

## The busy bee. Vol 9, No 2 February, 1898

St. Joseph, Missouri: Rev. Emerson Taylor Abbott, February, 1898

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NO. 2.

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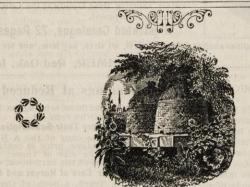
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devoted to Farm Bee Minor Interests of Upsive Agriculture.

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# THE BUSY BEE.





EMERSON TAYLOR ABBOTT,

EDITOR AND PROPRIETOR,

ST. JOSEPH, MO.

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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 "Adavnced 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 acquaintd with the Review, send 10 cents for three late, but different numbers.

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## THE BUSY BEE.

### PUBLISHED MONTHLY.

Vol. 9.

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DISTURBING BEES IN THE WINTER.

By C. P. Dadant.

I once heard an old bee-keeper say that he examined his bees at all times of the year and in all kinds of weather, and that it never did them any harm. I do not see how one can seriously consider such an assertion. During the spring and summer, when the bees are able to fly, a little disturbance is not injurious and it is quite probable that in most cases it is beneficial, if there are no robbers prowling about to pounce upon their stores, for if the apiarist is thoroughly informed of the condition of his bees, he can better attend to their needs. But in cold weather, the novice cannot be too much warned against the ill effects of a disturbance of colonies, whether they be in the cellar or in the open air. The bees at this time are closely clustered together in as compact a shape as the combs will allow, and so as to be as near the honey as possible. If you carefully open a hive you will notice that their heads are all turned towards the center, and that they move but little, all their efforts seemingly tending to gaining access to the warmest spot. A disturbance often induces a certain number of them to leave the cluster, to ascertain the danger, and their vigilance becomes the cause of their death, as they become numb and perish before they have realized that the temperature is beyond their endurance.

In a cellar, the disturbances causes still more trouble, for they are more on the alert in a temperate atmosphere and a shock, or a jar, sometimes induces hundreds of bees to roam about and leave the hive, through any aperture, and the least ray of light attracts them. Thus, quietude is indispensable; and if the novice must satisfy his curiosity, he must do it at the peril of the bees. If food has not been supplied before winter, for each colony, it is a difficult thing to supply

it then, without risk. The proper time to feed is just before the beginning of cold weather.

Aside from the loss of those bees that leave the cluster and cannot return, the disturbing of hives in cold weather has another objection. Whenever they are disturbed, if the disturbance is continued for a certain length of time, for instance, in transporting a hive from one place to another, the bees become frightened and load themselves with honey. When the disturbance ceases they again unload it, into the cells; but this excitement has caused them to consume more of the honey than they would have needed. and there is consequently greater amount of dejections produced. they can not discharge these in the hive without injuring the health of the colony, they become restive and are more prone to succumb.

There is, however, a time, in winter, when it may prove very advisable to disturb a colony of bees. It is, when a warm day comes, and for some reason, they have not become aware of it, either because their hive is in a shady spot, or because it is too thick, and the heat has not had time to pierce its walls. Chaff hives are often guilty of this inconvenience and that is the main reason why they are not more popular. It takes a long time for a chaff hive to become cold, but when it is cold, it takes too long to warm it up. We have used some 80 nives with thick double walls filled with chaff or with saw dust, and we have often had to wake up the bees. on a warm day, when all the other hives were having a good cleansing flight. The single, one-inch walls are quickly warmed by the rays of the sun, and unless the bees are shut in by the dead bodies piled on the entrance, or the hive is too well sheltered, they are very prompt to take advantage of a mild day.

But if from one of these causes, they remain quiet, they should be disturbed, they must be disturbed. The hives that have the greatest number of winter flights in cold, hard winters, are those that come out in the best shape. It is for this reason that we object to a Northern exposure, when wintering on summer stands, and for the same cause, we do not think the shade of an evergreen is advisable.

Hamilton, Ill.

## THE BEST BEES.

A Paper by J. O. Grimsly Before the Southwest Texas Bee-Keepers' Association,

Editors of bee journals and others known to be informed on the various branches of apiculture, are asked numerous questions, from time to time, in regard to all the different features of the industry, and I am convinced that the most common question asked is: "Which are the best bees?"

There are those just starting in the business, who want a new bee mainly for a change. The desire for a change, the wish to reach an imaginary standard prompts the novice to reach out after something his neighbor hasn't got, something he has not seen, and when the "new bee" is introduced, he feels that he has the best going, let it be from the north or from the south.

This state of affairs exists until he gets himself worked into the harness as a practical apiarist, then, seeing that his "new bee" doesn't winter well, breeds out of season, or lacks in some other material point, he sits himself down, and after reading catalogue after catalogue, and bee journal after bee journal, he finds that an apiarist of long experience recommends the Imported Italians, another of equal experience names the Golden or American bred Italians, another the Carniolans, another the Cyprians, and so on. Each of these give plausible reasons why the particular bee of their choice is better, in all respects, than any other. Then what is to be done?

The question, "which are the best bees" coming from the lips of an American citizen, is, or might be compared to the question, "which has the best climate, Cuba or the United States?"—it depends upon the fancies of those interested.

When the Carniolans were first being introduced into the United States, and even now, the statement that they

were hardy, and would prove to be the best winterers, was one of the strong points in their behalf, because they came from a cold country-Carniola being on the 46th parallel, or the same latitude as central Minnesota; the cold in Carniola Jeing even more severe than we have in the same latitude in the United States. At first thought this point is a good one, but let us see the effect, or rather the result of experiments. Bringing Carniolans to a climate like this-about 281/2 degrees north latitude, we find that they are not checked in their brood rearing by our mild winters, to an extent that is in keeping with the surroundings. We find, then, that breeding out of season is the serious objection to this race of bees. Remove that objection. and we would certainly have an ideal bee, color excepted. Then, with these characteristics, the Carniolans may be the best bees for most northern localities; in fact, I believe they are so considered.

While we, of the south, find fault with the Carniolans, the people of the north find equally serious objections to the Cyprians and Holylands. Cyprians are from the 35th degree north latitude, or about the same as north Texas, central Arkansas, and south line of Tennessee. The Holvland or Palestine bees are from the 31st degree, north latitude, or about the same as Bell county, Texas. To come plainly to the point, I am of the opinion that for the north, we need a northern bee; for the south, a southern Thus, for all the northern states we might not be wrong in naming the Carniolans, and for the southern and Pacific coast states, the Holylands. But we have a wide gap to fill, then what shall it be? By referring to an atlas, we find that the Italians are from about the 44th degree, or just two degrees south of the Carniolans, but the climate of that portion of Italy being about the same as the central states, we can, and I believe I would recommend the Italians for that part of the country.

