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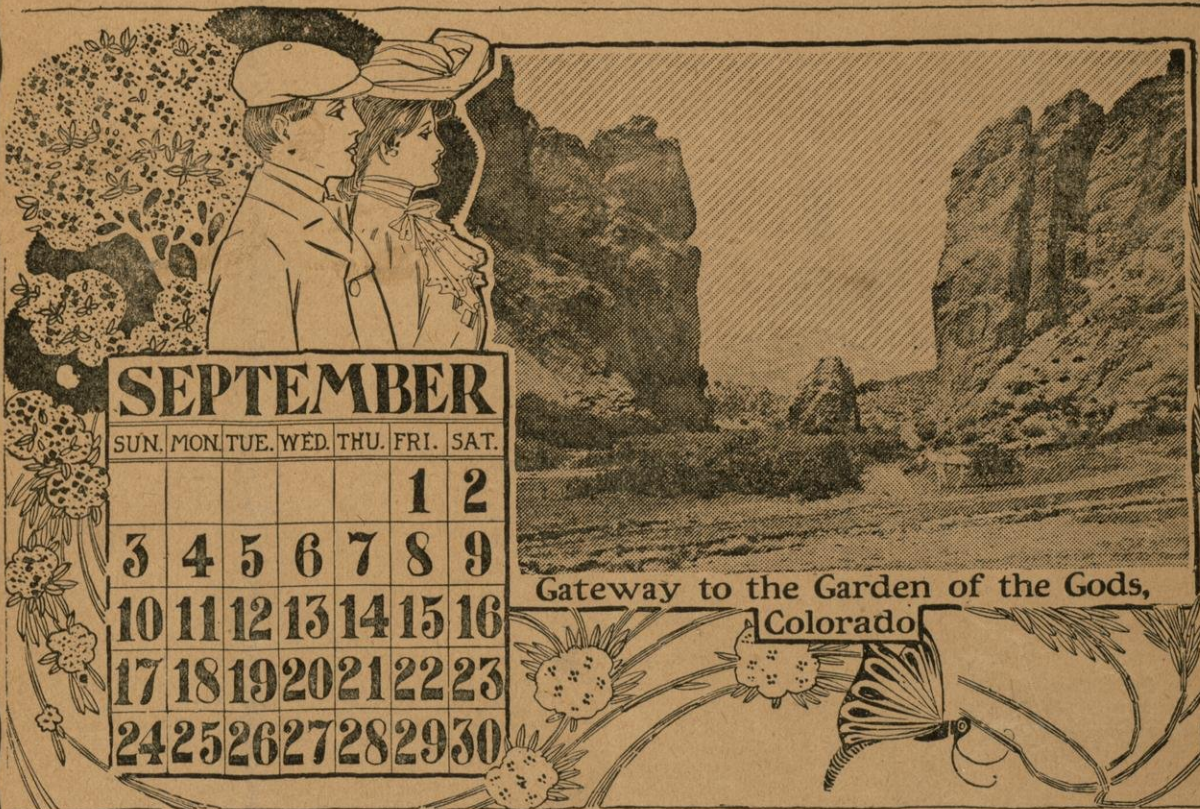
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VOL. XVI. No. 9.

A Journal Devoted to the Interests of the Farm and Home.

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EMMA INGOLDSBY ABBOTT.....Home Department

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ALL COMMUNICATIONS intended for publication must be written on one side of the sheet only, and must be accompanied by the name and the address of the writer.

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. 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.

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If this paragraph is marked with a cross your time expires with the number marked, or has expired. Please let us have your renewal at as early a day as possible.

Of an Orchard.

Catharine Tynan Hinkson.

Good is an Orchard, the Saint saith,
To meditate on life and death,
With a cool well, a hive of bees,
A hermit's grot below the trees.

Good is an Orchard, very good,
Though one should wear no monkish hood;
Right good when Spring awakes her flute,
And good in yellowing time of fruit.

Very good in the grass to lie
And see the network 'gainst the sky,
A living lace of blue and green,
And boughs that let the gold between.

The bees are types of souls that dwell
With honey in a quiet cell;
The ripe fruit figures goldenly
The soul's perfection in God's eye.

Prayer and praise in a country home,
Honey and fruit: a man might come,
Fed on such meats, to walk abroad,
And in his Orchard talk with God.

—The Christian Register.

EDITORIAL.

IF any one is inclined to think that Missouri is bad off we desire to call his attention to the fact that she is about to harvest a tremendous corn crop, and that the estimated value of her poultry and eggs of last year amounted to \$79,106,906, according to the statistics of the labor commissioner. One county in Missouri, Monroe, shipped out \$17,000,000 worth of live poultry last year, and Saline County sent out a surplus product of dressed poultry amounting to \$5,000,000. Green County comes to the front with an egg shipment of 5,548,830 dozen. These are samples of the possibilities of this great state, and there is not much danger

of any one starving to death, or going to the poor house, in Missouri as long as he is willing to exert himself along these lines.

POSSIBLY you are thinking of new and improved machinery to lighten the work of the farm; if so, do not forget the women folks. A good modern churn, an up-to-date washing machine, and other handy tools about the kitchen will materially lighten their burdens. We might remark in passing, also, that these are cheaper than doctor bills, to say nothing of being left alone with a family of children to look after.



A THRIFTY flock of hens or a herd of good dairy cows, begins to yield cash returns to the farmer at once, and every industrious farmer will find them "a present help in time of need." No one has to hunt long for a market for strictly fresh eggs, or choice high grade butter. Every man or woman who eats, and most of them do, will appreciate a thing of that kind, and gladly pay the cash for it. This is only a hint to those who are short on money to pay taxes, or for other purposes.



THE man who has never grown any alfalfa does not know how easy it is to secure plenty of the best kind of hay on earth for all classes of live stock. The truth of the matter is that alfalfa is hay and corn combined. Try feeding the dairy cow on it once, and you will never want to be without it again. It would pay any farmer who has no forage but timothy hay, to sell it and buy alfalfa, and this is especially true if he wants to secure plenty of milk and butter in the winter when they bring the highest prices.



YOU may think there is no difference in the quality of the pork when a hog grows up in filth, is fattened in filth, and drinks filthy swill three times a day, but if we had to eat the pork we would prefer a different method of handling it merely for the looks of the thing, if nothing else. It is hard for us to understand how it is that bad feed shows up in the cow's milk, in the eggs of our hens, but a hog can eat any old thing, and live in any old way, and yet the meat be sweet and juicy and healthy. Can it? You tell!



SECRETARY SHAW has decided that frog legs imported from Canada must be classed as poultry and be made to pay duty. Why not call them dressed meat? Wonder at just what point the transformation from frog to chicken takes place? If you live on the Canada side of the line

you can have frog's legs for dinner, but a fellow just over the line on Uncle Sam's side who dines on the same meat has only plain chicken. Wonderful thing this tariff business, and its ways are beyond finding out. It is frog in Canada, but, if the Canucks send it across the line, it must be plain chicken in order that our Uncle Sam may get a slice out of it.



ONE of the permanent institutions in the State of Missouri, in the success of which every citizen should have a personal interest, is the state fair, which has now gone beyond the experimental stage. The attendance this year was not as large as it should have been, or as large as it would have been had the weather been more favorable. The displays, taken as a whole, were very good and some of them ranked very high. The grounds are nicely located, and the series of new brick buildings which have been erected to house exhibits, are well suited to the purpose for which they have been made. They give the fair an air of permanency as well as prosperity. The grounds this year, we are sorry to say, were not entirely free from fakers and fakes, as some of them were on hand and running the entire week, the noise and din of whose gibberish and clatter was very annoying to those who know what an agricultural fair really means, as it filled the air so that it was almost impossible to hear anything else in that locality. It is to be hoped that the management will exclude all of these fakers another year, even though they do bring in a few dollars to help out a needy treasury. Missouri is big enough and rich enough to hold a state fair and pay all of the bills promptly without any help from the fakers. *Will our legislators please take notice?*



Kindness Will Win.

HE was only a big awkward colt, with weak legs that would not stay in one place long enough for him to stand up and nurse, so we had to help him up and steady him while he got the much needed nourishment. We took hold of him as gently as we could, rubbed his face, patted his nose and talked kindly to him. He seemed to appreciate what we were doing for him from the start, and, as he gathered strength, stood on his feet and began to walk around, he showed no signs of fear. He soon greeted our coming, and seemed glad to have us around. He had no fear because he had never been hurt, and did not know what it was to be afraid of any one. We continued to treat him kindly, and, as soon as he could walk around with ease, we made a halter to fit his little

head. We held it up before him, patted his nose, talked kindly to him and slipped it on his head. He shook his head some at first, but seemed to think it was all right, and in a few days he was wearing his halter like an old horse. We took hold of it occasionally and held it, talking kindly to him and patting his head as usual. After a time we took hold of the halter and led him after his mother as gently as we could, patting his head and nose, saying to him a soft voice, "Come colty do not be afraid." In a few days we snapped a rope in the ring, and began to lead him in that way. He seemed to think it was all right and led along the first time as though he was an old hand at the business. He is naturally nervous and high strung, but he has no fear of any member of the family, for, as we said above, he has never known what it is to be hurt. We flatter ourselves that this kind of treatment followed up the rest of his life will bring the same responses it has so far; and, should he remain with us until he is old enough to drive, we think he will be no harder to teach to drive than he was to lead. If you have never tried this method of handling a colt, try it on the next one and see if it does not show more intelligence from the start than colts usually get credit for. In fact, this will be found a good way to handle any kind of young animals, and many of them will respond as readily as did the colt referred to above.



