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NOVEMBER, 1897.

NO. II.

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A Monthly Journal
Keeping and the other
to-Date and Progress.



devoted to Farm Bee
Minor Interests of Up-
sive Agriculture.



THE BUSY BEE.



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EMERSON TAYLOR ABBOTT,
EDITOR AND PROPRIETOR.

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St. Joseph, Mo.

THE BUSY BEE.

PUBLISHED MONTHLY.

Vol. 8, No. 11.

ST. JOSEPH, MO.

NOVEMBER, 1897

STOP A KICKIN'.

Stop yer kickin' 'bout the times,
Git a hustle on you;
Skirmish 'round and grab the dimes,
Ef the dollars shun you,
Croakin' never bought a dress.
Growlin' isn't in it.
Fix yer peepers on success,
Then go in to win it.
Times is gittin' good again—
Try to help them all you kin.

Don't sit 'round with hangin' lip,
That is sure to floor you,
Try to git a better grip
On the work before you.
Put some ginger in yer words
When you greet a neighbor,
Throw your troubles to the birds,
Git right down to labor,
An' you'll notice ev'ry day
Things is comin' right your way.

Stop yer kickin', get a hold
Of the wheel an' turn it;
You can never handle gold
'Less you try to earn it.
Brush the cobwebs from your eyes,
Stop yer blamed repinin'.
An' you'll notice that yer skies
Allus'll be shinin'.
If you hain't the nerve to try,
Sneak away somewheres and die.
—Clipped from Farmers' Voice.

HOW FAR BEES GO FOR HONEY.

By C. P. Dadant.

I have often read of bees going great distances for their honey, and harvesting crops from blossoms three miles or more from their apiary. Although there is probably some truth in the statements thus made, yet, for all practical purposes, I believe that it is useless to depend upon their going over two miles in any one direction. We have had out-apiaries, located 4 to 12 miles away from our home apiary, for 25 years, or more, and I know by the experience of the crops in each of these apiaries that the ranges of the bees in them were entirely different.

We once had an apiary located on the shores of the Mississippi river. This apiary remained in that spot for about eight years, and its crop was

always shorter than that of any other apiary. It was about four miles north of our home, and although we knew that the vicinity of the river—which, of course, cut off half of its pasture—had something to do with its scanty crops, yet we disliked to remove it, because it was in a location where orchards abounded and the facilities for a spring harvest were good. We were for a long time under the impression that the home apiary was helping to cut off its honey supply, by its proximity, but we were well cured of this doubt when we found a small apiary of 10 colonies exactly half way which had harvested more surplus than either of our own.

We have often, since, ascertained that localities three miles apart may have altogether different crops, both in quantity and quality.

I read an article lately by one of our leading authorities, in which he advises prospective bee-keepers to select their location in reference to the amount of bloom, wild or cultivated. This is good advice, and yet it is not always safe to depend upon present conditions to determine the future. As an instance of changed conditions, unexpected, I will mention what has happened in the neighborhood of an apiary which we located some 20 years ago between the cities of Hamilton and Warsaw, about half a mile from the Mississippi river.

When we first placed bees on this farm, the land was but little cultivated in the neighborhood, and the bottom or low lands along the river, composed of islands and overflowed strips, were in their natural condition, producing a profusion of fall bloom. The cultivated lands in the neighborhood were largely orchards, and the timber contained plenty of basswood—a real Eldorado for bees.

Within a few years the young, thrifty orchards had become much damaged by hard winters, and the low lands

were so closely pastured by neighboring cattle as to cease to produce anything, except iron-weeds and boneset, which, as everybody knows, produce about the poorest grade of honey that can be found. Later, the owners of the timber began to cut it down, and we seriously feared that all the basswood would go. The crops of this apiary had so diminished that we began to study over the necessity of removing the bees elsewhere. But in the past 3 years a revolution has taken place. The low lands have been put under fence and cultivated. The cattle being shut out from those islands that are not thoroughly cultivated, they grow more and thriftier honey-plants than they ever did before, and after all these years, a better harvest comes to our bees than the one before. It matters but little what is grown on these lands, the soil is so rich that when the cows are kept off a bountiful harvest is sure to come from knotweed and Spanish-needle—and the crop of the apiary is at present equal to the best we have.

Another apiary, located only two miles east of the above, yields no fall honey worth mentioning. This shows it makes no difference what other people's bees do, ours will not thrive on a honey-crop source located two miles or more from them.

There is, however, a possibility of bees traveling that distance, or even more, if the country over which they travel is not broken. We have seen our bees at work about two miles from home along the valley on which we live, and we ascribe it to their not having any hills to climb or heavy timber to pass. Very certainly, bees will travel farthest where the country is smoothest. Hancock, Ill.

American Bee Journal.

BEEKEEPING FOR PLEASURE.

The following is condensed from an article by Geo. Appleton in the Wisconsin Agriculturist:

There is pleasure in beekeeping if the beekeeper be interested in outdoor life and in the study of nature in all her moods and forms. The curiosities of the hive, the marvelous work that goes on within the hive, is not only entertaining, but also instructive and inspiring.

In keeping bees for pleasure, expense is a secondary consideration although it may be very little. The first thing to be done in preparation is to secure a hive adapted to beekeeping for pleasure. It must be an observatory hive, or a hive so constructed that it may be thrown open to view at any time. This is usually provided for by giving the hive glass sides. But the glass sides must be covered with shutters, for bees work in the dark and if the shutters be not applied, the bees will cover the glass with wax and propolis.

Neither of these will make the hive absolutely dark, but the bees make it as dark as they can with the means at their disposal. To keep out the light and to protect the hive, let the sides be covered by shutters or blinds that may be easily and quickly removed.

Of course nothing can be seen in a so-called observatory hive except that which goes on in the two outside frames, or rather the outside of the two outside frames. To watch in an observatory hive, the building of comb is very interesting. When foundation is used the bees simply draw out and down the wax, adding a little of their own, perhaps a third.

All this comes from the bee, exudes from the body between the plates or scales in minute particles, and the bees work it over with their "fingers" and shape it into comb. A wonderful provision is wax. It may be said in passing that wax was not intended to be eaten. It was given the bees that they might have means of storing honey for their own use. It is useful in the arts, but unfit for food.

When bees build comb without the help of foundation, the work is still more interesting to watch, although it cannot be watched long at a time, for the bees, at first unmindful, soon become alarmed by the admission of light and stop work.

All combs are built downward. The edge of the comb where the bees are at work, increases rapidly under the deft fingers of the workers. The work of bees at every stage is absolutely perfect. There is no staking to build or take down. Hanging head downward, the bee with wonderful instinct and skill builds its hexagonal cells absolutely correct as is based upon and provided for by mathematical science. This

work goes on so slowly that the human eye, in the time it observes, does not perceive any increase but if looked at again in twenty-four hours, the addition to the structure is seen.

It is certainly interesting to see the bees, the pollen gatherers, come into the hive and unload their baskets of pollen. Pollen is the fertilizing agent in flowers, and is used by the bees to feed to the young bees after it is mixed with honey. What dainty food! Honey and pollen! No wonder bees are so extraordinary in many ways!

The pollen is collected in "baskets" on the thighs of the hind legs. These baskets are crowded so full that often the "mass" of pollen, about a sixteenth of an inch in diameter, falls out. The bee enters the hive and proceeds to unload the pollen baskets by giving them a spasmodic kick with the middle feet, the bee having six feet. If they, the bits of pollen, do not come out quickly, perhaps the packer bee assists, taking hold of the pollen and pulling, reminding one of a man taking off another man's boots. The packer then rolls the pollen into a cell and gets in after it head first and batters it down with his head, that it may be packed solid.

What a factory this is! In addition to this force are the fanners, the bees placed by instinct, throughout the hive to keep their wings in motion to produce a current of air. If this were not done sometimes the comb would melt; the fanning gives pure air and cools the hive. The sound of the bees' wings makes what is called "the hum of the hive" referred to by some writers who appear to think that the hum is the result of the bees' working. Bees work in perfect silence, that is, no sound comes from their work, and when there is no fanning, complete silence reigns as far as the ear can detect although the entire colony is at work as usual.

The beekeeper for pleasure looks for honey—some honey from his bees. He may have this in one pound and in two pound boxes, comb honey. He may have extracted honey if he will take the trouble to extract it, but extracting is the work of a professional beekeeper. If the hive be properly arranged the bees may be led to work in irre-

gular sections or boxes—to fill glass globes, tumblers, jars with the finest of honey in white comb. This is ornamental as well as food for the table. Comb in the shape of stars and crosses have been made and filled with honey by the bees.