But, let our recommendations be what they may, we can't satisfy the curious. Besides, the Italians have two very serious objections, from a comb honey standpoint. They are slow to enter the sections, and do not cap their honey white. But, to the honey producer, and not the fancier,

these objections can both be overcome by introducing German blood, which, doing away with two serious objections, brings about another that the novice is by no means pleased with; they will sting-regular long rangers. Yet, should the work be thrown upon an experiment station I am confident that a strain of hybrids could be produced that would not only enter the sections readily, and cap their honey snow white, but would be reasonably easy handled, and after a time be bred up to a uniform color. Careful breeding is the only way by which the honey producer can hope to secure an ideal bee. I am convinced that we have not, at this time, an all round, general purpose bee, and in order to succeed we must look at the surroundings, consider the effect of the climate, and then after getting the bee best adapted to the locality breed it up to a standard in keeping with your ideas.

There is room for improvement, if undertaken in a practical, common

sense way.

## BEE GOVERNMENT.

Undoubtedly the Great Creator and Wise Law-Giver has instituted a GOV-ERNMENT 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 in each, so that in their several spheres all co-operate for the general good-the welfare of the COMMON-WEALTH. The queen, impelled by the instinct of her nature, performs her duties in the family, like every other bee, in accordance with her faculties and to the extent of her ability. The SUPREME POWER RESIDES IN THE MASSES. Their will determines: their wishes rule.—Baldenstein. 1861.

It is unsafe for a farmer to be careless, for if there are boys on the farm they will be careless, too; and misplaced tools and neglected work, especially on a small place, may easily shift the scale from profit to loss.

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### PLAN FOR NEXT YEAR'S WORK.

Some Good Advice.

Now is a good time to plan for the next year's work. It is not too early to begin, for the time of planting will come quicker than we imagine.

The winter season naturally gives us a little more leisure and while it is not by any means a period of idleness for the wide-awake farmer, it does offer more time for reflection than the growing time of spring and summer.

Thus it would be opportune that advantage of the season be taken and profitable planning for the year to come be made. There is almost unbounded room for intelligent thought as to what is to be done here and there upon a large farm. Each piece of ground must be made to yield profitably or else the business cannot pay. The field that last year and years before produced wheat, should be given a rest and the one that has had nothing sown upon it but oats, should have a change.

The question of a good garden for the wife is not to be forgotten and what to plant, the seeds to purchase and a thousand other things connected will give ample food for thought. They should all be treated as questions of vital importance, as it is only by careful consideration and the putting into practice of the results, that we can expect good returns.

We must not wait for spring, when it is time to sow and plant, to decide these little questions, for then one is apt to be too busy and the matter goes a-begging. Think now when you have the time. Map your work all out; have everything arranged so that when the time comes you can work intelligently.

If you have never tried a methodical plan of farming, begin now. Go to work and decide what you are going to produce next season and notice the result.

The above advice from the Montana Fruit Grower is just as applicable to bee-keeping as it is to general farming.—Editor.

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Now is a good time to read up on apiculture. Send us \$1.25 and get Langstroth on The Honey Bee, and the Busy Bee one year, both for the price of the book.

### LOW PRICES FOR HONEY, AND WHAT HELPS TO CAUSE IT.

### By Mrs. Lizzie Ireland.

In making observations for several years, I have come to the conclusion that the lazy, slovenly bee-keeper has

considerable to do with it.

There are hundreds of bee-keepers who use cracker boxes, boot boxes, or anything they can get hold of for hives. Some of them have a small box on top with auger holes between, but a good many only have one box, and when they want honey the poor bees that have been so industrious must be killed, and the honey is taken out of the brood chamber. The comb will be dark with bee bread mixed here and there, and of course, this is very poor

quality of honey.

A part of this is sold to neighbors, that do not have bees, at a low price. Very likely this is their first experience. They have never tasted honey They are disappointed. Honey does not taste near as good as they thought it would, and after this they will buy cheap syrup, and several consumers of honey are lost. Now, just think if all those people were counted, what a number use syrup that might have been using honey instead, if they had bought a first class article. Can't you farm bee-keepers see that you are standing in your own light? Such beekeeping as this causes us to get at least 1 cent less on every pound of honey that we have to sell.

At the same time they know more than Langstroth or any of the many

experienced writers of today.

Now, to show the difference, I will give my experience the past season. I use the eight frame, dovetailed hive with section holders in the supers, with wood separators. My two best swarms gave me 35 pounds each, of beautiful box honey. I was very well satisfied. I sold a few pounds to five different families. Gave to several a pound to try my honey.

I was careful that all of my neighbors who visited me while my honey

lasted, should sample it.

The honey was pronounced by one and all to be as fine as they ever tasted and I have secured more customers for another season than I shall be able to supply.

Republic County, Kansas.

### HONEY PRODUCTION IN CUBA.

A writer in the American Bee Journal has the following on this subject: "The bulk of the Cuban honey crop is produced by native apiarists, who use sections of the hollow trunk of the royal palm. These are long, from four to six feet, laid down on the side, one end entirely open, the other closed with a board. The brood is usually in a compact shape, leaving most of the 'hive' to be occupied with honey quite free from brood. Whenever the hive is full, the honey is removed, comb and all mashed, strained, and the wax rendered out. The implements used are tubs, cloth strainers, kettles, a long knife or machete, and an iron rod, one end bent into a hook. It will very readily be seen that from the small investments in skill, capital and labor. honey can be produced very cheaply in a country with such honey-resources as Cuba has; and that, unless there is some drawback that we don't have, they can furnish honey in our seaboard markets much cheaper than we

## SMALL FARMS.

can afford to produce it."

### Their Advantages.

W. I. Camp says in the Prairie Farmer: I am an advocate of small farms. I lose my patience when I see farmers grasping after more land, skimming over a half section, raising half a crop of grain and a whole crop of weeds. In many cases a large farm is a curse to the family. It takes all a man can rake together to pay interest, taxes and extra running expenses. Just stop and think, friends, how happy and independent most farmers would be if they owned eighty acres, or even forty, with not a debt in the world, great or small; taxes paid the first day the books are opened; when they sell anything, put the money in their pockets and use it as it is needed in their families to keep the wife above want, so she will never need anything she does not have on hand or the money to get it Families on a large farm are often more cramped for the conveniences and necessities of life than many who don't pretend to own any land. One

of my friends here in the west owned 160 acres, with mortgage on it. I tried my best to persuade him to sell eighty acres, which would have paid the mortgage and left him out of debt. He asked me very coolly if I did not think he could look after his own business. This is about all I ever got for my counsel. Poor times and poor crops came on and now he is renting the same farm, and without an acre of land to his name, or anything else. I believe a man and his family would be far happier on a small farm, even if he was able to own a whole section and still be clear of debt. We ought to find some rest before we are dead. My younger days were spent in Vermont among small farmers. smaller the farm the more independent and well-to-do the farmer seemed to be. From ten to twenty-five acres of tillage besides the pasture was thought to be a good farm. We kept cows, sheep and hens and a few hogs. Many of these small farmers became wealthy. My uncle commenced with nothing on the roughest kind of a farm. He died at 78 years of age and left \$70,000 to his children without a single debt. I believe it to be supreme folly for any farmer to work and worry his away on a big farm which is beyond his capacity to manage successfully; then die and leave a mortgage that will sink his family to poverty. I have a small farm and a little money-if I had a big one I should be dead broke. -Quoted from the Market-Garden.

