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FARM NOTES.

Managing a Small Farm.

I wish to ask thru The Farmer how I can get the best results from farming a fifty acre sandy farm? Or perhaps to make it more clear, what system of farming can I adopt to make the most money under the condition in which I am placed? I have fifty acres of sandy land, in very good condition. Ten acres of this I have into permanent pasture, being rather low to insure a good crop on a wet year. The remaining forty is high and dry. I have this forty acres divided into four ten acre lots and am following a four year's rotation—plowing clover sod for corn after manuring, following corn with beans, beans with wheat and oats, and then seeding again. However, will say the land is not adapted to oats. Am planning on keeping four cows, have two now, besides fifteen or twenty sheep, and one brood sow. We have a cheese factory in our vicinity.

Clinton Co. SUBSCRIBER.

The successful management of a small farm is a problem upon which a good deal of thought and study can profitably be put. There are two necessary factors to consider, the first, of course, being the income which may be derived from the farm, which under these conditions should be made as large as possible; and, second, the maintenance of the fertility of the farm which must necessarily be kept up to a maximum of efficiency to insure the continuance of an adequate income from the farm. That a small farm can be so conducted as to come up to these requirements has been proven in actual practice in scores of instances where a small farm has been made to yield an income which has not only made its owner a good living, but has also enabled him to gradually accumulate a competence. Generally, where the latter has been the case some specialty has been produced for which a special market has either been enjoyed at the start or created thru the efforts of the owner. And these results have been attained in various branches of farming, yet in a great majority of cases where marked success has been attained in the management of a small farm it has been thru the development of some special line of production by highly intensive methods. It may have been in the production of fruit, or garden truck, or seeds, or some other special crop, or it may have been by dairying along intensive lines, but, as before noted, it has practically always been accomplished by intensive methods along some one special line. But in order to bring permanent success, this specialty must be one that will either return a maximum of fertility to the soil, or which will provide a sufficient income so that fertilizers may be purchased and applied in sufficient quantities to keep the fertility

A FEW LEADING ARTICLES OF THE WEEK.

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of the soil at a point which will insure the production of maximum crops.

With the land adapted to permanent pasture, with a good market for dairy products close at hand, and with a start in that direction at present it is probable that dairying would be the best specialty on which to place the main dependence in increasing the income from this farm. If this plan is decided on the sheep should be eliminated, as the two do not fit in well in any scheme of farming adapted to a small farm. Then by using soiling crops to supplement the pasture in summer and growing a maximum of forage crops for winter feeding, putting the corn into the silo and purchasing concentrates to balance the ration, the dairy herd could be gradually increased to ten or fifteen cows, and the income from the farm thus materially increased, while it

would at the same time be growing richer in fertility, rather than poorer as it must under present conditions where cash crops are grown and sold from the farm. Under this scheme of farming we believe that it would also be better to drop the beans as a cash crop, and substitute potatoes, or at least to alternate the two, as it has been the experience of the writer as well as that of many other farmers that beans following corn deplete the humus of a sandy soil so rapidly that it soon becomes difficult to get a seeding of clover. In fact, one cultivated crop is all that should be grown on this kind of land in the crop rotation. The writer believes that a three year rotation is better for this kind of land than a four year rotation, but since the farm is fenced for the latter it may be found better to follow it for the present; still, in this case it would be better to substitute another forage crop as soon as the dairy herd reaches proportions where it can be utilized in feeding them, instead of raising a cash crop, altho when plenty of manure is available this is not so essential as where the supply is so limited that an application can be made only once at most during the crop rotation.

With this arrangement the special tools and appliances needed to conduct a dairy farm can be afforded, including a manure spreader which will aid in making the manure go as far as possible in increasing the fertility of the soil, while if general farming is followed on a small farm like this it will hardly pay to have all the equipment really needed, even if it could be afforded at all. Of course, an abrupt change in policy cannot be made in most cases, and probably it may not be practicable in this case, but granting that it is essential to follow



Home of E. D. Jennings, of Ionia Co., Built in 1871 on Farm cleared up in 1859.



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some special line of farming to reach the highest success in the management of a small farm and having determined what that specialty shall be, it is a comparatively easy matter to work toward that end gradually, until it becomes the main dependence for a cash income to carry on the farm. For this purpose dairying has an advantage which few other specialties possess in that it provides a steady income, available throughout the year instead of at infrequent periods as is the case with so many other products. But if some other specialty is favored it may be made just as successful by the right man, in which case the other things can gradually be dropped, as the specialty, whatever it may be, is developed.

THE GASOLINE ENGINE ON THE FARM.

The value and use of a gasoline engine on a farm is not fully realized or appreciated by many farmers who need them. There seems to be some doubt among the farmers as to whether the gasoline engines are really durable and always ready to work. They have heard reports to the contrary and hesitate to invest in one on this account. In this article we shall endeavor to point out the favorable qualities and also the ones commonly argued against this means of power.

It is the writer's opinion that a gasoline engine is the most economical and the most convenient means of power that can be used on a farm. The expense for fuel is the least and it takes only a minute's time to get it into full working operation, which is not true with steam power. Of course, it costs more when it is heavy work, such as grinding feed or cutting corn stalks, but for light work the expense is practically nothing, considering the amount of work it accomplishes. For a three-horse power engine it varies from one to three cents an hour, depending, as was stated before, on the character of the work.

There has been much said about a gasoline engine always being out of order but such has not been our experience. Of course, one must understand his engine and study its working principles. If he understands these the engine will give him little trouble and it will always be ready to start when he is ready to start it. The fault found with them is principally by inexperienced people who do not understand the engines. This report spreads and farmers hesitate to buy on this account, fearing that they may not be able to operate it when purchased. To all these I might say that they will never regret the investment for the engines will work and can be kept in working order with practically no expense. The principle of one is simple and not at all hard to understand. At first our engine gave us a little trouble but as soon as we became acquainted with it and accustomed to it, we had no further trouble. If it does not start right off now usually a minute's time will place it in running order. We believe that within a few years, when experience has proven the value of gasoline engines more and when farmers have lost the skepticism of hearsay that these engines will be more numerous throughout farm sections. A person does not know the value of one until he has used one. Then he wonders how it was that he ever got along without it as long as he did.

The uses to which one may be put are numerous. They vary with each owner. To give the reader some idea as to their availability, I shall briefly describe the work that we do with out engine. Its main function is to furnish power for the dairy. It is connected with a line shaft on which are pulleys which again connect with the separator, churn, and pump in the milk-room, and with the corn-crusher, corn-sheller, feed-grinder, stalk-shredder, and grindstone in the apartment fixed for this work. In the milk room we can separate, churn and pump at the same time. Thus, while the milk is being separated the churning can be going on which saves time in both operations. In the winter while the separator is running the water may be pumped for the cows and forced right to the troughs in front of them, or in warm weather a continuous stream of water surrounding the cream can will cool it as it comes warm from the separator.

In the mill room where more power is required only one operation can be done at one time. The stalks may be cut up as needed or a week's supply or more cut up at one time. The corn may be first crushed and then ground, cob and

all, or else shelled and mixed with other grain before grinding. There is no taking feed to the mill and then having to go back after the grist; no toll to pay the miller, which means so much more profit for the farmer, one of the profits that help pay for the engine. The satisfaction of having the work done, the stalks cut and the feed ground, when one is ready for it is no small argument in favor of the engine. And then, even the turning of the grindstone comes in. It is a small duty but yet one appreciates it. It is not always counting the sections of the mowing machine bar as they are ground off, one by one, and if there is a little harder pressure on the stone there is no one to look up, wishing each section to be the last. We are preparing an arrangement with which we can unload hay with the engine and hope to have it in successful operation by next haying time.

If the reader owns an engine he can do the same work or any other stationary power work he may have to do. As for me, I would about as soon think of doing farm work without the use of a mowing machine or binder as without the gasoline engine.

In buying, an engine the purchaser will find it to his interest, and cheaper in the end, to get a first-class make, one that is guaranteed to work as represented.

We have tried in this article to give facts, learned from using our engine. Experience proves that for farm power a gasoline engine is unexcelled by any other means of power because it is always ready for short jobs and because it is the most economical in all respects. We believe that a farmer who owns a farm where he has any use for power, should regard a gasoline engine, not as a luxury, or merely a labor-saving machine, but as a necessity and a profitable financial investment.

Pennsylvania.

L. J. HAYNES.

THE WOOD SUPPLY.

Early winter is the best time for the farmer to get up the wood supply for the coming summer and winter. If the wood is cut early in the winter it gives a chance to get it hauled to the yard and split during the winter. Any one who has split wood steadily on a warm day will agree with me that it is not a desirable summer job, and it is not conducive to a good temper to have to split dry, tough wood each evening after a hard day's work. Wood is much more easily split green and will season out rapidly in spring if split and piled so there is abundant air space between the piles.

Aside from the inconvenience to the housewife in burning green wood, the practice is not economical. A stick of wood contains a certain number of heat units, but if it also contains a large amount of water, as green wood does, a number of these heat units will be wasted in converting this water into steam. In other words, drying the wood, and the amount of heat required to convert a pound of water into steam would furnish considerable heat. Should it become necessary to burn green wood for a time it should be dried in an oven for a day in advance, and some dry wood should be kept for kindling and to give an occasional "hurry up" fire.

In cutting the wood supply from the wood lot one should take first that which is down, dying at the top, or rotting and becoming hollow at the bottom. There will generally be enough of such damaged timber for wood without cutting good timber except as needed for lumber. Old rails and rubbish about the farm may be cut up to eke out the supply.

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Kindly answer the following questions thru the columns of The Farmer: Can we successfully use red cob ensilage corn for silo purposes? We have grown it as a fodder crop on gravelly soil and it has matured in a good season. Will it make as good ensilage as field corn? We want more tons to the acre than common corn affords, if possible. Kindly give the experience of some practical farmers who have used it in this way.

Kent Co.

ARTHUR CULP.

Have you ever raised any of the red cob ensilage corn? The seed catalogs claim that when corn is in full milk that it is just right for ensilage purposes. Now I have noticed in your articles that you want corn to be mature and I would like to ask if it is necessary for corn to mature enough for seed to make the best ensilage.

Saginaw Co.

O. J.

The majority of practical farmers who grow ensilage agree that we will have better ensilage if we use a variety of corn which will properly mature in the vicinity where it is grown. Red cob ensilage corn is a large southern variety of corn that will not mature in an average season in the state of Michigan. It requires a longer season. If we had an exceptionally favorable season, the corn might mature enough for ensilage, but it is risky. I grew red cob ensilage corn one season, that is, put in a portion of the field of this variety and I do not like it for ensilage. It's a very coarse kind of corn, does not have as good foliage as the common dent corn grown here and in that particular season did not mature sufficiently so that it made first class ensilage. When the seed company says that corn that is in full milk is in just the right condition to cut for ensilage, they simply don't know what they are talking about. They are not practical people in this respect. That is one of the reasons why the silo in some instances hasn't given good results, because the corn was put in too green. The corn doesn't want to be ripe enough for seed but it ought to be mature enough so that it is fully glazed and the earlier ears dented. Then it contains the largest per cent of digestible nutrients and then is the proper time to put it into the silo. This putting corn into the silo when it is in the milk makes sour silage that will not give the best satisfaction. I would prefer to plant the same kind of dent corn that I had been in the habit of growing for field purposes, putting it a little thicker say, doubling the amount of seed, using ten quarts to the acre and then when the corn is matured sufficiently to be glazed and some of the ripest ears dented, put it into the silo and you will have as much and better feed as tho you had planted a big southern variety like red cob ensilage. Of course, I am aware that some people claim to have had splendid results in growing red cob ensilage but my way of thinking they never had the best kind of ensilage so they are not competent to judge of the quality. In a very favorable season if the red cob is planted early it might mature sufficiently. It might be that some of the ears would mature enough so that they could be saved for seed and if these seed ears were kept and planted the next spring it would be much more apt to mature. It would become acclimated as it were, and by saving the early ears each year for a series of years, then we would get a modified variety of the red cob ensilage which would mature sufficiently for ensilage in this state. Then that corn would be all right. Probably you could grow full as much or more per acre than you could of the common dent corn which you usually grow for field purposes.

COLON C. LITTLE.

Corn improvement is going on all over the country. The Department of Agriculture notes some corn tests in Delaware which are instructive in that they show that what appears to be very good corn may be poor seed. One hundred and fifty samples of seed corn were selected and germinative tests were made of each. Over 20 per cent of the ears showed imperfect germination while the percentage declared unfit for seed was 28. It is suggested that by systematic selection the yields might be increased from 20 to 40 per cent.

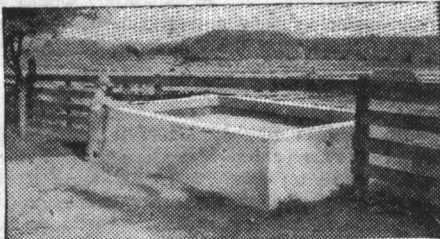
In studying the money in different forage crops, their manurial value to the land should not be overlooked. The manure from a winter's feeding of clover or pea hay will be far richer in fertilizing value than that from corn fodder or timothy. As nitrogen is the most valuable constituent of the feed stuff, so it is the most valuable property in the manure.

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LIVE STOCK

ARE LARGE LITTERS DESIRABLE?

Sometime since a gentleman from Ohio told of his experience with pure-bred swine, in a letter to The Farmer, and gave as his reason for abandoning them, that pure-breds were not prolific enough.

While my experience with pure-bred swine is not large, I have found them, when kept side-by-side with high grade swine, to be equally prolific. Furthermore, that both, as a rule, under favorable conditions, are rather too prolific for best results.

Last spring three sows of mine (Duroc-Jerseys), raised me seven, eight and nine pigs, respectively, and I don't hesitate a moment to say that the litter of seven brot me in more profit than either of the larger litters. The sow was able to give them an excellent start and they were an unusually smooth, even lot, outweighing the other two litters by an average of from 25 to 50 lbs. each at 5 mos. of age.

In October, the same three sows produced litters of seven, eleven and eleven respectively, but one of the first litter was laid on, leaving but six. The second litter was from my finest sow, but by some freak of nature, altho the sow is a big one and in good flesh, and the sire was an aged boar, five of the pigs at birth had no hair and their eyes were not open, yet they were carried the full sixteen weeks. They were the smallest, most discouraging litter of pigs I have seen for a long time and altho given the best of care but five of them survived. For these the sow produced all the milk they could take and they soon began to grow rapidly and are now very nice pigs.

The third litter of eleven pigs were unusually nice and lively for so large a litter, also of good size; but, altho well fed and given all the skim-milk, while the other sows had to get along on swill in their slop, the eleven pigs were more than the sow could properly care for. And now, at nearly three months of age, I am satisfied the eleven pigs in the first two litters will outweigh the eleven in the last litter two to one, yet the latter have had all the humoring.

Of course some sows can properly care

for more pigs than others, while the same sow can provide for more pigs in warm weather than in cold. The amount of skim-milk and other suitable feeds at her disposal will also make a difference. But in all cases it is my rule to encourage the young pigs to learn to eat as soon as possible and to feed them all they will eat three times a day thereafter. Yet in spite of all this, the sow that will produce me seven, or at the most, eight, strong, large, healthy pigs each spring and fall, is more valuable to me than the prolific freak, that will, without regard to breeding regularly produce litters of from twelve to sixteen pigs each.

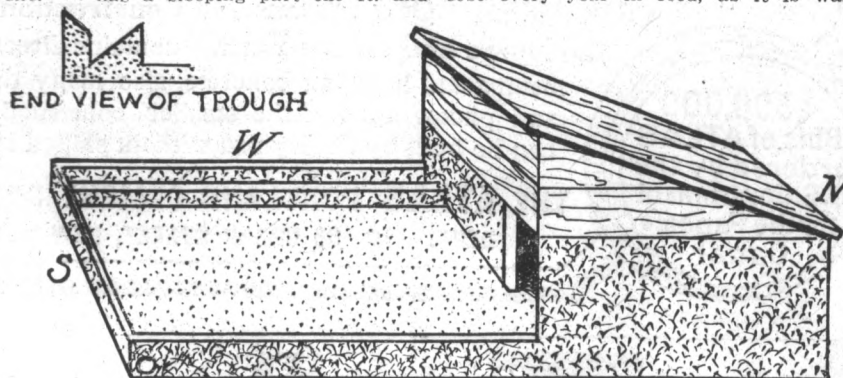
It is my experience that I can produce a ton of pork easier and cheaper from the smaller litters and not have any small, runty pigs in the yards to be ashamed of. How is it with other hog raisers? those who raise hogs with real corn and other feed, not those theorists who raise all their hogs with a fountain pen.

Branch Co.

O. L. DOBSON.

A CEMENT HOG HOUSE AND PEN.

I have been reading plans of large hog houses in your paper and will give plan of my small one for the benefit of some who do not need or cannot afford a large one. It has a sleeping part 6x8 ft. and



feeding floor 7x8 ft. wall 4 in. thick and 3 ft. high to sleeping part, and 8 in. higher than feeding floor of pen. Mix gravel and cement 10 to 1 for all wall and floor. Use all the small stone you can. Make wall first, then floor about 4 in. thick, then give floor 1/4 in. coat of

sand and cement 2 to 1 and trowel smooth. Leave hole in wall at corner, as shown in cut, putting piece of 3 in. tile in form and making floor slant a trifle from both ways to this corner. For a trof set a 6 in. board edgewise 9 in. from wall and fill angle made by board and floor with cement, same as floor, and by finishing the wall with the top slanting toward the trof, and cutting the end of a 2x4 the shape of trof and setting it in end of trof next to building to nail your yard boards to they will come over straight side of trof so you can turn in swill at any part of trof and hogs can't get into or tip it over. I made a 3 in. threshold at door, but would advise making sleeping floor 2 inches higher than feeding floor instead, with a little slant toward door.

To cover sleeping part, set 2x4's edgewise on wall, even with outside, with corners nailed, and fill angle made by 2x4's and top of wall with cement; then build on this. Mine is made shed roof as shown in cut and covered with prepared roofing, with a slide door in west end. I used five sacks of cement and less than a roll of roofing, and a little old lumber which I had, and did the work myself, which makes a cheap, durable, comfortable pen for six or seven hogs.

I think this pen saves more than it cost every year in feed, as it is warm

and tight; no grain or slop is lost. When it doesn't rain often, a pail of water, a broom and few minutes work will keep trof and floor clean and sweet. I use quite sandy gravel and find 10 to 1 strong enough for anything but top of floors. St. Joseph Co. F. E. DOANE.

"SAVE THE HORSE" SPAVIN CURE.

REG. TRADE MARK



SOUND



UNITED STATES POSTOFFICE.