Self Interest in Our Laws.

NO more striking illustration of the power of self interest in the conduct of the government has come to our notice of late than the protest which came from the state of Oregon to the Reciprocity Congress in Chicago against a reciprocity treaty with Canada, for fear it might reduce the price of lumber, and thus cut off some of the profits of the lumber barons. The people are paying too much for their lumber now, and the U. S. Department of Agriculture is spending thousands of dollars every year to promote the interest of forestry, and thus guard against a lumber famine in the future. Canada has plenty of lumber which she is willing and anxious to cut and sell to our people for a less price than they are paying now, yet our fool notions as to the sacredness and perpetuity of a protective tariff, backed up by the selfish interests of those who profit by this folly, prevents us from letting Canada aid us in saving our forests, and at the same time give our people cheaper lumber. Some may call this wise statesmanship, but it looks to us like blank nonsense, demagoguery and political claptrap. A protective tariff may be a good thing for a country, we will

not discuss that, but to shut lumber out of the United States from Canada, or any other country, smacks more of imbecility than it does of statesmanship. Secretary Wilson can do more for for-

estry in this country by trying to get a little sanity on this subject into the heads of those who make our laws than he can by publishing and circulating tons of literature on forestry.

Grow Less Corn and Give What You Do Grow Better Cultivation.

ONE of the most important lessons which the farmers of the West, especially, should learn is to plant less corn and give that which they do plant better cultivation. The Central West is proud of its corn crop this season, yet as one passes through the country he sees plenty of fields which have not been properly cultivated, the yield of which could have been doubled had they been given sufficient of the right kind of cultivation at the proper time. Corn is cultivated for three important reasons, to kill the weeds, to retain as much as possible of the stored up moisture, and to aerate the soil. The amount of cultivation needed to kill weeds depends largely on the nature of the soil and the character of the season. Some seasons are much more favorable to the growth of weeds than others, but unfortunately it so happens that the seasons that are the most favorable to the growth of corn are also the most favorable to the growth of weeds. It is also a fact that weeds cannot grow on the same soil with corn, and the corn reach the highest possible growth. If the farmer has a fair crop of corn and a large crop of weeds, he may rest assured that a smaller crop of weeds would mean a very much larger crop of corn. The weeds and corn cannot both reach the highest state of development at the same time, and a large crop of one must mean a small crop of the other. So it comes to pass that the ideal condition of things is all corn and no weeds. Some may say that this condition of things cannot be secured on the ordinary farm. We grant it cannot be, so long as farmers continue to plant larger crops of corn than they can cultivate properly, but we maintain that it is the duty of every farmer to reduce the acreage of his crop until he can cultivate it as it should be in order to reach the ideal condition of things.

More, we maintain that he would secure better results by so doing, and with less work on his part. Another reason why we cultivate is to retain as much moisture in the soil as possible against the critical time in July and August when we generally have a long dry spell, especially here in the Central West. If you will examine the corn fields of those who first begin to talk about the bad effects of dry weather and the corn suffering for want of rain, you will generally find plenty of thrifty weeds in such fields, and the evidence of a general lack of cultivation. A hard, crusty, poorly cultivated soil cannot store up and retain moisture, and as soon as the dry weather comes the corn begins to suffer and to show the effects of careless tillage; and, besides, if the land is weedy, as most poorly cultivated land is, the weeds are taking what little moisture there is in the ground just at the time the corn needs it most. As for the aeration of the soil it is plain to every one who gives it a moment's thought, that all living things need air and plenty of it. It is just as impossible for the corn plant to get plenty of air in a poorly cultivated soil as it is for a person to get plenty of air in a tight room when all of the doors and windows are kept constantly closed. A good corn crop cannot be secured without plenty of moisture and plenty of air, and this means frequent and thorough cultivation. No one need expect the best results without it. It is true, we may get fairly good crops under the present method of procedure, but what is the use of exhausting more land and doing more work when the proper use of less land would secure the same or better results with less labor? Ten acres of land well cultivated will produce more corn than twenty acres cultivated the way it is on the average Western farm.

Take All the Family and Attend Your State and County Fairs.

HAVE you taken advantage of the opportunity your county and state fair offers you to learn what your fellow agriculturists are doing, what new thing they have discovered, what progress they have made in the development of better fruit, a higher grade of live stock, corn and grain of every

kind best suited to your locality, and the multiplicity of other things of vital interest to the man who tills the soil? If not, you are making a serious mistake. You can learn more about what constitutes a good horse, hog, cow, sheep or what not, by looking at a living specimen for a short time

than you could learn by weeks of reading and study. There is nothing like a careful examination of the thing itself to help one to form a high ideal, to which he hopes to work. Of course, if one is entirely satisfied with his present attainments, and is content to go on in the same old ruts all of his natural life, there is no use for him to attend the fair, unless it would be for the mere fun of the thing. The man or woman who wants to grow, who longs for the best there is in every department of life, who thinks the earth is a great school of growth and progress in which we are to learn and do things, and learn more by the doing, rather than a raft of drift wood floating aimlessly down the stream of life from the cradle to the grave, cannot afford to overlook or neglect the practical and living exemplifications of the progress that has been made along agricultural lines. Then, take the entire family and attend the fair. In fact, all of the fairs you can. You need the rest, your family needs it, and while you are resting you will be gathering information that will prove of great value all along the journey of life. When you get there do not spend your entire time sitting in the shade on the grand stand watching the races. It may be a good thing to know about the speed of horses, but there are other good qualities in these noble animals, and a knowledge of them may prove of more practical utility to you than speed, and equally as interesting, if you study them with the same enthusiasm. Then, there are other animals besides race horses in which farmers have an interest, and about which every farmer should be anxious to learn all he can.

Do not let your children spend all of their time standing in front of the snide, and many times

immoral, shows listening to the silly talk of some ignorant barker whose gabble makes one inclined to believe in Darwin's theory that man descended from the monkey, or something lower. Take them to the Poultry Department; tell them about the different breeds; show them the best horses, cattle, sheep, hogs, etc., and tell them all you know and can learn about them. It will not do any hurt even to boys if they are taken through the art and domestic departments and shown by practical illustration what constitutes good cooking, etc. Take an interest in all of these things yourself, and do not tell the children to "shut up and keep still" when they ask questions about anything, and you will find that they will enjoy and profit by the fair as well as yourself. Tell the boys and girls not to wander aimlessly through the halls and stare at the people, they can see people any place, and they, it is true, are well worth studying at the proper time, but at the fair eyes and ears should be wide open for *things*, not everything, but *farm things*. There will probably always be some objectionable things at fairs, but one can soon learn to see good things and shut his eyes to the bad. In fact, if he goes to the fair with the right idea of its value, he will be so busy with the good things that he will have no time for anything else, but this is no reason why he should not use all the influence he has to keep the bad out of his county and state fair, for the less bad there is the more room there will be for the good. Then there are the weak ones out of whose reach temptation should be kept as much as possible, and the stronger and braver ones owe something to them. By all means attend the fairs, and make the best possible use of these opportunities for growth and development.

Something About Farm Papers and What Constitutes a Good One.

CAN you recommend a good agricultural weekly?" This is a question that cannot be answered in an off hand way, as there might be some difference of opinion as to what constitutes a good paper. Some people like a long dissertation on a subject while other people like short, pithy paragraphs that tell more in a few lines than can be found in an entire column in some publications. Then, again, there are people who are interested in a clean paper; clean in its reading pages and clean in its advertising pages as well, such a paper as we are trying to make The Modern Farmer. There are others who do not seem to care what kind of ads are found in a paper so it furnishes them the kind of information they want. Fakes, whiskey ads, patent medicine, and mining stock ads

do not seem to disturb them in the least. Judging from our own experience and the enthusiasm manifested for the growth and prosperity of a clean, pithy monthly, we would be forced to say that this class of readers are largely in the majority, but we hope that this is not a true index of the real condition of things. Then, there is the question of locality. What would be a good farm paper for a certain class of readers in one locality might not be best for the same class of readers in another locality. Some papers that are the very best that can be had for a given territory might prove of very little value in other fields, as every thing in them has a local tinge. Some papers are strong in one department and weak in others; some papers furnish a vast deal of general information, and others contain instruc-

tion that is mostly local and are devoid of any information outside of that special territory; some papers deal almost exclusively in known facts, while others are devoted almost entirely to the exploitation of theories. So it comes to pass that the term "a good paper" depends largely on locality, the question as to what one wants a paper for, and the kind of a publication he is willing to encourage. If one lives in Missouri and wants a general farm weekly, and is willing occasionally to see an ad in its columns that belongs to the class of ads that we call "objectionable," then "Coleman's Rural World" is the paper for him to take, for it is by far the best agricultural paper of the kind in the state, and furnishes more general and practical information of value to the farmer every week than can be found in a half dozen other weekly papers. If one lives in Kansas there is only one paper to select, and this is "The Kansas Farmer," but it covers the field so thoroughly and practically that it is hard to see how there could be room for any other. About the only objection that we could offer to it is the length of the articles which it contains, and its lack of pithy editorials. It smacks too much of the agricultural college professor who delights in an exploitation of what he calls the scientific side of agriculture, to the neglect of the more practical. Iowa has two good weekly farm papers, but as we see things it would not take us long to make a choice. "Wallace's Farmer" is not only the best farm weekly in Iowa, but taken all in all, it is one of the best, if not the best weekly farm paper printed on the continent. It is marred somewhat by the multiplicity of "free readers" which it contains, the

length of its editorials, and its tendency to what we call "goody-goody," but it is clean, able and high class, and barring a few medical ads, which we do not think should find place in a farm paper, its ad pages are as clean as its reading pages. Nebraska also has two good weekly farm papers, "The Nebraska Farmer" and "The Twentieth Century Farmer," each of which are bound to prove helpful to those who are engaged in any branch of rural pursuits. In its early history a serious objection to the latter paper was that too much of it was made up of articles which had first done service in a political daily and weekly, but of late there has been a marked improvement in this direction, and the paper now contains more original articles which have been written with the exclusive idea of helping that class of readers which are supposed to make up the bulk of its subscribers, farmers. We might mention other good weekly farm papers, as there are scores of them in the different states in the Union, some of which are national in character and suited to any locality, like "The Rural New Yorker," but we have not the space to even give the names of them. What we have said will give our readers an idea of what we think constitutes a good weekly farm paper, and we hope it may aid them some in selecting such a paper as is best suited to meet their personal and family needs. None of these papers conflict with The Modern Farmer, as we are trying to keep it in a class by itself. As it costs so little, we have faith to believe our readers will want it as a monthly visitor in their homes, whatever other papers they may take.

