hindered in his regular work, and the one who does give his time to it, is well paid for it the same as in threshing.

I shall keep an eye on this Sorghum subject, and, as the season progresses, probably say more about it. Meantime I should be happy to hear from others on the subject, either through the FARMER or by personal correspondence. D. J. POWERS.

MADISON, November 10, 1863.

Washington City.

I believe there is no city in the Union in regard to which, as a city, there is so general a misconception as that to the Capital. You may seek to save a friend from disappointment by the best description you can give of it, you may even go there yourself prepared by previous visits; both your friend and yourself will be, first time, or last time, somewhat taken down from your expectations.

Those who choose may speculate as to the cause of this. I think I know how it comes to be so, as well as any of you, and that all of you know it as well as I do, if you have ever reflected upon the insignficance of any symbol of the morally sublime—as, for instance, of the idea which is the soul and front of our dear native land.

I confess I feel small assurance of being able to do what I attempt, and yet I would like to give you some idea of Washington.

The morning of a delightful day in June witnessed our departure from the magnificence of New York. I did not look back, or think back much. There was only a glance of triumph at what was pointed out for Independence Hall as we passed through Philadelphia, and, if possible, a more soul-full surge of hatred for the rebels in contemplation of the locality where those good New England boys left the first blood of this rebellion upon the pavement of a street in Baltimore. I was going to Washington. This was enough to fill the thoughts of all that day.

Who ever heard of a traveller who was not disappointed upon arrival in London? Who has not read of the bitterness of Luther's disappointment in Rome, the city of his God? In company, then, with my friends, the universal traveller, and the illustrious Martin, I consider it entirely respectable to say, I was disappointed in Washington.

Everybody knows the city to be situated on the north bank of the Potomac, in a district ceded for that purpose, to the General Government, by Maryland and Virginia. The situation is a fine one, though with streets unpaved and deep in the dust with which every breath of wind and every pat of the foot brings you into intimate acquaintance, yet broad and laid out for a some-day imposing appearance. Everybody does not know the architecture of the city to be unworthy the name of Capital, or of the majestic river in whose presence it stands. The houses, a few public edifices and State buildings excepted, are of every quality and style, save good and tasteful. The "magnificent distances" of which we hear in everything that dates from Washington, save State Papers, are distances, indeed, between points upon which the eye would choose to rest.

The plan of the city is the same as that of ourown Capital, with principal streets proceeding at right angles from Capitol Square and filled in with that intricacy of diagonal and half streets that look so well from a hight, or on paper, but is so wearying to the feet and temper-trying to the uninitiated.

Of the churches, I cannot give you the number, but this I can, I saw not one there of which any flourishing town in the West would be proud; so of the school houses; so of the stores, of the markets,—not so, they are an abomination of inconvenience and slovenliness, particularly one that bears the distinguished name of Washington Market, which, by any honesty of significance, should stand for the market *par excellence*.

When you are out sight-seeing in a great city, and wish to economize time and strength, you will find in picture galleries, libraries and refreshment saloons far more than the trifle you pay for, but in these, as in other preparations for the crowd of people who are there to-day, and gone to-morrow, there is no adequate provision. There is not even such a display upon the streets as to attract one's mind from the wearisomness of getting about. Those who dress best, that class of persons whose attire helps so much to convert the streets of many of our large cities into an ever-shifting panorama of beauty and art, here, ride; while those who walk wear the second or third best, of such apparel as they have. I think I was particularly disappointed in this when on Pennsylvania Avenue, the great street of this world famed city. There, at least, I found I had been expecting to see something worthy the days, and the men, and the women illustrious in the early pages of our history. It was there as otherwhere.

And is this all of Washington? No. It was to me a small part of it. Still it is that which you cannot escape in your long walks or drives, after that which is really the city of our pride. Am I now going to tell you about the Capitol, the State Departments, the White House, the Public Gardens, the Navy Yard, the Hospitals, Contraband Camp and those surroundings that invest the city with all the sacredness of the past and all the hopes of the future? Not much, and for the reason that it were words multiplied in vain. Suppose I give you the dimensions and cost of that vast structure, the Capitol, yet piling up its marble to the sky, and, in detail all that words can, of its amplitude of accommodation, and fitness of finish, for the Legislative bodies of so great a people. You have all read of this, as had I, and seen it, doubtless, in picture as well as in print. But there is a something you cannot tell to your neighbor, nor I to you. It is that experience of emotion, that elevated conception of the greatness and the future of our Republic, of which you there seem a distinct part, while standing under that magnificent dome that, all by itself, pays you for the expense and fatigue of a journey there. Then go the rounds; visit, in turn, the State, the Treasury, the War Departments, the Patent Office, the Post Office and the Navy Yard. These buildings, with the exception of the State Department, which is soon to be in keeping with the rest, are just about as fine, I mean in the sense of the substantially elegant, as buildings can be; while the Navy Yard, with its countless shops of clamp and hammer and hiss, is day and night forging the thunder bolts of retribution against those who are seeking to make the nation there represented a by-word and a reproach on the earth.

There is, after all, an atmosphere in Washington that makes you quite forget the architectural unfitness and dilapidation of the city proper. It is the inspiration that comes of the overshadowing presence of those great symbols of our nationality. It is a good place in which to feel all the littleness and all the glory that makes up the vaunt of the American people.

To speak of the Hospitals and the surroundings would require a separate chapter. As is fitting, the nation's capital is environed with commodious and entirely comfortable retreats for the dying and the convalescent soldiery whose right arm has been its defense in the hour of danger. Of these, and the Soldiers' Home, a retreat for the regular army aged and infirm, and of the Contraband Camp where, for the first time in the history of our country, the dusky children of the sun are gathered in safety under the folds of our own

glorious tri-color, I would like to speak, and may in the future.

Have I forgotten the White House and Mrs. Lincoln? I had, nearly.

As for the White House, it is a substantial, good sized, well furnished stuccoed dwelling, not a bit too good for you, or me, or our neighbors: provided always that we are entirely loyal and not, in our personalities, evidence of the doctrine of total depravity. As for the Madam, I was two weeks within crossing of her threshold, but did not see her. Why not? I didn't want to. I have not forgiven, shall not forgive that lady who, having the best chance a woman ever had to display all womanly and high qualities of soul, has, instead, by the littleness and frivolity of her course, touched with the blush of shame the cheek of every noble woman of the land.