Fredericktown, O., Sept. 22, 1908. I have been using your splendid preparation and with the best of results. I have used 9 bottles all sold on different horses and found it splendid. I have a four-year-old that I have taken wind puffs off of and have driven her hundreds of miles on my trips; have been offered \$250 for her, as she is a well-bred one. I purchased "Save-the-Horse" of druggist, F. F. Hosack.

F. W. FLUMMEN.

General Teaming, 187 North Third Street, Philadelphia, Pa.—I can give it the best recommendation, used it on thoroughbred and bone spavin with great success. Both horses are used every day at the hardest kind of work, which is a great thing among horsemen. As the saying goes, "Seeing is believing."

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\$5.00 a bottle, with legal written guarantee or contract. Send for copy, booklet and letters from business men and trainers on every kind of case. Permanently cures Spavin, Thoroughbred, Humpback (except low), Curb, Splint, Capped Hock, Windpuff, Shoe Blist, Injured Tendons and all Lameness. No scar or loss of hair. Horse works as usual. Dealers or Express Paid. Troy Chemical Co., 20 Commercial Ave., Birmingham, N. Y.

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NEGLIGENT Will Ruin Your Horse

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\$3 PACKAGE will cure any case or money refunded.

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will reduce inflamed, swollen Joints, Bruises, Soft Bunches. Cure Boils, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse \$2 per bottle at dealers or delivered.

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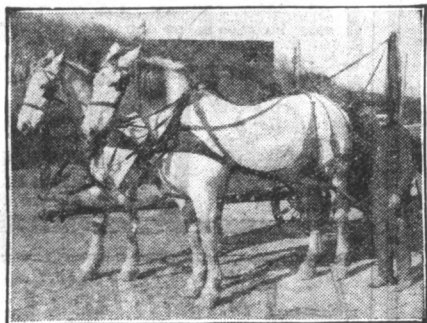
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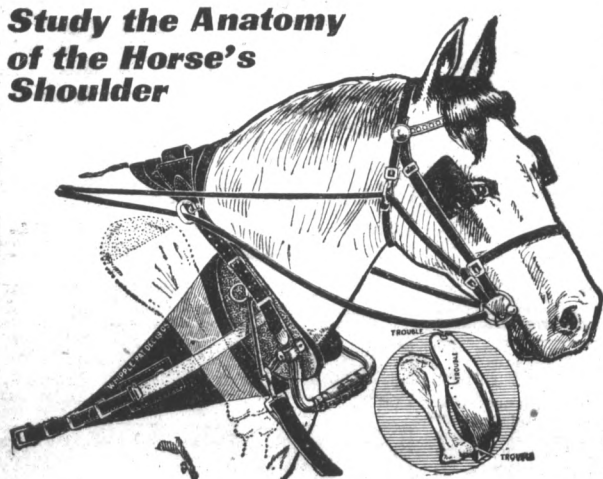
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They Always Pull Easier and Better

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When a man can buy a Whipple Humane Horse Collar that will keep his horse well, it is a crime to torture him with a collar that will make him sore. And it's bad policy from a money-in-your-pocket point of view.

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HERE'S the greatest practical invention in horse collars of the age. Over 35,000 of these collars bought the past year for country and city use. Every set sold on 15 days' trial—satisfaction guaranteed or money back. No more sores—galls or bruised shoulders. No more wasted time. No more loss of valuable horses ruined by sores, bunches or diseased shoulders. No more sweened colts either; can't be. Tell you why. You'll see it in a minute from the illustrations here, but better in our Free Book, "Horse Collar Sense" or by examining Whipple Humane Horse Collars at your harness dealer's.

The simple facts are just these: 1—The pulling surface on these collars is properly distributed. 2—Your horses pull the heaviest load easiest with these collars because there are 45 square inches of pulling surface on each shoulder as compared with only 10 square inches on old-style hame collars. 3—The burden of pulling comes above the lower shoulder joint, giving the horse a chance to step without bruising the joint where most bruises come. 4—There is no pressure on the thin skin and flesh over the shoulder blade where so much trouble is caused with old-style collars. 5—No pressure at all on top of the neck or on the windpipe or breast to shut off horse's breathing.

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It's a fact that only one set of Whipple Humane Horse Collars on a farm will cure up and keep cured of collar troubles, all your horses. Don't use "sweat pads"—it's cruel—especially in hot weather—injures your horses, and besides, the sweat pads cost you more than most collars before you get thru. You don't need them with these collars. So we say to you—Satisfaction Guaranteed or your money back, on the

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SHOWING SHEEP AT FAIRS.

Under the above heading there appeared in one of the papers read largely by Grangers of this state an article signed by Lorimer Kipp. Because this article quite fairly expresses the sentiments concerning the exhibition of stock and the showing at fairs, entertained by a large number of farmers thruout the country, I take the liberty of quoting quite liberally from the article and also from the editorial accompanying the same.

Mr. Kipp starts out with the declaration that fairs are supposed to be institutions where farmers can show their stock and compare different lines of breeding. But as far as showing Merino and Delaine sheep is concerned it is a snare and a delusion. He declares the ring is filled with jockies that do nothing else. They spend all their time between fairs buying, begging, borrowing or some other way getting all the show sheep of the country and then fit them so that they gobble all the premiums. These sheep are fitted so highly that no ordinary breeder could hope nor afford to do the same with sheep he raises and cares for. He complains that these sheep are shorn in the fall and then fattened and blanketed till they are worthless for breeders and are sold to suckers. The men who fit and show these sheep have no further use for the worthless things after the fairs. He then thinks agricultural societies should require that all the wool sheep should be shorn not earlier than March 1st and cites the fact that the St. Louis world's fair had an April 1st shearing rule. Finally he turns around and says it is all right to keep sheep dry, blanket them and keep them stabled so as to be used to dry feed and to make them look fine. He says we can all do that and not buy or borrow. Then the editor joins in on the chorus with the following screed:

"What Brother Kipp says about show sheep is equally applicable to stock of any kind. Cattle that are exhibited at fairs, especially dairy cattle, are generally useless after the fair is over, and hogs are so abnormally fat that they are spoiled for any future use as breeders. The people who exhibit at fairs are mostly jockies, who just buy enough stock to fill all the classes, and then no farmer can take his stock out of the fields and compete with them. Consequently they monopolize the fair business. Unless some rules are adopted to regulate this matter the farmer will soon lose all interest in 'stock shows' at the state and county fairs."

Now I presume I am in as good a position as any Merino breeder in the country to discuss these ideas, since I have been successfully showing sheep at numerous state fairs for a number of years. At one time last fall I had about 120 head of sheep in various show rings. Not more than ten head of these sheep were not of my own breeding. Those that were not were bred from my stock and were purchased in the first place for speculative purposes only, and used to fill in where needed to fill classes. But three of this ten succeeded in winning a first prize, namely, a yearling American Merino, a yearling Delaine ram and a two-year-old Rambouillet, the latter heading my flock showing on the western circuit. Now this does not look much like begging, borrowing or buying to win. If it is jockeying I shall have to plead guilty, but if I do I will have the consolation of being one of a large company of successful breeders who will have to qualify in this same class. How about D. K. Bell, of New York; C. H. Bell, R. D. Williamson, A. T. Gamber, L. W. Shaw, U. Cook & Son, Dwight Lincoln and P. Ragle, of Ohio, and A. A. Wood & Sons, of Michigan, all of which are among the most prominent breeders of Merino sheep in the country and who showed practically nothing at the fairs last fall that was not of their own breeding. That jockey talk, so far as Merino sheep are concerned, is sheer nonsense. Mr. Kipp's wail about excessive fitting finally resolves itself into a commendation of the same, for we saw that he finally concluded that it was all right to keep sheep dry, blanket, etc., and make them look fine. Now, how can any animal look "fine" if it is not in good flesh. That is all any successful Merino exhibitor aims to do. He does not find it necessary to fatten his stock past usefulness, and in most cases he would have a hard job on his hands if he tried to. I presume I had about as well fitted a lot of sheep as was in the ring this year. Yet not a ram in the lot that was a winner but what was and is a successful breeder, providing he was old enough. Practically every ewe shown that was old enough was the mother of a living lamb

last fall and is now the mother of from one to three lambs. Ewes five and six years old that have been in the show ring and won every year of their lives have raised me from one to two lambs every year after they reached breeding age. One of my most successful show Merino ewes raised me a pair of twins last winter and was on the circuit over two months this fall and then turned around and gave me a fine set of triplets in December. In other words, the successful sheep exhibitor is the successful sheep grower. He studies his animals and by care and judicious feeding brings them to their full development with increased constitutional vigor and greater prepotency and productivity than the ordinary farmer or breeder can hope to get in his stock, caring for them as he does. If Mr. Kipp and his friend, the editor, should once attend a fair where all the stock actually conformed to the standard they pretend they would like to see followed, their disgust would be unspeakable.

When the worthy editor put in his little oar and said what he did about dairy cattle and swine, he capped the climax of imbecile drivelling. Any man, who knows anything about the matter and especially who knows as much about it as the editor of such a paper ought to know, knows that in practically all classes of cattle as well as swine the greatest and most noted winners have been the most celebrated breeders or performers. I wonder if Marston, of Bay City, has to discard his show herd of Jerseys after he gets thru with the fairs? Does Miller or Hupp, of Birmingham, do the same with their Guernseys? Do Bartlett, of Pontiac, and Hibbard, of Owosso, put all their show Berks in the pork barrel after the last fair? If you think so, just go around their farms and see.

Without the expert breeder and exhibitor combined bringing out the stock of his fancy in the finest form and highest state of development there would be no incentive to the breeding of good stock and the whole business would degenerate to an alarming extent in a short time. Let us stop knocking at the men who are doing so much to keep up and advance the standard of our stock, but rather give them the merited approval and encouragement, even if we ourselves are too lazy or indifferent to take a hand in the business ourselves.

Oakland Co. E. M. MOORE.

How to Feed Cattle.

A very costly mistake, often made by farmers and cattle-feeders, is failure to maintain the digestive function of their feeding animals at a healthy, normal activity. Ignorance lies at the bottom of this more often than carelessness. No one purposely chooses a course likely to diminish profits.

Yet it is a fact, capable of demonstration, that many a thrifty steer or good milch cow loses, thru too heavy feeding and an over-taxed digestive system, the power of healthy assimilation, and "goes back" until the gain of months is lost.

One course alone promises immunity from such disaster—a regular, daily tonic-dose, composed of elements proven beneficial, for each animal.

This is "The Dr. Hess Idea." Prosperous feeders follow it, and their success is teaching others to do so. In fact, "The Dr. Hess Idea" is the only common-sense rule for the care of farm animals. The heartiest steer with the best appetite can't take an extra heavy ration every day—such as a feeder always gives when hurrying a "bunch" to market—without getting "off feed" sooner or later; it isn't possible. Now, then, to begin right, start with the first mess of grain and give a little of Dr. Hess Stock Food (a tonic) with it. Follow this course right up to the finish, and you will market fine animals at a satisfactory profit.

The reason is plain when you know the nature of the preparation. Dr. Hess Stock Food (a tonic) contains elements which strengthen digestion. Do not think of it for an instant as being itself a food. It is not intended to take the place of grain or hay or corn fodder. The feeder using it gives his regular balanced ration each day, in measure and proportion as he has always done. The theory of this tonic is "assistance to nature." We have just said that it "strengthens digestion," and that is exactly the mission of Dr. Hess Stock Food in the animal economy. It makes a steer lay on a lot of good, solid flesh in less time than he would without it, because it strengthens digestion. It is a well-known fact that but a certain proportion of the food eaten can be digested, anyway; the rest is, of necessity, waste. But to increase this digestible proportion to the maximum is evidently wise, because assimilation always keeps pace with digestion, and, of course, the benefit is seen in the better condition of the animal.

Dr. Hess Stock Food makes a cow increase her milk flow, for the same reason. It helps a hog to fatten in the shortest time possible, and it puts all domestic animals in prime condition, curing many of the minor stock ailments.

Beyond a doubt, "The Dr. Hess Idea" is the foundation on which successful stock husbandry rests. If you try it and fail of good results, your money will be refunded.

WHY

Badger DAIRY FEED

Simply because it makes more milk and better cows at less cost. And it does this because it contains all the necessary Protein, Fat and Carbohydrates in exactly the correct proportions for milk-making and condition building. That's why it's best.

You may think you are getting all the milk possible out of your cows. So did Mr. Low, who wrote us the letter on the right. But he found out he was mistaken and so will you, if you will just start feeding **Badger Dairy Feed** for a short time as a test.


We've just published a valuable book for all dairymen and we'd like to send it to you free. If you will send us your name and address on a postal you will receive a copy by return mail. This book is really "Different" from the books you have been receiving, and we are sure you will appreciate it. Better send a postal today.

CHAS. A. KRAUSE MILLING CO., Box 106, Milwaukee, Wis.

Waukegan, N. Y.
Chas. A. Krause Milling Co.,
Milwaukee, Wis.
 Gentlemen:—As a breeder and feeder of a Registered Holstein dairy, I have for some time tried to secure an ideal dairy feed. I was advised by my dealer to try **Badger Dairy Feed** and I purchased 3 tons.
 My dairy at that time was averaging 20 quarts per cow, which I thought was a good average. Before the 3 tons were consumed, the dairy was averaging 22 qts. per cow. I have one cow that is eating 20 lbs. of **Badger Feed**, and is producing 80 lbs. of milk per day—also a 3-year old that is eating 18 lbs. and is producing 70 lbs. of milk a day. That's the real proof of how good your **Badger Dairy Feed** really is.
 Yours truly,
 (Signed) **H. L. LOW.**

MAKES MORE MILK

HOW MUCH DO THEY GET?



An unthrifty pig will eat as much as a thrifty one and STILL make no weight. YOU know that—but DO you know that 90 per cent of hog sickness, 90 per cent of **HOG LOSSES** are directly due to intestinal worms—that these worms take the food the PIGS should get—**STARVE** them so they **CAN'T** make weight—weaken them so that they're a prey to ALL kinds of disease.

You **MUST** prevent or kill those worms **RIGHT FROM THE START**, if you are to make good hog profits, for most shoats will become wormy by the time they're **SIX WEEKS OLD**. Why take chances of feed waste and hog loss when one to three feeds of

IOWA WORM POWDER

will positively rid the pigs of worms and **IOWA STOCK FOOD** will keep the hogs in a prime, healthy condition until marketed? Here's a sample of its work:

Iowa Stock Food Co., Jefferson, Iowa. State Center, Iowa, Sept. 26, 1908.

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On the 25th of July, 1908, I bought \$10.00 worth of Iowa Worm Powder and 100 lbs. of Iowa Stock Food to feed 160 pigs. The goods did just what I fed them for. I saw from one to five worms come from a pig at one time from a single feed of Iowa Worm Powder. My pigs were dying. I haven't lost a pig since I commenced feeding your goods.

I am proud of my hogs, and to-day I gave my order to your Mr. Deal for \$42.00 worth more of Iowa Worm Powder and Iowa Stock Food. I have fed other foods and worm powders, but the Iowa Worm Powder and Stock Food is the only kind that has given me satisfaction and I can cheerfully recommend your goods to my friends.

Truly yours, **W. C. HILLEMANN.**

FREE—If you've never used **IOWA WORM POWDER** you can secure a \$1 package of it **FREE** by sending us 25c for postage and packing. **TAKE ADVANTAGE OF THIS OFFER TO-DAY** and **INSURE** your hog profits.

IOWA STOCK FOOD COMPANY,
Dept. M, Jefferson, Iowa.

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On a First-Class Manure Spreader

Yours to Try Free 30 Days—Freight Prepaid

Let me tell you something: I'm making a quotation on the Galloway Wagon Box Spreader so low that farmers all over the country are taking notice—and sending in their orders while they can get them at this figure. The name—

GALLOWAY

is a guarantee of manure spreader excellence all over the United States—and every one of my Spreaders is backed by my \$25,000 Gold Bond.

Here are four things to remember in connection with the Galloway: 1. It's the only successful wagon box spreader in the U.S. 2. It has 7 distinct, separate, original patents. Nothing else like it—or as good. They alone make it worth \$25 to \$30 more than any other. 3. My own Factory turns 'em out—capacity, Seventy Complete Spreaders a day. 4. I make you a price that sells them. That price is the lowest ever made on a first-class Manure Spreader. But before you risk one cent on my Spreader I send it to you to try 30 days free.

The Galloway Wagon Box Spreader fits any truck

The Wm. Galloway Co., 649 Jefferson St., Waterloo, Ia.

My NEW Roller Feed Spreader. Greatest thing in the spreader line today



Fits Your Own Wagon

\$25,000 Guarantee

or high-wheel wagon, and is made in 4 sizes, up to 70 bushels. My big, Free Spreader Catalog and my Special Red Hot Proposition are waiting for you—Spend a cent for a postal today and get your name to me at once. I'll make you the lowest price ever offered on a first-class Spreader—Freight all paid—and show you how to clean up \$50.00 clear cash profits. Write me personally—TODAY.

Wm. Galloway, President

Why the "Segment-Ground" Process Makes Sawing Easy



The Atkins "segment-ground" saws taper from tooth edge to the center of the back and from the ends to the middle. Hence the blade makes room for itself so that it is almost impossible for it to "get stuck" in the wood. This patented feature can be had only in

ATKINS CROSS CUT SAWS

Naturally, too, we know better than to weaken this big advantage by using anything but the best steel. The Atkins blade holds its edge longer, cuts faster and runs easier than any other saw. It costs more to make a saw this way, but the Atkins price is not high. You save time and make the work twice as easy by buying an Atkins saw. See that it bears our name. If you're sorry, after using it, take it right back to the dealer and get your money back. Your dealer has them or can easily get them for you. If he is slow about it, write us.

A one-cent postal brings a five-cent book, "The Care of Saws," and a silver tie pin free.

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Largest Exclusive Saw Manufacturers in the World.

With branches carrying complete stocks at New York, Chicago, Minneapolis, Portland, Ore., Seattle, San Francisco, New Orleans, Memphis, Atlanta and Hamilton, Ont.

VETERINARY

CONDUCTED BY DR. W. C. FAIR,
CLEVELAND, OHIO.

Eczema.—I have a horse twenty years old that is troubled with a skin eruption accompanied with itching. The hair is inclined to drop out. M. H. Q., Weston, Mich.—Give 2 drs. Fowler's solution, 1/2 oz. fluid extract sarsaparilla and 1/2 oz. ground gentian at a dose in feed three times a day.

Cow has Dyspepsia.—I have a cow that does not have an appetite for rough fodder, she seems to consume grain readily, but is out of condition. W. F. M., South Haven, Mich.—Give your cow 1 oz. ground gentian, 1 oz. powdered cinchona, 1 oz. powdered charcoal at a dose in feed three times a day.