About Books and Periodicals

By the Editor.

We want this department to be of permanent value to our readers. We, therefore, invite publishers to send us copies of books and Periodicals of special interest to farmers. They will receive careful attention in this department. Always mention THE MODERN FARMER when writing to publishers about any book or periodical mentioned here.

By mistake the pages of the Practical New Standard Speller were given as 24 in the August issue. It should have been 240.

Opening a series of articles on "Safe Foods and How to Get Them," in the September Delineator, Mary Hinman Abel issues a call to women to unite in the study of the food question that they may use their influence intelligently to remedy existing evils.

The Garden Magazine for September contains a number of seasonable articles on vegetables, as well as a number of suggestive articles on fall and other flowers. We want to say again to our readers that they will find this a very valuable publication.

Coats, jackets, street and house costumes for ladies and young folks are shown in The Designer for September and a special article illustrates and

describes "Costumes for Grammar and High-School Scholars." "Points on Dressmaking" tells how to line a jacket, and the Millinery Lesson instructs how to make bonnets for elderly ladies.

The Cosmopolitan for September shows that it is fully able to live up to its claim of being the magazine of timely interest. At least three articles in the issue are distinctly of that nature.

Altogether the September Cosmopolitan is a magazine to read and re-read and lay aside for future reference.

"Suggestion" opens such a wide field for thought in every issue, and presents so many things that seem new and startling that it fairly takes one's breath to read some of it, but we feel that it is doing good work

in teaching humanity to think less of its self, and to depend less on medicine and more on a hopeful and buoyant spirit.

"The Woman's Home Companion" is coming to be one of the most interesting of that class of magazines which are published exclusively for women, and bids fair soon to outdistance all of its competitors. Our lady readers are sure to be pleased with the table of contents for September. Look up our clubbing offers with this excellent home publication.

The leading article in "Success Magazine" for September deals with the appointment of Elihu Root as Secretary of State, to take the place of the late John Hay. To say that this sketch is interesting and instructive when it is told by Walter Wellman is to attempt to emphasize a self-evident truth. Mr. Wellman is one of the leading journalists of America, and is also one of Mr. Root's closest friends.

The benefit and lasting joy of creating real homes in the country are illustrated by many personal experiences in the September Country Calendar. Secretary Bonaparte's well-

kept farm near Baltimore; "A Poor Man's Paradise," of home and trees and flowers, described by Mabel Osgood Wright, one of the creators; a pretty little remodeled Dutch farmhouse; Maxfield Parish's artistic handiwork in the interior decoration of his home; a house built by an "ignoramus" and another by an architect, are among the brightly treated themes. The well blended yellows of the "country house" cover and the profuse, large and explicit half-tones within, complete from the pictorial side a number full of inspiration to every prospective home-builder.

The Popular Science Monthly for September contains a number of very readable and instructive articles which we commend to the patrons of The Modern Farmer. The opening article, China, by Dr. Edmunds, is most an excellent beginning of a series of articles that are sure to be read with great interest by all of those who want to learn more about the customs, education, etc., of the four million people who inhabit this old but in many respects, undeveloped country. Another interesting and spicy article is entitled "Quackery," by Dudley F. Silver. Our readers will appreciate it all the more, we apprehend, because of the fact that none of them are permitted to exploit their nostrums in the columns of The Modern Farmer. These are only a few of the good things that await the reader in the columns of this high grade scientific monthly.

One of the most startling as well as interesting articles in the September Pearson's is entitled "New Hope for the Consumptive." It is composed mostly of an account of the work that has been done by the New York Post-Graduate Hospital, and contains some seemingly heretical statements, looked at from the standpoint of what may be called orthodox medicine, one of the most startling of which is the declaration in italics that "nothing is more certain than that the curing of a case of tuberculosis depends as much, if not more, upon the determination and will of the patient as upon the skill of the physician." Therefore, the first thing done at the very beginning of the treatment is to impress upon the patient that 'if he will persevere, his general tendency will be toward health, until eventually he will be cured.' According to the article patients are cured ultimately by the simplest kind of treatment. We advise those who have any fear of this dread disease to get a copy of Pearson's for September and read this article over carefully many times.

Circular No. 15 of the Bureau of Soils, Department of Agriculture, Washington, D. C., treats of the "Manurial Requirements of Leonardtown Loam Soil of St. Mary County, Maryland." Here is a sample of the way a good deal of money is worse than wasted by the National Department of Agriculture, in our opinion. Think of writing and printing a 15-page circular on the soil in the locality of a

single town in an obscure county of a state! The circular, however, has one merit which very many of the publications sent out do not have. It is written in plain language and is comparatively free from so-called scientific verbiage. Many of the publications which are published in the interest of plain farmers read as though they had been written for the perusal of a committee of college presidents. We venture to say that at least half of the legislators who voted the money to have them published could not read them intelligently, and if they could read them they would not be any the wiser along practical lines. When will this scientific nonsense stop, and this needless waste of the people's money, in order to air some man's knowledge, cease?

"How to Keep Bees," a hand-book for the use of beginners by Anna Botsford Comstock, Doubleday, Page & Company, publishers. Price \$1.00, net. Illustrated, cloth, 228 pages.

One dislikes to open a review of a book which has a great deal of real merit with a criticism, and especially is this so when the author has a national reputation which makes it seem like presumption on the part of the reviewer to offer any criticism on anything she may say or write. To put the matter as mildly as possible we will say we are sorry that Mrs. Comstock felt impelled to write a bee book, especially for beginners, for it does not require a beekeeper of very wide practical experience to see that in many cases she is writing about what she has read, rather than what she has done. A large number of people do not seem to understand that the only way to prepare themselves to teach others how to do things is to do them, and do them over and over until the doing of them, as well as the telling of them, becomes as natural as breathing. It requires something more than the training of a professional entomologist to write a bee book, especially a bee book for beginners. Mrs. Comstock has no doubt had some experience with bees, but judging from her book we should say that she has read more about bees than she has had practical experience with them. Then, again, some of her reading seems to

have been badly timed. Her book gives us the impression that she began her experience with bees by reading Maeterlinck. Now, Maeterlinck is all right for the old practical beekeeper to read, for he knows how to sift the chaff from the wheat, the real information from the speculative theories, but the beginner who starts out with Maeterlinck, or with Mrs. Comstock for that matter, for her book is Maeterlinckish, if we may coin a word, from start to finish, is very apt to get wrong ideas of things, but if not entirely wrong ideas, perverted ideas, to say the least. If Mrs. Comstock could take a few more lessons in practical beekeeping, and then would rewrite her book, and has the nerve to resist the temptation to moralize and juggle with words and phrases such as are superfluous and misleading, she could make a very readable book, and one that would prove of real value to beginners. As it is, she has made a book interesting to read, and one, as we said before, with a good deal of merit, but we cannot conscientiously recommend it to the beginner, for he is sure to get some wrong ideas of the industry, and learn some things from it which are not true, either in theory or practice. However, the book is not likely to do any great harm, for it will be read mostly by the agricultural "400" who do all of their farming on paper or by proxy, for whom a large amount of the "nature study," and agricultural (?) information which appears in some books and in the so-called agricultural high-class monthlies, which have sprung up during the last few years, seems to be written. Such publications furnish fine pictures, and a deal of interesting reading for country gentlemen, who, if they farm at all, do it by proxy, as we said before, but they are of little interest to the real farmer except as a work of art. As he lives close to nature and keeps in touch with her on every side, even the art portion of these publications does not appeal to him as it does to the city farmer who looks at nature on paper only, and whose family studies agriculture, if at all, in a finely furnished and highly scented parlor, attired in dainty slippers and all too suggestive low neck gowns.

THE FARMER'S HOME

A happy, prosperous home means a happy, prosperous country



EMMA
INGOLDSBY
ABBOTT
EDITOR

Lemon juice is good for rheumatism.

An old woolen sock or stocking makes an excellent rag for washing windows or paint.

A bit of charcoal twice the size of an egg, or a little larger, put in one corner of the ice chest or refrigerator will help to prevent disagreeable odors.

Successful Farming says that a pan of lime set in the cupboard with the

preserves and jellies will prevent mold.

If you have not a pair of household scales, get some at once, and do not make jellies and preserves by guess work any longer. You will find them handy for other things besides this.