#### WORTH REMEMBERING.

Market gardeners do not often give away their "snaps," but one confessed not long ago that he had led the market in early tomatoes for several years by following two rules. He plants in north and south rows, and lays the stalk horizontal in a shallow trench, leaning the plant to the north and covering all except the top of the plant. This plant lets the sun strike the ground over the roots and buried stalk and hastens fruiting. His other rule is never to cultivate in any way which would wound the roots after the blossom has appeared. When wounded, the plant stops feeding the fruit until it has repaired the damage.-Northwestern Farmer.

## 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.

### VENTILATION.

God made the air for us to breathe. I do not claim this as an original discovery, nor do I assume any superior knowledge of the plans and intentions of the Creator. Indeed, if the order of creation be considered, I suppose I should say God made us to breathe the air. No one will dispute this, but to judge from the way many of us close up our dwellings in winter, making them as airtight as possible, and proceed to manufacture an atmosphere inside of them which is composed mostly of the effluvia and carbonic acid gas from our own bodies, one would suppose that we cherished the illusion that we could improve Nature's product in this respect.

There should be some arrangement for admitting outside air into every house. Sleeping rooms should have a current of pure air flowing into them all night, and in the morning the windows should be thrown wide open for at least two hours. When I say a current of air I do not mean a strong sweeping wind, nor even a draught that is perceptible to the sleepers, but some plan should be adopted whereby fresh air can be supplied without discomfert.

Do not be afraid of night air. It is not injurious as many people suppose. The outdoor animals breathe it, and awake in the morning refreshed and apparently without that stupid, languid feeling that so many human beings arise with. In fact, there is no other air to breathe at night, and surely the outer air is better than that in a close, unventilated room. A woman I know, who is a great grandmother, but whose vigor of mind and body is equal to that of most women twenty years younger, sleeps with her window

sash drawn up full length every night the year round; and I have no doubt that this habit has contributed largely

to keeping her young.

The bedding should receive a daily airing also. A bed that is made up as soon as possible after it is deserted by the occupants may have a tidy appearance, but it is a whited sepulcher, and not fit to be occupied a second time.

Pure air and sunshine are nature's disinfectants. Disease germs lose their venom under the combined influence of these two agents that are always at our command, and they never present any bills. Their benefits are for the just and the unjust, the rich and the poor, alike.

#### MAKE HOME ATTRACTIVE.

There is nothing that is acting steadily and so powerful to drive our youth from the country to the city as the little attention paid by a majority of the farmers to those small home comforts and enjoyments which, while costing but a trifle, would invest the country with a charm which all the glaring fascinations of a life in the city would not break. The study of agriculture as a science, a knowledge of the nature of the soils, and the adaptation of the various fruits and flowers. and field crops to the different qualities of soil appeal sufficiently strong to the intellectual nature, but in the arrangement that surrounds our country places but little attention is paid to the idea of beauty or pleasure.-Southern States Farm Magazine.

### NATURE AS AN EDUCATOR.

Dr. M. L. Holbrook gives the following excellent advice as to the education of children: "So far as possible, a love of nature should be early and continuously inculcated. Nature is, in a physicial sense, the father and mother of us all, and a child that grows up to maturity with a genuine love of rocks and trees, flowers and insects, animals and plants, storms and sunshine, cold and heat, fresh air or the ocean wave; of every varying landscape and mood of nature and all of the activities around us, stands not

only a better chance of possessing a healthy nervous system, but of maintaining it during life, than if the opposite has been the case. I am not at all in sympathy with any system of education which takes children far away from nature. Nature is a book, a great library of books, whose authorship is the Infinite. Our little works, our libraries, vast and valuable as they are, cannot be compared with it. They are poor transcripts at best of the thoughts of half developed human beings."—Monitana Fruit Grower.

## Agricultural Education

Friend Abbott: I desire to congratulate you upon the excellence of your paper, The Busy Bee, and I do hope that you will meet with all the success you so richly deserve.

I am doing all I can for it. Now in

answer to your question:

"Do you want the elements of agriculture taught in the public schools?" I will say that I am decidedly in favor of it, provided the teacher is qualified and able to properly impart the aimed at knowledge to his pupils.

I contend that among a hundred of our teachers, hardly a single individual can be found who knows anything, or sufficient, about the elements of agriculture, to qualify him or her to teach the pupils. To merely teach from text books furnished the teacher is hardly advisable, and may work more

harm than good. I have been director in my school district for over thirty-three years (without a break) and of course, have my own opinion of our public schools and teachers, such as the peculiar environments and conditions in a new country like ours have produced. can not say of our teachers (generally speaking) that they look upon teaching the young as their life's avocation. As a rule, the young man who teaches school for a limited number of terms, simply does so for the purpose of fitting himself for the law profession. The young lady, for the reason that it appears to be more genteel and respectable than to hire out for clerical or housework, and we may as well be

plain about it, and say, that the lady teacher in the majority of cases, regards teaching school only as a "stepping stone" to get married. This assertion is blunt, but nevertheless true.

We have hardly any proper seminaries for preparing and fitting our teachers. In this respect the old country (in particular Germany) could serve us as an exaple to be followed. Our teachers generally obtain their certificates from county superintendents, who, ten to one, are "hatching lawyers," and comon grade politicians.

Instead of stability, in the employment of our teachers, like it is in Germany, we have, so to speak, "tramp teachers" who are hired from year to year, always being subjected to the good or bad will of a school board, whose members know on an average, a great deal more about their hogs, cattle and horses than about the worth and qualifications of a teacher.

As soon as our teachers are properly educated, including the elements of agriculture, and as soon as the "tramp" system has given way to stability, i. e., for the teacher the needed security in his position, the time will have arrived, I think, that the elements of agriculture should and will be taught, but not before.

I am yours truly,

WM. STOLLEY.