Liver Disease.—I have a 7-year-old cow that I believe to be with calf; when turned out she staggers and is losing flesh rapidly. S. A. A., Grand Rapids, Mich.—Give your cow 30 grs. calomel at a dose daily for a week; also give 1 dr. ground nuxvomica, 1 oz. ground gentian and 2 ozs. hypo-sulfite soda at a dose in feed twice a day. If her bowels are constive give her epsom salts.

Acidity of Stomach.—My cows are inclined to chew boards, lick bones and eat rubbish, but are in fairly good condition. E. M. P., Charlevoix, Mich.—Give your cows each, 1 oz. bicarbonate soda, 1 oz. powdered charcoal and 1 dr. salicylic acid at a dose in feed three times a day. Salt them well and feed them some vegetables.

Ringworm.—I bot a cow last spring that appeared to be all right. A short time after I got her a scab formed on back, this scab has spread gradually, but never gotten well. I applied sulphur and lard, this done no good. How should the case be treated? P. M., Saranac, Mich.—Apply peroxide-hydrogen, ten minutes later apply a small quantity of iodine ointment, and your cow will get well.

Indigestion.—I have a cow seven years old that came fresh Dec. 25th. She seems to be hearty, but does not give more than one-third as much milk as she should. She is fed four quarts of corn meal and dairy food twice a day, also cut cornstalks and clover hay. E. A. K., Rockford, Mich.—Feed her some gluten meal, some vegetables, more bran and less corn meal.

Chronic Conjunctivitis.—I have a 7-months-old calf that has an almost continual discharge from the eyes. I might say this discharge is watery and does not change very much. F. D. C., Sullivan, Mich.—Put 2 grs. acetate lead and 7 grs. sulfate zinc into 1 oz. distilled rain water and apply to eyes twice a day. Blow a little calomel into eyes two or three times a week.

Cows Hold up Milk.—I have four cows that we are milking that are inclined to eat well when out of doors, but eat poorly when in stable—every one of them are inclined to hold up their milk. A. S., Memphis, Mich.—Your cows may have in stable which accounts for their hold-up milk. Excited or abused when ing up milk. Treat them kindly and feed them whatever kind of food they crave while you are milking them.

Spasm of Larynx.—I have several 2-months-old pigs that are fed on cold skimmed milk. They eat good, but are taken sick suddenly with a sort of fit and I am inclined to believe some of them will die. These sick spells come on when they first start to eat. E. J., Mount Pleasant, Mich.—Your pigs suffer from spasms of larynx or chilling of stomach. Warm their feed and add some ground ginger.

Snagged—Teething.—I have a 3-year-old colt that got snagged thru bottom of foot six months ago—he apparently recovered from the lameness, but now has a contracted hoof. I also have a 3-year-old filly that has a sore mouth on account of teething—her gums are swollen and inflamed. J. F., Prescott, Mich.—Blister coronet with cerate of cantharides once every ten days or you can safely use any one of the blisters that are advertised regularly in this paper—the foot should be kept moist. Give your 3-year-old filly 2 drs. powdered nitrate potash at a dose in feed twice a day and scarify gums slightly with a pen knife.

Wounded Teat.—Some time last summer one of my cows met with an accident, making a wound on side of teat that has not healed—the milk comes out of side opening. This cow will be fresh next month and I would like to have her fixed up before she comes fresh. J. J. D., Bad Axe, Mich.—Scarify edges of sore enough to make them raw, stitch wound with silk and apply equal parts iodoform and boric acid twice a day. It is always difficult to obtain a proper union in such cases.

Partial Loss of Power.—I have a colt three years old that has poor use of hind quarters. When traveling he wobbles and appears weak on hind legs and backs with difficulty. A. H., Mayville, Mich.—Give 1 dr. ground nuxvomica, 3 drs. Fowler's solution and 2 drs. powdered rosin at a dose in feed three times a day for three weeks. Also apply equal parts turpentine and sweet oil to center of back from root of tail to withers, every two days.

Thrush.—I have a 5-year-old horse whose frog is soft and spongy, but gives off a very offensive odor and the bottom of foot appears to be decaying. J. F., Roseville, Mich.—Apply 1 part coal tar disinfectant and 15 parts water to bottom of foot night and morning. Be sure and purchase one of the coal tar disinfectants that are regularly advertised in this paper, for many of the coal tar preparations on the market are not active enough to do very much good.

Additional Veterinary on Page 63.

Horse Owners Should Use GOMBAULT'S CAUSTIC BALSAM

The Great French Veterinary Remedy.
A SAFE, SPEEDY & POSITIVE CURE.

Prepared exclusively
by J. E. Gombault, ex-
Veterinary Surgeon to
the French Government
Stud.



SUPERSEDES ALL CAUTERY OR FIRING.

Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

WE GUARANTEE that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

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\$1200 to \$3000 a Year

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Competent Horse Trainers are in demand everywhere. People gladly pay \$15 to \$25 a head to have horses tamed, trained, cured of habits—to have colts broken to harness. A good trainer can always keep his stable full of horses.

If you love travel, here is a chance to see the world, giving exhibitions and making large profits. You will be surprised to learn how little it costs to get into the Horse-Training profession.

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Very prolific, large boned, vigorous April boar pigs ready for fall service \$15 each. April Glits bred to farrow next spring \$20 each. Your money back if you are not satisfied. COLON C. LILLIE, Coopersville, Mich.

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POULTRY AND BEES

WHY HE PREFERS ARTIFICIAL HATCHING AND BROODING.

I gave up using hens for hatching five years ago. I found that if the number of hens required to hatch the eggs which an incubator would handle were kept laying, they would pay \$6 to \$8 for each hatch, which would be equivalent to 18 per cent interest on the capital invested in hatcher and brooder. Besides, it took at least an hour a day to care for the brooding hens, while I can take care of a hatcher in 15 minutes per day. The chicks from hens are also quite apt to be lousy, while those from the hatcher are always free from vermin. I use a well constructed incubator from which I have hatched as high as 88 per cent of the fertile eggs in four consecutive hatches. Most any of the machines made today will hatch eggs of strong vitality.

I formerly made the mistake of attempting to hatch too early in the spring, before the hens had run out much. I found that but a small percentage of the eggs were fertile, and even those were of weak vitality and the chicks did not do well. I now wait until hens can get out a little. I mate cockerels with hens, and cocks with pullets, using one male for each dozen females. I gather eggs twice a day, and those selected for hatching are put in egg crates and the crates are turned once a day. I always discard small and irregular shaped eggs, and especially any having a rough shell.

Now, most anyone can hatch chicks, but it takes constant, careful attention to brood them. I have experimented with most all makes of brooders and have also had good success with a home-made affair costing about one dollar (besides the making), for a 50-chick size. The main features of a brooder are, or should be, not too much bottom heat, good ventilation, and such arrangement that the chicks will not crowd into corners to get smothered. For my home-made brooder I get dry goods boxes about four feet square, raise bottom up about one foot and saw a circular hole in center for heating drum, which should be 8 in. in diameter and 10 in. high with a 3-inch hole in center of bottom for a lamp chimney, and a small hole near side of top for a small tin tube (about the size of a lead pencil), which must reach up thru top of brooder to allow the lamp fumes to escape. I place bottom of heating drum even with bottom of floor by tacking a couple of strips under the same. I use a low hand lamp with a medium-sized burner, so that chimney will not enter hole in bottom of heating drum. A door is cut in one end at bottom of brooder to slide lamp in place, and an inch hole bored in door to give air to lamp. A slide door at opposite end, even with floor, allows chicks to pass out onto a runway to the ground. I put on a gable roof, with one side hinged at top and an 8x10-inch glass in each gable for light. It is covered with building paper. The circular hover, 18 in. in diameter, has a slit 6 in. from outer edge towards center to allow hover to go by the fume pipe. Cloth is tacked on edge of hover so same will hang an inch or two from floor, the cloth being slit every two inches.

When we have the brooder made and started we must be careful not to crowd it. Fifty chicks is about right for brooder of this size. The next thing is to get these chicks to the ground, which will do more towards making them healthy than all the fancy chick foods money can buy. Give each brooder a nice run containing some tender grass and enclosed with inch-mesh wire netting. Keep the chicks scratching for something between feeds. The first four days I feed the infertile eggs, boiled hard and mixed with bread crumbs in a crumbly mass, followed by pinhead oatmeal and millet seed. When wings begin to feather I feed fine wheat bran 5 parts, corn meal 3 parts and oil meal or animal meal 1 part, mixed to a crumbly mass with scalding water to prevent fermentation in chick's crop. When about one month old I feed cracked corn and wheat and give free range. I always keep a drinking fountain in corner of brooder (a quart glass jar inverted in a saucer), and a half-gallon jar inverted in a tin pan in the yards. Also keep fine grit in brooder and on feeding boards.

Care must be taken not to allow the young chicks to become wet or chilled. Clean brooders often and spray with lime water and carbolic acid. When chicks are large enough to roost coax them into their winter quarters. I have excellent

success with the above treatment, otherwise I would not write about it.
New Jersey. C. A. UMOSELLE.

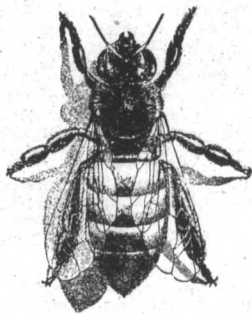
THE HIVE BEE—APIS MELLIFICA.

From the earliest times of which we have a history the honey bee has been an object of interest and admiration. Its intelligence in storing up an abundance of food for winter supply and in seeking the sources from which it is obtained; its mechanical skill and exactness in building its combs of six-sided cells (the form which is most economical of space and material); its great industry in suitable weather—not merely busy, but apparently in hot haste; its form of government, whether monarchical or republican, which establishes good order in a crowded and populous habitation, secures a perfect union, provides for the common defense and secures the respect of men and animals, have made it an object of wonder in all ages.

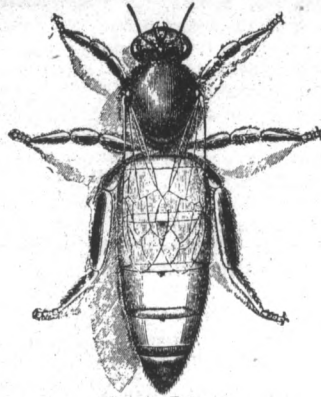
No other living things on earth have ever had so many historians and eulogists as these remarkable insects. In them the naturalist has found an ample field for his investigations, and the philosopher for his speculations. Many books have been written about them and nearly all

the hives several times and, when they discover that their presence will no longer be tolerated, they conclude to stay out. On one occasion I saw a squad of four or five bees bring out a drone and all fell to the ground together. He struggled with all his might, made a good fight against overwhelming odds, and made a loud complaint against such barbarous treatment. He had not been stung, nor hurt, and as soon as his abductors had returned to the hive he also returned without any difficulty. I would have given considerable to have had some flour to dust on him to mark him. I watched intently, and soon after he entered the hive, as nearly as I could tell, the same squad brot out the same drone and deposited him on the ground as before. He was not hurt a bit. To my

The males are never destroyed in hives deprived of queens. They are tolerated, supported in idleness, and have been seen in hives in the month of January. They are only driven out of hives in which the queen is completely fertile, and after the swarming season is over. They are not known to fulfill any other purpose than that of propagating their species, and the question has often been asked why so many more males than are needed are to be found in every hive. This



Worker Bee.



Queen Bee.



Drone Bee.

agricultural papers have a department especially devoted to them and their successful and profitable management.

The feature which distinguishes them from almost all other insects is their being created in three different kinds—the males, the females, and what have generally been supposed to be neuters, or worker bees, devoid of sex. The males, or drones, have a thick flattened body, a round head, and a rather abruptly terminated abdomen, within which are contained the male organs of generation. The male is distinguished also by the absence of a stinger, and by the coarser humming noise which accompanies his flight. The queen bees, which all authorities agree in recognizing as the females, are larger than any of the others; the abdomen is of greater length, is provided with two ovaries of considerable size, and a stinger slightly curved.

The worker bees are distinguished by their smaller size, being about half an inch in length, and by the peculiar structure of their legs and thighs; also by the apparent absence of every trace of generative organs. Until recently the worker bees were regarded as neuters, but are now known to be females with the ovaries and other generative organs undeveloped by reason of being reared in cells too small to permit of their proper growth. All doubts on this point have been removed by the experiments of Schirach. When a hive is deprived of a queen, and there are no royal cells, the surprise that stubborn drone defied the whole commonwealth by returning a second time. I waited and watched to see them bring him out the third time but they did not come. If they killed him inside they did not bring out his corpse. bees provide themselves with a sovereign by immediately enlarging a worker cell containing a worker larva, and which without such enlargement would have produced a worker bee; then by feeding the said larva on better food they so increase the size and development of the ovaries as to transform the larva into a queen bee.

The drones, or male bees, are the "gentlemen of leisure," too lazy to work. In the fall of the year, or sooner if their sexual services can be dispensed with, they are driven from the hive or killed. Huber describes a massacre of drones he witnessed by placing hives on a glass table. He thinks they are always slaughtered. I kept bees for more than thirty years and observed their habits. I am fully of the opinion that such wholesale massacres as Huber describes are as uncommon as the massacre of St. Bartholomew or the murder of the innocents by King Herod. From what I observed the drones are forcibly dragged out of

question has never been satisfactorily answered. It seems to be an invariable law of nature that a superabundance of seed should always be provided, lest the grasses, grains, fruits, flowers and animals should be scrimped and thus become extinct.
J. W. INGHAM.

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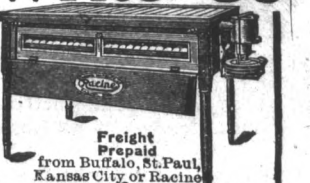


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The Lawrence Pub. Co.,
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DETROIT, JANUARY 16, 1909.

CURRENT COMMENT.

In the statistics quoted from the annual report and Values of Secretary Wilson in a recent issue of the Michigan Farmer, the aggregate value of farm products in the country was shown to be away above the five-year average for the current year. There is no question in the mind of any close observer that farmers have been more prosperous during the last decade, and particularly during the latter years of it, than at any previous time within the memory of the younger generation of farmers at least, if not at any time within the history of our country. This aggregate increase in the value of farm products has been partly due to an increased production, which in turn has been partly due to the increased yield which has resulted from the application of better methods in our agricultural practice, and partly to the higher prices which we have obtained for nearly all of our staple products. These conditions have enabled many farmers to make improvements which have added not a little to the value of their farms from a standpoint of homes at least. But the fact remains that in our state at large, there has not been a corresponding increase in the price of good agricultural land, as indicated by current sales from year to year. It is true that in especially favored localities, close to big market cities and adjacent to trolley lines, there has been a marked advance in land values, but this has been due to other influences than those above noted. In some of our adjacent sister states, conditions have been entirely different. In Illinois, Indiana and Ohio, land values have risen rapidly in quite direct proportion to the increase in the value of farm products, and agricultural lands have changed hands quite as freely at the enhanced values which have been obtained in recent years. In talking with a prominent Illinois farmer not long ago, the editor asked him if he did not think their land values had about reached the high point. He replied in the negative, and when asked for reason said, "You know they don't make any more good land."

It is true that the better class of agricultural lands can no longer be obtained in desirable localities for homestead purposes as in former years. Yet very large

areas of valuable land will be reclaimed by both irrigation and drainage in years to come and there is still much good agricultural land right here in Michigan that awaits development by homeseekers; and while there is no question given by this gentleman doubtless has an important bearing upon this proposition, yet there is no doubt that there are other reasons for the phenomenal increase in land values in what is so often spoken of as the corn belt. In this territory this greatest of cereals has reached its highest development, and owing to the superior natural advantages of soil and climate, and the intelligent methods which have been applied in its culture, the yields which have been secured and the disposition which has been made of the crop, has enabled the farmers of that section to make a profit in farming land that sells at \$150, and in some cases nearly \$200 per acre.

We believe there is no doubt that a similar effort on the part of the farmers of Michigan, or any community of the state, would bring to them somewhat similar results. Wherever any specialty has been made a sort of community interest, there you will find land values higher than in other sections where diversified farming has been the rule without any inter-dependence among the citizens of such community. Of course, Michigan is admirably adapted to diversified farming, and a certain diversity of interests adds to the certainty of an income from the farm, and yet wherever there is community work along any given line as in the growing of sugar beets, the raising of potatoes, in dairying, or any other department of live stock husbandry, an increase in the prosperity of the farmers of that community is immediately noticeable and a corresponding increase in the value placed upon their land will generally be found to accompany it. No doubt, this is due quite as much to the friendly competition which is engendered as by the object lessons which are sure to be noticeable in any community where any one specialty is given prominence, but both are valuable factors in increasing our interest in the business in which we are engaged and in spurring us on to greater efforts and deeper study in order to secure maximum yields and make our business afford a maximum profit. For this reason the various local farmers' organizations in the state will find it profitable to take up community work in the securing of industries which will afford a special market for special productions in that community or, if that is not practicable, in inaugurating some scheme of community effort in the improvement of the staple crops which form the principal products of the farms in their several communities.

The power of example in molding the life and character of a child is a matter of common observation and remark; but that the same influence is potent in only slightly less degree with men and women who, after all, are but grown up children, is not so generally recognized. It is none the less certain, however, that the power of example is a very potent force in shaping our actions and habits in a great many ways, even reaching to the conduct of our business. It is a matter of common complaint among live stock breeders that they can seldom sell any stock to their neighbors, and yet, it is a fact worthy of remark that the community in which a successful live stock breeder is to be found is generally a prosperous and progressive community, and while it may not follow as a logical conclusion that his efforts toward the improvement of the live stock of the community have been in any great measure responsible for that condition, yet it cannot be denied that his work and example has been an influencing factor to that end. Generally a pride in his business as well as an eye to the comfort of his stock will have induced him to keep his barns in a good state of repair, and equipped in a manner which will give a maximum of comfort to his stock at a minimum of labor on his part. That sort of enterprise is infectious, and the chances are that his neighbors will give more attention to these details on account of his example. Then by feeding out the products of his fields on the farm and returning the fertility to the soil, he is able to grow better crops than his neighbors who are similarly situated so far as natural conditions are concerned, and this is bound to lead to comparisons which will force themselves to the attention of those who may be less successful, and finally induce them to change their scheme of farming to a beneficial degree. What may be said of the live stock breeder in this connection

may be said with equal truth of the stock feeder, the dairyman, the fruit specialist, or, indeed, of the specialist in any line of work. This is but another argument for specializing along some line in the conduct of our farms. We will not only improve our methods along that particular line, but by the power of example we are bound to exercise a wholesome influence over the agriculture of our entire community, and we, in turn, are the more likely to observe the effect of specialization along different lines by others and to be influenced thereby. The power of example is indeed great, with we grown up children as well as with the younger ones, and we need more original investigation, research and experimentation on the part of the better farmers of every community. It will help us in a two-fold way, in the knowledge which they may gain and disseminate, and in the influence which their example will wield in the community.