Where hard water is used the tea-kettle becomes thickly coated on the inside with a limy deposit. To remove this, put some vinegar in the kettle and bring it to a boil. This

will soften the lime and it can be easily scraped off.

Discolored granite or enameled ware is hard to clean. Two of our exchanges give receipts for removing such stains. The Texas Farmer says coarse salt and vinegar will accomplish this, and the Metropolitan and Rural World declares that boiling a little chloride of lime in a saucepan will clean it.

In these days when everybody and her grandmother wears light shirt waists an apron has come into use that hangs from the shoulders and covers the entire front of the dress. This will save one the necessity of changing her dress sometimes when preparing the evening meal.

Ready made sheets and pillow cases can be bought now at such a slight advance over the cost of the material that it does not pay a busy housewife to make them herself. And, unlike many of the ready-to-wear garments, the quality of the cloth is as good as one would buy by the yard for the purpose. But a well finished homemade comfort is so superior to the store article, except, perhaps, the highest ones, that there is no comparison between them.

Is This Too Much?

At the National Congress of Mothers, at Washington, Mrs. Barber, of Boston, gave a word picture of the ideal woman, of which the following is a paragraph:

"She meets adversity with courage and cheerfulness, and adjusts herself to it; she thinks each responsibility a privilege, and does not call it a 'burden.' Scandal finds no carrier in her tongue; there is no place in her heart or mind for the unkind thought or word that so easily halts another soul on its way; she has no room for that ugly brood—jealousy, envy, malice, suspicion, distrust; she has dignity tempered with graciousness; courage softened by gentleness; her poised soul rests in God's will, and her thought, speech, hands, and feet do that will."

It seems at first thought that this is almost too much to expect of an ordinary woman, and yet its possibilities are in every one of us.

We have seen one or more of these lovely traits in different ones among our friends, and it is within our own power to cultivate them all. What a fine old world this would be to live in if every woman shut out what Mrs. Barber calls the "ugly brood" from her heart. Yet we can drive them out, as the bees drive the drones from the hive in the fall, and make them stay out until they perish.

A Short Cut in Bread Making.

I used to commence soon after dinner the day before I baked and went through five different operations before my bread was ready for the oven. Now, with the same kind of yeast, three operations give equally as good bread and the process is completed in less time. I learned this from a busy farmer's wife. I prefer a good brand of yeast cakes to compressed yeast, even if the yeast is obtainable fresh, as is not always the case in the coun-

try; for although sponge from compressed yeast rises more quickly and the bread can be baked earlier in the morning, yet the flavor of the bread is not as fine as that made from a slower rising yeast.

After the supper work is done I sift into the bread pan what flour I will need for the quantity of bread I will make. Into a well in the center I put, for each loaf, a teaspoonful each of lard or cottolene, salt and sugar; I pour on this a cupful of boiling water for each loaf, stirring some of the flour into it, but not enough to make a stiff, hard lump. Then I stir in as many cupfuls of cold water as I had of the hot water, and then add the yeast previously softened in a cup of lukewarm water.

I then stir as much flour into this, drawing from the sides and bottom of the pan, as I can well stir with a spoon, take out the spoon, cover the pan and set it where it will rise by morning. The first thing in the morning I knead down the sponge and let it rise again. After the second rising I make it into loaves, and if properly baked, after the loaves are light, this will make as sweet and light bread as anyone ever saw. Scalding part of the flour makes the bread moist, and it does not dry out quickly.

More depends on the baking than many cooks seem to realize. If the oven is too hot when the bread is put in, and a crust forms too quickly,

even if it does not burn, the inside of the loaf will not bake well. If not hot enough, the bread will rise too much before baking, and it will taste flat and insipid, and sometimes even sour. An ordinary sized loaf should bake an hour. The heat should be as great at first as at any time during the baking, but not sufficient to brown it in less than twenty minutes. After the first half hour the heat should gradually decrease until the bread is taken from the oven. An oven thermometer is a great aid in determining when the heat is right.

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THE FARM IN GENERAL

E. J. WATERSTRIFE EDITOR

Rotation helps keep up the life of the soil, and it should be practiced often, and the crops changed as often as it can be—the oftener the better. A change each year will not hurt.

It surely pays to do a thing right, and do it for what it is. If you have produce to sell in town, the best will bring the best price, and you should try to have only the best.

Do not always be wanting and trying to sell the farm, but put in that time in making it better, and making it seem like a home and then you will not want to sell it. Have a home of your own.

If you are going to make any improvements, make them right. It will pay better to put up a building right than to put it up half, as many do. It will take more time and work, but will pay best in the end.

A short time ago I was talking to a man who lived a short distance from me, and we were talking of farm papers. "I am getting a good paper now," he said, "The Modern Farmer—a paper too good for the price."

While you are buying handy and convenient tools to use for yourself, do not forget about your wife, and that something handy may save her many steps. Have the house convenient, it will pay to study on this.

The farmer should not neglect the poultry on the farm, but should give it more attention and make it a source of profitable income, which can be done by a little effort. Remember if you want eggs you must feed.

I see one of the good farm papers has for a motto "practical and not fancy farming." Now that just suits me, and that is what I intend to do. I like to look on the practical side of everything. It is the only successful side.

Do you know where you are going to get bedding for the stock this winter? If not it is about time. I had no threshing this year, but stacked my oats and will feed them in sheaf, but I went and helped several of my neighbors thresh for some straw, I was glad to do this and so were they.

Haul and scatter the manure on the land as soon as possible, and get the most out of it. This is the most practical way, and if you want to get the most out of it scatter where it will get plowed under as soon as possible. I like to get it mixed with the soil at once.

If you have a good home, do not think of selling it all the time, for you cannot enjoy life that way, for with what interest can you work if you are fixing it up for others? But if you are improving for yourself you have an interest there which will help you in after years. If you have a place, go to work and make a home

of it, for this is the way to get the most out of it.

How can a man take advice any more, for one will tell you to do a certain way, and the other man will have a different way, and if you listen to them all you will not do anything at all. All you can do is to use your own common sense, and decide for yourself.

We are now beginning to gather in the season's crops, and over a good part of the country the crops have been good. As you gather in store the different crops notice whether or not you are improving in the yield, and try to make some advances for the next year.

No time is lost that you spend in improving your place. Improve the looks, and make the home seem like a home. Make it a place that you will not be ashamed to call your home. Have the building well up and convenient on every hand, but above all improve the soil, and make it more productive each year.

September. And that means to begin to send the boys and girls to school, and see that they attend regularly. Many have so much work to do that they keep the boys at home

a good part of the time. Manage so you can give the boys and girls the benefit of an education, yes, even if you have to sell part of the farm.



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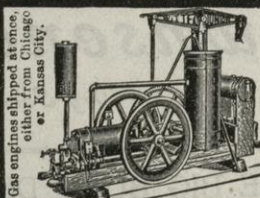
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Dairying on the Farm.

To milk well a cow must be fed well.

The best butter is that which is best made.

Pea meal has a wonderful effect in stimulating milk production.

Good cream rising means keeping the milk sweet as long as possible.

The cost of support is in proportion to live weight, but the yield of butter is not in such proportion.

The poor process of manufacture will spoil the product from the finest cream.

Cream rising is a principle of different gravities in the oils and casein of milk produced by cold.

Butter may easily be worked so dry that the grains of salt left in it are not dissolved but remain in a gritty condition.

In buying cows for the dairy it is most profitable as a rule to obtain those with their second or third calves.

There are very few things on the farm that will give as steady an income as the making and selling of good butter.

It is good food, pure water, not too cold, and warm stables that are the three great agents in milk production.

It is the solids that are in a hundred pounds of milk that gives it value, and the surest test of value is the churn.

A paying cow can never be a rustler, but an animal that returns to her owner a proportionate measure based upon her environments.

The butter, after making, should be kept in a cool, dark place until sent to market, as air is most destructive to quality.

The less milk is cooled after setting the more quickly it sours, and souring milk quickly is against good cream rising.

The great principle to be observed in winter dairying is to feed economically as regards cost so as to secure the best result.

The difference in Jersey milk from other milk is that the proportion of all its solids is greater and the amount of water less than average milk.

A dairy becomes a manufactory to convert the vegetation of a farm into a finished and final product, and so concentrates it that it is put on market at least cost of freight.

The milk rich in fats is a profitable milk for all purposes, but a cow that gives skim milk, however large or small the quantity, is the unprofitable cow for the farmer.

The solids in milk—not its bulk—

gauge its produce, for it is the same as with cream, equal measurements produce different results, as milk is in one sense diluted cream, and the churn must be the final decision in the matter.

The law of stimulation holds good in milking, and if well followed will help to make good milkers, but if disregarded it will run down the best and run out rapidly those which do not have this characteristic of production so strongly developed.

Improved mechanism aids in making a better uniform article of butter, and its special adaptation to the requirements of the art not only enables the operator to get more but a better article with less labor, which amounts to cheaper production, when the different items are added together.

Skim before milk gets thick. Even when it begins to taste sour cream rising is suspended, for souring is not to hasten and perfect cream rising but to retard and stop it altogether, as milk on acidulating loads the little cream globules down with cheese, and they cannot rise.

Dairy cows are usually fed on rich foods, and, on this account their voidings are rich in the elements most essential to plant growth. For this reason grain growing and dairying go well together.

To avoid streaky butter, note, first, that the cream is all of the same ripeness; never churn old and new cream until it has been mixed and well stirred together for at least four hours; then be sure that the butter is not underchurned.