Mr. Stolley is correct as to the lac. of qualification on the part of teachers in this special line, but we can not hope for better qualified teachers until the demand is made for better equipments, accompanied, as suggested, the prospect of more manent employment and better pay for the services rendered. Let the legislature of Nebraska or any other state, enact a law that on and after January 1, 1899, the "elements of agriculture" shall constitute a part of the course of study in every public school of the state, and no person shall receive a certificate to teach in said public schools who can not pass a creditable examination in the same, and I think by the time the law becomes active, there will be teachers ready for the work. If there is a "will," a "way" may be found in this as well as other things.—Editor.

### AGRICULTURAL EDUCATION IN OUR PUBLIC SCHOOLS.

"Strike while the iron is hot," is a good motto in this movement as well as when applied under any other concition. During the last rew years a sort of wave spread over our country in favor of this much needed reform. More and more are we impressed with the onesidedness of our system of education, the sole aim of which is to acquire the elements of English, etc., and step by step pass through the university, and become a professsionalwhat? That theory of education we borrowed from the European monarchial system. There the peasantry were not considered as factors of the government and of no account but as menials. In this country in 1776 we repudiated that false, that inhuman doctrine and enthroned man. "All men are born free and equal," and in so far as our theory of government is concerned remain so as long as they are citizens of our country. History proves over and over that the more educated the citizens of any country were the more civilization there abided. It does not necessarily follow that the best educated person makes the best citizen, but it is a fact of every day observation that the person with a practical education, an education that he can use every day of his life, makes a useful and law abiding citizen. I do believe that the one-sided intellectualism of our age has more to do with the making of schemers, sharpers and leeches generally, that prey on the unsuspecting than any other one thing. Hundreds of our high school and academy graduates are fitted for absolutely nothing in practical life. The educational dressing they get is a mere gloss or shine to wear for occasion. Practical reformers saw this some time ago, and industrial schools were started, sometimes at much sacrifice to the originator, but their good results we behold. The idea of the industrial school must permeate every rural school, if we would give our children in rural communities a fair start on the road where they can make life worth living. I believe that Prof. Bailey of Cornell

I believe that Prof. Bailey of Cornell university has struck the best plan thus far tried. His idea is to instruct the teachers of rural schools in such a way that agricultural studies can

be introduced to the pupils rather as a side issue, without books, and without having a law passed, and a big noise made. We all are too conservative, we must admit, and, if our legislature were to enact a law requiring the branch of agriculture added to our curriculum there would be a big howl; but in this way the good work is done quietly, and before any one is aware of it the pupils will come home and know considerably more in many good, practical lines than their parents. John comes home and says, Pa, you plant a bean and a grain of wheat, do they germinate or come up alike? Pa thinks they do, but John will get a box and plant them and set them by the cook stove, and show us how they differ. John considers that a glorious victory, and so do I. Then he will tell the names and nature of the weeds that grow on the farm that Pa never thought of. hen he will bring in worms and bugs, and show Pa the wonderful transformation they undergo and the food they eat, and evil they do during these transformations. am happy to see the agricultural press take hold of this matter in such a friendly and aggressive spirit. By the help of the press we may hope that the educational and agricultural departments of our various states may soon work shoulder to shoulder for the uplifting of the American farmer.

Adams County, Pa.

danis County, Pa.

## Communications

BEE TREES.

Whiteside, Mo., Dec. 27, 1897. . Editor Busy Bee-Dear Sir: I have thought many times to ask you to make a plea through the "Busy Bee" in behalf of our so-called wild bees. I have reference to the way in which the most of "bee hunters" cut a bee They will cut it late in the season, perhaps get a few pounds rotten wood, old comb, and a little honey, feel well paid for their trouble and leave the bees to starve. A neighbor of mine cut fifteen trees last season in this manner. I have been guilty of doing the same thing years ago, but I think that I have learned I think that if anyone will

consider the matter for a moment it will change the old plan of destroy-ing the bees. If they do not care for the bees for their own use, they can easily dispose of them to some one in the community, as they have a market There are not many places value. over stocked with them. It is so easy to save them and more profitable. I have some trees that I will cut at the proper time. I will give you my experience with two trees that I cut last season. The first I cut the 24th of April. it had a fine lot of bees and as fine an Italian queen as I would wish I tied the comb in the frames to see. as you recommended in transferring from an old box to a frame hive, and in a few days I took them home. Later I got two fine swarms from this hive, and something over seventy-five pounds of honey from the three hives. The other tree I cut the 10th of May. I transferred them in the same manner as the first. They failed to send out a swarm but they made about seventy pounds of fine honey, and are the strongest colony in my yard.

I think that I have shown that either tree paid me better than the old way, besides I did not leave the bees to

perish.

Anyone engaged in farming should be willing to give more for a good hive of bees than two average bee trees produce.

Very respectfully, S. W. SMILEY.

Bristol Co., Mass., Jan. 21, 1898. Editor Busy Bee:—I have received your paper for January, and have concluded to become a subscriber. Enclosed you will find money order for one year's subscription. The premium I shall leave to your own judgment in my particular case, which is this: About two months ago I bought a colony of bees in an old box hive. It has two small boxes in the top, and I suppose they are for the surplus honey.

Now, in the first place, the bees know as much about me as I do about them. The paper I want to read is one which will tell me what to do, and

when to do it.

How can I tell if there is a queen in my box hive? as I cannot see inside of it. Second, how can I take the bees from the box hive and put them in a hive so I can handle the bees? (I am not afraid of them.) I got my hive of a

man who does not know anything about bees, as this is not a bee country. I found a lot of dead bees about the hive, so I got some honey and put it in the top where the two small boxes go, but the bees do not seem to eat it, and I conclude they must have plenty in the hive. If so, why do they die?

Hoping to see an answer in the Busy Bee, I am, Yours respectfully,

### RICHARD JOHNSON.

You can not tell much about the queen this winter, but in the spring when the fruit comes in bloom if you find that the bees are carrying in plenty of pollen, and seem active about the entrance of the hive, you may know that they have a good thrifty queen. The pollen is carried in on the bee's legs, and is used to feed the young bees.

Bees store it some times when they have no queen, but it is pretty good evidence that they have a queen when they are active about the hive and are carrying in an abundance of pollen early in the season.