Much good may come from keeping bees for pleasure. The mind is turned from daily routine and the weight is lifted. The movements of the bees in and out of the hive and the many "bee problems" interest the mind and keep it busy for the time being with something that delights and rests it.

The exercise, too, in the open air brings healing for many ills. An eminent physician once said: "If I could get people out of doors, and give their minds and bodies something to do, I could cure them without medicine."

SWEET CLOVER IN MISSOURI.

Some one wrote the following for *Gleanings*, 1894, from Garden City, Mo.

As is well known, sweet clover is a valuable honey-plant, while some persons regard it as a bad weed; but with eleven summers' experience I have learned quite a little about it. In the first place, I sowed it for its honey qualities; but I soon found there was something else of value connected with it. I sowed it on poor heavy soil in the spring of 1882. The following year it was a boon to my bees, yielding abundance of honey. I had sown it near the public road, and many persons going by would stop to see the bees work on it, and expressed surprise. The roots penetrate deep into the hard subsoil, and make the land loose and friable, and, after the crop is cleared off, it is in fine condition to put to other crops.

We once, just as it was done blooming, turned it under and sowed it to buckwheat, thus getting two crops of bloom in one summer. The following spring we sowed it to oats, getting a fine crop, while at the same time the sweet clover volunteered, making a heavy growth by the 15th of Sept., standing about three feet high. Now was our time to try its qualities for hay, and, suiting the action to the thought, the mower was brought out, and in due time we had it in a stack, making about 1½ tone per acre. It was the sweetest-smelling hay that I have

ever seen. In one instance I had to call the doctor one very dark night, and, as we came within a few rods of the haystack, the doctor stopped short and said:

"What smells so wonderfully sweet?" On being told it was a stack of sweet-clover hay he was much surprised. It was actually so sweet that, every warm day during the winter, the bees would be flying about it. We fed it all out to our sheep, with corn fodder for a change, and I never had sheep do better. Horses will readily eat it, but cows do not care much for it.

It will grow almost anywhere, even on very rocky hillsides and waste lands; but I prefer to sow it where I can keep control of it and get a crop of bloom and a crop of seed; then the next spring a crop of some kind, and in the fall a crop of hay, or to wheat in the fall, and in the next fall a crop of hay.

Every other year it reseeds itself; but if put to a cultivated crop a few years it can all be killed out. I made a garden-spot on a sweet-clover patch where there were millions of seeds, and in two years it was all gone.

With us it grows from four to eight feet high, thus making it almost impossible to get it into a thrasher or huller. We cut it with a self-rake reaper, then make a platform on a sixteen-foot hay-rack, placing it on a skid made on poles bolted together with cross-pieces; then hitch three horses to it, and pull it to the field. With two light poles about eight feet long, and just heavy enough for a man to handle, and two pitchforks, we are ready for business. Now fill your platform, not too full; and if the clover is very dry, a few good strokes will land the seed in the bottom of the platform. Now tumble out the refuse; drive up, put more on, and so on around the field. A little experience will show how it should be done. When all is thrashed off, run it through a huller and you have the Bokhara seed.

It seldom fails to yield enough to keep the bees out of mischief, and keep up brood-rearing; but we seldom get much surplus; for blooming as it does, at a time when very little else is yielding honey, it would take a large area to give us thousands of pounds.

As to off years, we have them too in this as well as in other honey-produc-

ing plants; but only once for us in eleven years was there an entire failure; yet it bloomed profusely, but seldom a bee was seen on it, but thousands of large flies, bugs, and what not but bees.

SWEET CLOVER IN KANSAS.

I clip the following from the American Bee Journal of July 4, 1895:

I discover that there exists quite a disposition to boom sweet clover. Better "watch a little out." Our people regard it as a pernicious weed. It is reported that a certain Kansas farmer sowed 40 acres, having purchased the seed for alfalfa, and the party who sold the seed only escaped a lawsuit by a sudden death. "Haec fabula ducet." If you don't want to die in a hurry, don't sell sweet clover seed, nor mixed sweet clover and alfalfa. It appears to be wonderfully hardy, grows along the irrigating ditches, thrives with irrigation, but also grows about as well on the upland where the subsoil is as dry as ashes, and probably has never been penetrated by rain water, or otherwise received a bit of moisture since this section was the ocean's bottom. Nothing will eat sweet clover, either green or when cut for hay, and we do not consider it valuable for its nectar. I have heard that stock eat it in Utah, but our cattle will sooner eat loco and yucca.

Syracuse, Kans. JAMES H. WING.

Replying to the above in a subsequent number of the same journal, the Editor of the Busy Bee said:

Emerson says somewhere, something like this: A weed is a plant the use of which has not been found out. I was reminded of this when I read Mr. Wing's letter on page 434. Why, sir, if his description of the way sweet clover grows in Kansas is true, all that is needed is for them to "find out its value," and it will have a regular boom in that state. He says it will grow where the soil is as "dry as ashes," but "nothing will eat it." Well, that depends. The cows eat it off here in St. Joseph as readily as they would the best grass you ever saw. Of course, stock must learn to eat it. So must they learn to eat prairie hay. I have seen horses in the east, which had been fed all their lives on good timothy hay, that would not touch the prairie-grass hay which

we get in Kansas. They would think it a "pernicious weed."

In another number I further said on this subject: How is this, anyway? Let us see. A weed according to Webster, is, "A plant growing in cultivated ground to the injury of the crop or desired vegetation, or to the disfigurement of the place; an unsightly, useless, or injurious plant." According to this definition, sweet clover is not even a "sort of weed," for it is neither unsightly, useless, nor injurious; but on the other hand has been proven a profitable crop both as a forage plant and as a fertilizer of the soil, and what delicious honey the bees do gather from its flowers!

I fully agree with Dr. Miller that it would be a good plan to sow the "hog-lots," which produce nothing but dog-fennel, with sweet clover, alfalfa, or some other useful plant. If all the waste land of the country could be made to produce some nectar-yielding plant, how much the honey would add to the annual income of the country! Perhaps many do not realize what a large portion of the land of the country is uncultivated. I quote from the Report of the Secretary of Agriculture for 1893:

"Of the total country only 18 per cent. is improved. The better developed part (east of Colorado) shows only 29 per cent. improved, and even the long-settled Atlantic coast, which we are apt to consider fully occupied, still possesses about 65 per cent. of unimproved land."

Allowing one-half of this to be woodland, there is yet plenty of room for sweet clover, even if it were a useless weed aside from honey-production.

CULTIVATING SWEET CLOVER.

By H. R. Boardman.

Yes, I am sure I can give a few hints in regard to the cultivation of sweet clover, that will be valuable to those who propose to sow it. I have studied its habits for a good many years. Almost every one falls into the fatal mistake of supposing it will catch and grow anywhere, with no further trouble than scattering a few seeds. The requirements for success are, a thoroughly underdrained or deeply drain-

ed soil. It will not grow with its feet in the water. Like the alfalfa, to which it is nearly related, it will not succeed in a soil that is water-soaked during the winter, and this is about the only condition under which it will not thrive.

It will grow and thrive on any and every kind of soil, and it is not much matter how poor it is; but it must be perfectly drained to a considerable depth. It is abundant in my locality, and I will tell you where it grows—along the roadsides, and especially where the road has been piked up, leaving deep ditches at the side; on the banks of large ditches along railroad embankments, and along the streams. The Huron and Vermillion Rivers have great quantities growing along their banks, and on the bottom lands. You will observe these localities all furnish a good depth of well-drained soil. It is the important requirement, in my estimation, for its success. Do not try to raise it on soil that has not this condition, or you will certainly meet with disappointment. Honor its preference and you will be rewarded with success.

During the last summer I made several trips along the Vermillion River, in pursuit of my favorite amusement—trotting for black bass. I kept one eye on the white patches of sweet clover swarming with bees, that I found in great abundance for a distance of more than 20 miles. "Oh!" I said, "if I could raise such crops of sweet clover it would be worth money for the honey alone." But I have no land that is so perfectly adapted to it as that along the river. But I remembered this crop when the seed was ripe, and availed myself of the privilege of harvesting some of it, which the owners of the land granted freely. Hundreds of bushels of this seed each year falls off, and is washed down the river, to seed and reseed the banks and bottom lands clear to the lake, and undoubtedly along the lake shore for no one can tell how far.