SHORT OF PREMIUMS.

On account of the very heavy demand for some premiums, we have run short, but all will get the premium ordered within a few days.

HAPPENINGS OF THE WEEK.

Foreign.

Soundings made in the strait of Messina since the recent earthquake shocks have shown that the bottom is now some 600 meters nearer the surface than before the catastrophe. This will in all probability make it necessary to resurvey the harbors. Altogether there has now been taken in round numbers, 76,000,000 lire from the ruins of the city of Messina. This would approximate over \$15,000,000. The American hospital ship Campana reported Sunday that the surgeons and men had attended 609 injured persons and buried 300 bodies since arriving upon the scene of disaster.

A tour thru the eastern part of Cuba by Gov. Magoon satisfied the official that the conditions are promising and that there is every evidence that the islanders will make a success of government now that they are given a chance to start right.

One man was killed and eight badly hurt by the premature explosion on the line of the Panama canal a few days ago.

The American soldiers and others who are on the scene of the district affected by the earthquake in Italy were complimented by the Pope thru Archbishop Ireland for the splendid work that is being done. He also expressed his gratitude for the help sent from this country.

Forty persons were killed and some sixty hurt by the collapse of an old church at Sion, Switzerland, during services Sunday. Pillars in an underground crypt gave away and let the building walls fall in. The inhabitants were terrified, believing that an earthquake had tumbled the structure.

The Connecticut, of the advance squadron of the American fleet now in the Mediterranean waters, reached Naples, Sunday. The services of the ships and crews will be placed in charge of the officials who are superintending the rescue work and other duties incident to the disaster.

The federal district in which the city of Mexico is located is now considering an ordinance that will, if authorized, limit the number of saloons to that city of one for every 600 feet.

A plan for building a canal from the Hudson to the St. Lawrence river, thus connecting New York City and other places along the Hudson, directly with Montreal by water is being promoted. The dominion government has already given consideration to the proposition. A deputation from New York and other places will call upon Premier Laurier this week.

The Turkish council of ministers has rejected the offer of Austria to pay 2,500,000 pounds for the annexation of Bosnia and Herzegovina.

No action has been taken with regards to the appeal for pardon by Gen. Stoessel, Rear-admiral Nebogoff and other high officials of Russia now in the fortress of St. Peter and St. Paul at St. Petersburg.

The international association of aeronauts decided that the Swiss balloon, Helvetia, was the winner in the international competition held in Germany last October.

France has followed other nations in passing a law making void patent privileges where the exploitation of the patent is entirely outside of the republic.

For fear that their ruler would be smuggled from the country, Koreans were in much fear recently when their emperor made a visit to Fusan and accepted an invitation to inspect the Japanese warships located there.

Mulai Mohammed the rightful successor to the throne of Morocco died last week, it is said, from the effects of poisoning. At one time he was declared ruler over a part of the empire but his brother, Abdul Aziz, supplanted him, who in turn was ousted by Mulai Hafid, the present ruler.

Since the Russian Christmas festivities there has been a large increase in the number of cases of cholera due, the doctors hold, to excesses of eating and drinking.

National.

An explosion in one of the coal colliers at Ziegler, Ill., killed 26 workmen early last Sunday morning. The explosion was caused by the ignition of gas thru a spark from an electric motor. There had recently been fires in the mines and full work had not been resumed when this accident happened. A similar explosion

occurred four years ago when 60 persons were killed.

In his recent hearing before the naval committee of the house of representatives, Secretary of the Navy Newberry recommended that Congress authorize the building of four 26,000-ton ships. This would give this country the most powerful war vessels, not only afloat but that are now being built or contemplated by any other nation.

There is much excitement about Ithaca, N. Y., from the discovery of oil in a well that had formerly been used for furnishing water for stock.

The report of the immigration bureau for the fiscal year ending June 30, 1908, shows that during the past year the number of aliens admitted to this country was 39 per cent below the number for the previous year. There was a smaller per cent of illiterates and a larger number who applied that were not allowed to enter. A revision of the laws regulating immigration has aided in keeping down the number entering this past year.

Bills purporting to make Tennessee a state-wide prohibition state have passed the second reading in her legislature, and it is believed that the measures will become law.

Secretary of State Root and British Ambassador Bryce have signed a treaty which provides for the settlement of all disputes between Canada and the United States by a permanent high commission. The treaty will now be submitted to the senate for ratification.

In harmony with the movement for the beautifying of Washington Congress is planning on laying out a Lincoln park between the new Union Station and the Capitol grounds upon which a statute to cost \$1,000,000 will be erected.

Report comes from officials interested in the quarantine on live stock in this and other states that there is likelihood that the same will be raised in whole or in part in a few days, with the exception of Oakland and Wayne counties where it is also expected that the present restrictions will be ameliorated to some degree.

In the present judicial dealing of the federal court with the Chicago packers the injunction placed over the meat men in 1903 by Judge Grosscup may be used in the present rebate cases to secure justice.

CROP AND MARKET NOTES.

Branch Co., Jan. 9.—The weather for December was generally warm and pleasant. No snow to amount to anything and roads excellent most of the time. January started out with warm, rainy weather, followed by a cold wave and zero weather January 6. The roads are now (Jan. 9), a mass of hubs of all heights, and the severe freezing cannot but prove injurious to wheat. Hay and stock buyers are again busy. Best hay \$7 per ton, but so light in weight, owing to the dry season, that it proves a sad disappointment. Feeders are buying what clover hay there is for sale, at \$6 per ton in barn. Hogs, \$4.50 to \$5 per cwt.; wheat, \$1 per bu.; oats, 47c; corn, 56c; clover seed, \$4 to \$4.50.

Ottawa Co., Jan. 7.—We are now experiencing our first zero weather for the winter. It was preceded by several days of warm weather which melted the snow leaving the fields bare. The cold snap will be bad for wheat as there is no snow to protect it. The quarantine has caused considerable loss to some farmers, because they could not sell their pork as the local markets were overcrowded. A man in this vicinity ships from one to three carloads of hogs and other stock to Buffalo about every two weeks. This week is the first he has been able to ship since the quarantine commenced, so the quarantine has been quite a loss to him as well as farmers. About all farmers have been able to do so far this winter, is to care for their stock. As this is a dairy section, this keeps many quite busy.

Kent Co.—Prices of farm produce, especially with local markets, has been sustained and nearly everything has been worked off that farmers care to part with at present. A few fat hogs are scattered over the state awaiting favorable market conditions. If these hogs could have been shipped a month ago when they were ready to go, some profit might have been realized.

MICHIGAN CROP REPORT.

December Weather.

The first decade was cold and dry. The temperature was slightly above normal most of the remainder of the month. Light snow fell at intervals during the first twelve days. Heavy snow occurred the 16th and 17th. It was quite dry until the 30th when moderate showers fell in the southern and central counties. In answer to the question, "Has wheat during December suffered injury from any cause?" 84 correspondents in the state answer "yes" and 503 "no," and in answer to the question "Has the ground been well covered with snow during December?" 328 correspondents answer "yes" and 264 "no."

The total number of bushels of wheat marketed by farmers in December at 122 flouring mills was 170,450 and at 108 elevators and to grain dealers 166,463 or a total of 336,913 bushels. Of this amount 252,448 bushels were marketed in the southern four tiers of counties, 63,742 in the central counties and 20,723 in the northern counties. The estimated total number of bushels of wheat marketed in the five months, August-December, was 5,500,000. Seventy mills, elevators and grain dealers report no wheat marketed in December. The average condition of live stock in the state is reported as follows, comparison being with stock in good, healthy and thrifty condition: Horses, 96; cattle and sheep, 95, and swine 94. The average prices January 1st of some of the principal farm products in the markets where farmers usually market such products were as follows: (Continued on page 61).

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

MICHIGAN FARMER
AND *LIVE STOCK* JOURNAL
PUBLISHED WEEKLY. ESTABLISHED 1843.

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

This Magazine Section forms a part of our paper twice a month. Every article is written especially for it, and does not appear elsewhere.

NATURE'S CHILDREN—BY EDGAR WHITE

If you had lived 70 or 80 years on a backwoods farm, engrossed in its routine toil, until thru your industry and the natural increase in the value of land, largely covered with virgin forests and underlaid with valuable mineral deposits, you had accumulated over \$250,000 worth of property, and had never seen a great city, never ridden on a railroad train, never saw a steamboat or a real river, never talked thru a telephone, had no conception from observation of the marvels of architectural and engineering skill that have been produced in all that time, would you feel interested if somebody were to come to you and, describing all these things, would say:

"I will take you to see them and it shall not cost you a cent?"

The hypothetical question presents the situation of the Elliott family, who reside on 2,000 almost virgin acres in northern Missouri. There are three in the family, a sister and two brothers. None was ever married. Their names and ages are as follows: Betty, 83; Jordan, 77; Perry, 75. They occupy a time-worn house on the crest of a rolling hill, a location selected by their father, William Elliott, when he moved from Kentucky to Missouri in 1816. In that year the geographies treated Missouri as a state of the far west. Missouri had but one congressman. Its population was 66,586 white people and 10,222 slaves. The Indians were not estimated, but they were numerous.

"Aunt" Betty and her brothers lived in the midst of scenery as primeval as when their sturdy parent came to carve out a new home place in the wilderness. They dress as they did in the days of the pioneers. Their wants are simple and easily supplied. None of them can read or write, but all of them converse intelligently. They are typical of the sort of families that existed in Missouri from the earliest days up to 1840.

Knowledge of the circumstance suggested to a great newspaper of St. Louis the idea of taking these gentle old people to the city to show them what men had done while they were buried in the forest. It was to be a holiday treat, with all expenses paid. The plan was to send a trusted chaperon for them, who would act as guide all the way and see them safely home at the completion of a visit to the city. They were to lodge in one of the best hotels, to be taken to the gardens in an automobile, thru all the parks and fine residence districts, down to the big iron furnaces in Carondelet, across the Eads bridge and thru East St. Louis, where thousands of freight cars are being shunted around the yards, then given a steamboat ride down the river; taken to the best theatres and up the tall towers of the skyscrapers and shown the myriad wonders of a great modern metropolis.

"Aunt" Betty listened with glowing eyes while the paper's emissary sketched the gorgeous panorama to her and her brothers, who had been called in from the harvest field to listen.

"And would—would I have time to—to get me a new skirt while down there?"

The observation from "Aunt" Betty showed the feminine mind was much the same under all circumstances. Tho her years count up the most, "Aunt" Betty is really the youngest member of the household. She doesn't wear spectacles and she moves about with a light and springy step. Her hearing is perfect and she only recalls a slight illness 12 years ago. She was all eagerness to see the world, and had no fears of getting lost, tho she had never in all her life set foot on a railroad train.

"The boys"—"Aunt" Betty always uses that term in referring to her brothers—were not so enthusiastic. They didn't see how they could leave the farm; there was the stock to look after; it might turn cold and snow; they had heard St. Louis was an awful wicked place, anyhow, and didn't see how it could help anyone to

get closer acquainted. No, they wouldn't say positively that they would not go, but they wanted time to think it over; it was a serious proposition. "By-the-way, how come Mr. What's-his-name to take so much interest in them? What did it matter to him whether they ever saw a big city or not?"

The representative of the paper answered these searching questions and left with the assurance from "Aunt" Betty and Perry that they would accept the hospitality, but Jordan—the one with the coonskin cap—was not to be won over. He couldn't understand the why and wherefore of it; and wanted to look into it before he decided to take "Santa Claus'" unique present.

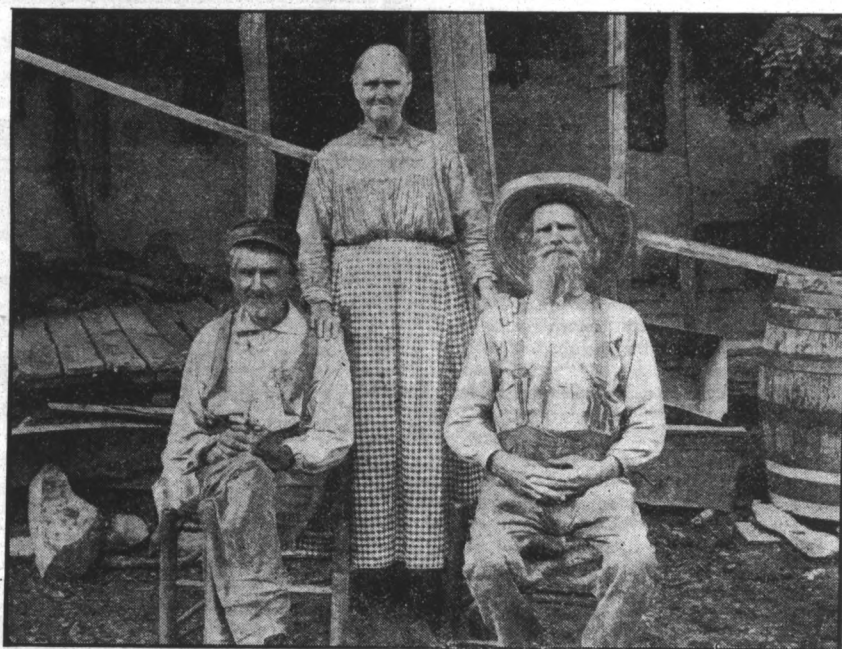
Up until 1870 the Elliotts lived in the log cabin built by their father. In that year they erected a frame structure

where the cabin had stood. It must have been a queer house even at that time. Today it is in a general state of dilapidation, patched at every conceivable place and propped up where the worst sags are. When a window-light is broken out a board is nailed up to take the place of it. Large flat rocks are laid on the roof to keep the shingles from blowing away. When it rains good and hard the rear roof affords about as much protection as a naked umbrella frame. It should be stated here that the interior of the old house, over which "Aunt" Betty has exclusive jurisdiction, is kept as neat and clean as the decks of a battleship. It isn't her idea to patch up and piece out where time and storm have ravaged the house. "The boys" always have good intentions toward proper repairs, but in the stress of work about the farm they let the house go. In 1863 they fetched several wagon-loads of flat rock from the brook, and laid them out in the yard until they found time to wall a well. Up to the present time the well has not been dug, but they will get around to it by and by. They say they will and everybody takes the word of the Elliott "boys." Meanwhile the family get water from a spring a quarter of a mile from the house.

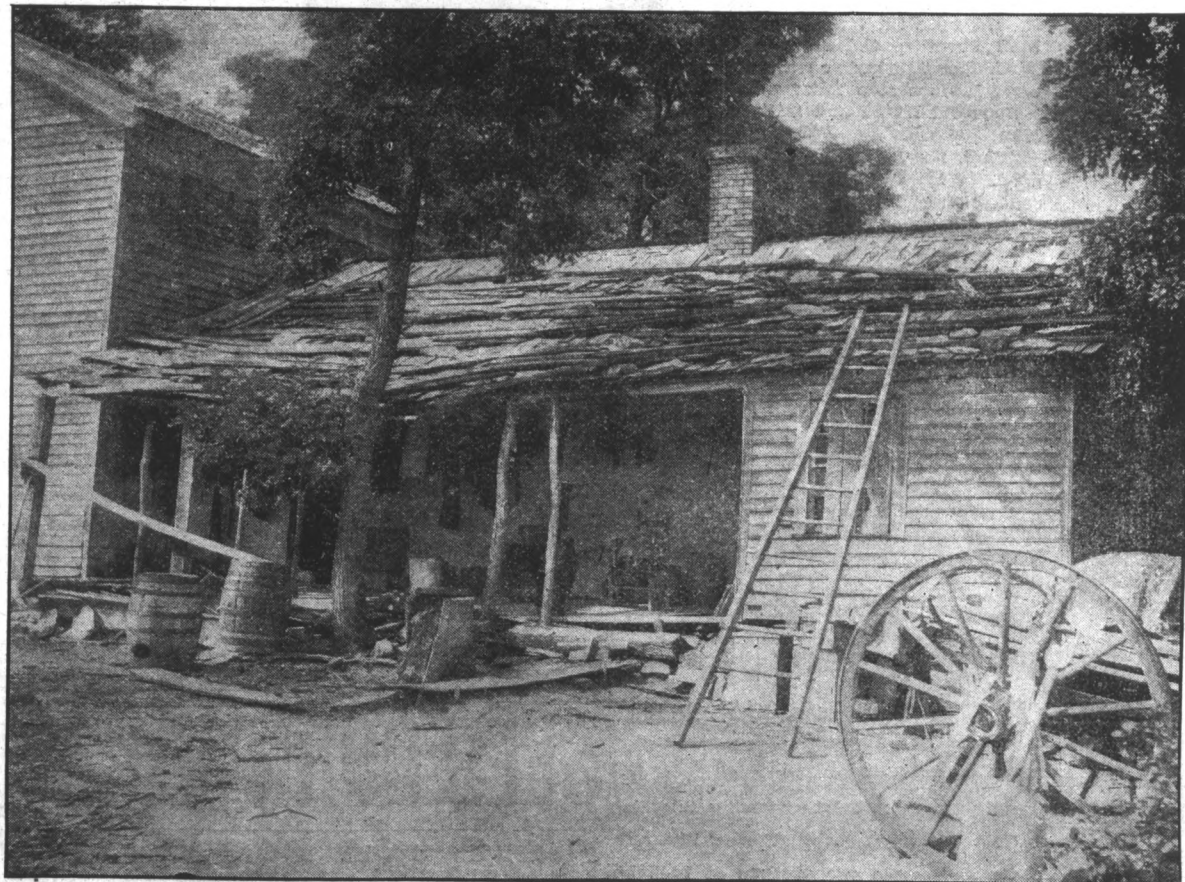
The Elliott estate is in the very heart of the richest coal mining region in the west. It is underlaid with coal running from four to five feet in thickness. This coal alone is worth on royalty from two to four hundred dollars an acre. But the family will not sell their coal rights, altho the collieries, working busily all about them, indicate an early and profitable market. Coal and railroad tracks are on every side of the big farm, but it remains the same as when the Indians trod it, except for the comparatively few acres under cultivation. The timber, comprising about 800 acres, is enclosed by an old rail fence, rotting into the ground. Mine and railroad men have offered fancy prices for this wood for props and ties, but it is not for sale.

Lovers of the quaint in rural life would travel many a mile before they could match the views about the Elliott homestead. The long front yard is softly carpeted with chips, the axe's product for nearly a century. There is not a square foot of space thru which shows the naked earth. Smoke-house, crib, barns and store-rooms are made of poles and logs, and have doors swung on leather hinges. Near the smoke house is a grindstone, worn to the diameter of a saucer, resting in a frame hewed out of a log. It was brot to Missouri in 1816 by the father, and probably its service in Kentucky and Missouri was not far from 100 years. The spacious yard is alive with big turkeys, geese, guinea hens, chickens and ducks, the proteges of "Aunt" Betty, and they have right-of-way everywhere. There are no dogs or cats about the place.