You can take the bees from the box hive in the spring about the time the fruit begins to bloom, but I would not advise you to do it. You will lose more than you will gain by doing it. I advocated transferring at one time. but I do not think now that it pays. I would advise you to stop up the holes in the top of the hive so the bees can not get into the upper story, if it has one, and then let them alone until they swarm. When the swarm comes out, move the box hive back from where it now stands about ten feet and turn the entrance the other way. Have a modern hive ready with the frames filled with foundation and set it where the other one stood. and hive your swarm in it. Let the old hive remain where you put it until the next evening, and then take it up and set it close up by the side of the other hive with the entrance the same way. Let it remain there about one week, and then take it up in the evening and set it in some other part of the yard. The next day all of the field bees will go back to the old location and enter the new hive. You will now have a good, strong colony of bees ready for business.

Let the old hive alone until another swarm comes out, and then treat it in

the same way again. If you undertake to transfer it, you will lose a great many bees, and you may kill the queen, and thus not get any good out of your colony during the season.

If you proceed according to my directions, you are sure of one good, strong swarm and a lot of surplus honey, if the season is favorable.

It is nothing strange to find a lot of dead bees about the hive at this season of the year. There are always more or less old bees in every colony which go into winter quarters so nearly used up that they die before spring, and the bees carry them out of the hive.

You should be able to tell from the weight of the hive whether or not the bees have plenty of honey. If the season was favorable in your locality last year, they probably have. Bees generally winter better in box hives than they do in modern hives. The conditions are more favorable for them, and more in accordance with their natural habits. We put them in hanging frame hives for convenience of manipulation only.

The bees would not go up and get the honey during cold weather, even though they did not have plenty to eat. They form a cluster in the center of the hive as soon as the cold weather sets in and remain in that condition until there comes a number of warm days so they can fly out, when they will no doubt carry down the honey, even though they do not need it.

If I have not made clear all you want to know, try again. We publish this paper for the good of those who are anxious to learn, and we are glad to have them ask questions; the more the better. I will have more to say about transferring when we reach the season for doing such work, if done at all.—Editor.

Madison County, Neb. Jan. 21.
Editor Busy Bee:—I have been reading the Busy Bee for the last six months and can say it has been a great help to me in learning how to care for bees, and I feel I need it another year. So, inclosed please find fifty cents to pay for the Busy Bee, and you may send me your premium offer, the Standard Cyclopedia of Useful Knowledge, and oblige.

W. G. ANDREWS.

#### 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.

Price, 50 cents per year, payable in advance.

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When the time for which your subscription has been paid expires your paper will be stopped. If you want to renew your subscription, you should renew before your time expires. This paragraph marked with a blue cross indicates that you will receive but one more copy of the paper unless you renew your subscription by the payment of 50c. If the paper comes to you when you have not subscribed for it, you may know that it has been paid for by some friend, and no bill will be sent to you.

REMITTANCES—Should be made by express or postoffice money order when it is possible. If these cannot be obtained, put the money in a letter and register it. Never send money in a letter without registering it. When forced to send stamps, we prefer to have one-cent stamps, and they should be folded carefully with paper between them so they will not stick together.

## Editorial.

Send us the names of your friends who keep bees, and we will send them sample copies.

### THE UNITED STATES BEE-KEEP-ERS' UNION.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men. Membership fee \$1 per annum.

Executive Committee: President, George W. York; vice president, W. Z. Hutchinson; secretary, Dr. A. B. Mason, Station B. Toledo, Ohio.

Board of Directors: E. R. Root, E. Whitcomb, E. T. Abbott, W. Z. Hutchinson, Dr. C. C. Miller, C. P. Dadant. General Manager and Treasurer:

General Manager and Treasu Eugene Secor, Forest City, Iowa. Prof. E. S. Goff of the Wisconsin University writes: "I have examined your little paper and I am much pleased with it."

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The Semi-Weekly St. Louis Republic and the Busy Bee, both one year for \$1.00. Think of it! 116 papers for only \$1. Send me your subscription at once before this offer is withdrawn.

The Busy Bee is sorry to learn that Dr. Gress of Atchison has had the misfortune to lose all of his bees and a large quantity of honey by fire. We did not learn the particulars. We lost over a thousand dollars' worth of honey, etc., once by fire, and we know how to sympathize with others who have a like misfortune. We had no insurance at all, and we learn that Dr. Gress had but little.

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We could not describe the great Mammoth Cave of Kentucky so that you would know just how it looks. Neither can we tell you all the good qualities of Campbell's Soil Culture and Home Journal. It has recently been greatly improved and enlarged; you must see a copy. Send to the Campbell Publishing Co., Omaha, Neb., for a free sample and you will want it for a year. It costs only \$1. We can send it and the Busy Bee both one year for \$1.00.

-0-A subscriber writes: "I intend to put up a stand 2x32 to set my hives on, and then build a shed over it and have it open on the sides in the summer and closed in the winter. What is your opinion of it? Is one or two supers best for the St. Joe Hive?" A shed like the one mentioned above has some advantages and some disadvantages. The two leading advantages are that the bees are shaded in the summer and protected from sudden changes in the winter. The main disadvantage is that bees are not so easily managed when they are grouped together as they will have to be under a shed. I think if I were going to the expense of a shed that I would build a permanent house for the bees as suggested in the January number of the Busy Bee. and make it broad enough so one would have plenty of room to stand behind the hives to manipulate them. However, I have never had any practical experience with either sheds or houses, but I am inclined to think I would not like either of them. Have any of our readers any further suggestions to offer on the subject?

I would not think of running an apiary for comb honey with less than two or three supers for each hive. One super might be all some hives would need but some of them would need three or four. If the honey flow is good, bees will fill two or three supers about as quickly as they would one, if they are properly manipulated. I will have more to say about this in the Busy Bee when the time comes for manipulation.

We can still use more articles for the paper one year. Send them on in the best shape you can. Only make sure you have something of utility to say, and then say it the best you know how. Do not feel disappointed if you do not find your letter or article in the paper at once. We are receiving a great many communications, and it will take some time to find room for all of them. We have not gotten those communications from the ladies vet for the Home Department. Do not the wives and daughters of bee-keepers know some things that are worth telling in print? I am sure I know some who do, if they can only be induced to tell what they know.

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The editor of the Busy Bee visited Omaha the 15th of last month with the other Commissioners from this state, in the interest of a Missouri exhibit at the Trans-Mississippi, and he wants to say that this Exposition bids fair to rival the "World's Fair" in many respects. It is bound to bring together people from every part of the continent, and it seems to him that it would be a great mistake not to hold the next meeting of the United States Bee-Keepers' Union at Omaha during the Exposition, which opens June 1st, and closes November 1st. What do the members of the Executive Committee say to this? The matter should be settled at once that we may prepare to have the grandest meeting of beekeepers here in the center of the United States that was ever held on this continent.