I made up my mind that this big crop had come to stay. I have sown sweet clover several times on this kind of land, upon which it will not grow, and I shall not waste any more time in that way. I think I can give good advice to others when I say, "Don't sow it unless your soil is adapted to it."

For field culture I would sow sufficient seed to get a good liberal catch, and not sow more land than I could and do this. Half a bushel to the acre of the unhulled seed is not too much. The spring of the year I think the best time to sow it. It will make a good catch on winter wheat or rye ground, but I think I should prefer to harrow or cultivate it in deep with a light crop of oats.

I will not take time to try to show the value of this plant. I am sure it is being rapidly recognized.

—Gleanings, 1896.

East Townsend, Ohio.

PREPARING BEES FOR WINTER.

I infer this information is for our farmer friends. The experienced bee keeper already has his own pet methods. It seems to be generally acknowledged that outdoor wintering on the summer stands requires the least time, money and skill, and is therefore especially adapted to the needs of the farmer bee keeper. We belong to that class and suffer no loss from wintering.

This is our method: We commence sufficiently early to have our bees packed by the first week in October. First, examine your hives and see that your colonies have good queens; should you find one queenless, unite it with one of your weaker colonies that has a good queen. This may be done by placing the former over the latter, putting a sheet of heavy wrapping paper, size of hive, between the two, cutting a hole just large enough to allow the passage of a single bee at a time. This will unite them slowly, avoiding a battle in which many valuable bees might be lost.

Take from the sides of each hive two or more frames, then put a section of chaff division board on each side of the frames, next to the walls of the hive. Weigh an average frame in order to ascertain the quantity of stores. If less than twenty-five pounds, feed honey or a syrup, made from the best granulated sugar; giving to each colony enough to bring its stores up to the required standard. We use the ordinary box bee feeder, set on top of the frames at sundown. Put on top, across the frames, sticks, or much better, what is known among bee keepers

as Hill's device. Over this place a cover of some loose woven cloth. The common burlap which may be obtained at any furniture store, is cheap and satisfactory. Now put on a cushion a little larger than the hive. This cushion is made of the same material as the cover and filled with chaff: Tuck down the edges that there may be no exposed place; put on the hive cover, observing that it has one or two air passages covered over with fine screen wire and the work is done. Leave the entrance full width.

If your bees are in an exposed place some kind of windbreak at the back of the hive will be good. Last winter we utilized a pile of loose brick, by building a wall of them against the back of each hive as high as the brood chamber, and banking up earth against it. When we looked into the hive we found them so well supplied with bees and brood that we had nothing to do but let them take care of themselves, though our neighbors lost all their bees.

In writing this article it is taken for granted that the reader of a progressive paper uses the movable frame hive. In the language of the old German apiarist from whom we purchased our first colony and got our first instruction in bee-keeping, "the old box hive is gone with the time when the farmer raised and fattened his hogs in the woods."—Mary Martin Durbin in *Indiana Farmer*.

The editor of the *Busy Bee* cannot agree with all of the above, but it contains some good points.

SWEET CLOVER.

In *Bulletin No. 70*, from our Ohio Experiment Station, subject "Forage Crops," we find the following:

As a forage crop for feeding or for hay, we have not found it of any special value, our cows and horses having refused to eat it either green or dried.

This to me is simply astounding. I can understand why cows and horses should be suspicious of it when it is offered them for the first time; but I can not understand how any cow or horse should refuse to eat it after having once had a taste of it when it is young and tender, say a foot or two in height. Inasmuch as the State of Ohio once called sweet clover a "noxious weed,"

this becomes an important matter. Our horses will eagerly grab for sweet clover in preference to any other green stuff that can be given them; and they will eat it cured as hay, and grab for the dried branches that have ripened seed. In my travels I have watched anxiously to see if I could find a bit of sweet clover in any field where horses and cattle were pastured, but I have never found it. I have also watched to see if I could find it along the roadside where horses or cattle were permitted to feed, and I have never seen that. I wish our readers would give us quite a lot of postal-card experiences. I say "postal-card" because if you write a long letter we can not publish a large number of them. We want reports from different localities. Let us settle this question.—Editorial in Gleanings.

HOW TO GET RID OF SWEET CLOVER.

In the first place cut it down before it produces seed, the same as you would any other plant. Second, turn on stock in the spring if practicable, and put enough stock in the field so they will eat up the sweet clover before it can grow up to seed. Third, plow it up before it produces seed. Some one of the above three ways can almost always be found practicable. The principal difficulty will be found in the fence corners, where no stock is kept, or on railway ground; but as it has never yet got over into cultivated fields adjoining railroad ground and roadsides, on our premises, I cannot understand how it should do any appreciable damage in any locality, where confined to these waste places. I am continually watching for it in my travels; and just as soon as I can find a place where it is detrimental to growing crops, pasture lands, or meadows, I will gladly report.—Editorial in Gleanings.

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SWEET CLOVER.

By Wm. Belshaw.

What! sweet clover a noxious weed, cattle refuse to eat it, a nuisance, etc. I object to so serious a charge against so valuable a plant. It does not sting like the nettle, appear like the thistle, tear like the briar, poison like the loco weed, and poison oak, hook like the cockle burr, or stick in the feet of the small boy like the sand burr, or choke like the imported flower, the morning glory. Nor does it encroach on the cultivated fields and pastures like most weeds. On the other hand, it is one of the clovers, and although it has not all the valuable qualities possessed by all the others, it has some qualities possessed by them and special ones of its own. As a collector of fertilizing elements necessary to more exhaustive vegetation it is one of the best. It thrives on the poorest soils, the most tenacious clay. Scrape off the rich surface soil and on the scanty fare furnished by the subsoil, it flourishes, restoring to the surface again its original fertility. It reluctantly gives way to drought, and is not injured by frost. It grows best by the roadsides where it has been fresh graded and is one of the earliest plants to raise the hardened surface of the ground in the spring. It has a dense mass of beautiful leaf foliage before any of the grasses begin to show green. As a forage plant, as far as I have seen it eaten by cattle and horses, it appears to leave no ill effects upon them. The fact of its not being eaten by all cattle is not the fault of the sweet clover as a forage plant, but with the cattle that have not learned to eat it. I have seen a fat cow eating it and a hungry thin cow passing it by unnoticed.

Again I have seen a retired farmer mowing it for his carriage horse because the horse preferred it to any kind of hay. I have seen a bunch of cows grazing upon it in the pastures, and I am informed by the owner that it did not injure the flavor of the butter or milk. He considered it a good forage plant from experience.

As a bee plant it is one of the best equalling white clover in quality of flavor, doubling it in quantity on the same amount of ground covered, and it appears to possess the rare quality of being stored away as surplus honey

rather than stimulating swarming. The two varieties of sweet clover—yellow and white—give a fairly long season to gather the honey, the yellow commencing to bloom a month before the white.

Riding with a farmer one day, and pointing it out to him, he said he was going to sow it by the roadside where he lived to keep down the weeds and keep the road from washing.

I do not think that its qualities as a hay producer has ever been tested, but it would produce two crops of hay, one in spring and one in the fall. Also a crop of seed. Compared with alfalfa it is a better honey producing plant. Will thrive in less porous ground is less liable to blight, but as a hay crop I do not think it equals it. Neither do I think it will stand the drought as well. At the same time it is not so easily injured by rain or damp situations, or tenacious clayey soils.

Seneca, Kansas.

Mr. B. hints at an idea, which if confirmed by further investigation, will prove valuable to bee-keepers. He says "sweet clover has the rare quality of being stored away as surplus honey rather than stimulating swarming." If this is true, it is a valuable point in favor of the sweet clover from the standpoint of the bee-keeper—Editor.

FARMING AS A BUSINESS.

Farming as a business, if it is to be successful, must be kept away from the speculative influences and rigidly conducted upon the fundamental principles that the returns of the farm will always be in proportion to the care and the labor bestowed upon it in the right direction. Home and foreign markets must be consulted, not for the purpose of speculating, but to learn how to adjust the crops of the farm. Had this plan been strictly observed by all our farmers who in general intend to be honest, there would not now be so many staring each other in the face and wondering why some things have not turned out better.

Business now seems to be in a state of suspense, waiting for something to happen which may give it direction and impetus. Nevertheless, the farmer need not now wait, nor, indeed has he been doing so.