Dairying plays an important part in a successful rotation of crops, and affords a good means of turning all kinds of grain and fodder into valuable manure, and so adding to the fertility of the soil by feeding them to dairy cows.

The use of the separator in the dairy lessens very materially the labor of caring for the milk, besides securing all of the cream. Using the separator is as much an advance over the creamery system of management as

the creamery is over the old plan of shallow pans or crocks.

In butter making we get no returns from the food expended until, in the mature cow, the question of support is first satisfied, and the cost of daily support is usually from two and a half to three per cent of live weight, where the value of the food is reduced to the same standard as good hay. With heifers, the food is drawn upon, first, for growth and second for support, before any can be expended for production.

When it can be avoided a cow should never be allowed to skip a milking, as the retention of so large a volume of milk in the udder will inflame it and injure the quality of the milk, and perhaps the udder also.

By salting with strong brine while the butter is still in the churn there is no danger but that the butter will be salted evenly and thoroughly without leaving any hard, gritty pieces of salt in it, and at a great saving of labor.

The dairy farmers who make the most out of the season's work are those who have the best cows and who buy bran, middlings or other feed, if it is necessary to keep up the flow of milk and the nervous strength and power of the cows. It is easier to maintain a steady flow than to bring a cow back to a full flow after she has once fallen off. Better buy a little feed and maintain a good flow than to save feed at the expense of the milk flow.

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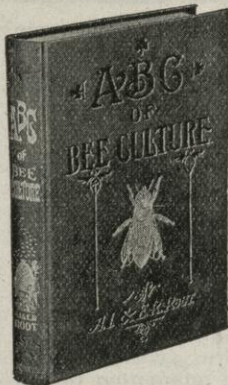
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The Philippine School System.

Nothing in the whole history of our six years' sojourn in the archipelago is more encouraging than the warm welcome accorded to the American school teachers, followed by the recent rapid growth of the insular school system. The importance of the work that is being done in the islands by American school officers and organizers is very imperfectly understood in this country. The fact that more than half a million children and youths are now enrolled in the Philippine public schools can only be appreciated in its true significance when we remember that instruction in English is required in all grades, that a great part of the teaching is done altogether in English, and that attendance at the schools is entirely voluntary. The fact that a school system of such magnitude could be developed under the peculiarly difficult conditions existing in the Philippines and make a popular institution throughout the archipelago within seven years after the sinking of the Spanish ships in Manila bay is a striking tribute to the executive ability, enthusiasm, and devotion to duty of the American men and women who have gone out to the islands with the idea of doing pioneer work in education. Hundreds of teachers who take positions each year in the Philippines have an influence outside of the schoolroom far greater in some respects than they had at home. They are continually brought in contact with the local governing bodies, are called upon for advice on civic and social matters, and have a

thousand and one opportunities to period.—From "The Progress of the mold the political institutions of the World," in the American Monthly interesting people at the formative Review of Reviews for September.



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Beekeeping on the Farm

BY THE EDITOR

The annual meeting of the Missouri State Beekeepers' Association, which was held at Sedalia, August 22-23, during the State fair was quite well attended and a good deal of interest and enthusiasm was manifested on the part of the members who were present. The thing that seemed to be uppermost in the minds of the members was the necessity of legislation to protect the beekeepers of the state against foul brood, and the importance of educating all of our citizens along that line before the meeting of our next legislature. Secretary Ellis of the State Board of Agriculture was present and gave an interesting talk in which he assured the beekeepers that he stood ready to aid them in every possible way he could. He said that while he was not a beekeeper, yet he surely realized the importance of the industry and the adaptability of our state to its further growth and development, if fostered by the executive and law-making powers of our commonwealth.

It seems that what Missouri beekeepers most need now is more enthusiasm for the industry and a unity of purpose and action. Not a false enthusiasm, born of selfishness and ignorance, but a real enthusiasm born of a love for the industry and an intelligent conception of its present conditions and future possibilities. Beekeeping in Missouri as a specialty can never prove a very great success, as the season for the honey flow is generally too short, and the crop too uncertain to justify any one in depending on it entirely for a living, but beekeeping conducted intelligently as one of the minor industries of the farm, or joined with fruit growing, poultry-keeping, etc., can and will be made a great success by those who give it proper attention at the right time. No one should get the idea, however, that bees are a sort of get-rich-quick institution of modern discovery which is offered to the man engaged in rural pursuits as a means of escaping physical effort, for if he does he is sure to meet with disappointment. We often say there is no excellency without labor, and we can assure the reader that it is equally true that there is no honey, at least not much, without work, both mental and physical. Mr. Rouse was re-elected president and Mr. Holekamp, of St. Louis, secretary. Mr. Long, of Kansas City, treasurer. Steps were taken to raise a fund by special contributions to enable the secretary to keep up the agitation of the question of a foul brood law until the next legislature meets. Every one present seemed to think there was no danger of Governor Folk vetoing such a bill should it come to him again for his signature. The general feeling was that he wished the industry well, and that the veto grew out of a misunderstanding of the real purport of the law and the importance of the industry, and that the beekeepers

themselves were somewhat to blame for not placing before the Governor all of the facts along with the bill. Had these facts been given to the Governor as they were to the members of the house and senate, he would no doubt have given the bill his hearty support. The general verdict seemed to be that with the light he had he could not have well done otherwise than to veto the bill, as he honestly believed that the tendency of it would be bad.

In view of some of the "pre-digested" nonsense which has found its way into print lately, the following editorial in the Scientific American under the title "Precautions Against Poisoning the Queen Bee" may prove of interest to our readers:

"The safeguards provided against the administration of poison to the Empress of China are rudimentary, compared with those which stand between queens of the honey bee and

such a risk. Curiously enough, this is a phase of the internal economy of the beehive which appears to have escaped observation."

"In a wasp's nest, each forager on returning proceeds directly to the queen, and offers refreshments, consequently the queen is sometimes destroyed by slowly-acting poison. Farther as regards wasps, it is observed that when any larvae not recently fed perceive the queen receiving food, they become restless. If nearly grown, they wag their heads in a suggestive way which plainly conveys a demand for a share. Each forager after feeding the queen gives the balance of his load direct to the nurses.

"In the case of the honey bee, one possible reason why no virulently poisonous honey reaches the hive may be that the insect foolish enough to collect any would probably die, as the so-called honey sac is really a stomach in which a preliminary digestive process proceeds.

"This is proved by the polariscope, which shows that while the nectar of the flowers is pure cane sugar, or levulose, the substance in the hive cells is sacrometrically half dextrose and half cane sugar. Dextrose is invert sugar, a coarse variety of which

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"Forager bees returning to the beehive place the half-digested product known as honey in their storeroom with other honey. This mixing would have the effect of attenuating a poisoned load, should such be brought in.

"Foraging bees never feed the queen or young larvae, but they give a mouthful or two to drones in passing.

"It is the business of a gang, distinct for the time being, to cater for the queen and young. They bring the food from the stores, submit it to the digestive process referred to, after which it is regurgitated to supply the needs of the queen and young larvae. The attendants are numerous, and each supplies only a minute quantity.

"The queen bee is so constituted that her digestive system is capable of assimilating only the prepared food, or chyle. She will die in a few hours on a comb containing honey, although kept at the temperature of the hive."

The "pre-digested" theory is beginning to bear fruit, and we would think that a little more of this so-called scientific nonsense would practically annihilate the honey market. People are not apt to take kindly to "pre-digested food" or eat it with a great deal of gusto. "The honey sac is really a stomach in which a preliminary digestive process proceeds." This is surely positive enough to satisfy the most enthusiastic advocate of the "pre-digested theory," and coming from such a source will no doubt be widely quoted, but it is none the less nonsense, and is far from being in harmony with the real facts in the case. If one wants evidence of the lack of scientific accuracy in this article he will find it in the statement that "the Queen bee is so constituted that her digestive system is capable of assimilating only the prepared food, or chyle," and that "she will die in a few hours on a comb containing honey only." If we had not kept them on honey and seen them lap it up of their own accord this might go, but if the other statements are not any more accurate than this they are not worth the paper they are written on. We are also told that there is a constant struggle to feed her majesty. We wonder where he learned this. The editor of the Scientific American

must have been reading Maeterlinck, or, worse yet, Virgil. All of this reminds us of that old saying "Better not know so much than to know so much that is not so."

A Kansas Report.

Manhattan, Kan.

Editor Modern Farmer:

I will send in my report for this season. I wintered my bees on their summer stands, only losing one colony. They starved with plenty of honey in the hive, but they were few in number and the long continued cold kept them from moving over to the honey. They were clustered in one side of the hive at the beginning of winter. I placed a cake of sugar candy on top of the frames. They consumed all of the honey in the combs on which they were clustered, then followed the heat they produced and consumed the candy above them, then died clustered to the cover while there was candy extending over the balance of the frames and from one to two inches of honey in the remainder of the frames. When warm weather began I found two colonies queenless, so I placed them on the top of other colonies and at the beginning of the honey flow I found both stories nearly full of brood and they had started queen cells; so I shook all of the bees off and confined them to one story, then put on the supers and they have filled two supers while my other colonies in single story have not filled one super.

So much for giving plenty of room and plenty of stores early in the season. When I removed the upper stories of brood I placed one on top of the other until the bees all hatched then put a queen excluder between them and I will get perhaps 40 pounds of honey per hive, which I will extract at the close of the season, or keep the combs of honey to give the needy colonies next spring.