The Elliotts are frugal, as may be surmised. They had hard lines in the early days when they were assisting their parents in caring for a large family. They could live in



Jordan. "Aunt" Betty. Perry.



The Home of a Family Worth a Quarter of a Million.

luxurious ease the balance of their days by the money they have saved up, and that which they have out on interest. But the habit of toiling has got in their blood. They can't sit still long. Not having learned to read, that pleasure following the work day is denied them. But they are good talkers and like to welcome friends. It has never occurred to either of them that there is anything queer in their manner of life. And perhaps there isn't. It may be they get more comfort out of life than most people. They have no worries. The brooks, the trees, the undulating land, the clear sky, the picturesque valley—all these friends of their youth are with them yet, and their simple faith in God has grown stronger with the years.

"Aunt" Betty is strong and healthy and has the bright eyes and clear cheeks of a lass of 16. She must have been a beautiful girl. Someone asked her how it came she never married. She flushed slightly and then said:

"Well, I guess it must have been because I didn't have time to think about it. When we was young we—me and the boys—was so busy trying to get a start and to look after the others that it seemed there was no chance for courtin', and then it got so we that we was enough for each other and we just drifted along, you know. O, yes, I knew some young men—one fine young fellow—the best horseback rider you ever saw—and a good deer shot. He came one day—but, pshaw! That was long ago. I got more time now, but I don't guess I'll ever marry. There would be nobody to look after the 'boys.'"

"Aunt" Betty's rule for a happy old age: "Fight shy of doctors and medicine. Have something to interest you and keep a-going. Learn to go to sleep easily, and don't reach out for trouble before you get into it. Get out in the air and the sunshine and raise turkeys and ducks and chickens. Eat hearty, don't pay no attention to what the doctors say about old people not eatin'—and go to bed early. Why, it's just as easy."

A LETTER FROM OLD VERMONT.

BY NELSON A. JACKSON.

Pull up your chair, Hannah. Where's my specks? What is the matter? Nothing, only the mail man just brot us a letter, an' it's from ol' North Horton, Vermont. There, I knew that would bring you! Let's see, we ain't heard from there for more'n four years. Last time was when Square Hollister wrote us that the meeting house had burned and they wuz getting money for a new one. I wonder who this is from. I'd like to go back to the old place again; these here everlasting plains kinda get tiresome sometimes. Open the letter! Wall, now, jest don't you get in a hurry. It was ten year ago come next October seven, that we left thar and ain't seen one of the old town folks since.

This letter left North Horton February third, and got here today. Today is—where's the almanack? Why don't I read the letter? Now you look here, Hannah, I jest want to get all the pleasure I can out of this here letter. I'm jest like a cat worrying a mouse before she eats it. Today is the sixth, took three days to come thru. What's that! you got to look after bread, or it'll burn? Now you get a hustle on you for I want to read this letter, right off.

All ready! wall, here goes. See who it's from? Wall, now, that's jest like a woman, more curious to see who wrote the letter than to read it. Yes, the old Square is the writer of it. Sure that bread is all right? Wall!

North Horton, Vt., Feb. 2, 1908.
Dear Brother and Sister Campbell:—

I ain't got much on hand for tonight, so I jest thot I would scrawl you a few lines to let you know how we folks are getting along, here in the old neighborhood.

The new meeting house is all finished, it is a dandy, too, all painted and it's got cushioned seats and a new organ—"Say, Hannah, I wonder if the new one has got as good a porch on it as the old one had. You remember when we were young, how the young fellers would line up out thar and wait for the gals? You remember the first time I ever see you home? How we fellows used to guy the poor chap that got the mitten. Go on with the letter? Wall now, Hannah, you be in a hurry. Let's see, whar was I? Oh, yes."

But the new minister is a trial to some of us old ones. He is a young chap from some of those Boston schools. He is a good enough man, only his sermons are so awful short. He preaches only about 30 or 40 minutes. Not much like Elder

Knapp, who used to give us pure gospel for two hours at a time. I guess I never wrote you that the good old Elder died two years ago.

"Wall! wall! so Elder Knapp has passed over to glory. Wall, if man ever went to heaven, he did. You remember the last donation we attended back in Vermont? Twan't none of your stingy affairs, neither. Netted the parson \$105 cash, 'sides enough provisions to last six months, saying nothing about wood and slippers. Remember how Eb. Hawks took Sally Butterworth to supper? I ken see 'em yet, Eb. blushing jest like a school-boy, an' Sally acting as if she wan't more'n 17 instead of 48. Eb. went home with her, too! Wall, what next?"

Now, old neighbor, I have a real bit of news for you. Nancy Fulton and Josh Stringer were married last Wednesday—

"Ol' Nancy married at last. Why, I went to singing school with Nancy more'n forty years ago. Never a Jill without a Jack. And there's Josh been trying to get married ever since he was a youngster. How the girls used to mitten him! Why, Nancy wouldn't look at him back in those days. Tell you what, Nancy made a mistake when she cut Jonathan Nutter; John's a millionaire now. Wall, I hope they'll be happy."

Bill Stringer traded off the old balky, chestnut mare to Deacon Hexter down to Hexter Center.

"Wall, Bill's a good one. I'll bet the ol' deacon's sweating yet. How he used to blow and sweat and get red in the face when he got mad. Bill was a sharp one, tho. Why, Bill's had that old mare more'n twenty year. He's lost more time tryin' to make that old pesky creature go than it would take to build a town. Why, if Bill had got ten cents an hour for such time, he would be a rich man now. He used to carry a can of coal oil tied under his wagon, so that he could build a fire in a hurry under the old chestnut. I wonder how he primed the ol' deacon."

Bill got some kind of coloring stuff and dyed the ol' mare black. He didn't work her much and fatted her up. The deacon saw her one day and thot Bill had a new horse and stumped him for a trade. Bill just took him up right there and then. Now the deacon says that he will have the law on Bill. But that will not help him any, for there was a crowd that saw the trade and they can swear that Bill did not tell a single lie during the whole trade.

"Wall, I'm glad to hear that the old skin-flint of a deacon did get tuck in for once in his life. Makes me feel five years younger."

You remember Josh Buxton's youngest girl. She married a young dandy from New York, and they have fixed up the old Buxton place for a summer home. I wish you folks were back here, we all miss you. The old ones are passing on over the river, one by one—there are not many of them left. I feel rather lonesome some days, when I think of it. But that don't do any good; the kind Father will call us all in time. David Ketchum is laid up with lame back and has not been down to the store for six weeks. Wish I could play you a game of checkers. I must stop now; with love to all Your old friend and faithful brother in Him,
JOHN HOLLISTER.

"Wall, now, Hannah, that letter did me good. Wish I could set down to a game of checkers with the ol' Square. We used to be about even. What's that? Used to waste a lot of time! Wall, I don't know but what checkers are 'bout as useful as them fancy things you women make. Wall, I must go out and feed the hogs."

A WINTER TWILIGHT.

BY ALONZO RICE.

Across the winter fields the daylight dies;
Wrapped in their white investiture of snow,
The heights retain awhile the parting glow,
Then fade as ebbs the splendor from the skies;
In dream-like mood, all nature dormant lies,
While timid tribes of furry folk bide low;
The pulses of the trees such respite know
Till Spring in old-time beauty shall arise.

"He giveth snow like wool," one sang of old;
And, in fulfillment of the Psalmist's word,
Behold the white flakes silently descending.
Beside the hearth let charming tales be told,
Of those trouvers that sang like any bird,
Or Ruth amid the sheaves at twilight wending.

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THE LITTLE CACS.

BY RAY E. WHITE.

How old am I? Just turned ten
A little cac, you see.
But, Oh! there's just a world of fun
For Brother Bill and me.

The kind of fun that makes ma cross,
And father say, "the dickens!"
And then there comes the leather strap
And just the awfulest lickins.

My sister Sue is twenty-one,
Her beau is Tony Young;
And every time he comes around
You bet that we have fun.

He brings us crackerjack and gum,
(He comes 'bout twice a week)
Then bids us run away and play
A game of hide and seek.

We thot we wouldn't "run away"
But hid behind the door.

And there sat sister, fine and nice,
A fumbling with her dress,
And Tony sat beside her there—
I guess you know the rest.

He'd reached the middle of his speech
When, shining like the moon,
We both forgot about ourselves
And snickered out too soon.

'Bout that time father chanced along,
Which made us look forlorn,
And twasn't many minutes 'fore
I wished I wasn't born.

He took down the old persuader,
(It was just a leather strap).
Ah! I've had many whippings since,
But never one like that.

I've got a brother Tony, now,
And, too, I'm Uncle Ben;
And father says he'll never whip
The "little cacs" again.

And so it is the whole world 'round,
As the sun shines after rain,
No matter how great the loss may be
There's always some small gain.

PETE, ARTHUR & CO.

BY SOPHIE HAMMOND MCKENZIE.

"Where's mother?" exclaimed Arthur
Allen, rushing in from school.

"She is out calling," said grandma.

"Oh, dear! Seems so she's always call-
ing. And now, when I wanted her to help
me, right off!"

"Why, what is it?" asked grandma.
"Perhaps I can help you."

"No, you can't, 'cause it says you must
have your father or mother sign their
name. An' father won't be home until
seven o'clock, an' Pete White said if
mother wouldn't sign it to come right
over and tell him, for he knew another
fellow who was dyin' to do it. Oh, I
wish mother'd come!"

"There she comes now," said grandma.

"Oh, goody, goody!" And before his
mother could get into the yard Arthur
was telling her about fifty packages of
plant-food—Pete White—and a steam
engine—and begging her to sign her name
to a paper that must go on the next
mail.

"It is an hour before the mail is col-
lected," said his mother with most try-
ing calmness. "I wish to look over this
paper carefully. You know papa says
never to sign a paper before reading it."

"But you will sign it, won't you?"

"I don't know yet."

It seemed to Arthur as if he could not
wait another minute. For that noon
Peter White had taken him to one corner
of the play-ground and unfolded to him
a wonderful business opportunity. It
was a great honor to a third-grader to
have a sixth-grader talk with him—and
on business, too.

In the first place, Pete showed Arthur
a large envelope directed in a flourishing
hand to "Mr. Peter White, Tabor, Mass."

"Is that your father?" asked Arthur
after laboriously spelling out the address.
"My father! Nothing! That's me! My
father's name is Charles. That says
'Peter White,' don't it?"

"Ye-es, but I thot your name was
Pete."

"Oh, the fellows call me that; Pete is
short for Peter, but in business they write
out your whole name."

"O-h!" said Arthur.

"Now see what's inside," continued
Peter. "Here's a letter looks like print-
ing don't it? But it ain't. A fellow did
it with a typewriter. When you have
lots of business you don't write with a
pen. Haven't you seen the typewriter
they just got in the principal's office?"

"Not yet," was the regretful answer.

"That's 'cause your teacher's easy.
Ours is fierce. I've been sent up twice
this week. Ain't done nothing, either.
Next time I go I get a wallopin'. But
we got ter hurry. It's most time for
that old bell. Now the man who type-
wrote this letter, he says that if I'll sell
fifty packages of plant-food at ten cents
a package he will give me a steam engine

worth ten dollars. But I must sell them
in thirty days."

"When you going to begin?"

"That's just it—I can't begin at all."

"Why not?"

"Just started a soap order to get a
parlor lamp for mother. An' she says
I've got to finish that first, 'cause we're
going to have a whist party at our house
an' she wants the lamp for a prize."

"Can't you get the engine after you get
the lamp?"

"Nope, won't be time. Then folks
don't like to have the same person come
around too often. You've never been
around at all, have yer?"

"No—never!" It seemed to Arthur as
he listened to Pete that he had never
been anywhere or seen anything. He
wished that his father, like Pete's, worked
in a shoe-shop instead of owning one;
then he might have some chance in the
world.

"Here's a picture of the steam engine
they will give you," Peter went on.
"Isn't that great? You'd have to pay
ten good dollars for it at a store. Now,
all you have to do is to sell fifty pack-
ages of plant-food."

"What's plant-food?" timidly questioned
Arthur.

"My, but you're green! Ever hear of
chicken-food—food for chickens? Well,
plant-food is food for plants. Don't they
have phys'ology in your room?"

"I don't think so, but we have nature-
study—all about plants."

"Good! Then you're just the fellow to
sell plant-food. You'll know what to say
to make 'em buy."

"But I thot they wanted you to do it?"
"They did. But they said if I couldn't
—an' I can't—to hand this letter to some
reliable person."

"What's reliable?"

"Reliable? I looked it up in the dic-
tionary and it said see another word 'an
I saw it, and as near as I can make out
it means a fellow that does what he says.
You're young, but reliable. Fellows my
age mostly ain't neither. There's Jack
Grover! He's dying to get this engine
but he ain't reliable. He said this morn-
ing he wouldn't cross my spelling words
if they were wrong, and then he went an'
crossed six out of ten just 'cause I tripped
him when he was taking his seat. But,
of course, if you don't want it, I can get
plenty of fellows that will."

"But I do want it," exclaimed Arthur,
"only I don't know how to begin!"

"See this blank? Now," explained the
business-like Peter, "just sign your name
here, and 'Tabor, Mass.' here, get your
father or mother to sign here—then mail
it. They will send you the plant-food
by return mail. You sell it in thirty
days, send them the money, and they
send you a steam engine worth ten dol-
lars. See!"

"Yes, but—"

"There goes the bell," cried Peter.
"I'll see you right after school, if I get
out on time; if I don't, you wait for me."

Arthur was so dreamy and absent-
minded that afternoon his teacher feared
he must be ill. Once when she asked him
how many ten times three elephants were
he answered, "thirty steam engines." Perhaps
the child is coming down with
brain fever, thot she. But her anxiety
was relieved when she saw the energy
Arthur displayed as the closing bell
sounded.

Peter's "fierce" teacher could not re-
main after school herself that night, so
he was out on time, too. He found Ar-
thur more eager for the steam engine
than when he left him, but still afraid
he could not sell the plant-food.

"Don't be a 'fraid-cat,'" said Peter. "If
you want that engine you just get that
paper signed and off on the next mail.
If you don't, I guess I'll let Jack Grover
have it. He treated me white this after-
noon."

"Oh, I'll do it! I'll do it!" cried Arthur,
and ran for home as fast as he could
with the paper. And then his mother
was out—and now it was taking her the
longest time to read that typewritten let-
ter. Why, Arthur had eaten thirteen
ginger-snaps since she began. And at
last she had finished, but what was she
saying?

"Arthur, I don't know about this. I
don't think you had better try it."

"Oh, do let me, mother," pleaded Ar-
thur. "I know father would sign it."

"It is almost Christmas; perhaps you
will get a steam engine for a gift," said
his mother.

"But I want this one, and I want to
earn it same as Pete White and other
boys earn things. Do sign it, mother."

"Peter is older than you."

"He says I'll do better 'cause I'm young
—and—reliable."

"But do you realize that you must sell
fifty of the packages?"

"Yes, and I can do it in one Saturday,
too. Pete says I can—easy."

"Perhaps."

"Of course I can."

"We will wait until your father comes
and see what he says."

"But Pete won't wait. He will get
somebody else," wailed Arthur.

"Then he may. I shall not sign the
paper."

Arthur knew that it would not be wise
for him to tease any more, so he gath-
ered up the precious documents and ran
over to Peter's. But Peter was out with
his soap order and would not be home
until suppertime. The mail would be
closed then. "If father signs it to-night
it will go early in the morning," reasoned
Arthur, "and I can explain it to Pete.
But then," he thot, "supposing father
won't sign it—how could I ever face Pete,
he'd be so mad!" Arthur was so dis-
couraged and troubled that if he had
been a girl he would have cried; but as
he was a boy he went home and sulked,
and refused to be comforted, even by
grandma.

It did seem as if fate was against his
starting in business. For at six o'clock
his mother received a telephone message
from Mr. Allen that he would not be able
to get home before nine o'clock. That
meant Arthur would be in bed when he
came. How dreadful for a business man
to be obliged to retire at 8:30! But Ar-
thur knew by experience that it would
be useless to ask to sit up until his
father came, especially in term-time. So
he sulked until the half-hour after eight
sounded. Then, as he slowly and reluc-
tantly dragged his feet up the stairs, he
called to his mother, "You show those
papers to father, won't you?"

"Certainly, Arthur. I am very sorry
that you are so unhappy."

Mr. Allen was very tired when he
reached home but not too tired to en-
quire for his only son.

"So our boy wants to be an agent?" he
said after he had heard the story of
Arthur's ambitions. "We won't have a
little boy much longer, will we, mother?"

"I'm afraid not, and I don't like the
idea he has got from Peter White, at all.
If he wants a steam engine so much
you will buy him one, won't you?"

"Why, of course. But I don't believe
it's so much that he wants a steam engine
as it is that he has the canvassing fever.
Most boys have it. I remember when I

did. My father let me try it, too, and
once was enough for me. It did me a lot
of good, tho. Now don't you worry over
this; it's all right. I shall sign the
paper."

When Mrs. Allen went to take the last
look in Arthur's room for the night she
found his eyes wide open.

"What, not asleep yet, Arthur?" she
said very tenderly.

"No, and I just can't, mother. I've
tried and I've said the threes backwards
and counted sheep."

"Father has signed the paper."

"Good! I'll sleep like a horse now."

"Arthur, where do you learn such ex-
pressions?"

"I don't know. Tell father he is all
right, and call me at six o'clock so I can
mail the letter." And Arthur gave his
mother a forgiving hug as she kissed
him good-night.

In the morning he was up at six
o'clock, without being called, and went
to see Peter. That important young man
was quite ferocious toward Arthur at
first for not making his mother sign the
paper at once, but finally said it would
be all right if he could have the engine
every other week. To this Arthur readily
agreed. It was really a great privilege
to share anything with Pete White, the
best fighter in school.

At noons and recesses, before the plant-
food arrived, the senior member of Pete,
Arthur & Co., instructed the junior mem-
ber in the wonderful art of selling goods.
As Arthur listened with open ears and
open mouth, one minute he was eager
to begin and the next he was filled with
dread.

It was an exciting occasion at the
Allen house when the postman left a
package addressed to "Mr. Arthur Allen." His
hand shook so he could hardly cut
the string, and his heart beat like a
steam engine when he beheld fifty blue
envelopes with yellow labels marked
"Magic Plant-food—the Seller of the
Age."

The same mail also brot Mr. Arthur
Allen a typewritten letter, which, with
the help of a dictionary, he managed to
read thru after an hour of hard study.
And then, alas! He could not remember
what he had read. But the senior part-
ner, who was consulted immediately,
could read the letter easily and explain it,
too, so that the more he explained the
less Arthur understood.