His business is to till the soil. He is the producer, with the assistance of nature, of all the necessary food and raiment for the whole human race, and he need not fear a want of demand for his products, if his labor is rightly directed. His first business is to provide for his own family and those dependent upon him. This is indeed his chief business and it needs no large farm of fertile soil in a favorable climate to accomplish this.

But even this must have his care, and his chief care, because for this he must be held responsible, whatever else may come. His farm then, however small, and held by whatever tenure, must be so arranged as to accomplish this one thing. Fortunately, he has it in his power to raise on the farm almost everything he needs for home consumption. His wheat and corn, his meat and his dairy product, his poultry and their valuable product are all within his reach. His garden will furnish vegetables in abundance, and his berry patches should furnish him the best berries of all kinds that can be grown in this country. If he is a thrifty and careful farmer, all these sources of supply for his family will be so arranged that the surplus above what is consumed at home will always find a ready sale in a near market. All this can be easily accomplished by having a supply of the best dairy cows and the best poultry possible, so that by a little care on the part of the family what they use themselves shall be produced on the most approved plans, and shall always be of such a kind as to demand the highest price in the market. This safe and successful way of providing for a family is always within the reach of any industrious and economical farmer, and is almost entirely independent of anything which may happen in outside or foreign markets.

It was on account of this ability of the farmer to live almost entirely on his own products that the farmer was once counted the most independent of all American citizens.

This general method of living made our fathers, who labored under all kinds of disadvantages, contented and happy on their farms and in their farm homes.—Farm News.

POULTRY

EDITORIAL POULTRY NOTES.

Look out for the comfort of your poultry as the nights begin to get cold and raw winds blow. This is the time of year when the roup gets in its deadly work. If you have not prepared a house where your fowls can keep warm and comfortable do so now. Roup is not caused by damp weather, cold winds or anything of the kind. It is caused by the action of a specific germ, but whatever debilitates and weakens the constitution of the fowl exposes it to a possible attack of this germ. The germ finds an excellent place for breeding on an irritated mucous membrane, and this explains why a simple cold in the head develops sometimes very rapidly into a very bad case of roup, or consumption, which is only another form of the same disease. Roup is one of the most deadly enemies of the poultry business, and can be prevented very much easier than it can be cured. In this case an ounce of prevention is worth as much as several pounds of cure. Clean, warm and comfortable quarters will be found much more effective than drugs. It never pays to doctor fowls singly anyway, unless they are very fine and costly ones, and then they will generally die, if they are very sick. Clean up their house and runs, give them plenty of clean, pure food and water, a chance for sufficient exercise, and they will rarely be sick. Poultry is naturally healthy.

If you want your hens to lay in the winter you must keep them warm, comfortable and healthy. If they exhaust all of their surplus vitality trying to keep warm, they will have no superabundant energy left out of which to produce eggs. A laying hen may be considered a machine, a living machine, it is true, but none the less a machine for grinding out eggs, and you cannot expect to get anything out of the machine except what you put in it. All the elements that go to make up a chicken are in an egg, and

a hen must eat that which will keep up her own bodily existence and supply surplus enough to produce a chicken, or else she cannot grind out an egg. If any of the elements which go to make up a chicken are left out of her diet for a sufficient length of time egg production must stop. You cannot get something out of nothing, nor eggs out of this living machine when you have not furnished the material out of which eggs are made to feed into the machine. This shows the necessity for variety in food. Corn, wheat, oats, table scraps, lean meat, green cut bone, milk, sour and sweet, cabbage leaves, cut clover soaked in water, wheat bran mixed with meal or shorts, and fed hot in the morning, will furnish the variety necessary to keep the fowls healthy and the machine supplied with the material necessary to make eggs. By all means do not neglect the lean meat or green cut bone to take its place, and furnish plenty of pure, clean water.

Poultry Notes.

Do not try to get the growing pullets fat.

Fowls will soon suffer from irregular feeding

Sell the poor layers; they take away the margin for profit.

Disinfect sufficiently and often to keep down foul odors.

Healthy, thrifty fowls pick up their food quickly and retain it.

The rooster eats twice as much as the hen and gives no return.

The important item in securing early maturity is to keep the chickens growing.

The color of the egg shell has nothing to do with the quality of the egg itself.

In many cases soft shelled eggs are due to over-feeding—the hens get too fat.

Feeding the hens parched corn once or twice a week will be found beneficial to health.

If any profit is realized from late hatched fowls, it is important they be kept growing.

Poultry, fruit and bees are three crops that can be grown at the same time and in the same location.

There is money in raising chickens and producing eggs even though there is never an egg sold off the premises.
—Exchange.

THE BUSY BEE.

A Monthly Journal Devoted to Farm Bee Keeping and Other Minor Interests of Progressive Agriculture.

REV. EMERSON TAYLOR ABBOTT,
Editor and Publisher.

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COMMUNICATIONS.

The Editor solicits communications on the subjects treated in this paper. All such will receive careful attention and be given a place in the columns of the paper, if the Editor deems them of sufficient interest to the general public to warrant their insertion. Write on one side of the paper only, as plainly as you can. If you have something of real interest to communicate, do not refrain from writing simply because you think you may not be able to clothe your thoughts in proper language. Tell what you know the best you can, and the Editor will look after the rest.

Editorial.

Do you want the elements of agriculture taught in the public schools? Give us your idea on the subject briefly. Let us have a brief answer from every reader.

If you want to see a horse that will eat sweet clover with a relish, call on the editor of the Busy Bee. She is not poor and starved either.

Do not fuss with your bees at this time of year, or feed them syrup, for the excitement added to the use of the syrup will excite them to activity, and cause them to wear themselves out before brood rearing begins in the spring. The quieter they are from now on the longer they will live.

Do not leave any honey or other sweet exposed where the bees can get at it. If you do, you may wish you had not. It makes the bees wild at this season of the year, and you may get a case of robbing on your hands which you will find it very difficult to check. Besides the bees needlessly wear themselves out by flying out in search of the much coveted sweets.

See that each colony has plenty of winter stores where they can be easily reached by the bees during the cold weather. If you have any doubt about any colony having enough to winter on prepare some sugar cakes by melting up granulated sugar, and when boiling it until it will harden. Mould into cakes, making them near the same weight, and place one of these directly over the cluster of bees when it forms, which will be as soon as the cold weather sets in.

We have a fine lot of both comb and extracted honey which we can sell to suit the times. Can you not dispose of some in your locality! Write for prices.

That Sewing Machine.

If you need a machine, now is your time to get one very cheap. We guarantee ours to give satisfaction, as we have thoroughly tested it ourselves and know what it is.

Read our premium list in another column. The machine we offer is first class, and you are sure to be pleased with it. It never fails to please. We have tested it.

Requests for sample copies of the Busy Bee are coming in every day, and I have also been sending sample copies to a number of parties whose names I had on my mail list. I aim to send more than one copy to each one so he may be able to see just what the paper is, and I trust that those who secure sample copies will believe me when I say that it is our purpose to improve the paper just as fast as circumstances will permit. We cannot afford to put more money in the paper, unless our readers will take an interest in increasing our subscription list. We do not ask you to make us a donation, neither do we urge you to support the Busy Bee on the ground that it is a public institution, and therefore you owe it something. We ask you to take the paper because we think it is worth the money we ask for it. If you agree with us, send in your subscription at once. If you do not, according to our rules the paper will be stopped. This applies to those whose subscription may have expired, and also to those who have been receiving sample copies. No charge will be made for the copies you have received, but all papers will be stopped with the December number unless the subscription has been paid up in advance, or for some other reason you are entitled to the paper. If you send in your subscription before January 1898, you can get either GLEANINGS or the AMERICAN BEE JOURNAL and the Busy Bee for the price of one paper, \$1.00.

To new subscribers I will send all three papers for \$1.75, less than the price of two of them.

Read my offer below and club the Busy Bee with any other paper you may want. The Busy Bee and Harper's Magazine one year, \$3.50; Harper's Weekly, \$3.60.

Sweet Clover Again.

We had left a number of valuable articles on sweet clover, and I have concluded that I could not do better than to insert them in this number of the Busy Bee. If the readers of the

paper will see to it that these sweet clover numbers are passed around, especially among those who look upon this plant as a bad weed, they will confer a lasting benefit on the bee-keepers of the country, and possibly be the means of removing an unwarranted prejudice from the minds of many with regard to this very valuable clover. We still have a number of copies left of the October number, and as long as they last we will furnish them to those who may want them to pass around for two cents each. Send at once, if you want any of them, as they will not last long.