The season has been poor for beekeepers here. The beginners and small beekeepers are very much discouraged and are going out of the business, and that will be better for those who hold on and hope for a better season next year. I try to keep a stiff upper lip and encourage all I talk to, but it is going to be pretty hard for the one who depends on his bees for his bread and butter until he can raise another crop. He will have to economize and not butter his bread very profusely. It has been a very peculiar season. Between fruit bloom and alfalfa there was two weeks that the bees had to be fed. After alfalfa began to bloom the bees have worked every day, but have not at any time gathered much any day. Some began storing in the

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supers early in June and have not finished filling one yet. I feel satisfied they will get enough to winter, so we will be thankful for that and be happy.

Now a word about aged queens. I have always taken G. M. Doolittle's advice and let the bees supersede the queens at their will, but have noticed that the last one or two years of a queen's life I got no surplus from that colony. This year it is more noticeable than ever. My yearling and two years old queens are the only ones that have made any sur-

plus. I have raised some young queens and will replace as many as I can this fall. If I had replaced the old queens last fall I would now have \$3.00 worth of honey from those hives. As it is I will not get anything. I feel satisfied that this vicinity is overstocked at present, but this season will thin them out a little. There are 500 colonies of bees within a radius of two miles of Manhattan. That is too many for the best results.

Yours truly,

J. L. YOUNG.

Lessons for the Beginner in Beekeeping, No. 9.

The Winter Problem.

One of the most serious, and perhaps we should say partially unsolved problems of modern beekeeping is how to carry the bees through the winter safely without serious loss. Given comfortable quarters and sufficient food to keep up the animal heat and replenish the waste, and a horse, cow, sheep or chicken can be wintered with as much certainty as it can be kept during the summer months. Nature seems to have equipped these animals so that they can adapt themselves to the changed condition of things. It is our contention that while this may not be absolutely true of bees, yet it is very much nearer true than some of us are inclined to think. Of course, we should take into consideration the fact that while the life of the colony may cover a long term of years, yet the life of an individual worker bee only extends over a few months at most; and during the active work of honey gathering she wears herself out in a few weeks. Now, if she has about used up her vital energy when the winter sets in we need not expect the period of her existence to be lengthened out so as to carry her over to the following spring. It requires vital energy to resist the cold and repair the waste in the winter the same as it does during the honey flow. Every living thing has a certain amount of this vital energy and when it is entirely used up its existence in its present form must cease. Of course, it may be cut off by disease or accident before that time is reached. As we suggested in our last lesson one of the secrets of successful wintering is plenty of bees that have not done much work, and used up much of their vital energy, so it comes to pass that one of the things for which every beekeeper should work is a hive full of young bees late in the fall. If the honey flow in his locality is not of such a nature as to secure this the bees should be fed. The Queen will not lay, if plenty of stores are not coming in, and we believe that where there is not a good fall flow that it will pay the beekeeper well to feed simply to secure plenty of young bees to go into winter quarters. Of course, if this is to be done, it must be done at once in this locality, for after the nights become frosty and many of the days so cold that the bees cannot fly out it

is too late to rear brood, as young bees require a good deal of heat.

We said above that nature had so equipped other farm animals that they could adapt themselves to the changed condition of things, and the same seems to be largely true of bees in the wild state where they are left, if you please, to follow the bent of their own minds, and make their surroundings such as they prefer. In other animals it is the vital energy of each individual animal which carries it through the winter but in a beehive the individual life is practically swallowed up in the life of the colony during the winter. While each individual bee is alive, yet her life and vital energy is of but little value if separated from the combined life of the colony. In the winter she must forget her individuality and work in

perfect unity and harmony with the other bees of the colony in order to perpetuate her own being. As the cold weather comes on the bees in the hive form themselves into a compact cluster and the life of each bee becomes for the time being a part of what may be called the larger life, or the cluster, acting as one individual life. Now, this cluster can do some things which a single bee cannot do, and it also has some limitations thrown around it, for the larger an animal is the greater the limitations that it encounters in certain directions. Nature seems to have equipped bees and taught them how to adjust themselves to the changed conditions of things by the swallowing up of the individual life in the life of the whole colony, or cluster. During warm weather each individual bee is a law unto itself. It can come and go as it pleases and move about on the combs in any direction, but as soon as the cluster is formed, and the individual life is swallowed up in the whole, this is all changed, and the larger life becomes limited in its actions. If the bees were left entirely to themselves nature, if you choose to call it that, has so equipped and informed each bee that she knows how to prepare surroundings suited to the movements of the larger life, the cluster. It is a law of nature that heat rises, and the heat which rises from the colony of bees is subject to the same law as other heat. Now, the colony or cluster can only move in one direction during the winter, and that is upward, following the line of heat which rises from the

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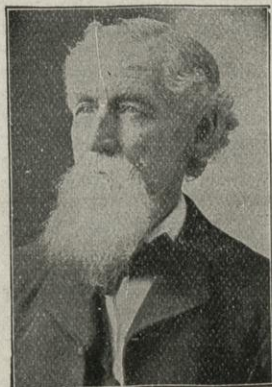
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cluster. As long as this larger life is properly fed it is able to produce the animal heat necessary to keep itself warm and also to supply the waste, which is reduced to a small quantity in the cluster of bees that hangs perfectly quiet, but just as soon as the supply is cut off, or reduced below the amount necessary to keep the fire burning within, the animal begins to feel the pangs of hunger, and can only live a very short time. As a general thing the cluster dies as one animal, for as long as a bee has any food in her honey sac she is ready to share it with her companions in the larger life. We have found clusters that were so weak from starvation that one could scarcely see the movement of a limb, but when they were given warm honey they would about all revive, form in a new cluster, and go through the winter all right if plenty of food was placed where they had easy access to it. You will readily infer from what we have said that one of the things which bees need to successfully pass through the winter is plenty of food above the cluster. Now, bees in their natural state seem to know this and so build combs that are long up and down. There is also another thing that must be guarded against and that is sudden changes. As we said above, the individual bee acting alone is helpless and there is always a time when the change is taking place from the individual life to the cluster life, and every bee which is caught by sudden cold before it becomes a part of the larger life is sure to become chilled and, of course, die, as one bee acting alone has not enough vitality to resist very much cold. Here, again, the bees seem to know what to do, for it left to themselves they generally build their combs in such a form as to prevent sudden changes in the center of the hive. As the cold weather comes on they contract the brood nest and gather themselves closer together until when the winter comes in real earnest they are clustered so closely together that they are practically one animal, with plenty of food stored away in the one direction which this animal can move upward. It is true, some of the parts of this animal are on one side of the combs and some on the other, but there is a vital energy which flows from one to the other and links them all together in one individuality. The individual bees are only living atoms which for the time being make up the larger animal, the cluster, and every member suffers or prospers with the other members.

Three of the conditions, then, of successful wintering are plenty of bees whose vital energy has not been wholly or partially exhausted, plenty of food so located that it is easily accessible to the combined animal, the cluster, and the necessary protection against sudden changes during the time when the individual bees are forming themselves into a compact cluster in order to become a component part of the living whole. Before our forests were cut down and

the larger part of the land cultivated there was plenty of fall honey which protected the life of the colony against old bees, but since this great change came the bees cannot always guard against the possibility of their not being able to gather sufficient honey for their needs in the fall. It is, therefore, the duty of the beekeeper to help them out by feeding them whenever there is a short fall flow, or none at all.

It is impossible for the bees, of course, to build long combs, and in a shape to protect themselves from the cold and sudden changes, in our modern hives. It becomes necessary, therefore, for the beekeeper to make some compensation for this change in some way. It is the writer's opinion that a serious mistake was made when shallow frames were invented, but now that we have so many of them in use he does not think it wise to suggest any changes. If our frames were shorter and about twice as deep as the regular Langstroth frames our bees would winter better than they do now, as this would guarantee plenty of food in the proper place, above the cluster. Since we have compelled the bees to build straight combs as well as shallow ones it becomes necessary, as we said before, to protect the bees against sudden changes. Some do this by the use of chaff hives, but they cost too much for the ordinary beekeeper. Some carry their bees into a cellar or pit, especially fitted up for them, but this is too much trouble and expense for the farmer, besides very many of the colonies put in cellars die from some cause or other. Many of them, we think, from a lack of pure air. Others put their bees in a special beehouse above ground built for that purpose, but we doubt if even this is inexpensive enough for the ordinary farmer. It is our opinion that in most if not all climates, a store box large enough to reach the ground turned over each hive will furnish about as good protection as can possibly be given to bees. Prepared in this way one is sure that the bees will have plenty of fresh air. They will be shaded so that they will not fly out during the days when there is snow on the ground, and no difference how deep the snow gets one need not be bothered about the bees. They will not smother if covered up entirely, box and all. There still remains the question of plenty of food in the right place, and this is one of the most important points of all, in our opinion. One can by feeding force the bees to fill all the combs in the hive nearly full of honey and in this way get plenty of stores in the proper place to carry the bees through the winter, if the winter is not a very long one, and each individual cold spell is short, so that the bees can break cluster and form a new one on the combs where there is plenty of honey. To guard against the possibility of any colonies getting out of food during long cold spells the writer conceived the idea of preparing a sugar cake for each hive of bees, and placing it directly over the cluster after

it is formed. We have told a number of times in *The Modern Farmer* how to make and place this sugar cake, and we will not repeat it here, but if any of our readers have not learned the process fully, they can drop us a card and we will either repeat the instructions in these columns or answer by private letter.