Saturday forenoon, with the plant-food
in a Boston bag, trembles in his knees,
chills in his spine, lead in his heart,
and a marvelous speech composed by Pete
buzzing in his brain, Arthur went forth.
Pete had advised him to call on his
mother's friends first, but he decided to
begin on Cottage street where the people
did not know him. He walked hesitat-
ingly the whole length of the street; at
the very last house he mustered up all
his courage and gave the bell a violent
ring. Before he could recall the first
words of his speech the door was opened
by a smiling lady who began, "I'm so
glad—" and then, with a terrible frown
said, "Oh, you dreadful boy! Don't you
know any better than ring my bell like
that? I thot it was Helen. Go out of my
yard this minute!" And she slammed the
door without giving Arthur a chance to
speak. If the experienced Pete had not
prepared him for such treatment, he
would have run home to his mother, that
is, if he could have run with those shak-
ing legs.

At the next house he tapped gently at
the kitchen door.

"Now, what do you want?" snarled a
tired-looking woman, opening the door
just a crack.

"Please, wouldn't you like to buy some
plant-food?" timidly enquired Arthur.

"Plant-food!" cried the woman. "I can
hardly get food for my children!" And
she shut him out.

He would try the other side of the
street. It was sunnier over there. So
he rang the bell of the house opposite and
waited a long time. Just as he was going
away a motherly-looking woman opened
the door. She invited him in, asked him
his name and where he lived, treated
him to hot doughnuts, showed him the
pictures of her grandsons in the west,
bot one package of the plant-food and
paid him ten cents in shining coppers.

And so the morning went. At some
houses they refused to buy but were
polite, at others they refused and were
rude. Whenever anyone did buy they acted
as if they did it to help him instead of
their plants. By noon he had sold ten
packages and he had called at every house
on two long streets.

In the afternoon, tho his legs ached
terribly, he started out again. This time
he took Peter's advice and chose a



An Even Dozen—Victims of a "Big Stick."

street where he was well known. At many of the houses the maid told him that the lady was out. When he did find them in some smiled and said, "So Arthur Allen is an agent, too?" and then they bot enough plant-food to have fertilized a farm if it had been as good as the labels said it was. Others looked disgusted, and he overheard such remarks as, "I shouldn't think his mother would let him! Probably she will be mad because I did not buy of him!"

At the parsonage he had to wait for the minister's wife to talk it over with her husband. He heard the minister say, "I know, but we must do it." Then she came back and said wearily, "I'll have one package." And then it took her a long time to find the ten cents.

By night he had sold thirty packages, which was really a good day's work. But Arthur was blue because Pete had he could sell the entire outfit in one day, easy. He was so tired, too. Grandma said comforting things to him, but his mother acted unhappy, and somehow he felt that his father was inwardly laughing at him.

Monday he reported to Peter, who told him he had done well for a starter. But Arthur was afraid he had tried all the best streets first, and his fears were true. Tho he worked every minute after school, and every Saturday, he found himself on the last day of the thirty days which had been allowed with five packages of the plant-food still unsold. What should he do? He might buy the plant-food himself, but that didn't seem quite business-like. As he stood digging his heel into the sidewalk his Uncle Fred came along. "Hello, Arthur, what's the matter? How's business?"

At first Arthur was not inclined to talk, but Uncle Fred acted sympathetic and honest, so he finally told him all about it. "Cheer up, my man," urged Uncle Fred; "that plant-food is just what I need for my hotbeds." And he slipped a half-dollar into his nephew's hand and the plant-food into his own pocket. For an instant Arthur was overjoyed. Then he asked, "You're not doing it to help me?"

"I'm doing it to help my plants," replied his uncle.

"Will father like it?"

"I don't have to ask your father if I can buy goods," answered Uncle Fred. "Now you run home to supper."

Arthur was so tired and sleepy he could hardly keep awake while his father counted out the five dollars, made out a check and ordered the engine.

"Well done, my boy," exclaimed his father, as he sealed the letter. "It is more fun than skating, isn't it?"

"Not so very," yawned Arthur.

"Now you are all ready for a soap order, aren't you?"

There was no answer, for Arthur was sound asleep in his chair.

Peter gave a warwhoop when he heard that the engine was ordered.

"It ought ter be here in a week, and I'll be right over to help you run it."

But three weeks passed and still there was no steam engine. Mr. Allen wrote to the company about it, and then another long week dragged by.

Late Saturday evening, when Arthur was in the bath-tub, the expressman delivered a package for him. It was hurriedly opened and he was allowed to look at the wonderful machine, but mother said it was too near bed-time to start it that night. So Arthur reluctantly went to bed and dreamed of steam engines, and explosions, and railroad wrecks.

Early the next morning he was begging his father to start the engine. "Why, today is Sunday," said his father. "You must be a good boy and wait until tomorrow."

Arthur had not that of its being Sunday, but he continued to think of it many times before the long day was over.

When Pete heard the news on Monday morning he said, "Let's get our lessons down cold so we'll get out on time, and I'll go right over with you and we'll start her a humming."

After school they ran for Arthur's as fast as they could. Mrs. Allen heard the unusual noise on the stairs leading to the play-room. "Is that you, Arthur?" she called.

"Yes, mother—me and Pete."

"What are you going to do?"

"Start the engine; Pete knows how."

Mrs. Allen was not long in reaching the play-room. "Now, boys, I don't dare to have you start that engine alone the first time. This evening, Arthur, your father will help you, and Peter can come over then."

Arthur looked disappointed and Peter looked disgusted. Evidently, however,

there was no help for it, nothing to do but wait again. No engine, tho, ever received a more thoro examination than this one. Pete pronounced it a "daisy" and made numerous wild bets on its powers.

You can be sure Peter, tho he had a long row of tardy marks in the school register, was not late at the engine exhibition that night. And he thot that, for a rich business man, Mr. Allen was pretty slow in studying out the directions and getting the machine under way.

But at last the wonderful wheels began to turn and the exhaust went puff-puff, as steady as a clock. After it had been going for a few minutes Mr. Allen left the room, saying, "Now, boys, don't interfere with it. When you want to stop it, just drop the cover on the alcohol lamp."

"Gee!" exclaimed Peter, when Mr. Allen was gone, "it's good, but it's slow! That steam coming out of the top is all going to waste. Let's put that paper-weight on it and hold it down."

"Perhaps we'd better not," said Arthur. But the weight went on.

Oh, how fast the wheels went now, around and around.

GERALD CLAY'S VOCATION.

BY HOPE DARING.

Chapter X.—Restitution.

There was a moment's silence. Then not because she feared that the captain had misunderstood her, but because she longed to hear even her own voice reassert the truth that she had just spoken, Pauline again said: "It is the missing note, the one given you by William Brooks."

Captain Clay tottered to a chair and sat down, while Pauline sank upon an ottoman that stood before the fireplace. Again there was a brief period of silence, then, slowly, solemnly, Thomas Clay said: "Found! The last link in the chain of evidence against William Brooks. And he—Child, tell me what vision rises up before me when you now think of that man."

Pauline understood. It was one of her charms that she could so readily enter into the thot of another. To her, Thomas Clay's placid, poetical nature was not, as to many, a mystery. Instead it was akin to her own.

"I see him—the man who has ventured all for money—alone, ill, sad. The wife whom he loved is dead, his place among true men is forfeited, and, while he may have money, it brings him naught but misery."

"You see aright, Pauline. I think the saddest of the specters that haunt William Brooks' lonely fireside must be the one that represents the man that he might have become. Now we must find Gerald and tell him of this."

"You were reading this book when Mr. Brooks came that day?"

"I had been reading it. And but a few minutes before his arrival I had taken the note out to look at it. Instead of replacing it I must have laid it on the book. Doubtless Cousin Lizzy closed the volume without seeing the paper."

"Gerald is out in the barn. I will go and tell him," Pauline said, rising.

"It is for him that I am glad," and Thomas Clay sighed.

Pauline paused to lay her hand upon his shoulder. "You have already given him enough, Uncle Thomas. The best gifts that you have bestowed upon him are your love and your example."

Out in the hall she slipped into a long, dark cloak and tied a crimson scarf over her head. Then she let herself out of the back door and started for the barn. It was raining, a slow, cold drizzle that wrapped the landscape around with fold upon fold of gray mist.

The door of the largest barn stood ajar. Pauline stepped within, calling: "Gerald! Are you here?"

"I am, sweetheart. It is fine in you to come out in the rain to keep me company."

Gerald had been at work, repairing a wood-rack. He had been working upon the barn floor and his tools were scattered about. As he overturned a box to make a seat for Pauline, she cried eagerly: "Never mind that. Gerald, in a book in the library I found—"

"Found what?" he asked as she stopped. "Pauline, your eyes are like stars."

"I found Mr. Brooks' lost note."

Gerald stared at her without speaking. She went on to give the details of the discovery.

"What did I tell you?" cried Pete. "It wasn't half going!"

Arthur was trying to forget his father's orders when, bang! went the boiler, and hot water flew in every direction, making the boys cry out in fear and pain. The wheels had come to a stop, never to go again. A piece of the flying boiler struck a box of lantern slides, sending them with a crash to the floor.

Mrs. Allen came screaming up the stairs, but Mr. Allen was there before her, calmly asking the boys how it happened. With an anxious look Peter said it was time for him to be going, and he left it to Arthur to explain. For the first time since he started in business Arthur burst into tears.

"Well," said his mother, still trembling, "if you are not injured and the house isn't on fire, I'm glad the dreadful thing blew up."

"You are all right, Arthur," said his father, as his son's grief broke out afresh when he tried to pick up the broken lantern slides. "You have been a successful agent, and now you have had an auction. When I left the engine it was going—going—and now it's gone!"

"I had concluded that the note had been destroyed," he said gravely. "It pleases me to know that it has been found, for it destroys the last of the bulwarks of falsehood behind which Brooks had striven to hide himself."

"He is still ill, is he not?"

"Yes. When I saw Mr. Kenton, a week ago, he said that he should seek an interview with Brooks as soon as the man's physician would allow him to see anyone. I trust, Pauline, that we may be able to effect a settlement with him. In the face of all the evidence that we have secured, it will be sheer folly for Brooks to hold out."

Gerald went into the house and called up Mr. Kenton by long-distance telephone. When the lawyer was told that the missing note had been found he declared that the evidence against Brooks for fraud was complete. He readily agreed with the Clays' decision that no further action should be taken until Mr. Brooks had so far regained his health that an appeal for a settlement could be made to him.

Mr. Kenton had already taken steps to institute a claim against any property that might come to Brooks by the death of his wife. Neither Gerald nor Pauline were sanguine regarding the restoration of the money, but they were glad that the truth of the story told by Thomas Clay could be proved to the world.

William Brooks was confined to his bed. The physician in charge refused to allow Mr. Kenton to enter the sick-room. At last the doctor did allow the lawyer to address a letter to Brooks. This letter stated that the Clays were prepared to prove that no North Lode stock had ever been purchased in the captain's name, also that the missing note had been found.

The reply to the letter was very brief and had been penned by the nurse, for Mr. Brooks was too ill to write. He asked the Clays, thru Mr. Kenton, to wait until he regained at least a portion of his old strength. Then he would meet them.

Gerald was again all eagerness concerning the work of the farm. Already he was coming to be known as one of the most progressive of the farmers of that locality. To him, spring, with its ever-new lesson of renewed life, was a delight.

At three o'clock one May morning the Clays were aroused by a knocking at the hall door. Gerald dressed and went down stairs. He found a messenger from Lexington. William Brooks was dying and begged Gerald to come to him.

"Says he can't die until he has talked with you," the man said. "Will you go?"

"Certainly I will."

Gerald went on horseback. He started at once, leaving the messenger to follow after his horse had rested.

When Gerald reached Lexington, Mr. Brooks was unconscious. He rallied after a time, but it was not until afternoon that he was strong enough for the interview with his young kinsman.

As Gerald approached the bed on which the sick man lay, Brooks said: "I will not offer you my hand. Once you refused it, and you did right. Sit down and let me tell my story in my own way. I must conserve my strength."

Gerald sat down. "I am sorry for you,

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Cried the Owl
in the woods.
As darkness
closed around him
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To Whit-To Whoo-o
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Mr. Brooks. In both your illness and your recent bereavement you have my sympathy."

"Thank you, Gerald. If I dared thank God for anything, it would be for your refusal to enter into partnership with me. Long ere that I had wandered from the path of honesty. It was the greed of gain that was my undoing. Both my wife and myself were eager for the social advantages that money could buy. I was not a success as a lawyer, and in my business transactions I thought I saw that exact honesty would stand in the way of my preferment. Once I had taken dishonesty as my rule of life, I went on and on."

He paused. The nurse who was present gave him some medicine, and Mr. Brooks went on.

"I began to dabble in stocks, losing oftener than winning. Still I kept on, dreaming of the day when I would make a fortune. I do not know what made me think of Captain Clay, but I brooded over the thought of those thousands lying idle, while with them I could win wealth. When I could not get you and, thru you, the money, I went to the old captain. I played a villain's part, Gerald; for I worked upon his love for you. Even when the money was in my hands I told myself that I would play fair with the old man. It was when he attempted to withdraw it that I resolved to cheat him. I thought that neither your uncle nor yourself were accustomed to business, and that you would credit the plausible story that I would tell. It had been my intention to invest the money in the North Lode Company, but I learned that it was unsound. Its failure came a few days later, and in that I thought I saw a chance to defraud your uncle."

Again he was obliged to stop. Gerald moved uneasily in his chair, but did not speak.

"I do not need to tell of my villainy to Captain Clay," the weak voice went on. "With the money I dabbled in stocks. Ill fortune attended me; I lost and lost. Then came the social ostracism that was the legitimate result of my false life. My wife sickened and died, and I am about to follow her. Gerald, yesterday I turned over to your uncle every dollar I am worth, after the expenses of my illness and burial are paid. It is only about half of what I took from him, but it is all that I can do."

"Do not think of it further," Gerald said, laying one hand upon that of the dying man. "Mr. Brooks, I was very angry at you. Now that you repent and have made what restitution you can, I assure you of both my uncle's and my own forgiveness."

"Thank God! Now I can die in peace. Gerald, it will be but a few hours. Stay with me. You are the only person in this vicinity in whose veins flows a drop of my blood."

Gerald stayed. At midnight William Brooks died. Very soon after that Gerald started for his home.

There was no moon, but myriads of stars gemmed the heavens. As Gerald rode swiftly along he thought of many things. It was with a feeling of satisfaction that he remembered he was carrying to his uncle the assurance that at least a part of his money was to be restored to him. How would that restoration affect Gerald and his wife? The young man knew that the money would be at his disposal. Even the part returned would free him from the necessity of remaining at Elm Hill. But did he wish to go elsewhere?

At last he was dimly conscious of a change in the gloom that enveloped him. There was in the air a subtle hint that night was about to recede before the coming of the day king. Gradually the eastern sky came to be a dull pink, like the faded petals of a spent rose. A dim silvery light crept over the landscape. The woods thru which he was passing changed from gray to green. As he came in sight of Elm Hill, the sun's rays shot athwart the earth, touching all things with gold.

The sound of Bonny Bess's hoofs waked both the captain and Pauline. The young wife dressed more quickly of the two and when Gerald reached the house he found her waiting for him on the back porch. For a few moments they talked in low, earnest tones. Then, as they heard Captain Clay cross the hall to the library, they went to him there.

"I believe you bring good news, good for you," the old captain said as he held out his hand for that of Gerald.

"Could there be good news for us that did not include you?" Gerald asked. Then he went on to tell the news that he brought. For a moment after his nephew finished speaking, Thomas Clay sat in

silence. Then he said, "It is well. Gerald, you have proved your devotion to me, your strength and power to do. There is enough of the restored money to carry out the plans we once made. You shall enter Johns Hopkins, study law, and realize your dreams of leadership."

"And you?" Gerald asked.

"Oh, I'll worry along, living upon yours and Pauline's visits here."

"Uncle Thomas, would you not rather that we stayed here?"

"Much rather, if I thought only of myself. But I have neither the right nor the desire to spoil your life."

"You have the power to broaden and deepen our lives, Pauline's and mine," and Gerald Clay took one of his young wife's hands and one of his uncle's in a firm clasp. "Uncle Thomas, I have found my true vocation; here at Elm Hill I have found my true work. We will make this farm the best one in all the surrounding country, and here I will realize my olden dreams. Pauline and I want to stay at Elm Hill."

(The End.)

SMILE PROVOKERS.

Mother—Johnnie, you left out part of your prayers. You didn't say "God bless Aunt Hattie and make her happy."

Johnnie—Why, mudder, I don't have to put that in any more. Aunt Hattie's engaged.

Showman—Look here, your paper said the biggest snake in my show was twenty feet long, when it's really thirty-one feet.

Editor—Sorry, but we were pushed for space yesterday, and had to cut everything down.

"You have three pairs of glasses, professor?"

"Yes; I use one to read with, one to see at a distance, and the third to find the other two."

Mother (in a very low voice)—Tommy, your grandfather is very sick. Can't you say something nice to cheer him up a bit?

Tommy (in an earnest voice)—Grandfather, wouldn't you like to have soldiers at your funeral?

Not even a lawyer, however skillful in cross-examination, can make a witness tell the truth, provided the witness wishes to evade it. It is impossible to put a question in such exact language that it will demand the desired answer. Indeed, nothing is more true than the statement of Talleyrand, that language is intended to cover up one's thots. It was necessary on a certain occasion in court to compel a witness to testify as to the way in which Mr. Smith treated his horse.

"Well, sir," said the lawyer, with a sweet and winning smile—a smile intended to drown all suspicion as to ulterior purposes—"how does Mr. Smith generally ride his horse?"

The witness looked up innocently and replied: "Generally a straddle, sir, I believe."

The lawyer asked again: "But, sir, what gait does he ride?"

The imperturbable witness answered: "He never rides any gait at all, sir; but I've seen the boys ride every gait on the farm."

The lawyer saw that he was on the track of a Tartar and his next question was very insinuating.

"How does Mr. Smith ride when he is in company with others? I demand a clear answer."

"Well, sir," said the witness, "he keeps up with the rest, if his horse is able to; if not, he falls behind."

The lawyer was by this time almost beside himself. He asked, "And how does he ride when he is alone?"

"I don't know," was the reply; "I was never with him when he was alone," and there the case was dropped.