I have been personally acquainted with sweet clover for fifteen years, or more, but the more I investigate the merits of it, the more I value it. My experience has been confined almost exclusively to the white variety, as but little of the yellow grows in this locality. In fact, I had never seen large quantities of the yellow growing until my visit to New York to attend the annual meeting of the United States Bee-Keepers' Union. A company of us went to visit Niagara Falls, and as we were going from Buffalo to the Falls on the electric cars, we saw acres of it growing along the sides of the road-bed. Editor Root, Jr., of Gleanings, sat in the seat with me, and I called his attention to it, and we both noticed that it was entirely different from the white variety, occasional patches of which appeared along the same road. The yellow was much finer and not of such rank growth, just as I find it here where it grows in small patches.

As to the merits of sweet clover as a forage plant, I will say that my horse will eat it green or dry, and seems to relish it. It is only fair to say, however, that she would not touch it when I first offered it to her. After a few trials of it she began to eat it, and now she is glad to get it.

It never spreads into cultivated fields and soon dies out where stock have access to it. We have had a long severe dry spell and now some of the hills of the city are covered with a rich green growth of sweet clover, and it is about the only green thing left.

We are beginning to have calls for goods for next season, which shows that some bee-keepers do not intend to get left the coming year.

The Honey and Supply Exhibit at the Trans-Mississippi Exposition.

Mr. E. Whitcomb, of Friend, Neb., has been appointed honorary commissioner in charge of the department, and it goes without saying that nothing will be left undone to make the exhibit in this department one of the largest and finest of its kind ever made in the United States. Bro. Whitcomb writes me that plans for the honey and supply house are being formulated, and that it will be the finest one of its kind in the world. I can well believe this, for I know the good people of Nebraska never do things by the halves. He asks me if Missouri will not make an exhibit of honey. I wish I could say yes; but unfortunately the bee-keepers of this state have no active organized society to push our interests, and I fear enough of them could not be interested sufficiently to make an exhibit a success. I for one, would gladly make the attempt to set up as fine a honey exhibit as was ever made by any state of the honey of the grand old state of Missouri, if I could have the co-operation of the rest of the bee-keepers in the state. What say you, brethren and sisters, hold up your hands and be counted. It is to be hoped that the bee-keepers throughout the entire west will make a special effort to contribute to the success of this enterprise for they will never have a finer opportunity to show what they can do along this line. The Trans-Mississippi Exposition and Brother Whitcomb and his department can depend on the Busy Bee to do all she can to make this exposition a success. I want to say now that it is my candid opinion that here is the place for the next meeting of the United States Bee-Keepers Union. The location is central, the accommodations will be ample at a reasonable price, and the rates are bound to be low. I feel confident that more bee-keepers can be gotten together at Omaha next year than were ever before congregated in the U. S. This will be an excellent opportunity for the bee-keepers of the East to see the vast and productive prairies of the great central west, at the same time make a visit to their friends who have "gone west to grow up with the country." I trust the good people of the west will take the matter up at once with the executive committee of the U.

S.B.K.U., and that we may have an early decision as to the location of the next meeting. There will be meetings of almost, if not all other branches of agriculture there, and it seems to this editor that bee-keepers cannot afford to go elsewhere. Let us go where we will find hundreds eager to learn more about our industry. Thus early I start the word by which we conquer, "On to Omaha!"

Think over what you will need in the shape of hives, etc., another season, and buy them this fall, and make them up at your leisure during the winter. They will not be any lower next spring, and if other things, such as lumber and nails continue to advance, they may cost more than they have sold for this season. Then most supply dealers will sell goods a little closer when they are not rushed with orders. I would think that after this season's experience it would not be necessary to say to anyone that it is not safe to put off buying these goods until the day they are needed. Many learned this year that they can not get bee-hives always on short notice.

Now is a good time to scatter sweet Clover seed in waste places so that the young plants may start up at the first opening of spring. After it once gets a good start it will take care of itself, if sown where stock does not have access to it. If your stock has not learned to eat it, and there is plenty of other green forage, they will pay no attention to it. However, should there come a long hot dry spell and burn up every other green thing as is frequently the case in this locality, they will learn to eat it, and are very apt to destroy it, if of only one season's growth. Sweet clover, nor any other clover for that matter, should not be pastured the first season, if one wants to make sure of a good stand and get the best results.

Honey for Sale.

Parties who want a fine quality of clover honey, either comb or extracted, can procure the same by addressing the undersigned, stating how much they want, and kind, when prices will be quoted, which will suit the times.

EMERSON T. ABBOTT,
St. Joseph, Mo.

Here's Your Chance.

Until January first, 1898, I will club the Busy Bee with any paper published in the United States, the regular subscription price of which is \$1.00 or more per year. Send me the amount of the regular price of any other paper you want to take, and I will have it mailed to you regularly for one year, and send you the Busy Bee for the same length of time. Remember, this applies to any kind of paper published, whether it treats of bees, poultry, general agricultural, religion, news, or otherwise. All you have to do is to send the price of the paper and the name and address of the publisher, and it will be ordered for you, and the Busy Bee will also be mailed to you for one year.

I will club the Busy Bee with any 50c paper for 60c, or any 25c paper for 35c. Remember that this offer only holds good until January, '98, and you will need to act at once to get the benefit of it. You must pay up all arrears for any paper which you may have been taking in order to get the benefit of this clubbing offer, and no subscription will be taken for less than one year. The Busy Bee will be sent for the full time for which you pay for the other paper.

No premiums of any kind will be included with this offer for either paper, and no commissions will be paid. The two subscriptions must be sent direct to me accompanied with the cash in a registered letter, or else a New York bank draft, postoffice or express money order. No private checks will be taken under any circumstances, and if sent they will be returned at the sender's expense.

Show this offer to your friends, and get them to send with you all in one draft. Send to me for any paper you want, and I will see that you get it promptly.

If you want any of the other Bee Journals, send your subscription direct to me and get the benefit of the above offer.

I will also club the Busy Bee with any book published in the United States, except some medical, school or law books. Send me the price of the book you want as follows: For all books over \$1.00, I will furnish the Busy Bee and book for the price of the

book; for all 75c books add 10c to the price of the book. This offer only includes books which are sold at regular price by the publishers.

Act at once, if you want a farm bee paper which will save you many times its cost every year.

This offer includes such farm papers as the Journal of Agriculture, Rural World, Kansas Farmer, Nebraska Farmer, Wisconsin Farmer, Prairie Farmer, Campbell's Soil Culture, Practical Farmer, or any other farm paper. Also any of the monthly magazines, or any denominational religious papers.

TRADE NOTES.

The A. I. Root Co. will have a display at the Trans-Mississippi Exposition. It will be a fine one.

The G. B. Lewis Co. report a very large business during the past season, and they have begun to prepare for a much larger business in '98. They, too, will be at Omaha.

E. Kretchmer had a display at the Nebraska state fair and captured a number of premiums.

The Dadants have been rushed with orders during the entire season, which shows that their foundation still keeps its well merited and world-wide reputation.

The sale of Bingham Smokers is constantly on the increase, which is a good indication that they can stand the test of usage.

Now is the time to buy a sewing machine. You will never get one any cheaper. The "Peerless" is first class and guaranteed to give satisfaction.

Our market is overstocked with honey and prices range low. Beeswax is in good demand and brings ready cash.

You can depend on any instrument purchased from T. J. Washburn to be just what it is represented. Those at a distance will do well to write him.

We have plenty of both comb and extracted honey which we will sell at prices to suit the times.

The publisher of the Busy Bee pays the highest market price in cash at all times for beeswax.

Home Department.

Conducted by

EMMA INGOLDSBY ABBOTT.

This page is open to all lady readers of the Busy Bee. Any woman who has found anything helpful in her work is invited to give others the benefit of it through these columns.

BEAUTIFUL THINGS.

Beautiful faces are those that wear—
It matters little if dark or fair—
Whole souled honesty printed there.

Beautiful eyes are those that show
Like crystal panes where heart fires glow,
Beautiful thoughts that burn below.

Beautiful lips are those whose words
Leap from the heart like songs of birds,
Yet whose utterance prudence girds.

Beautiful hands are those that do
Work that is earnest and brave and true,
Moment by moment the long day through.

Beautiful feet are those that go
On kindly ministries to and fro—
Down lowliest ways, if God wills it so.