There are a good many other things that are discussed in bee books in connection with the winter problem, but we are quite sure that if these three points are looked after carefully, and the bees are free from disease when they are put in winter quarters, that very few colonies will be lost. We have often said that bees in a normal cluster do not freeze, they starve, and we have been asked how many bees it takes to make a cluster large enough not to freeze. To which we may reply, bees enough to make an individual animal with sufficient vital energy to resist the degree of cold to which it is exposed. In conclusion we will say that a very small cluster of bees properly nourished can stand much more cold than most people think, cold which would freeze a human animal of much larger bulk so thoroughly that all hope of recovery would be gone. Plenty of young bees, plenty of good food directly above the cluster, and reasonable protection from cold winds and sudden changes, then, are the three most important things in wintering bees in almost any climate where it gets cold enough to freeze.

How do you winter your bees, and what losses, if any, do you have? Tell our readers about it. You may throw some new light on one of the most serious problems of our industry. All beekeepers are looking for information that will help them out in this direction, and make them feel a sense of security, for no one likes to face the idea of finding himself the possessor of a lot of empty combs and hives only in the spring.

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Pullets hatched in July or later will rarely lay until spring, but they usually make good spring layers. The objection is that they must be fed all winter while they bring in no income. On account of the hot, dry weather they rarely thrive as well as those hatched earlier, or even those hatched in September.

While the fowls may not entirely protect an orchard from insects, it has been demonstrated that when poultry are confined around the trees or even given the run of the orchard they will aid very materially in keeping down insect pests, bugs and worms that so often infest the trees and fruit.

Young chickens have very little storing capacity and they need to eat very frequently, otherwise they will suffer from long-fasting and then from over-eating. It is not a good plan, however, to keep food constantly before them, for the soft foods upon which they mostly depend so often become stale and unfit to eat when exposed to the air even for a short time.

To keep fowls in a natural and profitable condition, self imposed exercise is required, and this is only obtained by giving them more or less range where there is grass, trees or shrubbery to engage their attention and favor their instincts. One advantage with fowls on the farm is that they can be given a free range and in doing this are able to pick up a good part of their own living and convert into a valuable product much that would otherwise go to waste.

Always provide a dust box. One of the best materials to use for this purpose is road dust, and it is a good plan to gather a supply during the summer and store away where it will keep dry to use during the winter. The dust box should be sufficiently large to admit of at least two or three fowls using it at once. The material should be changed sufficiently often to prevent becoming too foul.

Especially when kept closely confined leg weakness is not uncommon among the larger, heavier varieties, and occurs more frequently where the growing chickens are being forced to fatten rapidly for market. It is nothing more or less than a refusal of the legs to bear the extra weight occasioned by rapid growth. The best remedy is to afford plenty of opportunity to exercise, and the feeding of

plenty of bone forming material, such as crushed bone.

Foods rich in oils should not be fed to laying hens unless in small quantities, especially in the summer. It is well enough to give oily foods when the hens are in low condition or when they are debilitated from attacks of lice, and a tablespoonful of linseed meal in the soft food of six hens will often cause them to improve, because it regulates the bowels. A small quantity of sunflower seed given two or three times a week to a dozen hens will often be found beneficial.

Young chicks have very little storing capacity, and need to eat very frequently; otherwise they will suffer from long fasting, and then from over-eating. At the same time it is not a good plan to keep food constantly before them. The better and more economical plan is to feed at regular hours, giving them all that they will eat up clean at each feeding, and in such variety as to maintain a good appetite. This is especially desirable when the fowls are intended for market, as with this class quick growth and early maturity are essential in realizing the best profits.

Where there is a good pond or good running water and plenty of pasturage, geese can readily be made profitable. During the greater part of what may be termed the growing season, they so readily and fully take care of themselves that no other class of fowls can be raised so cheaply. After the goslings are reasonably well feathered they can be turned out into a good pasture and from then until time to feed, in late fall or early winter, they will take care of themselves. Even during the winter but little grain is needed if they can have chopped turnips, beets, cooked potatoes, scalded clover and such coarse feeding materials as this. They rarely get too old to lay, in fact, the older geese lay the best and the eggs hatch the best so that it is nearly always good economy to market the young geese as soon as reasonably well matured and keep the old as soon as the desired number is secured.

They lay about as many eggs as the turkey while the feathers that may be picked at least every two weeks except during the winter and early spring will add considerably to the income.

But with these as with all other classes of poultry it is best as well as most profitable to keep only the better breeds, Toulouse or Embden, the latter have the advantage in being all white and white geese feathers bring the highest price on market.

Geese may be kept on land too poor to grow a crop profitably and in some localities this is an advantage.

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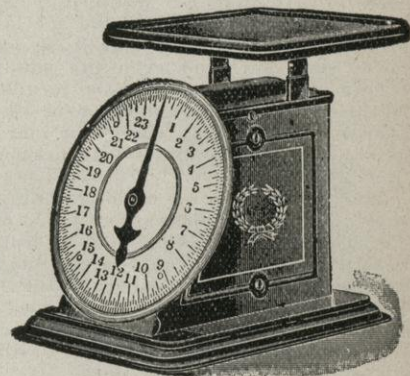
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We will include the MODERN FARMER and any paper in class No. 1 for one year with every order for one of these scales. Or we will give the scales free to anyone who will send us six new subscribers at 25c per year, for the MODERN FARMER. Scales shipped from New York or Chicago as preferred. Express from 25c to 35c, to be paid by purchaser. Address

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Trees, Garden and Flowers

APPLE PROSPECTS.

July 15, 1905.

By L. A. Goodman.

After the unprecedented cold of the past winter and the cold east rains of April 15th to 20th, we could hardly expect a full crop of apples. While the orchards were in good condition, (and are still in fine shape), blooming beautifully, yet injured vitality of the trees by the severe cold, and the failure of the bloom to well pollinize, caused the young apples to drop all through the months of May and June until the prospect for a crop is not good. In some places the fungus damages have been severe and the insect pests have been abundant.

The prospect, therefore, for a crop will be:

In the Ozarks, 25 to 35 per cent.

In Central Missouri, 20 to 30 per cent.

In North Missouri, 15 to 25 per cent.

While this is true we have special locations where the crop will be 50 to 60 per cent, and even the small average that the state makes, means, because of the large number of orchards, a good many barrels of marketable apples for sale at picking time.

The prospect, so far as heard from, show less than half a crop in New York, a little more than half a crop in Michigan, but a still larger percentage in the new Western and Pacific States. This justifies us in saying that the prices will be fairly good and that it will pay to take care of all our apples.

Grapes will be an abundant crop.

Peaches, of course, are a failure.

Pears a very light crop.

Plums a very good crop.

Preparing Fruits for Exhibition.

By Albert Dickens.

The exhibitor should study carefully the premium lists and note every class in which he can make entries and then get his entries ready. Every fruit and vegetable that is to go on the exhibit tables should have the best possible opportunity for development. This will usually require thinning, and sometimes a little pruning in order to give the fruits a chance to color. Every exhibitor must consider his exhibit from the judges' standpoint. While there are at present no authoritative standards, most expert judges have an outline they follow more or less closely. A general plan for all fruits, established by the Massachusetts State Board of Agriculture, is used in its present or a slightly modified form by many judges. It is as follows: Quality, 20 points; form, 15 points; color, 15 points; size, 10 points; uniformity in size, 20 points; freedom from imperfections, 20 points; total for perfection, 100 points.

Nearly all points are considered from a commercial standpoint. The over-sized fruit is not wanted by the

markets, and over-grown specimens are likely to be cut by the expert judge. Quality is a hard point to handle, especially with fruit not yet ripe, and in such cases is often disregarded or estimated by the form and general appearance of specimens. In competitions of storage fruits, however, it is of special importance. Uniformity of specimens is a most important matter. Fair-sized fruits of even form and color of the proper type make good plates. They show to much better advantage than uneven specimens. Freedom from blemish should be insisted upon. A fruit injured by insect, disease or accident is not marketable and deserves a hard cut. Some older judges disqualify such fruit from the competition.

Fairs should be educational in character. Those who attend should see only good specimens, such as the world markets want, if they are to be benefited by their attendance. The grower should know what is wanted, and if he does not, the fair may be a valuable school for him.

Read our advertisements. They are all clean and will not corrupt the morals of your children.

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Containing practical directions for the propagation and culture of all fruits adapted to the United States. By JOHN J. THOMAS and WM. H. S. WOOD.

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"Consider the meek and lowly porous plaster, my son," remarked the home-grown philosopher, "and don't get discouraged. Everybody turns his back on it, yet it hangs on and eventually achieves success by close application."

Mrs. Gadabout: "My husband is so slipshod. His buttons are forever coming off." Mr. Grimm: "Perhaps they are not sewn on properly." Mrs. Gadabout: "That's just it. He is so careless with his sewing."—London Tattler.

Maw Hoptoad—What sort of a crime is interment, Hiram? Suthin' like forgery?

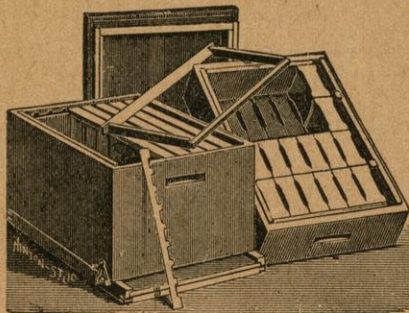
Paw Hoptoad—I dunno. What about it?

Maw Hoptoad—I see so many men air brought back to Chicago for interment.

A colored woman left her husband, much to the surprise of her friends, who regarded him as a decent sort of fellow. They asked her what was the matter with Jim. "Did he abuse you?" "No." "Did he drink?" "No." "Well, what was the matter?" "Oh, I jus' natch'ly lost my taste for him."