Have you read our clubbing offer with the Gentleman Farmer, the ad of which is found on another page? I am sure that you would not fail to take advantage of the offer of the two papers for 85 cents per year, if you only knew what a bargain it is. Write for a sample copy of the Farmer at once and send us 85 cents before the offer is withdrawn. Your money back if you are not pleased when you see a copy of the Farmer. It is a beauty, full of good things.

I desire to call special attention to our premium offer of five volumes of the Encyclopedia of Useful Knowledge. I am sure that none who get these five books and the Busy Bee one year for 50 cents will ever begrudge the money, or feel disappointed with their investment. If they are, they have only to let me know and I will return them their money. The books are mailed direct from New York and so it will be some days after I get your order before they reach you, as we hold the orders until a few accumulate. Should they not reach you in due time, please let me know. I may have to withdraw this offer soon, so you would better send at once if you want to take advantage of it. It is a bar-

A correspondent writing from Tempe, Arizona, says: "There is one point of interest to us here gleaned from your December number. Three of our company of bee-keepers are batchelors and two are widowers, and we want you to give us the address of that young widow in Iowa who wants to keep bees. She is needed here."

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gain you should not let slip.

This is a little out of my line, but I would venture to give it if I knew it. I shall have to refer you to Mrs. Atchley for her name and address, and I trust she will endeavor to do all the good she can in the world by sending the desired information to box 26, Tempe, Arizona.—Editor.

Do not forget the fact that you can get the Busy Bee with an order for \$10.00 worth of goods any time before April 1st. Get your neighbor to join with you and make it \$15.00, and I will send both the paper one year.

Perhaps no one noticed it, but the word "later" was left out of the remark about the saying of Hugh Miller in the January number. I should have said one of the earliest of the later geological periods. We have been getting out this paper under great difficulties ever since it came into our hands, but we hope to get things arranged soon so we can avoid some of the mistakes which occur.

#### LET YOUR BEES HAVE A FLY.

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The first warm day that comes the covering should be removed from the bees so they can have a fly. If they are packed with straw or chaff, or any other packing inside of the hive, the packing will no doubt be damp. Remove the lid and let the packing dry out thoroughly.

If you are in doubt about the bees having plenty of food, you can examine them while they are having a fly. If you find them out of stores, give them a comb filled with honey, or if you do not have this, give them a cake of sugar candy. —o not try to feed them syrup until it is warm enough for them to fly every day. When you do feed syrup give them all they will eat at once, if possible, and then let them alone. If you feed them syrup, while it is cold, you will kill more bees than you will save.

# CLEAN THE ENTRANCE OF THE

When it is warm so the bees can fly. it is a good plan to take a stick and remove all of the dead bees from the entrance. If your hive has a loose bottom, remove it and clean it thoroughly. If not able to remove the bottom, and the weather is warm, lift out the frames and set them in an empty hive and clean out the other hive. Set the combs back in the same order they were before, first brushing off all of the dead bees which may be found on the combs. Having done this cover up the frames snugly, making sure there are no cracks to create an unward draft. Then contract the entrance so that it is not more than two inches wide. The bees should be let alone from this on, if you are sure they have plenty to eat to last them until fruit moon. Remember, however, that a strong colony will soon be rearing brood very rapidly and they will consume honey very fast, so you should make sure that they have more than enough to do them. If you have any sugar candy on the hives, melt it up and feed it to the bees as syrup as soon as the warm weather sets in.

### BUYING BEES.

The indications are that a large number of people are thinking of starting in the bee business this spring. This is all right and the editor of the Busy Bee looks upon this as a good omen, but he wants to say to all who contemplate buying bees not to be in a hurry about it. About the time the fruit comes into bloom is the best time to buy bees. Colonies that are good and strong then are sure to do well if the season is favorable. You can tell a strong colony by the numbers of bees going in and out and the activity about the hive.

Buy your bees as near home as you can. You would better buy a good, strong colony of blacks in a box hive, if you can get them near home, than to send a long distance for an Italian colony in a modern hive. You will learn later on how to Italianize them, if you do not know now. If you have never had any experience with bees, you would better begin with one or two colonies. No trouble to get all the bees you want after you have a start and know how to handle them. They increase very fast under proper conditions.

### 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.

Order your supplies early and then you will have them when you need them.

Send us the names of your friends who keep bees, and we will mail them sample copies.

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Do you want an INCUBATOR? If so, I can sell you one made by a reliable firm very cheap. Also a "Wooden Hen." Write for circulars and prices, saying which you want.

### A DRONE TRAP FREE.

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If you do not have a Drone Trap, you need one. If you have one or more, you will find use for another one and I propose to give you one absolutely free. Here is my offer: Send 50c for the Busy Bee one year and 15 cents to pay postage on the trap and I will send you the Busy Bee one year and the trap by return mail. The price of the trap is 65 cents, post-paid, If you will send an order for some other goods to go by freignt, the trap can go with them, and you need not send the 15 cents for postage. This offer will not be good after it ceases to be found in the current number of the Busy Bee, so send at once if you want to get the benefit of it before it is withdrawn.

Mr. Editor:-In reading the Busy Bee I find one piece, entitled "Bee-keeping for Farmers," hits the right chord. Bee-keeping is a branch of agriculture and in looking over the country there are more farmers keeping bees than one would think, if one will take the pains to inquire-and the keeping is about all.

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I have talked with several who keep from two to six colonies in box hives.
They will say, "Oh, yes, I got a five pound box off one." Others will say, "Mine did no good; guess I will have you fix them like yours." They often leave them until they swarm and probably go away. Then they wonder why their bees have done no good.

Now I have been looking among the many bee journals for a cheap publication that would fit the case of this class of bee-keepers. Many that I have talked to say they do not feel like paying a dollar or more for a book. They are afraid they would not realize enough to pay expenses. The bee papers are full of science, good in its place, but of no good to them that cannot understand it. The publishers of bee papers do not like to give valuable space to the few beginners that they have as subscribers.

Now, the point is this: If there could be a small book published in pamphlet form, giving proper instructions in transferring, handling and caring for bees, it might lead many to take the paper, and in the end would lead many others to subscribe for the advanced bee papers. My children had to learn their letters before they could

There may not be many as ignorant as I was when I began, but I believe a publication of that kind would be of great help to many. Now, Mr. Editor, you see the point that I am trying to make. Yours respectfully,

JAMES COE. Fried Coe, that book will be published and it will begin in the early spring in the Busy Bee. It will discuss every phase of bee-keeping from the standpoint of the beginner and the farmer.

This paper is published in the interest of the class you mention, and if the fellow who "knows it all" does not want to read it—well there is no law to compel him. You tell your boxhive friends, the beginners and the farmers who have a few bees, that you have found just the thing they need, and that they can get five books and the paper a year for only 50 cents. -Editor.