Beautiful shoulders are those that bear
Ceaseless burdens of homely care
With patient grace and daily prayer.

Beautiful lives are those that bless
Silent rivers of happiness,
Whose hidden fountains few may guess.
—Littell's Living Age.

The Cellar.

No place is more of a menace to the health of a family than a dirty, foul smelling cellar under the house, and of all places about the house this is most likely to be neglected.

The cellar should be well drained and ventilated. If it is damp, a keg of quicklime placed in the cellar and allowed to air slack will improve it in this respect. An occasional whitewashing will help keep it sweet smelling, and a thorough fumigation by burning sulphur will destroy must germs and fungus growth. If fruit or vegetables are stored there, this will have a tendency to check decay and mould in them.

In order to keep the air pure, the window, or windows, should be kept open part of the day, when the weather will permit.

It is desirable to maintain an even temperature in the cellar. To accomplish this in summer, the windows should be opened at night and closed during the day. This assists in keeping it dry, as the hot air of midday coming in contact with the cooler temperature of the cellar will cause moisture to condense on the walls. In cold weather the order should be reversed, the windows being opened in the daytime, except during the severest weather, and closed at night. When fruit and vegetables are stored, the temperature should be maintained as near the freezing point as possible, without actually reaching it.

Pure air is a good disinfectant. It is cheaper than medicine and there is no need for anyone to economize in its use anywhere about the house. If the air in the cellar is foul, or water is allowed to seep through the walls, the rooms above are sure to become infected with the poisonous gases. The cause of many a case of fever or malaria may be traced to such a source.

Notwithstanding all that has been written on the subject, it still seems necessary to caution against allowing decayed fruits and vegetables to remain in the cellar. Rot is a fungus growth, and one affected apple or potato will produce germs enough to lay every other apple in the cellar liable to an attack. Warmth, dampness and a stagnant atmosphere are conditions favorable to the development of noxious germs, and contrary conditions in the cellar or elsewhere will discourage their increase.

Don't undertake to save time or your fruit by using any "preservative" in canning. These preservatives contain salicylic acid, the use of which in food is condemned by most European countries, in South America and some of the United States. This acid prevents fermentation, it is true, and hinders the work of bacteria as is shown by its prevention of the souring of milk. It will completely check the change of starch into grape sugar by diastase which should prove it to be inimical to digestion. Doubtless factory canned goods contain salicylic acid as a rule, but the housekeeper need not follow this bad example.—New England Farmer.

Letters from the Field

The following were written for Gleanings in reply to an editorial quoted elsewhere.

More About Sweet Clover, White and Yellow, Etc.

I do not think white and yellow sweet clover are identical, judging from the manner it grows here. Although its manner of growth is similar, the yellow is considered to be not as good for producing nectar as the white. Here in Albany county we have both kinds, although we have the white in greater profusion. I notice each kind generally isolated; that is, there will be patches of each in different places, showing that each perpetuates its own kind. Where they grow near each other the seeds may have been mixed, which would account for an occasional stem of yellow growing among the white, as remarked on page 255.

Is sweet clover of value both green and dry, as feed for stock? Stock refuse to eat it green when growing in pasture fields. When pasture fails they will eat it green. Cut and cured before stalks get woody, say when blossom buds appear, stock will eat it in winter and it makes excellent fodder. Sweet clover will perpetuate only where no cultivation is done. Plowed under before it ripens its seed, it is as easily eradicated as any other clover.

G. J. FLANSBURGH.

South Bethlehem, N. Y.

In Nebraska They Learn to Eat It During a Dry Year.

Out in Western Iowa the lanes were full of sweet clover until we had a very dry year; and the stock, in driving them to pasture, got to eating it, and seemed to like it as well as any thing they can get since.

E. W. MOREHOUSE.

Sutherland, Neb.: April 7.

SWEET CLOVER FOR STOCK.

In regard to sweet clover, I find that stock eat it as readily as alfalfa, and I have noticed my horses leave their corn to bite a choice tidbit that happened in their prairie hay. I also notice that there is no sweet clover growing in the pastures, but it is coming in rapidly along the roads and hay land. I think persons sowing it should put it in a field by itself rather than along the road.

B. G. SOWLE.

Kearney, Neb., April 10.

Kansas Stock Eat Down Into the Ground and Get It.

Is it not very strange that some people's stock will not eat sweet clover, green or dried? My horses and cattle are running on a piece this early in April, and they eat right into the ground to get it, and yet they are well fed; but stock that have never been used to it will not eat it at first sight.

JOSEPH SHAW.

Strong City, Kan., April 10.

You can depend on the people who advertise in the Busy Bee. No fraud can get a hearing in her columns.

The November number of the "Gentleman Farmer" is an unusually good one. Write for a sample copy to the Brother Jonathan Pub. Co., Chicago, Ill.

The Daily Times of St. Joseph is a live paper, full of news and you can get it by mail every day in the year for \$4.00, and the Busy Bee thrown in.

If you want to see circulars of THREE VALUABLE FARM BOOKS, write to the MacMillan company, New York. They are very cheap, and you should know about them. Send a card now for a circular, and mention the Busy Bee. This is a test ad, and we want to see how many will answer it, so do not forget to tell where you got the information. You can get the books of us if you want them when you see the circulars. It will only cost one cent. Write NOW.

The St. Joseph Business University is conducted by a gentleman who is thoroughly reliable. Read ad. on last page.

MR. SHAW'S EXPERIENCE WITH SWEET CLOVER.

"I have grown sweet clover for four years. I first got four pounds from James Vick, but the chickens destroyed most of it; but I saved some seed. Last year I raised about 1½ acres of seed which turned out well. When it was just in its prime I had a boy cultivating corn and trying to fish at the same time—two jobs that never would work together right. However, the horses got frightened and ran away. They made good time till they got to the sweet-clover patch, which they had to cross, but that was too much for them. The dense growth of clover threw both horses down and stopped them, breaking the tongue out of the sulky cultivator. If the clover had not been there I think they would have run right into the barbed-wire fence and perhaps ruined one or both horses. I don't think that any two-horse team with a vehicle could run through the length of that clover-patch.

I sow early in the spring, about ten pounds of seed to the acre, with oats; but I think it is better alone. I am saving about two bushels of seed to sow in the corn at the last cultivating. I tried about four acres about the last of August, 1895, but it did not come up. Horses like it first rate when they get used to it. Bees won't work on anything else while the sweet clover is in blossom.

JOSEPH SHAW.

Strong City, Kan., March 23, 1896, in Gleanings.

In August of the same year Mr. Shaw wrote for the same paper as follows:

"Our crop of honey has been very good so far, mostly from sweet clover. Bees won't touch alfalfa till sweet clover has done blossoming. I find quite a change in the minds of some of my neighbors. They are beginning to think sweet clover is a pretty good thing after all. I have sold some seed to one, and two others are talking of sowing some. It will grow on our poorest land, and make a crop, and choke out all weeds we have in this country, including sand-burrs and cockle-burrs. If it were of no other use it would pay well as a fertilizer. But it is a splendid hay crop, and, in my opinion, there is

nothing better for honey. I have about ten acres seeded down for next year. I put several acres in the corn at the last cultivating, and have a nice stand. You see, by putting it in the corn we have the crop the next season. If sown in the fall it will come up early the next spring, and make a good growth that season, but not seed. I always sow the seed with the hull on."

SWETE CLOVER FOR HOG PASTURE

C. H. Dibbern says in Gleanings: "I have often wondered why farmers did not make more use of sweet clover as a forage plant and for fertilizing. I know of several hog-lots of from 10 to 20 acres, that have produced nothing but dog-fennel for the past 10 or 15 years. Why not plow up, say half, plant to sweet clover, and keep the hogs off for the first year? The next spring, plow and seed the other half and turn the hogs in to live on the tender clover shoots. If not over stocked, enough clover would bloom and seed the ground to keep it from running out. Incidentally, the neighboring bee-keepers would be benefited."

Cows prefer sweet clover. I have two acres of this adjoining alfalfa. The gate opens just on the line between the two. I soon noticed the cows turning to the sweet clover. I then noticed very closely; and since that time, without a single exception, the cows would first turn to the sweet clover. This satisfies me that the cows prefer it; but, like alfalfa, it produces the very best of milk and butter. I have tried all the different varieties of clover here. Alfalfa and sweet clover are the only two that will make a success in this part of the country.—J. D. Givens, in Gleanings.