THE "ST. JOE" HIVE.

This is, Without Doubt, the Best All Purpose Hive on the Market, and it Never Fails to Give Satisfaction.



best devices known to the beekeeping fraternity, and every objectionable feature has been eliminated. It is made of the very best white pine, and every part of it fits every other part accurately and snugly.

We have improved the hive in many ways since the illustration was made, but it brings out clearly and distinctly some of its strong points, the most valuable of which is the metal spacer, by which every frame is held in its proper place, and at the same time it is impossible for the bees to glue the frames fast at any point. Every frame can be removed with ease and without disturbing any other frame in the hive. This spacer will not break nor split, as do the wooden spacers which are used in some hives, neither can the bees glue the frames together and make them all one solid mass, as they do the Hoffman frames. There is no trouble about fastening the spacers in place. All that is necessary is to drive them down in the saw kerf in the rabbet as far as they will go, and they are there to stay.

The frame is of the same dimensions as the Hoffman frame, has the heaviest top-bar of any frame made, and is so arranged, with two grooves and a wedge, that full sheets of foundation, or starters, can be fastened in a moment's time.

The bottom of the hive is loose, and is made of heavy, $\frac{3}{4}$ lumber. It is so constructed that it can be reversed and the entrance made large or small. This is accomplished by nailing strips on both sides of the bottom, the narrow strips being nailed on one side to make the small entrance, and the large strips on the other side to make a large entrance at the other end of the bottom. The bottom can be fastened to the body either with what is known as the Van Dusen hive clamp, or with simple hooks.

The lid is made with an air space above the sections, as illustrated, and is very strong and simple in construction. There is a honey board with each hive which is to go in the lid, slats down, either on top of the sections or the frames, as the case may be. This is to keep the bees out of the lid and to make the hive cooler in hot weather.

The super we generally send out has pattern slats $1\frac{1}{2}$ inches wide, in the bottom and two presser boards, one for the side and one for the ends, so that the sections are held snugly in place. No separators are used in this super, and we always recommend the use in it of sections open on four sides. Bees will store more honey where separators are not used than they will if the super is divided up into narrow compartments with no connection between them.

Those who prefer can have supers with section holders and separators, if they will ask for them when they order. Or, we can furnish the hive with supers fitted up for plain sections and fence separators. In fact, any combination used in the Dovetailed super can be had with the "St. Joe." We may not always have all of these different combinations in stock, but can get them in a short time from the factory. Any "St. Joe" super will fit on a Dovetailed hive, but Dovetailed supers will not fit "St. Joe" hives, on account of the rabbet on the sides which holds each part to its place.

Every bee space in the "St. Joe" is accurate. Bees do not build combs between the ends of the frames and the hive walls, nor between the frames and the supers. There is also a bee space between the supers when more than one is used.

We have aimed to combine the very latest and best of all hives on the market in the "St. Joe." It is the result of twenty years experience, devoted almost exclusively to the handling of supplies and the production of high-grade honey. As we said before, we have dropped out what we considered the bad features of other hives, retained the good ones, and introduced some new ones not found in any other hive.

The hive is first-class in every respect, and never fails to please those who use it. We advise those who want an up-to-date and modern hive to try the "St. Joe."

Do not let anyone persuade you that they have a hive "Just as Good," there is "No Just as Good" hive except the "St. Joe" itself.

Our prices are the same for the "St. Joe" hive as others charge for poorer ones. Please note that it is crated in lots of five, the same as other hives, and that anything less than a crate will be sold at single rate. We furnish it in both eight and ten-frame, but we recommend to all beginners to start with the ten-frame hive.

The prices of the "St. Joe" hive and the various parts are the same as those quoted for other makes of hives. Five, 8-frame, $1\frac{1}{2}$ story, \$8.50; ten, \$15.50; twenty-five, \$36.50. 10-frame hives 15c per hive more than 8-frame.

E. T. ABBOTT, St. Joseph, Mo.

OTHERS may tell you that there are better hives made than the "St. Joe," but we will not believe it, and we do not think you will after you have put the matter to a practical test and have become thoroughly acquainted with its merits and demerits, if it has any. It is not built for show, but for practical utility. It has no complicated parts which are hard to understand, difficult to operate and of doubtful utility when put to practical use. It has all of the very latest and

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Send for partial list. Best county in the State.

E. J. WATERSTRIPE

CLARENCE, MO., R. R. 5

If the cream is too warm or too acid, the milk becomes viscous and adherent from the presence of the lactic acid which has this viscous consistency, as is seen in the buttermilk, and this, too, prevents the adhesion of the small particles of butter and the consequent inability to churn.

The condition of the cows is an important factor affecting the quality of the milk. If these are in a good condition and thriving, the milk will be of the best quality, provided the food is all right. If they are in poor condition and failing the milk will be correspondingly deteriorated and poor.

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Western Poultry Journal50
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All clubs must include the Modern Farmer one year in advance, and you must pay up, if in arrears, to take advantage of our clubbing offers.

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American Truck Farmer,
Green's Fruit Grower,
Agricultural Epitomist.
All for \$1.25.

To any of these clubs may be added:
Any in Class 1 for 20c additional.
Any in Class 2 for 30c additional.
Any in Class 3 for 45c additional.
Any in Class 4 for 60c additional.

Pearson's or The Woman's Home Companion may be added to any club for 70c additional, but no single subscriptions will be taken at these rates.

BEE BOOKS CLUB.

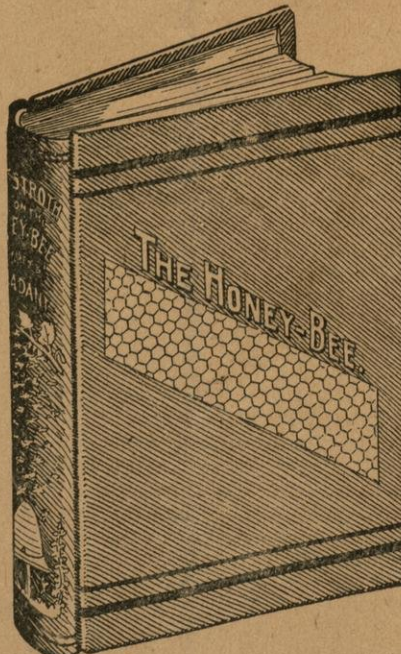
Langstroth On the Honey Bee, price \$1.20
A. B. C. of Bee Culture, price..... 1.00
Beekeeper's Guide, (Cook), price.... 1.25
Either of the above books, The Modern Farmer and Gleanings one year, all for \$1.75.

SPECIAL—New subscribers to the American Bee Journal can have this excellent weekly and the Modern Farmer, one year with a copy of Langstroth on the Honey Bee, for \$1.50. Do this quickly, if you desire to equip yourself cheaply to learn all there is to be known about bees.

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Gleanings in Bee Culture is published twice each month, and it is just such a paper as we take pleasure in offering to our readers.

Gleanings, (old or new)	1.00
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LANGSTROTH ON THE HONEY BEE.

SPECIAL OFFER.

The Modern Farmer, Green's Fruit Grower, both one year and the above book, only \$1.20 for a short time, or any other paper in Class 1.

THE MODERN FARMER,
St. Joseph, Mo.

Gems In Verse

A Bee In the Clover.

Down in the meadow among the clover,
With crimson heads swaying, bending
over,

Comes lightly winging a dusty rover—
Down in the meadow among the clover.

The clover's beakers with nectar are filled,
Out of the soil by the sunshine distilled,
And never a drop by the bee is spilled—
Down in the meadow among the clover.

He fills his amphora with greedy haste;
Not even the fragrance sweet does he
waste.

He stops but a moment the wine to taste—
Down in the meadow among the clover.

Away to his home then he swiftly goes,
His burden of sweets for winter bestows;
The snow will lie deep, full well the bee
knows—

Down in the meadow among the clover.
—A. Lancaster Ellis in Brooklyn Eagle.

The Cry of the Old House.

Come back,
My little lads, come back!
My little maids, with starched frocks;
My lads, my maids, come back!
The poplar trees are black
Against the keen, lone, throbbing sky;
The tang of the old box
Fills the clear dusk from wall to wall,
And the dews fall.
Come back!
I watch, I cry.
Leave the rude wharf, the mart.
Come back!
Else I shall break my heart.

Am I forgot—
My days as they were not;
The warm, sweet, crooning tunes,
The Sunday afternoons,
Wrought but for you;
The larkspurs growing tall,
You wreathed in pink and blue,
Within your prayer books small;
The cupboards, carved both in and out
With curious, prickly vine,
And smelling far and fine;
The pictures in a row
Of folks you did not know;
The toys, the games, the shrill, gay rout;
The lanterns that at hour for bed,
A charmed but homely red,
Went flickering from shed to shed;
The fagots, crumbling, spicy, good,
Brought in from the great wood;
The dark that held you all about;
The wind that would not go?
Come back, my women and my men,
And take them all again!

Come back!
Come up the still accustomed, wistful
lands,
The poplar haunted lands.
You need not call,
For I shall know
And light the candles tall,
Set wine and loaf a-row.
Come back!
Unlatch the door
And fall upon my heart once more,
For I shall comfort you, oh, lad!
Oh, daughter, I shall make you wholly
glad!

The wreck, the wrong,
The unveiling throng,
The sting, the smart,
Shall be as they were not—
Forgot, forgot!
Come back
And fall upon my heart!

—Lizette Woodworth Reese in Atlantic.

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