One thing more that asks for a word in the future: It is the unfinished monument that stands looking down upon the waters of the beautiful river that, not far below, murmurs along the sacred shores of Mount Vernon.

MRS. HOYT.

THE RAIN—THE BABLE AND THE PRAYERS.

BY B. F. TAYLOR.

We heard a dozen men complain,
When Wednesday it began to rain;
Just as before when it was dry,
They mourned a drought with many a sigh,
And seemed most strangely to forget
The Lord made water rather wet!
If all men's prayers were heard together,
The world would have the *queerest* weather.

"My mill stands still—Oh, Lord, give rain!"
"My grain is down—Oh, Lord, refrain!"
"My corn is parched!"—"Ah, Susan's bonnet—
Don't let a drop of water on it!"
"Oh, not to-day our washing 's out!"
"Roll up, ye clouds, I go for trout!"
"The hen's come off—the brood is drowned!"
"Ah, let it pour! my boat 's aground!"

So, 'mid the murmurs of the world,
The clouds like banners are unfurled;
The rain descends, the bow is bent,
The sky smiles clear, God's azure tent;
And rain or shine, 'tis pleasant weather;
The sower's hopeful seed is flung,
And harvest songs are always sung.

Miss Anna E. Dickinson.

This somewhat noted—perhaps we should say distinguished—political speech-maker has attracted so much attention by her public addresses at different points, east and west, during the past few months that we have presumed many of our readers to be interested in some reliable account of her history and *personnel*.

In times past there have not been wanting women with the courage to invade the professions of literatue, of medicine, of theology and social reform; but, so far as we know, Miss Dickinson has been the first of her sex to enter the arena of politics and to take the stump. She is therefore a prodigy among women, and, of course, a marvel among men.

We are not going to say that she has no right thus to leave her own more modest and restricted sphere, for we believe it to be the prerogative and duty of every human being to do that work in the world which he or she is best fitted to perform: provided, always that that work is honorable and needs to be done. We have no Procrustian rule to which every individual of the race must conform. We have no anxiety lest the whole race of women unsex themselves and become monsters

to the great discomfort and horror of men—no feeling of that sort.

If God has seen fit to create, or, if in the operation of his laws there has come to be, a woman with masculine powers and tastes, so that she prefers to do man's work and can do it better than he, why should we quarrel with her about that, any more than with the Scotch Giant for being so tall or with Tom Thumb for being so ridiculously small? God's laws are pretty well poised, and we should have no fears of their being tilted over and completely upset because we find here and there an exception to them. *Exceptio probat regulum.* It is the exceptions that prove the rule, and there is no need of being frightened. If Miss Dickinson or any other woman proves a genius for enlightening the public mind, and for contributing, in the least degree, to the purification of the dreadfully turbid political elements, why, in the name of Truth and Purity, not let her do everything in her power for its accomplishment? Are mental blindness and moral and political corruption calamities of so little moment that we should not be willing to have them cured except by the touch of our own masculine fingers? Such a sentiment is cowardly and mean.

But then here is one thing that Miss Dickinson and every other woman of her kind should think of: The world will only excuse so wide a departure from the usage of her sex on the ground of unquestionable genius for the very work undertaken. There must be in her a power of attraction and influence of a higher and very different nature from the mere novelty of a woman on the rostrum; else she is leaving the glory of her own sex and coming short of that of the other. She may make notoriety without regard to this principle, but she cannot make solid resputation, nor yet enjoy the consciousness of doing a noble, unselfish work for her country and race.

It is our private opinion that Miss Dickinson will prove to be obnoxious to this objection; and we make the suggestion only after having both seen her and read her speeches.

The above is not a perfect likeness, as one rarely sees a portrait that is; but it was taken from a photograph and faithfully represents the general features and what little expression of face she has—except that it does not fairly exhibit that apparent self-consciousness which now unpleasantly marks her pale and not very expressive countenance. It was probably taken before she had come to be the lioness she has since become.

Her stature is small, her shoulders drooping forward. Her gait is easy and graceful, her dress sufficiently elegant and becoming, her air that of one who fancies herself a genius from the ranks of the aristocracy.

As a speaker she is recitative, rapid in her utterance and rather monotonous. Of her speeches themselves, our readers who have seen them can judge as well as we. They are neither remarkable for originality of thought nor power of expression. A man making just such speeches would not on that account be ranked among either the great philosophers or orators of the age. In one respect, however, she does most emphatically excel: she has more *cheek*. No man would have the face, on an occasion of universal partriotic sacrifice, such as was the Northwestern Fair, to ask and receive for one lecture the exorbitant price of $500.

Miss Dickinson is said to have been born in Philadelphia, and to be of good Quaker stock. She is only about 23 years of age, and it is quite possible that she may yet become all that her enthusiastic admirers believe her to be already.

Riches beget idleness and idleness begets poverty. For a person to be idle because he is rich is just as disgraceful as to be poor because he is idle. There is no more reason why the possession of riches should absolve a person from labor, than that the possession of health should render the observance of temperance unnecessary. If for nothing else, the rich should labor for the sake of affording example and encouragement to the poor.

THE HOME.

Putting the Baby to Sleep.

In Dr. Holland's poem "Bitter Sweet," Ruth kneels beside the cradle and thus beautifully soliloquises:

"What is the little one thinking about?
Very wonderful things, no doubt.
Unwritten history!
Unfathomed mystery!
Yet he laughs and cries, and eats and drinks,
And chuckles and crows and nods and winks,
As if his head was as full of kinks
And curious riddles as any sphinx!
Warped by colic and wet by tears,
Punctured by pins and tortured by fears.
Our little nephew will lose two years!
And he'll never know
Where the summers go:
He need not laugh, for he'll find it so!

Who can tell what a baby thinks?
Who can follow the gossamer links
By which the manikin feels his way
Out from the shore of the great unknown,
Blind and wailing and alone,
Into the light of day?
Out from the shore of the unknown sea,
Tossing in pitiful agony—
Of the unknown sea that reals and rolls
Specked with the barks of little souls—
Barks that were launched on the other side,
And slipped from Heaven on an ebbing tide!
What does he think of his mother's eyes?
What does he think of his mother's hair?
What of the cradle roof that flies
Forward and backward through the air?
What does he think of his mother's breast—
Bare and beautiful, smooth and white,
Seeking it ever with fresh delight—
Cup of his life and couch of his rest?
What does he think when her quick embrace
Presses his hand and buries his face
Deep where the heart-throbs sink and swell
With a tenderness she never can tell,
Though she murmur the words
Of all the birds—
Words she has learned to murmur well?
Now he thinks he'll go to sleep!
I can see the shadow creep
Over his eyes in soft eclipse,
Over his brow and over his lips,
Out to his little finger-tips!
Softly sinking, down he goes!
Down he goes! down he goes!
See! he is hushed in sweet repose!"