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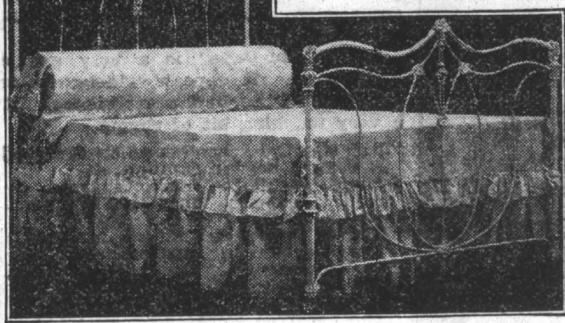
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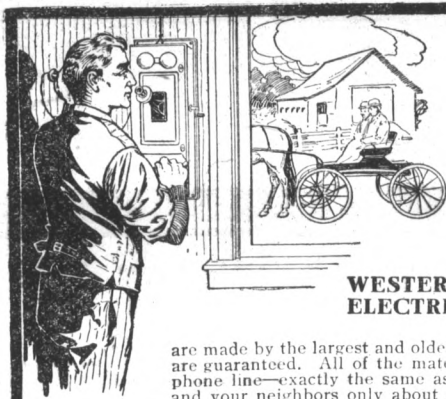
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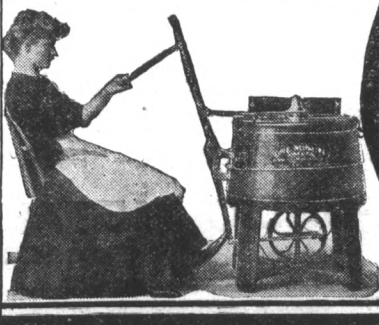
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OF INTEREST TO WOMEN

HOME CHATS WITH FARMERS' WIVES.

BY ELLA E. ROCKWEED.

A Trio of Dainty Pillow Slips.

A new way of doing old things is eagerly sought by the up-to-date housewife. The same old duties grow monotonous, and the never-ending making of pillow slips and towels in the identical way we have made them for years becomes a mere humdrum task which is gotten out of the way by the machine route as rapidly as possible.

Recently I have seen something new in this line. Some pillow slips made for Christmas presents, three different styles of them were the inspiration of this article, for no sooner do I get a new idea which I think will be useful to our farmer housewives than I am anxious to pass it along so that all may share it.

These pillow slips represented, possibly, too much work to make them practicable for every day use, certainly one pair which were heavily embroidered would be open to this objection, but we also love to have something dainty laid away for very best use for those special occasions which come to use when we have with us guests whom we delight to honor with our choicest possessions.

Then there are the girls, many of them with time with which to indulge their taste for fancy work. They will each like a pair for personal use or to give to a friend. The embroidered ones I shall describe first.

The material is of butcher's linen, a good quality being selected, so that it is nice and fine. Across the end of each slip have stamped a neat design and after padding work it closely in white mercerized cotton. Place an initial representing the family name of the owner an inch above the edge. Old English script looks best in embroidery as a general thing. Have the buttonholing on the edge firm and heavy, sufficiently padded so that it stands up nicely. Cut out along the edge, finish the slip as usual, but without a hem. By carefully arranging the side seam the embroidery pattern will almost cover it at the end, or at least sufficiently so that it will scarcely show.

A piece of cotton tubing, heavy, yet fine, may be substituted for the linen, if desired.

The second pair of slips described are to be made of ordinary pillow tubing. Turn the hem over upon the right side. This is easily done, since there is no seam at the side. Do not turn the edge under but baste it flat with the raw edge extending. Now cover this raw edge with a row of narrow embroidered insertion such as may be bot for from five to ten cents a yard. Stitch this on either side close to its edge. It furnishes a dainty finish, and is quite ornamental.

By varying the insertion, having no two pairs alike, it is very easy to keep the slips from becoming mixed since one can tell at a glance which ones belong together.

Less expensive even than the insertion is the seam covering used in making underwear, which comes in bunches of several yards each at ten cents a bunch. This would answer nicely in place of the insertion, giving a neat finish to the hems.

Sheets may be finished in the same manner if desired, or the slips alone.

The third pair of pillow slips had for ornamentation at the end a row of hairpin trimming used as insertion in the hem.

This work is familiar to those who crochet. Most women now in middle life learned to do it when they were girls. It is made by crocheting around a steel hair pin, turning the pin from side to side, using coarse white thread and a steel hook. An illustration of the work is shown which will make it clear.

After the desired length is completed the edges are finished into a row of single crochet, which affords a firmer substance for attaching to the cloth. Care must be observed not to stretch the work as it comes from the pin.

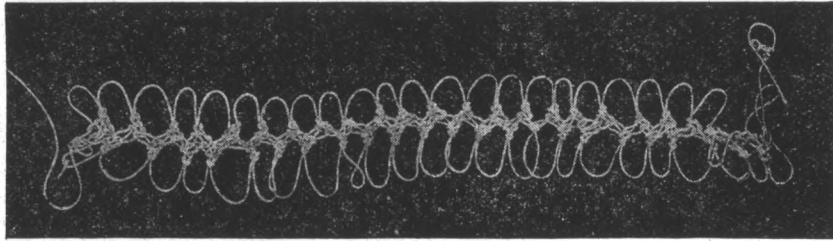
An inch-and-a-half hem is placed at the end of the slip, one edge of the insertion overhanded to it, then a doubled piece of the goods same width as the hem is overhanded to the other edge, giving the effect of a strip of insertion set in the hem.

The embroidered pair first described are not particularly new, needle work

of that variety having long been employed as a decoration, not only as a finish for fine pillow covers but also for sheets. The amount of work represented places them on the list of extras and not every woman has the time to devote to it. The two latter are not open to this objection. The crochet insertion works off rapidly and the kind you buy is inexpensive, which place either within the reach of the average housewife.

Speaking of pillow slips reminds me of the annoyance I have sometimes experienced in purchasing tubing which does not tear square across the piece. Just what occasions the condition I am unable to find out, possibly it is because it is the end of the piece and has become crooked in stretching, but I would caution housewives to examine the piece carefully before buying. See that the end tears straight across. If it does not take my advice and have none of it, no matter what specious argument the salesman may offer as to its coming straight after it has been washed. It simply will not come straight if it is not so when purchased. I can testify to this having more than once deceived myself by thinking it would be all right after it had been in wear a few weeks. To one with an eye which accepts only straight lines where straight lines should be, such an article as a pillow slip, the ends of which refuse to come true when ironed and which presents about as many curves top and bottom as a piece of raveled yarn, is a continual vexation of spirit. To cut off the objectionable parts means shortening the article beyond desired dimensions, and there you are.

So I say, beware of pillow tubing that twists and does not tear straight across the piece. Anyone who buys it will be sorry. Just why it will not pull square



Hairpin Trimming Used as Insertion in Pillow Slip Hems.

the same as a piece of sheeting which twists in the tearing I cannot explain, but it doesn't.

Many housewives buy ordinary yard-wide sheeting for pillow slips, turning the hem off the selvage on one side and seaming the other for the bottom. This places the warp of the fabric around the pillow instead of lengthwise of it as in the regular weave of casing. There seems not to be much difference in wear between the two.

There is a vast degree of difference between the size and plumpness of pillows as observed in different homes. Who has not, on some occasion, slept in a bed where the pillows were of almost infinitesimal smallness, so much so that they had to be doubled up in order to afford any support to the head. Then again they are so huge that they are really uncomfortable to lie on.

This matter is largely one of education. We like best what we have been accustomed to, for the same reason that mother's cooking seems the best on earth to her children. As a matter of fact, an overly large pillow is as awkward in practical use as the one extremely small. The big ones look best on the bed, tho we all agree on that point.

The generally accepted sizes in pillows run from 20x28 to 22x30. Some extra large ones are 26x30. Slips are made not much longer than the tick which holds the feathers, a yard for each is ample, with three inches turned off for a hem.

Only the best goose feathers should be put to such use. Hen's feathers are soggy, and undesirable. Always protect the ticking with white cotton put on under the slip and made fast to the pillow.

From a hygienic standpoint everything favors a medium small pillow. In fact, none at all is what many health-faddists recommend. A woman whom I met recently told me that she had cured herself completely of nervousness which threatened a general break-down simply by

giving up her pillow and sleeping without any whatever.

It is all a matter of habit, big pillow, little pillow or no pillow at all, the same as it is in almost every other thing with which we have to do in life. I have had people sleep in my house that asked if I could not give them a smaller one, and I have had other people pile upon the bed every available pillow in the room, while still others have discarded these head elevators entirely and I have found them uncrumpled, piled neatly on a chair next morning. But it remained for one of a gang of clover-hullers to eclipse all experiences by deliberately sleeping upon the pillow shams, pillow and all, evidently taking it that the shams were there for the purpose of protecting the pillows, and why not? Wasn't that the logical conclusion of the uninitiated?

By the way, was not the pillow sham in its day a highly convenient article? Its prestige is gone now, and it is rarely seen. The present day bed furnishing calls for roll or bolster, matching in cover the spread. This may be of net over a color, of dainty sprigged dimity or organdie or of battenburg, but a bolster it is which appears as a day-time dress of the modern bed whether of brass, of iron, or of wood. At night the bolster is removed with the spread, pillows being brot out from the hiding places to take its place.

Of course, this is not saying that every pillow is banished and that all beds have bolsters, yet this is the prevailing custom at the present time.

When there is not a bolster the pillows are in immaculate cases for day attire. Often these have a monogram in the center of each, with richly embroidered ends. Occasionally, only, one sees the shams. They are decidedly out of date.

Bolster frames are on sale at all furniture stores. They are made of wood and come in regular sizes, about ten inches in diameter, and cost a dollar and a half, covered only with cloth.

A brass bed with valance, spread and bolster to match, all white or over a color, is a dainty thing to look upon. With its appointments of easy springs, fine mattress, down comfort or soft wool

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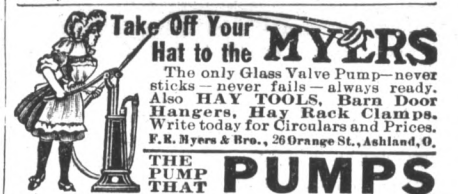
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This book is edited by A. R. Harding of the Hunter-Trapper, contains about 50 illustrations, and nearly 200 pages and is divided into 20 Chapters as follows:
General Information, Mink and Their Habits, Size and Care of Skins, Good and Lasting Bait, Bait and Scent, Places to Set, Indian Methods, Mink Trapping on the Prairies, Southern Methods, Northern Methods, Unusual Ways, Illinois Trapper's Method, Experienced Trapper's Ways, Many Good Methods, Salt Set, Log and Other Sets, Points for the Young Trapper, Proper Size Traps, Deadfalls, Steel Traps.

The methods as published are those of experienced trappers from all parts of the country. There is money made in catching mink if you know how. After reading this instructive book you will surely know. If you only catch one more prime mink it will pay for the book several times.

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HYGIENE IN RURAL SCHOOLS.

BY CHARLOTTE A. AIKENS.

It is rarely possible to make a badly planned house, or an unwisely constructed building into an ideal building, and this is as true of schools as of other buildings. But much can be done to improve conditions if the matter is taken in hand in real earnest.

Why is it that most of the woodwork in the interior of school buildings is painted a dull gray—a monotonous, dreary color that is enough to give one the blues. Isn't there enough dull gray in the average life without painting it on the walls that enclose us? Very often the children's lunch baskets have to be placed on the floor because no shelf is provided for them. Hooks for their clothing grow less and less—broken one way or another, and are not replaced. The stovepipe is often so rusty that it is a disgrace. Sometimes it smokes so badly that the children's eyes are red and inflamed from the irritation from the smoke. Sometimes the fire in winter is not lighted till a few minutes before the school opens and the children sit shivering for an hour or two. School trustees are very often elected because they can be depended on to try to save money—not because they will be interested in improving the school conditions or promoting the general welfare of the children. In the minds of a great many school trustees the cheapest teacher who can possibly be secured is the best.

The dimensions of an ideal schoolroom as given by one who has given much study to the subject, are as follows: Height of ceiling, 15 feet; length of room, 32 feet; width of room, 24 feet; pier or blank wall, rear of room, 4 feet; space allotted to group-of windows, 24 feet; window sill from floor (beveled), 3 feet; top of window from floor, 14 feet; height of window, 11 feet.

In old school buildings it is impossible to secure the most desirable conditions, but in planning school buildings in the twentieth century we have a right to expect that the authorities who have the work in hand will study questions of health. Ventilating flues that will provide for constant circulation of pure air, free from draughts, can easily be installed in a new building. The placing of the windows is important. The north light is the most constant but there are very decided advantages in south windows as well. The panes of glass should be large so as to be the more easily cleaned and afford the least possible places for dust to settle. Whenever possible, the windows should be planned so that the light will come in mostly from the left or from the left and rear of the desks, so as to avoid the shadows cast by the hands if the light comes from the right. Light from the rear is cut off by the back and causes shadows; and light from the front is the most undesirable. The windows should be about four feet from the floor so that the light will come in over the heads when the children are sitting. If the sills are bevelled the maximum of light will be admitted. Window shades in two parts so that either the upper or lower half may be shaded are advised by authorities in school hygiene. The shades, woodwork and walls should be of a light, restful color.

The school desk is a most important piece of furniture. When installing new desks the single desk is exceedingly desirable. Individual desks and seats make better work possible for both teachers and pupils. It is very difficult to get independent work from children when they are two in a seat and the difficulty in keeping order is greatly increased.

The two conditions which most affect the child's physical health—conditions caused by improper seats and desks, to a large degree, are round shoulders (which mean a narrowing of the chest walls), and curvature of the spine. The latter distortion usually takes the form of a twisting of the spine to one side or the other. The distortion is often not very noticeable but it is found in a much greater number of cases than is generally supposed. Sometimes dressmakers discover it when they are trying to fit tight fitting dresses. A physician who is widely known and regarded as an authority has said that, "Wherever large numbers of school children have been examined, the percentage of curvature has been found to be from 25 to 50 per cent." These examinations have been conducted in cities, of course. When the back bone becomes distorted or curved, the internal organs which it supports are affected—drawn out of their natural position and relation to each other.

A case comes to mind of a young woman who came to the hospital suffer-

ing from persistent stomach trouble. She would have distressing attacks of vomiting from apparently no cause. Six physicians had treated her for stomach and liver troubles. The sixth was sure it was the liver and kidneys that were at fault, but somehow treatment directed to those organs proved unsuccessful. The seventh man gave the whole body a careful examination and located a spinal curvature. She said her dressmaker had always complained that she was so hard to fit and her dresses had to be padded in the back to make them look right, but she had never thought of any connection between the distortion of the back and the internal organs. The vomiting ceased when a brace and support were secured.

When a tree is young it is comparatively easy to bend it, and if it is held in one position for any considerable time, it will very likely maintain that position when its fibers become hardened.

"Growing bone is an adaptable structure, and in its growth follows the lines of least resistance. All are familiar with the discomfort which comes from sitting for long periods in any position which does not permit a change, especially in a cramped position. The more the small of the back is supported, the less the muscular fatigue, and the less tendency will there be for the child to slide down or to twist to one side or the other to secure relief from discomfort." Every one knows the discomfort that comes from sitting long in a seat so high that the feet cannot touch the ground and yet in most rural schools there are no low seats for the little ones. For the first few years of his school life the average rural child sits with his feet dangling in the air. Seats are easily procured that are adjustable in height, a set-screw serving to hold the seat at the height desired.

The Boston schoolhouse commission, a few years ago, made a very earnest attempt to devise a seat that would be comfortable. Support the back where needed and prevent twisting the spine while writing or similar occupations are going on. After much study a model chair and desk was decided on and has been placed in the newer schools of that city. It costs no more than the old style seat and is free from most of the objections referred to. The child whom nature has endowed with a good degree of resistive power may emerge from the school unscathed but many children, as well as adults, are not up to par physically. The school life ought to be helpful in strengthening the weak points rather than developing latent tendencies to physical defects.

RICE COOKERY.

BY E. J. LYNCH.

For a hot supper dish rice croquettes will be relished by everyone. To make them, take two cupfuls of cold boiled rice, two teaspoonfuls each of sugar and butter, a little salt, a beaten egg, and just enough milk to make a firm paste after all is thoroughly mixed. Shape the rice into oval balls, dip in beaten egg and afterward in bread or cracker crumbs. Fry in lard till a golden brown. Care must be used in turning them. It is better to use a regular pancake turner for this purpose.

Rice Pyramids.—Instead of a plain boiled rice pudding try, if the family is not too large, making rice pyramids. Boil the rice and sweeten and flavor to taste. Mould it in small cups. These may be kept warm if desired. When ready to serve prepare a soft boiled custard. Turn the pyramids out on a platter and pour over them the custard. Or the custard may be omitted and strawberries used instead.

Riced Tomato.—Soak one cupful of rice for four hours in water. Put it in a baking dish and add two cupfuls of stewed tomatoes, some pieces of butter, salt and pepper. Bake covered till the rice is soft. If it is too dry add a little water.

Rice Cream.—Make a rich custard, using one cupful each of sweet milk and cream, the yolk of an egg, sugar and flavoring. When this is cooked stir into it a half ounce of gelatin which has been dissolved in cold water. Add a scant half cupful of boiled rice. Stir well and turn into a jelly mould. Serve with whipped cream or strawberries.

Excellent shirtwaist and coat hangers can be made by cutting small barrel hoops in two. Half barrel hoops are the best. Wrap the hoop with cambric and fasten in the center of same a loop or wire to hang it up with. The advantage of these over the wire ones are that they do not crease the garments.

When You Think

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If you want a book that tells all about woman's diseases, and how to cure them at home, send 21 one-cent stamps to Dr. Pierce to pay cost of mailing ONLY, and he will send you A FREE copy of his great thousand-page illustrated Common Sense Medical Adviser—revised, up-to-date edition, in paper covers. In handsome cloth binding, 31 stamps.

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THE MICHIGAN FARMER,
Detroit, Mich.

Michigan Farmer's Club List.

For the benefit and convenience of our subscribers we have arranged the following list of papers on which we can save them money. Besides the money, they save the trouble and expense of sending each order separately.

EXPLANATION—The first column is the regular subscription price of the other papers. The second column gives our price for a year's subscription to both the other paper and Michigan Farmer. The third column gives the price at which the other paper may be added when three or more are ordered. Example: We will send the Michigan Farmer and Detroit Semi-Weekly Journal for \$1.35. If McCall's Magazine also is wanted add it at 40c making total \$1.75. Any number of papers may be added at third column price if they are for a subscriber to the Michigan Farmer.

It will be useless to send us subscriptions for any daily—except the Times—at Rural Route prices. If you do not give number of your route publishers will only accept them at first column prices.

If you want the MICHIGAN FARMER TWO YEARS and the other papers one year add 45c to the second column price. For the Michigan Farmer 3 years add 75c. We do not send samples of other papers. Address the publishers direct.

Send all orders to the Michigan Farmer or through our agents.

ABOUT PRICE OF DAILIES—Those having rural mail delivery pay 2d column price, all others pay 1st column price.

NOTE—So long as a subscriber is on our list for one or more years he may order at any time any publication at third column price. So that a two-year subscriber does not lose the advantage of the reduced price if he wants any other paper next year or the year after.

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(w—weekly; m—monthly; s-m—semi-monthly.)