### -0-PLEASED WITH THE PAPER, ETC

Cass Co., Neb., Nov. 14, 1897.

Editor Busy Bee:-I have received several copies of your paper during the last few months. I always like to get it. I will say this in regard to it, that it is one of the neatest little periodicals published on the subject of bee culture that I have chanced to read lately. It is gotten up in good shape, well printed, and every idea advanced is right to the point.

Your editorial in November number in regard to holding the next meeting of the bee keepers union at Omaha next year at the Exposition grounds or a suitable place during the Exposition is a capital idea.

We hope Friend Whitcomb will lay the matter before the proper authorities and make an effort to secure this J. M. YOUNG. meeting.

0-Write for 1898 Price List to E. T. Abbott, St. Joseph, Mo.

### Book Review.

(Any book mentioned in this column

may be ordered through us.)
In this age of scientific investigation every intelligent and progresive man looks upon books treating or bearing on the pursuit in which he is engaged as an essential part of his tools. A part, too, which he can ill a\_ord to dispense with, and, therefore, he is as much interested in knowing what books of value there are relating to his occupation as he is in knowing what new tools have been invented to lighten and increase the efficiency of his work. I win, therefore need to offer no apology for occupying a part of the space of this paper with the review of such books as 1 elieve will be instructive and helpful to those who are engaged in rural pursuits.

are engaged in rural pursuits.

Note to Publishers.—You are invited to mail to The Busy Bee copies of any books of interest to mose engaged in rural pursuits, and they will receive proper notice in this column. All books receive. will be given some notice, but the length of me notice will depend entirely on the editor's ideas of their value to his readers. Please mark the retail to his readers. Please mark the retail price on the fly leaf of all books, and if possible send a circular treating of them.

"Principles of Plant Culture," by Prof. E. S. Goff, of the University of Wisconsin, is just such a book as should be placed in the hands of every boy and girl and is another answer to the question as to what can be used as a text book in teaching the elements of agriculture in the public schools. The first twenty pages of the book are devoted mostly to a general introduction of the subject. about one hundred pages are taken up with the discussion of "The Round of Plant Life," and such subjects as germination, the root, stem, etc., etc., are quite fully treated in a way that is sure to interest the reader, whether young or old.

Under the head of "Plants as Affected by Unfavorable Environments," the author treats of heat, cold, water supply, etc. "Plant Manipulation" is the title of a chapter in which transplanting, pruning, propagation plants and kindred subjects are taken up and given an interesting discussion. As a concluding chapter, the subject of "Plant Breeding" comes in for a pretty thorough treatment. The above is not even a brief outline of the many things of interest and value in this work of nearly 300 pages. The book is neatly printed on a good quality of

### Attention Please!

We wish to send you a free sample copy of "THE SOUTHLAND QUEEN," the only Bee Paper published in the South. It tells all about Queen rearing, handling bees, etc.

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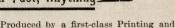
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### MONEY IN HONEY!

The Weekly American Bee Journal Tells all about it. Sample Copy Mailed Free G.W. YORK & CO. 118 Michigan St., CHICAGO, ILL.

paper in bold, clear type, which it is a pleasure to read, and is tastily bound in substantial cloth binding. It will be found a very valuable work for those who are looking for a brief but thorough discussion of some of the elementary principles of agricultural science. It is to be regretted that the proof reading was not more thorough. as the book is disfigured by about onehalf page of "erata," a thing which should not appear in any text book. The work is liberally illustrated, but it seems to the writer that a few of the illustrations might have been left out as they do not illustrate anything but people in rather uncomfortable positions. However, these are minor faults which can be easily corrected in future editions, and the book as a whole is well worthy the attention of all those who are at all interested in these subjects. The price, post paid, is \$1.10, but we can club it with the Busy Bee for an even dollar.

We have received a copy of the Journal of Agriculture Almanac and Reference Book for 1898, and the publishers have our thanks for the same. We look upon it as a very valuable compilation. It is just such a book as every one should have within reach at all times on his desk to answer the questions which are constantly coming up with regard to dates, facts and events. It contains 500 pages and the price is only 25 cents, and it is bound to be worth many times that, if consulted during the year. Remember we club the Busy Bee and the Journal of Agriculture, both for \$1.00.

The Poultry Farmer is the name of a new candidate for public favor, which has come to our table. It is a monthly publication, published at Des Moines, Iowa, at 50 cents per year. Judging from the number I have seen, it will prove a valuable help to the farm poultry keeper. We will club it with the Busy Bee for 75 cents.

Success and the Busy Bee for \$1.00, is another bargain. Write for sample copy to Success Publishing Co, New York.

Send us the names of your friends who keep bees for a sample copy of Busy Bee.



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WHO CAN TURN OUT

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PLAIN SECTIONS

(sections without insets)

### **FOR 1898**

Having special appliances and machinery, we can make them right. Nothing in late years has seemed to stir such a furor in the Bee-keeping World as these new goods. If you don't know about them, send to

## THE A. I. ROOT CO., MEDINA, OHIO.

New 1898 Catalogue, largely re-written, out by January 15th.

### Business'

The Riveter advertised on another page is a very desirable machine. I have tested it and can recommend it.

The Horticultural Visitor is an excellent paper of its class. It and the Busy Bee both for 50 cents for one year for a short time.

The February 1st number of Campbell's Soil Culture and Home Journal is before me, and it is full of interesting and helpful suggestions and information for every member of the family You should see a sample copy of this paper. Write at once to Publisher of Soil Culture, Omaha, Neb. For a short time I will furnish the Busy Bee and Soil Culture, both for the price of Soil Culture, \$1.00.

### ADVERTISERS TAKE NOTICE.

The A. I. Root Co., Bee-Keepers' Supplies.

Medina, Ohio, January 4, 1898. Dear Sir and Friend: I have taken pleasure in pushing your journal, and expect to keep on doing so, for I like your style; for I know that you are not one of the kind who will give a stab in the back, but do your stabbing, if done at all, on fair and open ground. I admire very much your practical thoughts and the common sense you throw into all you write; and I see no reason in the world why your jour-nal should not be a hustler, if it continues on the lines it is on now.

We want that advertisement to appear in your paper, for we believe it is going to pay us to use your medium. A man who can write as you do is bound to draw a good class

of people.

THE A. I. ROOT CO., E. R. ROOT.

The above extract from a private letter from one of the keen, shrewd advertisers of the country, and one who on general business principles would not be expected to help on the Busy Bee very much is greatly appreciated by the publisher of the Busy Bee for the spirit it breathes. I do not think there will be any occasion for "stabbing" under this kind of treatment.-Editor.