Hints to Mothers: The Song Gift.

It was baking day and Mrs. Austin was more than usually hurried. By a coincidence which will not surprise any mother, the children were twice as troublesome as common. They were fine, hearty, every-day children, and, unlike the "book children," often unreasonable. Little wills not unfrequently got tangled up in a way never heard of in books. So it happened that while mother was rolling the pie crust the little voices in the back porch waxed louder and stormier, and mother was compelled to look out upon them and see the cause of the commotion. Frank had little Lina's doll by the leg and held it high over her head, while she was struggling to recover it; and little Annie seemed to be crying by way of chorus. Now I know some mothers who would have just washed up their hands and chastised the whole party, leaving them to gloom and sullenness for the rest of the day.

Not so with Mrs. Austin. A few mild, firm words were like oil on the troubled waters. In her presence the storm was lulled, though by no means quelled, so she said in a cheery voice, "Now all come into the kitchen with mother, and let us sing 'Shining Shore' over once, and see if it does not make all our hearts happy."

So the little ones trooped in as mother picked up her rolling-pin and commenced the air, and stationing themselves by the vine-covered windows joined heartily in the song. It was a thousand times more soothing than all the rebukes she could have administered, and left the heart beautiful and happy.

"Now shall we try 'Happy Land' before you run out to play again?" So the young voices united again in that sweet-spirited hymn, and by that time the angry furrows were quite cleared away. Then mother had just a little bit of crust left which would make three pies, in some bright, dainty little "patty pans," and the pleasure of the children was complete as they watched the process of making, and saw the letters L., F. and A. cut in nice white covers above the delicious raspberries. Then with a few loving words of admonition, they all went out pleasantly to play under the shady apple trees, and there was not a word of contention heard among them.

Mother, to whom God has given the blessed gift of song, use it without stint in your little home circle. If your children have an ear and voice for music, develope the talent as carefully as you would a gold mine in your garden. It will yield you far richer returns in heart and soul wealth. Sing about your work and teach them to join with you. It will lighten your cares many fold, and make

home a more blessed spot in their memories forever.—*New York Chronicle.*

The clouds that rise with thunder slake
Our thirsty souls with rain;
The blow most dreaded falls to break
From off our limbs a chain:
And wrongs of man to man but make
The love of God more plain.
As through the shadowy lens of even
The eye looks farthest into heaven,
On gleams of stars and depths of blue
The glaring sunshine never knew.

—*Whittier.*

Are you a Lady?

The term lady is an abbreviation of the Saxon word "Leofday," which means bread-giver. The "Lady of the manor," was accustomed, once a week, to move among the poor as an alms-giver, enriching their tables, and bearing away their blessigns. She moved in queenly beauty, and to her queenly robe clung the children of the lowly, looking at her as if their little eyes could never be satisfied with seeing—

Their little hearts could never utter,
How well they loved her bread and butter.

But they loved her smiling face more. They needed not that any tell them how priceless is a smile. It was May-day with them whenever she came among them with smiles and bread, and always May-day with her, for the smiling poor loved her, and crowned her queen of all the year.

Reader, are you a lady? Are you a queen among the poor? Do the children of the poor put a crown on your head? Do they make your hair gleam with gems, or is it burning with diamonds that the fingers of the poor never set there? Do the poor man's children cling to your gown, and find a protecting shadow in its folds?

Are your jewels the grateful hearts of the poor? If they are, then they will never lose their lustre, but shine brighter and brighter, the longer you wear them. I would rather have one grateful tear from a famished child I had fed, than all the jewells that glisten on a queen's brow. I would rather carry light and joy to one desolate home, than call the kingdoms of the world my own.—*National Banner.*

ORIGIN OF QUARRELS.—The sweetest, the most clinging affection, is often shaken by the slightest breath of unkindness, as the delicate rings and tendrils of the vine are agitated by the faintest air that blows in summer. An unkind word from one beloved often draws blood from many a heart which would defy the battle ax of hatred, or the keenest edge of vindictive satire. Nay, the shade, the gloom of the face familiar and dear, awakens grief and pain. These are the little thorns which, though men of a rougher form may make their way through them without feeling much, extremely incommode persons of a more refined turn in their journey through life, and make the traveling irksome and unpleasant.

SCOLDING AND GOVERNING.—Some writer says:—"I never knew a scolding person that was able to govern a family. What makes people scold? Because they cannot govern themselves. How, then, can they govern others? Those who govern well are generally calm; they are prompt and resolute, but steady and mild."

HEALTH AND DISEASE.

Distribution of Heat in Dress.

Dr. Dio Lewis says, on this point:—"Whatever the material used, the form and arrangement of it should be such as to retain an equal amount of heat over the whole body.—Thus, and thus only, is a balanced circulation ensured, and the system effectually braced against either extreme of temperature, together with its changes. As an equilibrium of the vital fluid is essential, and it can be secured only by an equal distribution of clothing over the body—together, of course, with its non-compression—it follows that the *cut* is not of minor importance in the construction of dress. Sufficient clothing may be worn to secure warmth, yet the wearer actually suffer from cold. Instance: A woman clad in winter in twice the weight of material a man wears, fails to experience anything like the warmth he enjoys. He has a general equable sense of comfort, while she, if warm at all, is so only in spots and at intervals.. Such disparity is plainly traceable to the difference in the construction of their costumes. This equibalance in dress is essential to heat, too. As a balanced circulation is due to the healthy evenness of our sensations, it is in any case a prerequisite to temperaturial protection and bodily comfort. As to the second part of protection, its indications are met in securing the first. If the form is clad with due regard to heat and cold, it is, at the same time, in the best manner secured against improper exposures. I heard a reverend gentleman remark not long since that "women were not *dressed;* their clothes were hung upon them." We may safely leave it—in view of the oft-recurring "scenes" on the street and in the house, and the constantly-reiterated charge little girls receive, to "be more careful and not show themselves" and with an impartial judgment to decide how much ground in truth there is for this assertion."