Subscribers are what count in the prosperity of any kind of a paper, and we are determined to have them, so here is another special offer. We will send the Busy Bee one year to anyone who will send us 50c to pay for the same, and mail them free of charge one Porter Bee Escape as a premium. The escape sells for 20c, and everyone who has bees will find it very valuable.

20th Year **Dadant's Foundation.** 20th Year

Why Does It Sell So Well?

Because it has always given better satisfaction than any other.
Because **IN 20 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness. No Sagging. No Loss. Patent Weed Process of Sheeting.**

Send Name for Our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies of All Kinds.

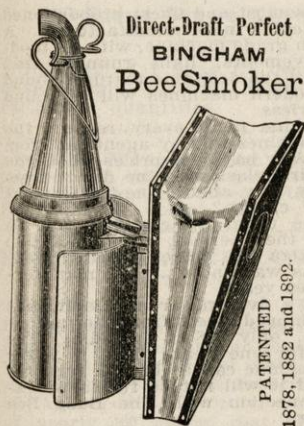
LANGSTROTH ON THE HONEY-BEE--Revised,

The Classic in Bee-Culture—Price, \$1.25, by Mail.

CHAS. DADANT & SON,

Please mention The Busy Bee.

HAMILTON, Hancock Co., ILL.



PRICES OF Bingham Perfect Bee-Smokers and Honey Knives.

Smoke Engine	largest smok- er made	4 in. stove	per doz.	each.
Doctor	3½	" "	\$13.00—	Mail \$15.00
Conqueror	3	" "	9.00—	1.11
Large	2½	" "	6.51—	1.00
Plain	2	" "	5.00—	.90
Little Wonder	2	" wt. 1 oz	4.50—	.60
Honey Knife			6.01—	.80

All Bingham Smokers are stamped on the metal, patented, 1878—1892—Knives B. & H.

The four larger sizes have extra wide shields and double coiled steel wire handles. These SHIELDS and HANDLES are an AMAZING COMFORT—always cool and clean. No more sooty nor burnt fingers. The Plain and Little Wonder have narrow shields and wire handles. All Bingham Smokers have all the new improvements, viz: Direct Draft, Movable Bent Cap, Wire Handles, Inverted Bellows, and are ABSOLUTELY PERFECT.

1878 Fifteen years for a dollar. One-half a cent a month.



Dear Sir?—I have used the Conqueror 15 years. I was always well pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the four inch "Smoker Engine" too large. Yours,

W. H. EAGERTY,
Coring, Cal., July 14th, 1896.

I have used Bingham Smokers ever since they came out. Working from three to seven hundred colonies twelve months in the year, I ought to know what is required in a smoker. The Doctor 3½ inch just received fills the bill. Respectfully,

O. W. OSBORN.

With a Bingham Smoker that will hold a quart of sound maple wood the bee-keepers' trials are all over for a long time. Who ever heard of a Bingham Smoker that was too large or did not give perfect satisfaction. The world's most scientific and largest comb honey producers of Bingham Smokers and Knives. The same is true of the world's largest producers of extracted honey. Before buying a smoker or knife hunt up its record and pedigree.

Please mention The Busy Bee.

T. F. BINGHAM, Farwell, Mich.

Durable Upright
PIANOS...
 For Everybody.

Easy terms of payment.

Handsome Stool, Scarf and Book included.

All freight charges paid to purchasers.

Make us a visit of inspection, or write us.

**Square Pianos
 in Good
 Playing Order
 From
 \$40 Upward.**

T. J. WASHBURN

117 South Sixth.

Letters promptly answered. Write me before you buy an instrument.

Gleanings at Reduced Rates.

New subscribers sending us \$1.00, or old subscribers who send us

\$1 Before Their Subscription Expires

will receive a copy of the A B C of Carp Culture, 70 pages, price 40 cents, postpaid, the pages the size of these; or we will send, in place of the carp-book, one copy of

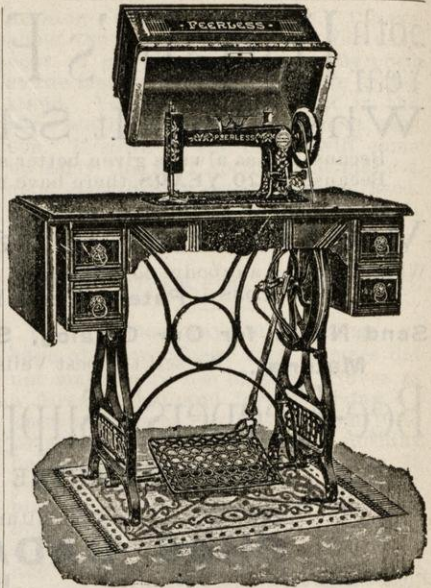
Winter Care of Horses and Cattle

by T. B. Terry, a book of the same size pages as the carp-book, 44 pp.; price 40 cts., postpaid; or in place of either one of the two we will send

Maple Sugar and the Sugar Bush

a book of the same size pages, costing also 40 cents, postpaid. Remember, in order to get one of these valuable books all you have to do is to send \$1.00 for Gleanings, and 5 cts postage, and we will give you one of them free. Remember, old subscriber, to be entitled to this offer must pay up all back subscription, if any, and send in \$1.00 for a year in advance with 5 cts. for postage.

THE A. I. ROOT CO., Medina, Ohio.



THE PEERLESS MACHINE.

The handsomest and finest proportioned sewing machine now manufactured. A strictly high grade machine, with all modern improvements; light running and noiseless. All the desirable features found in other modern machines will be found in the Peerless.

This machine is in every respect the equal of machines sold by agents at from \$50 to \$65. Why pay such prices when you can get a first-class machine direct from the factory for about one-third what agents will charge?

All of the usual attachments will be found with the Peerless, and in addition a box of extra fine nickel plated attachments. It is warranted by the manufacturers for ten years.

Price, for a five-drawer, finely finished machine shipped direct from the factory in Chicago, only \$18.00, including The Busy Bee for one year. This is lower than the machine can be had in any other way, and it will not be furnished except in connection with The Busy Bee for one year.

The machine will be given free to any one sending a club of 60 new subscribers for one year, with \$30 to pay for the same.

LANGSTROTHON THE HONEY BEE

This is one of the best bee-books in existence. It is well bound in cloth, printed on fine paper, and contains about 550 pages. It is filled with useful and practical information, and is finely illustrated. It has been thoroughly revised by those noted and successful apiarists, Charles Dadant & Son, and formerly sold for \$2.00. The price now is only \$1.25. It

will be sent, postpaid, with The Busy Bee for one year, for \$1.40, or it will be given free to anyone sending in a club of four new subscribers for one year, with \$2.00 to pay for the same. Here is a chance to get a bee book for a very little effort. To the first one from any city in the United States sending in a club of four new subscribers for a copy of Langstroth with \$2.00, I will give an extra copy of the paper free for one year, in addition to the book. Here is a chance to get your own paper free, if you will only get a move on you, and be the first one from your place to respond. I will send the extra paper to the party whose letter I happen to open first, should more than one come in the same day. Do not delay if you want to be first.

The St. Joseph Weekly Herald and The Busy Bee will both be sent for one year for the price of The Herald, \$1.00. The Herald is a family weekly paper, giving all the news of the day and in addition it has a number of special departments which cannot fail to prove interesting and helpful to every member of the family. It is Republican in politics, but this subject is not pressed to the exclusion of others. If you want to see a sample copy, address Weekly Herald, St. Joseph, Mo.

I will pay liberal cash commissions to anyone who will act as agent for The Busy Bee. Write for terms and sample copies.

60-Pound Square Tin Cans.

One box of 2 cans, 75 cents; 1 can, boxed singly, 45 cents. Write for prices on larger quantities.

BOOKS.—We can furnish you any book printed and will take your subscription for any paper published. Address The Busy Bee, St. Joseph, Mo.

THE REVIEW AT REDUCED RATES.

The Bee-Keepers' Review is \$1.00 a year, but, for the sake of getting it into new hands, and being able to begin the year with a large list, I will, until January 1, send free to each new subscriber a copy of "Advanced Bee Culture, a 50 cent book of nearly 100 pages, that gives briefly but clearly the best methods of management from the time the bees are put into the cellar in the fall until they are again ready for winter—32 chapters in all. Those who prefer can have, instead of the book, twelve back numbers of the Review, the selection to be mine, but no two numbers alike. All who send \$1 now will receive the last four issues of this year free, and the Review will be sent to the end of 1898. If not acquainted with the Review, send 10 cents for three late, but different numbers.