### SWEET CLOVER SEED

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25	pounds\$2.25
	pounds 4.00
100	pounds 7.50
	DEDTECH & ELIEMAN

Holland, Mich.

# The Rural Home

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Special Inducement

You can have THE RURAL HOME four months for Ten Cents, or one year for Thirty Cents. A trial subscription will convince you of its merits better than anything we could say.

S. H. PILE, Publisher, 810 Olive St. Saint Louis, Mo.

## Scotch Gollies'

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### MITH'S HONEY-EATH HONEY-EXTRACTOR

Root's Goods at Root's Prices.

Bee-keepers' supplies in general, etc., etc. Send for our new catalogue. "Pracical Hints" will be mailed for 10c in stamps, Apply to

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### Green Cut Bone.



There is nothing better than this to make HENS LAY.

MAN' BONE CUT-TERS are as good as the best. I can sell you one, cheap.

> Write for prices. E. T. ABBOTT. St. Joseph, Mo.



## Poultry.

#### EDITORIAL NOTES.

Keep your fowls indoors during the cold, stormy weather of the spring. They will lay more eggs, and do better in every way if you keep them in and furnish them a place to scratch, than they will if permitted to run out in cold rains, or wade in the snow. As spring approaches feed them less corn and give them more egg-producing food, such as oats, wheat, scraps from the table and lean meat or green cut bone. If you can not get the cut bone. try pounding up green bones for them. This will answer for grit as well as food. Broken dishes pounded up make good grit, and when they do not have access to any other kind of grit this should be given them whenever opportunity offers. Oyster shell is now kept on sale in almost every town and city by someone, and will be found excellent for laying hens.

The time is approaching when the henhouse, if you have one, if not, you should build one, ought to be cleaned out every day and a close watch kept for the first appearance of mites. Remember that "eternal vigilance" may be the "price of liberty." but eternal cleanliness is the price of success with poultry. Cull your flock closely, and do not breed from diseased fowls or "scrubs." It costs no more to raise a good fowl than it does a poor one, and good fowls bring a fair price in any market, but real poor ones are at a discount everywhere.

If your fowls are not pure breeds, get a pure bred cock of some good breed and begin to breed up. By securing a good cock of the same breed every year and breeding him to the best of the flock from the previous year's breeding, you will soon have a fine lot of birds of uniform size and color. Such fowls will sell better in





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the open market than those of all sizes, breeds and color, even though they are to be killed at once.

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#### WHAT TO FEED.

Green bones are not used as extensively as they should be, because grain can be obtained with less difficulty and at a low cost; but as egg producing material, the bone is far superior to grain-nor does the bone really cost more than grain in some sections. The cutting of the bone into available sizes is now rendered an easy matter, as the bone cutter is within the Bones fresh from the reach of all. butcher have more or less meat adherring, and the more of such meat the better, as it will cost no more per pound than the bone, while the combination of both meat and bone is almost a perfect food from which to produce eggs.

If the farmer can get two extra eggs per week from each hen in winter, he will make a large profit. We may add that if the product of each hen can be increased one egg per week only in winter, that one egg will pay for all the food she can possibly consume, and it therefore pays to feed the substances that will induce the hens to If the hens are consuming food, and yet are producing no eggs, they will cause a loss to their owner; and this happens every winter on a large number of farms. The hens receive plenty of food, but not of the proper kind.

A pound of cut green bone is sufficient for sixteen hens one day, which means that one cent will pay for that number of fowls. If one quart of grain be fed at night to sixteen hens, and one pound of bone in the morning, it should be ample for each day (and the majority of fanciers do, we find) in winter. In summer only the bone need be given. Such diet provides fat, starch, nitrogen, phospates, lime, and all the substances required to enable the hens to lay eggs. As an egg is worth about three cents in winter, it is plain that it is cheaper to feed bone than grain, as the greater number of eggs not only reduces the total cost, but increases the profit as well.

The bone cutter is as necessary to the poultryman as the feed mill. It enables him to use an excellent and cheap food; and gives him a profit where he might otherwise be compelled to suffer a loss. It is claimed that the bone cutter pays for itself in eggs, and really costs nothing. Bones are POULTRY SUCCESS is practically the theme of our new PoultryGuide and Combined Incubator and Brooder Catalogue. It tells all about the RELIABLE INCUBATOR and a great deal about the profits of poultry; about feeding—especially for egg production; about Pekin duck farming; leading character—

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now one of the staple articles of food for poultry, and no rations should have them omitted. They are food, grit and lime, all combined in one and the hens will leave all other foods to receive the cut bone. If cut fine, even chicks and ducklings will relish such exturkeys grow cellent food, while rapidly on it. To meet with success requires the use of the best materials, and green bone beats all other substances as food for poultry. There is quite a difference between the green fresh bone, rich in its juices, as it comes from the butcher's and the hard. dry bone which has lost its succulence. The value of all foods depends largely upon their digestibility, and the more this is provided for the greater the saving of food, the more economical the production of eggs.—Poultry Keeper.

#### SELLING FRESH EGGS.

It is a fact that nine-tenths of the residents of cities do not know where to buy strictly fresh eggs. This is no doubt a strange assertion to make in the face of the fact that thousands of dozens of fresh eggs are sold in this country every day, and especially when the purchaser gets them from "an old farmer." But even the old farmer is not always any wiser than the customer, allowing for producing them himself with the aid of his hens, but some old farmers buy eggs or bring them to market for their neighbors. There is a great deal of "faith" in buying eggs, and much depends on "confidence" and from whom they are purchased. A party who had a large flock supplied his brother in the city. Soon the brother's next door neighbor requested that he be supplied. and soon after several other neighbors desired a like favor. All of them were willing to pay extra for the eggs as they had confidence in the one who sold them. He was compelled to re-



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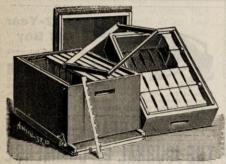
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fuse some of the would-be customers, from lack of supply, which only made his eggs the more desirable. Now, the market was amply supplied with "fresh" eggs, but that fact did not alter the circumstances so far as he was concerned. Cannot the readers learn a valuable lesson from this experience?-Poultry keeper.



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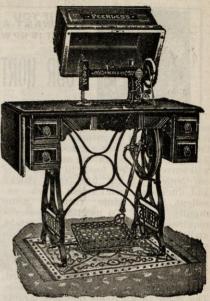
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They are the fowls for eggs, beauty, thriftiness and rich, juicy meat. There is no better fowl for the farmer. They are about the size of Plymouth Rocks, but are more hardy. I have some very fine birds, and sell eggs at hard times prices. Thirteen eggs, carefully packed, \$1.00; select eggs from my best birds, \$1.50 for thirteen,



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