"*Only* a cold." Take care! more than half the more dreadful and fearful diseases were at first *only a cold.* The catalouge is long and sad. Beware.

WIT AND WISDOM.

During the Seven Years' War, an alchymist offerred his services to Ferdinand, Duke of Brunswick, for the purpose of converting iron into gold. "By no means," answered the duke, "I want iron to fight the French; and as for gold, I get it from England. But if you are able to convert mice and rats into calves and oxen, you are my man. The former make great havoc in my military stores; and the latter I stand in great need of."

A German journal relates the following annecdote on the authority of a traveller recently returned from Africa:—"A wealthy Arab residing near the frontiers of Morocco, lately paid his first visit to Algiers, and was present at a ball. On his return home he said to his wives, "What strange creatures these French women are! Would you believe it—they absolutely carry an open umbrella under their petticoats!' Such was the idea formed of crinoline by this son of Mahomet."

A gentleman hearing that two of his female friends had quarreled, asked "Did they call each other ugly?" "No." "Or old?" "No." "Well, then, we can soon make them friends again."

David thus describes the gentleman: "He that walketh upright, and worketh righteousness, and speaketh the truth in his heart."

Sincere desire after God, and actual communion with Him, constitute the real life of religion.—*Chapin.*

We should round every day of stirring action with an evening of thought. We learn nothing from our experience unless we muse upon it.

In the register of the parish of Eckington is to be found the following curious stanza, written by a poetical vicar towards the close of the seventeenth century:

> "Our grandfathers were Paists,
> Our fathers Oliverians,
> We their sons are Atheists,
> Sure our sons will be queer ones."

I hate anything that occupies more space than it is worth. I hate to see a load of bandboxes go along the street, and I hate to see a parcel of big words without anything in them.—*Hazlitt.*

A good-for-nothing fellow left his wife in a great rage telling her he would never come back until he was rich enough to come in a carriage. For once he kept his word—being trundled home drunk in a wheelbarrow.

Captain Berry, of South Carolina, is a fierce patriot, as can easily be seen from the remark he made:—"I would rather be hung in South Carolina," said he, "than die a natural death in any other State."

Morals of the Navy.—A maiden of uncertain age, whose nephew had just passed his first examination for the navy, writes to us how shocked she is to hear from her youthful relative that "a sea captain in transport often hugs the shore," and that he never even receives a repremand for such indecorous conduct.

DOMESTIC ECONOMY.

Squash Pudding.—A quart of well stewed and sifted squash, a quart of grated or finely chopped bread, a teaspoonful of salt, six eggs, a pound of sugar, any flavoring you like, and a quart or three pints of good milk, will make a nice pudding. If convenient, line the pudding dish with thin potatoe paste. Bake well and serve warm.

Flour and Indian Pudding.—Four tablespoonfuls of flour, four of Indian meal, four eggs, one quart of boiling milk, one cup of molasses, one teaspoonful of salt; pour a cup of cream, or a cup of milk with a trifle of butter over it just as it goes to the oven. Bake three hours.

Sauces for any Puddings.—*Fruit Sauce*—Stew a dozen plums or cherries, or a couple of peeled and cored apples. Boil a pint of cream, or good milk, and pour it over a pound of powdered sugar; add the fruit, and, if you choose, flavor.

Soups.—The season for soups has come round again. It is surprising how few families make use of this most palatable and economical article of diet. A bone of beef or mutton, a part of a fowl, or a pound of any fresh meat, properly prepared with vegetables and seasoned, will, if nicely gotten up, serve more satisfactorially for a dinner than many a one that is served at greater cost. Of whatever meat soup is to be prepared, it should be carefully washed, not soaked, and then placed in water quite cold bringing this, very slowly, to a scald. If boiled at all, it should only be after a long simmering. This will bring out all the natural juice of the meat so that when ready for the seasoning, and such vegetables as you choose to add, the scraps of meat may all be skimmed out without loss.

YOUTH'S CORNER.

THE WAY TO BE GOOD.

BY MRS. HOYT.

"Tell us a story, aunt,"
Said the children one day:
And I said, "oh, I can't."

"Yes you can! yes you can!"
Cried they all, and at once;
And so I began.

The story I told them
Was pretty, they said,
As ever I told them.

So, then, who can deny
That an aunt can tell stories
If an aunty will try?

And the story was true
In each part, and the whole:
Shall I tell it to you?

One very warm day,
I went with my mother
To a church old and grey.

Five days were for school,
One for home, one for church;
That was the rule.

In the country lived we,
By the river and wood
So pretty to see.

On the grass, on the moss,
We walked slowly on
And, of course, I was cross.

For the beautiful day,
Oh that was not grey,
And I wanted to play.

And why people went,
When they were too large
To be taken, or sent,

And why we must go,
I asked of my mother.
She said, "Don't you know?

"Why, to sing and to pray,
And to hear the Lord's words,
That the ministers say."

What I understood
Of the sermon that day
Was about being good;

How children quite small,
Little girls and boys,
This one, that one, one and all,

Might be as good as others,
As aunties and uncles,
Big sisters and brothers.

I looked at the preacher,
Looked out of the window,
And round to my teacher.

I numbered all the folks,
And said, "That is the stove
That in winter time smokes."

By twos and by fours
I counted the children,
Then looked out of doors.

My mother shook her head;
And plainly enough
Her look at me said,

"Don't you want to be good?
Then be quiet and learn
The way to be good."

Then I sat very still,
But said to myself,
"Try as hard as I will,

I can never be good!
How *can* I be good?
I *have tried* to be good."

'T was that same afternoon,
That I saw with surprise,
Nor forgot very soon,

How a brave little ant
Moved a kernel of corn,
Tho' at first he said plainly, "I can't."

Did I see it with my eyes?
Honor bright! could it talk?
What color was it, and what size?

I saw it with both my eyes.
It was red, and about as large
As when ants are all of a size.

As for talking, it could talk
Full as well as other ants—
As well as a piece of chalk,

Or a boy who is not born.
I only said, it plainly said,
It couldn't move the corn.

And listen now, I say
I saw it try and win
By trying hard all day.

Poor little red ant;
Great big yellow corn;
No wonder it said "I can't!"

Why didn't I go help?
And how far did he move it?
And how am I going to prove it?