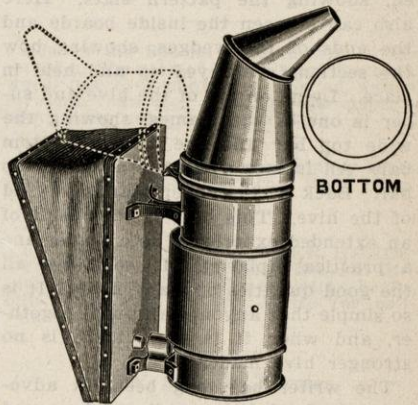
Address W. Z. Hutchinson, Flint, Mich.

Honey Jars.



1 lb., per gross, flint glass, \$4.75; 2 lb., per gross, with corks, \$6.25; 1-2 lb., per gross, with corks, \$3.65; dime jars, with corks, per gross, \$2.75; 5 oz. jars, 30 cents per dozen; 1-2 lb. 40 cents per dozen; 1 lb. 50 cents per dozen.

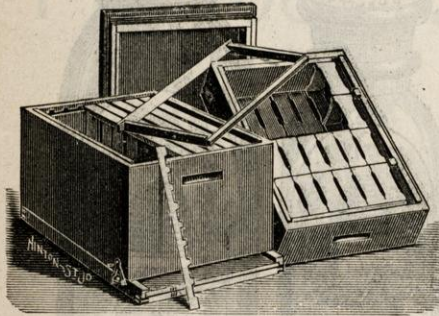
Corneil Smoker.



A very good smoker for the money. Price, 80 cents each; by mail, 25 cents extra.

The "St. Joe" Hive.

LATEST.



BEST.

The most practical and the very best hive out.

Has all the good qualities of the famous Dovetailed Hive, and is far superior to it.

The illustration will give a clear idea of all its parts. In front one of the metal spacers leans against the hive. Inside of the hive, at the back end, where the three frames are removed, is shown the metal spacer in place. Standing beside the body of the hive is a super with one of the sections removed, showing the pattern slats. Here also can be seen the inside boards and the ends of the wedges, showing how the sections are keyed up and held in place. Lying on top of the hive and super is one of the frames, showing the wide top bar and the narrow bottom bar. All frames now have a heavy top bar. Back of the super stands the lid of the hive. This hive is the result of an extended experience as a dealer and a practical apiarist. It combines all the good qualities of many hives. It is so simple that anyone can put it together, and when it is done there is no stronger hive made.

The writer has long been an advocate of "fixed distances," and has used a hive with a frame spacer in it for years. There is a great rage now for spacing frames by the so-called Hoff-

man method. I have not found this practical in a hive for general use. Some may be able to handle these frames and not kill the bees, but the writer, after repeated trials, gave up the idea of such a frame years ago. For the ordinary farmer they would be about equivalent to none in a year's time, as they would be all stuck together with propolis.

The "St. Joe" accomplishes the end desired with none of these bad features. It is made of seven-eighths lumber, of good quality, and has no portico, as you will see, for the spiders to spin webs in. The bottom is formed of a thick frame, grooved, so that three-eighths lumber is fastened into the groove, which, being ship-lapped, makes as good a bottom as if seven-eighths thick. It is a loose bottom, with bee space, and is very light and strong.

The frames have a top-bar that is 18 3-4 inches long. It is heavy and is 11-8 inches wide, leaving 1-4 inch bee space between the frames. The bottom bar is one-half inch wide and 17 1-4 inches long. The end bar is seven-eighths of an inch wide, and 8 3-4 inches long. It can be nailed each way, making a very strong frame and a very good one.

This frame fits the Improved Langstroth Simplicity Hive. The frames rest in metal frame spacers, which hold every frame in its place. The spacers fit in saw kerfs which are cut in the wooden rabbets in the ends of the body of the hive. All you have to do is to drive them down to their places and they will remain there without nailing or further trouble. Bees cannot stick the frames fast, and the construction is such that they will not build burr combs. The frames are spaced with the metal spacer at the bottom of the hive, so they are always in place. The hive can be shipped across the continent without killing bees.

The supers are made with the slats in the bottom cut the same shape as the sections, thoroughly protecting them. The sections are held in place by an end and side board that fit inside the super. There is a bee space in all

of the slats of the super, so that the bees will finish the outside sections, and also one between the supers.

The hive should be seen to be appreciated.

PRICES—Sample hive, made up with sections and starters, no paint, \$1.50.

Five or more, no sections, starters or paint, \$1.25.

Add 25 cents for two coats of good paint.

For sections and starters add 25 cents Full sheets of foundation in the brood chamber, 90 cents per hive of 8 frames.

Five hives in the flat, cut ready to nail, no sections or starters, \$5.00.

Ten hives in the flat, \$9.50. Extra supers in the flat, 20 cents; made up, 25 cents.

Plain hooks and eyes to fasten on the bottom, 5 cents per hive. For ten hives, 25 cents. Sections for five hives, 50 cents.

All prices for hives include one super only.

I guarantee this hive to be first class in every respect.

Globe Bee-Veil.



Five cross-bars are riveted in the center at the top. These bend down and button to studs on a neck-band. The bars are best of light spring steel. The neck band is hard spring brass. The

netting is white, with face-piece of black to see through.

It is easily put together, and folds compactly in a case 1x6x7 inches—the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to anyone whom flies, mosquitoes bite, or bees sting.

Price, \$1.00; extra nets, 50c; will club it with The Busy Bee for \$1.15. Cotton, tulle veils, plain, 50 cents; silk front, 60 cents.

Shipping Crates.



Single Tier Crates, of the latest non-drip pattern, at the following prices:

To hold 24 sections, 4 1-4x4 1-4, in the flat, with glass, in lot of 5, 17 1-2 cents each; in lots of 10, 16 1-2 cents each; in lots of 20, 15 1-2 cents each; in lots of 40, 14 1-2 cents each; 50 or more, 12 1-2 cents each.

These are crated in lots of 25, and to get the benefit of the 50 price, they must be ordered in full crates.

Twelve pound crates will be 2 cents per crate less. Most prefer the single tier 24 pound crate.



BERKSHIRE, Chester White, Jersey Red and Poland China Pigs. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue.

S. W. SMITH, Cochranville, Chester Co., Penna.

ADVERTISEMENTS.

Advertisements of a proper character will be inserted at the following rates:

	One Month.	Three Months.	Six Months.	One Year.
1 Inch ...	\$.70	\$ 1.75	\$ 3.25	\$ 6.50
2 Inches..	1.30	3.50	6.25	12.00
½ Column 2.50	6.50	12.00	23.00	
1 Column..	4.00	11.00	21.00	40.00
1 Page	7.50	20.00	39.00	75.00

Reading notices, 10 cents per line each issue. Special Position one-fourth more than above rates.

The publisher cannot undertake to be responsible for the acts of any of the advertisers, but he will not knowingly admit any fraudulent advertisement, and will immediately drop the ad. of any person or firm failing to deal fairly with the public.

CLASSIFIED ADVERTISEMENTS.

Ads. in the Special Column will be inserted at the rate of 1c per word for each word, figure or character. No ad. taken for less than 15c. Ads. in this department must not exceed five lines.

AGENTS.—Can make good money soliciting subscriptions for the Busy Bee. Write for terms.

ENVELOPES AND LETTER HEADS.—The publisher of the Busy Bee can furnish you printed envelopes, letter heads, bills, etc., very cheap. Write for estimates.

Parks' Section Former.

It will do first class work, and as much of it as a machine costing more. The sections are square made on this machine and it cannot get out of order. Price \$1.00.

Bee-Keepers'

the finest line
in the market, and sell
them at low prices.

We make ❖ ❖ ❖

Supplies.

Send for Illustrated Catalogue and Price List.

G. B. LEWIS CO., WATERTOWN, WIS.

E. T. Abbott, St. Joseph, Mo., Special Agent for Southwest.

Mr. Abbott Sells our Hives and Sections at Factory Prices.



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Tells all about it.
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TRADE MARK REGISTERED.

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Prevents and relieves Constipation and Liver troubles. An appetizing, nutritious Family Flour, for Bread, Gems, Griddle Cakes, etc. Unrivalled in America or Europe. Pamphlet and Sample Free. Ask Dealers or write to **Farwell & Rhines, Watertown, N.Y.**

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