I didn't want to go,
And I intend to prove it
By saying it is so.

"How far?" oh, very far;
As far as from end to end
Of the longest barn-yard bar;

As far as the pew is long
Where you sit and wish that playing
On Sunday was not wrong.

As far as from here to there;
For there was his little nest
And the household of his care.

Did you ever see a hole
No bigger than mousey's head,
Or the head of a small brown mole?

Of course you have; so has the cat,
Up in the corner close to the floor.
This hole was just like that.

How long and how many, who knows?
But down there lived little ant,
And his family, I suppose.

On, on towards that den
He pushed with all his might;
Pushed as if he were ten;

And went in front and tried,
And tugged, I tell you now,
And round from side to side.

Sometimes he stopped and looked
As if he'd given it up,
Then walked away and looked.

Not far away he walked,
Nor did he give it up,
And here is where he talked;

Saying, "Sure as I am an ant,
I'll lay that up for winter,
And sting who says I can't!"

Then back to his labor,
With a will as stout
As a soldier's good sabre.

Little by little he moved it,—
A will finds a way,—
Little by little he proved it.

There, ere the sun went down,—
Worthy illumination
All over the town,—

I saw the great treasure
Most safely arrive—
The great golden treasure;

At the hole in the corner
I saw it go down;
And, proud as Jack Horner,

With his pie full of plums,
Saw my hero go down
To beat all his drums,

To call all his neighbors,
And tell all his folks
Of his wonderful labors.

Then they held—as was right—
A joyful high feast
That good Sabbath night.

Did I run to tell about it,
Saying, "Yes, I saw it!"
You need not doubt it.

I sat and thought;
And thought it plain,
That the way to be good
Was *to try it again*.

Santa Claus brings Johnny a stocking full of goodies. Johnny is glad.

When Papa comes home from town, Johnny sees that Ned gets the sled. Johnny is mad.

ENIGMA.—Six letters compose may staff.
My second you write if you write the word *laugh*.
My third you pronounce if you just say "Oh,
Why mother, these buiscuit are nearly all *dough*."
My fourth, why child, you couldn't spell *cat*
Without using this, and its plainly in *that*.
My fifth in the alphabet isn't the worst—
To tell you the truth, it stands next to the first.
My sixth is as plain as you please in *muzzle*,
My first is in every line of this puzzle.
My whole is name of a man quite famed,
If you don't make it out now who 's to be blamed?

Answer next month.

EDITORIAL MISCELLANY.

The Editor's Late European Tour.

COLOGNE, THROUGH BELGIUM, TO LONDON—BATTLE OF THE WINDMILL AND OF WATERLOO.

Cologne is a town of 100,000 inhabitants and has greatly interested me by its Roman antiquities, its numerous old churches, its grand cathedral and much else. Founded more than fifteen hundred years ago, what wonderful changes have occurred in its history. First an intrenched Roman camp, then the abode of the ancient Ubians, it afterwards witnessed the coronation of the Emperor Vitellius, and then of Clovis, King of the Franks, was united by Otho the Great to Germany in the 10th century, exerted a powerful influence in, and was the chief support of, the famous Hanseatic League, in the 14th century, was conquered by the French in 1794, by the Russians in 1814, and finally fell into the hands of Prussia, by whom it is still held.

The people show their origin by a peculiar physiognomy, different from that of Germans of a pure blood, but are industrious and prosperous.

The Cathedral is most worthy of notice. It was begun in 1248, slowly progressed for two or three hundred years, remained *statu quo* for about three hundred more, and is now again going forward. Its foundation is in the form of a cross, and when completed it will be one of the grandest temples in the whole world—length 500 feet, width 230, two towers each 500 feet high, the arches supported by a quadruple row of colums sixty-four in number. Its architecture is pure Gothic and it is designed to follow in every particular the ancient German model. Though, as yet, but little more than the choir, with surrounding chapels, and one tower of the hight of 160 feet, are finished. I have thus far seen no work of man on the continent which has so stirred within me emotions of the sublime. 'Twas at twilight I first saw it, and the vision is still before me—the great temple standing in solemn majesty; the old, by its moss-covered walls appealing to the dead Past, the new, by its lately chisseled columns, its scaffolding and mighty construction engines looking bravely forward to the 500 years hence, when it may have been finished and—in a new spirit, possibly by another race of people—finally consecrated to the worship of the true God. I, also, did myself the pleasure of paying a moonlight visit to the house where my favorite artist, Peter Paul Reubens was born, and where the unfortunate Marie de Medecis, Queen of Henry IV of France, ended her eventful life. A plain, two-story and a-half dwelling, with a beautiful head and bust of the great artist, carved in wood, in the transem over the door.

Notwithstanding its 60 cologne factories, the city of Cologne is, by no means, the sweetest and neatest of all the German towns, and I am glad to be on the railway cars, dashing westward.

Between Cologne and Aix la Chapelle, the country is quite flat and cultivated in good German style. Wheat, rye, barley, oats, hemp and the sugar beet are looking well.

The engine whistles, and the agents announce "Aachen!" from which I know that we approach the old imperial city of Aix la Chapelle, on the frontier between Rhenish Prussia and Belgium, and about 40 miles from Cologne. A handsome, well built city, with at least one broad beautiful street, through which, as I look upwards towards the summit of the slope on which the town is built, the eye is charmed by the magnificence and beauty of city and suburbs. A stirring place, too, with modern improvements and a manifest disposition to get back as much as possible of the prosperity and importance it once enjoyed. But it's of no use, O ye Chapellers, it was Charlemagne who made your hill-girded city once so famous, and Charlemagne has been dead a thousand and forty-nine years! You may vigorously carry on your numerous factories for the making of needles, of kerseymere, of files and of copper and brass wires, and so make your goodly city a greater blessing to the Province than

before, but the great Emperors will no more come to you for coronation and burial.

The warm sulphur springs of Aix la Chapelle are noted and large numbers of foreigners annually come here for their health.

—So much for Prussia and the other German States. Famous for its literature, its science and its admirable system of education, Germany is, nevertheless, behind in the arts and especially in the mechanics of agriculture and the breeding of cattle and horses. What the German States lack is unity. That secured, with their extensive mineral resources, their quarter of a million square miles of productive lands, their facilities for manufacturing and commerce, what may not their forty-four millions of intelligent, industrious and liberty-loving people accomplish within the next century!

And now I touch the soil of

LITTLE BELGIUM—

The garden of Europe—famous for the fertility of its soil and the perfection of its system of agriculture, for the extent and great value of its mines of coal, iron, lead, zinc and manganese, for the magnificence of its forests of timber, for its teeming factories whence are obtained the best linnens, laces, cloths, carpets, porcelains, cutlery and fire-arms known to the commerce of the world, for the extent of its internal improvements, for its fine old cities noted for the magnificence of their buildings, the productions of their industry, and the number of their institutions of learning and public libraries, for the denseness of its thriving, happy population, and for its heroic history.

From Aix la Chapelle to Liege the country is mountainous—the people largely devoted to mining and manufactures. Verviers, on the way, is a stirring town noted for its cloth factories; and Liege, at the confluence of the Neuse and the Ourthe, both navigable rivers and at the point of intersection of several of the most important railroads of the kingdom, is known the world over for its superior fire-arms and cutlery—as the place where the Belgian rifles are made. Located in the very heart of the mining section of the country, where iron and coal are both inexhaustible, of superior quality and easily obtained, it is natural that it should be the great Birmingham of this kingdom.

Passing through Liege to the westward, the railway rises by one of the steepest grades known in the world—so steep that the trains are obliged to be drawn up the incline by a stationary engine at the summit; from which point the view of the valley and of the great smoking, thundering city is truly magnificent.

Thence to Brussels, the brilliant capital of the kingdom, and distant about seventy miles, the surface of the country slopes ocean-ward and is distinguished alike for its mines and its agriculture. The farms are not only garden patches in size, but gardens in reality. Crops grown as in France, without fences between. All the cereal grains, meadows, and various root crops, including the sugar beet occupy every foot of arable land, while the vines are seen upon all the sunny slopes of the hills, where nothing else could be grown.

Brussels is one of the most beautiful and interesting cities on the continent. Founded in the 7th century and successively controlled by the early Frankish, the Spanish, the Austrian, the French and the Hollandish dynasties, and, at last—since 1830—the capital of the new-born, independent kingdom of Belgium, it has had a checkered history and today shows interesting marks of the various nationalities under which it has flourished during the past thousand years.

For beauty of plan, elegance of buildings, boulevards, and profusion of statuary, fountains, gardens and shaded promenades, it is strikingly like Paris. But it is not only beautiful; it is one of the great centres of industry. Especially celebrated for its manufactures of fine lace, its linnens, damasks, carpets, ribbons, jewelry, mathematical and musical instruments, coaches, chemicals, soaps and glass.

Brussels is also celebrated for the great battles which have been fought in its vicinity. One of them, in 1815, decided the fate of European Empires. What names in modern

history so familiar or so famous as Napoleon, Wellington, Waterloo!

Shall I tell you the truth? Well, it was the field of Waterloo more than any other one thing that induced me to take this route to London instead of through Holland. I had not time to "do" both Holland and Belgium and I would not leave the continent without having studied that famous field.

TRIP TO WATERLOO.

It was only fifteen miles, and the road was delightful, passing along the skirt of the forest of Soignes, the southern border of which so well supported the failing troops of the Iron Duke when pressed by the resistless legions of the great Napoleon. But then it was already six o'clock in the evening and I could not easily and economically get a conveyance at so late an hour. I had resolved to sleep on the field of Waterloo that night, however, and was not to be turned aside by trifles. And so I walked! leaving Brussels at seven o'clock. No walk could have been more delightful. The McAdamized road is as smooth as a floor, and on one side has a pleasant footwalk between two rows of shade trees. On the other is the grand old forest, its beech trees so densely grown that it is impossible for the eye to penetrate their deep shade to a distance of more than a very few rods. The twilight lasted until nine o'clock, and then the new moon kindly took its place in the heavens, so that it was still not dark when I reached the village of Waterloo. Here I learned that the battle field was at St. Jean. Arrived at the little collection of houses known by that name at ten o'clock, and enquired the way to the great mound with the stone lion, which I knew to be on the very field of fight, was blunderingly directed by a man who seemed to talk no language I had ever heard spoken before, and went ahead, for I had conceived the romantic idea of taking a look at Waterloo by moonlight, before seeking for quarters. Followed directions, climbed what I supposed in the dimness of light to be the Mont Lion, when lo, I stood in the shadow of a monstrous windmill! As is the habit of this Hollando-Belgic institution, it stood upon stilts some fifteen feet high. It was a quarter of a mile to the hotel, and more than likely the plain spread out before me was that whereon the armies of the Allies and of Napoleon struggled for mastery. So I sat down under the mill for a few moments' "reflection" and speculation. A yell! as if all the devils in hell had been let loose, and I was surrounded by men armed with clubs and guns! 'Twas vain that I remonstrated and tried to explain. The blows fell upon my shoulders and shins in quick succession, and bayonets punched me threateningly in the ribs! Talking English, French and Dutch alternately, and then all at once, but without the least effect, I thought best to travel for the hotel. I had hit it. So long as I kept going they refrained from blows; and thus, with ruffians to the right of me, ruffians to the left of me and bayonets behind, I was marched to the great gate of the hotel.

A few hard raps on the gate brought a night-cap to the window and the spiteful enquiry, "Qu' est que c'est que cela? *My* toungue was the nimblest, and, as rapidly as I could tumble out the French of it, I told him, "A friend and an American citizen who has fallen among savages, and wants shelter." Said the night-cap, "Can you talk English?" Said I "I *think* I can!"

Then the devils who had me in keeping told the landlord in a most unintelligible jargon—which I afterwards learned was the dialect of the mongrel Walloons, who talk a compound of German, French, Flemmish and Spanish—that I was undoubtedly a robber, for they had found me about to break into (or carry off! I could not learn which,) the windmill! and that he must take me in and keep me under the closest watch! But my good American speech and face (!) did the business. In less than two minutes the great gate was closed behind me, and Night-cap and I were as cosily chatting over crackers and wine as though we had been two dear friends of other years. And thus ended the Battle of the Wind-Mill.

FIELD OF WATERLOO.

It is morning, and with a good French guide, (I always prefer to hear the French side of the story,) I stand on Mont Lion, surveying the field of Waterloo! I can hardly realize that forty-seven years ago this very month—quite within the memory of my guide—on this very plain was fought the greatest and most decisive battle in all history. The sea of nodding wheat heads, fattened upon the bones of heroes who that day perished, and the waving meadows grown more luxuriant for the mingled blood of Britton, Frank and German, know it not; but there is old, dilapidated, war-scarred Hougomont, within whose orchard wall whole regiments were literally slashed to pieces in awful hand-to-hand conflicts—there, in the distance, are Genappe, and Nivelles and La Haie Sainte, and last of all La Belle Alliance where Napoleon stood for hours and directed the battle—there, too, where the Iron Duke stood nearly all day amid the storm of shot and shell—there the fatal sunken road from Ohaine to Braine l'Alleud, into whose deep cut, as into the jaws of hell, rode so many of Bonaparte's glorious twenty-six squadrons of cuirassiers, in the grandest charge of mounted men the world ever saw—there the very spot whence, in his enthusiasm, the Emperor sent his courier to Paris to announce the victory—there the road by which Blucher came with his Prussian host and turned the scale, at the moment when the allied armies were half in rout and Wellington himself had well nigh lost all hope—there, again, the road by which the deaf and treacherous Grouchy did *not* come to the aid of the French—here where the grand Imperial Guard performed those prodigies of valor which have made them immortal—and there, in that little valley, where, after the Imperial Army had been thoroughly put to rout, and in the darkness of the night, the lone legion of Chambronne, under the concentrated fire of the victorious artillery of the enemy, under a storm of lead and iron such as granite could not withstand, and under the crushing weight of relentless legions on every side, sublimely fought until, piece-meal, they were cut and blown to atoms or ground into the very earth!

Sixty thousand warriors of the 140,000 who composed the two armies dead on the field! *That* was a battle. God forbid that the progress of man may ever require such another! And yet do I know that a second Waterloo is not this moment being fought in my own dear native land? If so, may Destiny, as here, be on the side of Liberty.

— At Brussels again, and off for Ostend; passing through the fine old manufacturing town of Ghent and the low, rich lands of northern Belgium.

Ostend is a fortified port of considerable magnitude and commercial business. Buildings and streets generally rather inferior, and uninteresting.

— My feet have left the continent. Tucked away in a mean little steamer—they run none other than such across the British Channel, for some reason—I have five hours of horrible sea-sickness, and at last, pale, faint, and pretty much disgusted, stagger upon the shore of the glorious little "sea-girt Isle" and rest from my torture beneath the towering chalk cliffs of Dover.

—It is nine o'clock in the evening of the 6th of June; the train slowly enters a vast, weltering city, whose million lights seem to welcome me home again to this, the present great centre of the world. The solid rock of London Bridge is pressed by my weary feet once more, and the sublime dome of St. Paul's guides me on my way to the hospitable mansion of the upright Judge whose guest I am glad, again, to become.

It seems a life time since I was here before. And what wonder? Have I not made the tour of the South of Europe—of France, of Switzerland, of Germany, of Rhennish Prussia and of Belgium? Up the Seine, down the Saone, up the Rhone, across the Alps on foot, and down the Rhine! A grand circuit of some two thousand miles, stopping at every place of either natural or historic interest, and all within less than one month! My English friends tell me I ought to be proud of

the achievement—that "none but a Yankee could have done it."

—Henceforward my notes shall be of England, Scotland and the Emerald Isle.

☞ **The Editor of this Journal** will spend a portion of his time the coming winter in delivering *free public lectures* on Industry, in such localities as he has not visited hitherto. He has also in preparation several lectures on themes of general and national interest, for the delivery of which he is ready to make arrangements with such lecture associations as may choose to communicate with him. The following are titles of three of the lectures of the class last mentioned:

"Napoleon in Mexico."
"England."
"Our Heroes," (a poem.)

Highly Interesting Foreign Correspondence.—Our next volume will be greatly enriched by valuable, pertinent letters from many parts of the Old and New World. Hon. Mr. Holton, of Milwaukee, now travelling in Europe, Judge Knapp, of New Mexico, the American Minister to New Grenada, and a number of the representatives of foreign countries whom we met last year at the World's Fair, in London, have promised to favor us with occasional correspondence touching the industrial affairs of the countries through which they travel or in which they reside.

Readers of the Farmer! dont forget, in the enjoyment of your own good fortune, the many neighbors about you who are without it. Every farmer should have, at least, one good, reliable agricultural paper; and, with every man of public spirit and a particle of State pride, that one which is published within his own State and for his own particular benefit, will receive attention *first*. Show the November and December numbers to as many non-subscribers as you can, without too much trouble, and see if they cannot be induced to try it for the next year.

The Farmer--Vol. XVI.—We have already said all that would seem to be necessary as to our plans and expectations concerning the future of the FARMER, and it is hardly necessary to repeat that we are determined to make it, *not only the best*, but also, *in every important respect, the cheapest of all the agricultural journals.*

We Tender our most Hearty Thanks to the host of working friends in all parts of the West who have contributed by their zealous efforts, as voluntary agents, to the encouraging success of the FARMER the past year. Now that they have on a good pressure of steam, we hope they will find suucess so much the easier, and thus roll in such lists of subscribers as shall astonish even our own large expectations.

Coming in Splendidly.—The Farmers of Wisconsin are giving new evidence of their appreciation of this, their home agricutual journal. The subscriptions have never come in so finely before, since the good old times before the financial crash of 1857.

Prizes for Everybody who shall subscribe to the FARMER for 1864. We have made more liberal offers than any other agricultural journal published. See prospectus on cover.

Wm. J. Park & Co., Job Printers and Printers to the State.—We cannot better compliment this new and reliable firm of Printers than by calling special attention to the neat mechanical execution of this journal since September. See their advertisement under table of contents.

Premium Sugar Cane Mill.—We are pleased to see by the Illinois papers that the FARMER's premium Sugar Cane Mill, to wit, E. W. Skinner's "Climax," carried off the Medal, Diploma and money prize at the Illinois State Fair; and that, by reason of that victory in competion with the best mills of the country he is receiving orders from all parts of the Northwest. Good enough for him. He deserves just such treatment.

Farmers' Clubs, we are pleased to learn, are being organized in many parts of the State. They may be made instrumental of great good. No neighborhood should be without such an organization.

Our Many Worthy Contributors for the past year 1863 are justly entitled to our grateful acknowledgements for the great interest they have added to the columns of this journal. We trust they will not weary in well doing, but give us even more than heretofore of the fruits of their thoughts and experience.

Remarkably fine two-year old Apple Trees.—J. C. Plumb, of Lake Side Nurseries, Madison, excels in nursery stock of this sort. Samples in our office grown by him can't be beaten in America. Mr. P. is of the opinion that it is better to plant trees at this age than such as are 3 or 4 years old. In this he is, as we also believe, eminently sound.

Plowing about Fruit Trees.—Please tell us through the FARMER whether it would be good policy to plow about apple trees *late* in the fall, Yours,

HENRY W. NICHOLSON.

ANSWER.—If you plow around your apple-trees at all, we know of no sufficient reason why it would not do to plow *late*. On some accounts, perhaps, it would be better to do so. —[EDITOR.

Straw-Stacks Burned.—I have had the misfortune to have my straw-stack from 28 acres burned—quite an item to us woods farmers. What shall I do with the ashes? I propose to apply it as a top-dressing to clover. If best, when apply it?

Your obedient serv't',

E. TALLMADGE.

Fond du Lac, Nov. 1863.

ANSWER.—That will do very well. Apply in winter, so that the rains of winter and spring may thoroughly leach their soluble constituents into the soil.—[EDITOR.

The Farmer will not be Discontinued to Present Subscribers, without notice to to that effect, unless it be at the option of the publishers.

A Sorghum Convention for this State is to be held at Madison sometime in January. A definite announcement will be made in the January number. Let the friends of the Sorghum interest arrange to be present.

Our Brethren of the Press will receive our grateful acknowledgments for the generous manner in which they have repeatedly urged the claims of this journal upon the farmers of the Northwest.

Publications Eminently Worthy of Patronage:—"Hunt's Merchant's Magazine," published by Wm. Dana, N. Y.; the "Scientific American," by Munn & Co., N. Y.; "Littell's Living Age," by Littell & Son, Boston; "The Atlantic Monthly," by Ticknor & Fields, Boston;" "The Continental Monthly," by J. F. Trow, N. Y.

Readers of the Farmer, we want the results of your experience and practical observation. Could you not help us more in this way if you would try?

NEWS SUMMARY.

INDUSTRIAL AFFAIRS.

Meeting of the Wool-Growers' Association.—The attention of our readers is called to the following announcement. We shall attend if possible:

PAINESVILLE, O., Nov. 9, 1863.

EDITOR WISCONSIN FARMER:—*Dear Sir:*—The "Ohio Wool Growers' Association" propose to hold their annual meeting in the city of Columbus, January 5th, 1864. Hon. Henry S. Randall has consented to deliver the address. The "Ohio State Board of Agriculture" will meet there; also the "Ohio Sorghum Association." The Legislature will also be in session. Thus, you see, we shall be able to combine a strong interest in our favor.

You may be assured no exertions shall be wanting to make the meeting worthy of our State, and the vast interest it is designed to promote. Can you aid us in mak-

ing this known to the *live* Wool Growers of Wisconsin? Our circular will be out in a few days, and we would be glad to send it to such names as you may give us. Please make a note of this in the WISCONSIN FARMER in addition.

With much esteem, sincerely yours.

W. T. GREER.

The Markets are full of encouragement to the farmer. Grain, hay, pork, fat cattle, wool and almost everything else bears a good price and seems to be on the ascending scale.

At Milwaukee, Nov. 20th: Wheat firm—Spring, No. 1, 1 09@1 09¼; No. 2, 1 05; Winter, No. 1, 1 10@1 10½. Oats, 61@62. Rye, in store, 92. Corn—No. 1, mixed, delivered, 95c; in ear, 72. Barley 1 20@1 25. Potatoes, 50@60. Butter, in roll, 22. Cattle in gross, $2 75 per cwt. Chickens, 8c per lb.; turkeys, 9c. Wool, 65@70.

NATIONAL AFFAIRS.

No news of startling importance since our last issue. All quiet on the Potomac. Meade feeling after Lee, and Lee feeling after Meade on the Rappahannock. Gillmore is still peppering Charleston with shot and shell; Gen. Butler has been assigned to duty at Fortress Monroe; Burnside has been in a tight place at or near Knoxville, Tenn.; Grant is crowding Bragg farther away from Chattanooga; the 13th Corps has had a collision with the enemy in Louisiana, and been worsted, losing some 639 men and quite a number of prisoners; Col. Guppy, of the 23d Wis., being of the number.

The courage of the army and people of the Union never was better than now. The draft is adding but few men to the army, but enlistment is going on actively in all parts of the country. The rumor that a conspiracy was forming in Canada, under the direction of rebel emisaries and sympathizers, to burn certain cities on lake Erie has occasioned such precautions on the part of the Government as will prevent its consummation.

FOREIGN MATTERS.

England appears to have her hands full, just now in preventing the escape from her ports of certain iron clad ships built for the Confederate service, but restrained by order of the Government.

France has notified the American Minister that the work of building rebel pirate ships in her ports should be stopped. It is rumored that the Emperor is to withdraw his troops from Rome, and that 10,000 Spanish troops are to take their place. He evidently needs more force for the subjugation of Mexico, and Spain is only glad enough to give her this indirect aid.

Polish affairs are *statu quo*. The Czar still bears upon the people of that fated province with a heavy hand.

Syria is struggling with revolt, 20,000 Arabs in the Hauran having rebelled.

The Mexicans, at date of last accounts, were doing their best to thwart the expedition into the interior, for which the French were making great preparations.

Gen. Commonfort, the Mexican Secretary of War, had left San Luis for Queretara to take the command-in-chief of the army—from 15,000 to 20,000 strong—which was drawn up before that place. The next in command under Commonfort was Gen. Uraga, Governor of the State of Michoacan, who is reported the best officer in the service of Juarez. Gen. Diaz, whom Commonfort had relieved, had marched, with some 3,000 men, from Queretara for Tehuacan, where he expected to receive reinforcements from the States of Vera Cruz, Puebla, and Oaxaca. With the forces thus raised he was to commence active operations against the French in the eastern part of Mexico, between the City of Mexico and Vera Cruz, with a view to cutting their line of communication with the coast.

The Church party of Mexico are not very well pleased with Gen. Bazaine, who seceeds Gen. Forey in the command of the French army. They find his views too liberal to suit them. They are much more liberal than those of Gen. Forey, who is believed to have been recalled by the Emperor in consequence of his unduly precipitate policy.