CLUB PREMIUMS.

Those subscribing for the Michigan Farmer in combination with other papers are allowed premiums just the same as if the order was for the Michigan Farmer alone. One premium only for every Michigan Farmer order. Orders for other papers alone will receive no premium under any circumstances.

(Continued from page 52).

The average price of wheat per bushel was 97 cents; rye 70 cents; shelled corn 65 cents, and oats 49 cents. The average price of hay per ton was \$8.18. The average price of fat cattle was \$3.88 per cwt., and of fat hogs \$4.97 per cwt., and of dressed pork \$6.48 per cwt.

The average price of each class of horses was as follows: Under one year old, \$43.36; between one and two years old, \$70.79; between two and three years old, \$104.77, and three years old and over, \$138.62.

Milch cows were worth \$36.65 per head. Cattle other than milch cows, under one year old, were worth per head, \$10.51; between one and two years old, \$17.83; between two and three years old, \$27.31, and three years old and over, \$35.30.

The average price of sheep under one year, was \$3.41 and one year old and over, \$4.19. Hogs not fattened were worth \$4.19 per cwt.

The prices given are for the state. The price of wheat is 4 and corn 3 cents higher than one year ago, while rye is 3 cents, oats 1 cent and hay \$4.16 lower.

The average price of horses, etc., one year ago was as follows: Under one year old, \$40.70; between one and two years old, \$65.71; between two and three years old, \$97.78, and three years old and over, \$131.99.

Milch cows, \$34.64; cattle other than milch cows, under one year old, \$10.05; between one and two years old, \$16.93; between two and three years old, \$25.79; and three years old and over, \$33.18. Sheep under one year \$3.85, and one year old and over \$4.85; fat cattle \$3.58 per cwt.; fat hogs, \$4.41 per cwt.; dressed pork, \$6.00 per cwt., and hogs not fattened \$3.83 per cwt.

MICHIGAN FARMERS' INSTITUTES.

During the last half of January the following Farmers' Institutes have been arranged:

County Institutes: Clinton Co., Ovid, Jan. 15-16; Gratiot Co., St. Louis, Jan. 18-19; Clare Co., Clare, Jan. 19-20; Genesee Co., Montrose, Jan. 19-20; Muskegon Co., Trent, Jan. 19-20; Eaton Co., Charlotte, Jan. 20-21; Oceana Co., Shelby, Jan. 20-21; Osceola Co., Hersey, Jan. 20-21; Mecosta Co., Big Rapids, Jan. 21-22; Saginaw Co., Fremont, Jan. 21-22; Mason Co., Ludington, Jan. 22-23; Montcalm Co., Lakeview, Jan. 22-23; Ottawa Co., Cooper'sville, Jan. 22-23; Tuscola Co., Caro, Jan. 22-23; Kalamazoo Co., Kalamazoo, Jan. 25-26; Kent Co., Grand Rapids, Jan. 25-26; Lapeer Co., No. Branch, Jan. 26-27; Charlevoix Co., E. Jordan, Jan. 26-27; Sanilac Co., Sandusky, Jan. 26-27; Antrim Co., Bellaire, Jan. 27-28; Kalamazoo Co., Galesburg, Jan. 27-28; Macomb Co., Chesterfield, Jan. 27-28; Grand Traverse Co., Traverse City, Jan. 28-29-30; Huron Co., Bad Axe, Jan. 28-29; Calhoun Co., Athens, Jan. 28-29; St. Joseph Co., Centerville, Jan. 29-30; Leelanau Co., Sutton's Bay, Jan. 29.

One-day Institutes will be held as follows:

Montcalm Co., Vestaburg, Jan. 14, W. F. Raven, Brooklyn, State Speaker. Eaton Co., Dimondale, Jan. 15, Prof. R. S. Shaw, M. A. C., State Speaker. Genesee Co., Burton Twp., Jan. 15, E. M. Moore, Orchard Lake, State Speaker. Ottawa Co., Nunica, Jan. 15, Berlin, Jan. 16; Forest Grove, Jan. 18; Zeeland, Jan. 19; W. F. Raven, Brooklyn, State Speaker. Lapeer Co., Almont, Jan. 15-16; Hadley, Jan. 18-19; Lapeer, Jan. 20, L. W. Oviatt, W. Bay City, State Speaker. Huron Co., Kinde, Jan. 16; Uby, Jan. 16; Harbor Beach, Jan. 18, H. B. Cannon, Rochester, State Speaker.

St. Joseph Co., Leonidas, Jan. 19, N. A. Clapp, Northville, State Speaker; Parkville, Jan. 20; Constantine, Jan. 21-22; Sturgis, Jan. 23.

Midland Co., Poseyville, Jan. 15; Laporte, Jan. 16; Geneva, Jan. 18, A. L. Hopkins, Bear Lake, State Speaker. Coleman, Jan. 19; Averill, Jan. 20; Larkin, Jan. 21; Hope, Jan. 22, Chas. B. Cook, Owosso, State Speaker.

Missaukee Co., Missaukee Grange Hall, Jan. 19; Morey, Jan. 20; Star City, Jan. 21, A. L. Hopkins, Bear Lake, State Speaker.

Antrim Co., Alba, Jan. 20-21; Kewadin, Jan. 22-23, H. B. Cannon, State Speaker. Otsego Co., Elmira, Jan. 20, A. P. Gray, Traverse City, State Speaker.

Charlevoix Co., Springvale, Jan. 21; Boyne Falls, Jan. 22; Boyne City, Jan. 23; Charlevoix, Jan. 25, A. P. Gray, Traverse City, State Speaker.

Lenawee Co., Rome, Jan. 15; Onsted, Jan. 16; Addison, Jan. 18; Hudson Center, Jan. 19; Medina, Jan. 20, N. I. Moore, Hanover, State Speaker; Morenci, Jan. 21; Ogden Center, Jan. 22; Blissfield, Jan. 23; Holloway, Jan. 25, N. P. Hull, Dimondale, State Speaker; Tecumseh, Jan. 26, Prof. R. S. Shaw, State Speaker.

Clare Co., Arthur Twp., Jan. 26, Peter Voorheis, Pontiac, State Speaker. Ionia Co., Orleans, Jan. 26; Smyrna, Jan. 27; So. Boston, Jan. 28; Lake Odessa, Jan. 29; Danby, Jan. 30, Chas. B. Cook, Owosso, State Speaker.

Grand Traverse Co., Kingsley, Jan. 26-27, Jason Woodman, Paw Paw, State Speaker.

Isabella Co., Mt. Vernon Grange Hall, Jan. 26; Weidman, Jan. 27; Delwin, Jan. 28; Shepherd, Jan. 29, Peter Voorheis, Pontiac, State Speaker.

Clinton Co., Wacousta, Jan. 28, Prof. A. C. Anderson, M. A. C., State Speaker. Monroe Co., Azalia, Jan. 30, N. I. Moore, Hanover, State Speaker. State Round-up, Mt. Pleasant, Feb. 23-26, 1909. L. R. Tarr, Supt.

We are sorry to announce to our readers the death of Mr. Chas. E. Whitman, president of the Whitman Agriculture Company, of St. Louis, Mo., who died on Thursday, Jan. 7, 1909. Our readers will feel acquainted with this firm from their frequent advertisements in our columns.

FARMERS' CLUBS

COUNTRY LIFE PROBLEMS.

The Farmer of Dec. 26th contained an article from D. F. Harmon, of Wayne county, in which the statement was made that 99 out of every 100 farmers would take but little stock in the questions propounded by President Roosevelt's commission on country life. While this may be partly true in old settled counties, like Wayne, where many farmers are occupying and tilling farms that were owned by their grand, and great grandfathers, to them conditions are different from what they are in newer parts of the state and nation. While I am not one of those who think that President Roosevelt is infallible, yet I want to give him credit for what he has done and is trying to do, and I want to say farther, had Congress accepted his recommendations, and those of the postmaster general, we would now be enjoying the benefits of a parcels post and postal savings banks, which have been favored by the Grange, Farmers' Clubs, and other farm organizations for years. In my judgment the appointing of this commission will be the means of procuring a large amount of information that will, sooner or later, be of much benefit to the farmer. The questions are mostly about things that the farmer has more or less to do with; then why should he not be interested in these country life problems. At our monthly meeting of the Seville and Sumner Farmers' Club, held Dec. 3rd, these questions took the place of the regular question box, and most of the afternoon was devoted to discussing them. Had Mr. Harmon attended this gathering of many of the representative farmers of this section, I think he would have modified some of his views in regard to country life. The only question in the twelve that he refers to is that touching the service given by railroads, trolley lines, etc. This is a question that the average farmer or business man can hardly answer, for he does not know what constitutes a reasonable service. Had Mr. Harmon referred to the next preceding question, No. 3, "Do the farmers in your neighborhood get the returns they reasonably should from the sale of their products?" he could find plenty of farmers all over the country, even in old Wayne county, who could tell him that they do not. When less than 200 men in Michigan can call a meeting in Detroit, Saginaw or Grand Rapids, and set the price on beans before the crops are harvested, if Mr. Harmon is a farmer, he can hardly say this is a square deal. Take the next preceding question, No. 2, "Are the schools of your neighborhood training boys and girls satisfactorily for life on the farm?" Does Mr. Harmon think they are? A great many all thru this section do not think so. Now let us take question No. 6, "Are the farmers and their wives in your neighborhood satisfactorily organized to promote their material buying and selling interests?" Possibly they may be in Wayne county, but they were not when I lived there. In Gratiot county we have the Grange, Farmers' Clubs and the Gleaners. The last named organization does some business along this line, how much, I do not know but it is as a drop in the bucket compared to the amount of business done. What the farmers of this country want, and need, is more mutual buying and selling. Consumers are paying 27 and 28c per lb. for turkeys in Detroit, while we are receiving 13c and 14c for the same turkeys 100 miles away. If the president's commission, with the aid of the people, can devise some method whereby the producer and the consumer can be brought closer together in a business way, the movement will be justified.

One would almost think from the wind-up of Mr. Harmon's article, that the farmer and his wife occupy nearly all the best and most important positions in business and society. If he will look back, only one year, and take a peep into the make-up of the Con. Con. Convention, he will discover that of the 96 delegates that composed that convention, 61 were lawyers, out of about 7,500 in the state, one lawyer delegate out of every 123 lawyers; while of the 90,000 farmers in the state, there were six delegates, or one farmer delegate to every 15,000 farmers. This is a pretty fair sample of the host of responsible positions held by the farmers, as compared to the other professions, and still Mr. Harmon thinks President Roosevelt is meddling with our personal affairs in taking up these questions.

Gratiot Co. W. T. PITT.

GRANGE

Our Motto—"The Farmer is of more consequence than the farm, and should be first improved."

THE PERSONAL ELEMENT IN GRANGE SUCCESS.

A Sunday school teacher was trying to explain what a letter is to a class of primary pupils. "Did you ever get a letter?" she asked. "Yes, yes, one from you!" exclaimed one and another of the group. The teacher was surprised, not having in mind to recall the letter she herself had written whenever one of her pupils had been absent. But the incident showed her the value of the practice.

It is true everywhere, with young and old, that it is the personality put into any work that wins and holds. Officers of Granges, if they would succeed, may depend upon success in just so great a measure as they are willing to give of themselves to the work. Nothing more, nothing less.

Cold forms, glittering plans, fine halls, low insurance, discounted bills—none of these things, nor all of them, will build up strong Grange sentiment without something besides. The human man or woman, perhaps unknown to himself or herself, craves individual recognition, sympathy and appreciation. Whether his part in life be humble or high, this is true. If it is humble, perhaps he deserves and needs it most of all.

It is practical wisdom in a Grange master or lecturer or other leader to build on these very simple, obvious facts. The shepherd of a flock "callet his sheep by name." So ought we to follow such an example and become acquainted with individual qualities in order that the Grange may best serve them. The hearty greeting spoken to every member present at a meeting; the message sent thru another member, or phoned or written next day, to a sick member; the recognition, when making assignments on committees or on the program, of some special fitness of the person for the duty appointed; the mention of some worthy work or object lesson shown by one's farm or home—these are things that count. A thousand more might be added, but they are all among the little things that occur to an officer to do for his Grange membership when once he sets himself to get into personal sympathy with their needs and abilities.

JENNIE BUELL.

AMONG THE LIVE GRANGES.

Membership of 230.—The report of the secretary of Madison Grange, of Lenawee Co., at a meeting held New Year's evening, showed that the organization now has 230 members. More than half of them were present at the meeting. New officers were installed, committees appointed and everything gotten in shape for a good year's work.

Grand Traverse Granges Prospering.—At the last meeting of the Grand Traverse District Grange detailed reports were filed by seven Granges of the district which showed an average membership of 76. The reports also showed that several of these Granges own property ranging in valuation from \$200 to over \$1,000.

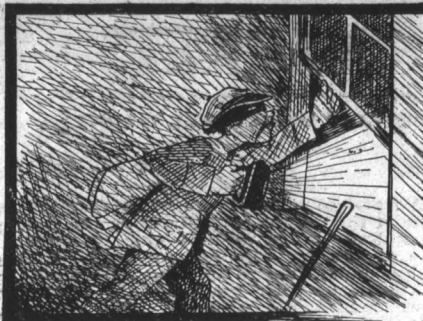
Monitor Grange, of Gratiot Co., closed the year by instructing two candidates in the first and second degrees and electing officers as follows. Master, Clarence Muscott; overseer, A. Rothgery; lecturer, Sister S. S. Richardson; steward, Archie Borton; chaplain, Cora Davis; treasurer, A. A. Sabin; secretary, B. T. Muscott; gatekeeper, J. W. Smith; Ceres, Sister C. A. Smith; Pomona, Sister A. A. Sabin; Flora, Sister A. Rothgery; lady ass't steward, Sister Hazel McCaw; correspondent director, B. T. Muscott; organist, Sister Jennie Muscott.

Sparta Grange, No. 340, of Kent Co., held an all-day meeting Jan. 2. In the morning two candidates were instructed in third and fourth degrees. An oyster dinner was served at noon and at the afternoon session the following officers were installed: Master, C. E. Chapman; overseer, Barton Colvin; lecturer, Mrs. C. E. Chapman; steward, W. E. Caukin; ass't steward, Chas. Meyers; chaplain, Mrs. H. E. Walcott; treasurer, J. A. Symes; secretary, Cornelius Spangenberg; gatekeeper, H. E. Walcott; Ceres, Mrs. Wm. Colvin; Pomona, Mrs. Jesse Bettes; Flora, Mrs. Vernie Andrus; L. A. S., Miss Clara Lown; organist, Mrs. J. W. Spangenberg; fire insurance agent, T. H. Whittael. We also listened to an interesting report from our State Grange delegates and installing officers, Mr. and Mrs. John Moxon.—Mrs. C. E. Chapman, Sect.

COMING EVENTS.

Pomona Meetings.

Clinton Co., a Pomona rally at Olive Grange hall, Wednesday, Jan. 20. Ingham Co., with Mason Grange, Friday evening, Jan. 29 and Saturday, Jan. 30. Open meeting Saturday afternoon, with address by State Master N. P. Hull. Ionia Co., with Danby Grange, Thursday, Jan. 21.



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MARKETS

DETROIT WHOLESALE MARKETS.

January 13, 1909.
Grain and Seeds.

Wheat.—In spite of the bullish appearance of the market, prices during the past week have fallen off a couple of cents. The reason for this appears to be that many holders desire to take profits and, by throwing their grain on the market have caused the declines. The strong features of the market are the decrease in the visible supply, the lighter receipts in northwestern markets and in Canada. The world's visible supply also showed an abnormal decrease and Europe is wanting more wheat than usual at this season of the year. Although Argentine traders have slightly more wheat than was earlier anticipated, they are now apparently not anxious to sell, believing that better prices will prevail. From all appearances, it is difficult to see how the market will decline much below present values, and there are many large holders who are content to keep what grain they now have and buy upon all depressions in the market. One year ago the price for No. 2 red wheat in this market, was \$1.02 per bushel. Quotations for the past week are:

	No. 2	No. 1	No. 3	Red.	White.	May.	July.
Thurs.	1.05	1.04	1.02	1.08	1.01	1.01	1.01
Fri.	1.05	1.04	1.02	1.08	1.01	1.01	1.01
Sat.	1.05	1.04	1.02	1.08	1.01	1.01	1.01
Mon.	1.04	1.03	1.01	1.07	1.00	1.00	1.00
Tues.	1.03	1.02	1.00	1.06	0.99	0.99	0.99
Wed.	1.05	1.04	1.02	1.07	1.00	1.00	1.00

Corn.—In spite of the weakness in the wheat market, the corn trade has continued strong thruout the week with an advance of 1c in values. The demand is increased and the supply limited. The amount of business done is below normal. The crop growing in Argentina is promising but it can have no great effect upon the trade here for a few weeks, and even then the southern crop is small and does not have a large influence upon the world market. There was but a slight increase in the visible supply in this country during the past week. The margin between well-fed and half-fed stock is encouraging good feeders to put their cattle, hogs and other stock in prime condition. This is bringing about a better demand for corn. One year ago the price for No. 3 corn was 58½c. Quotations are as follows:

	No. 3	Yellow.
Thursday	61	62
Friday	61	62
Saturday	61	62
Monday	61½	62½
Tuesday	61½	62½
Wednesday	61½	62½

Oats.—This trade has been very dull and easy thruout the week. Prices are practically unchanged in outside markets, and remain precisely at the same figure in the local market. The visible supply shows an increase of about a quarter of a million bushels. The price for No. 3 oats a year ago was 52½c. Quotations for the week are:

	No. 3	White.
Thursday	53	53
Friday	53	53
Saturday	53	53
Monday	53	53
Tuesday	53	53
Wednesday	53	53

Beans.—The advance in May options last week has been maintained and the nominal price for cash beans has also been placed on a higher basis. There is little demand for the option noted above but the other deals are lifeless. Many farmers are holding their beans believing that the small crop justifies them in doing so. Quotations are as follows:

	Cash.	May.
Thursday	\$2.15	\$2.25
Friday	2.15	2.25
Saturday	2.17	2.25
Monday	2.17	2.25
Tuesday	2.17	2.25
Wednesday	2.17	2.25

Clover Seed.—A very satisfactory demand continues in this trade. The supply is fair and the amount of trade is relatively large. Market is firm and prices range with those of a week ago. Quotations are as follows:

	Prime	Spot.	Mar.	Alsike.
Thursday	\$5.65	\$5.75	\$5.80	\$5.80
Friday	5.65	5.75	5.75	5.75
Saturday	5.65	5.75	5.75	5.75
Monday	5.60	5.65	5.65	5.65
Tuesday	5.60	5.65	5.65	5.65
Wednesday	5.60	5.65	5.65	5.65

Rye.—Market continues dull and inactive with the price fixed at last week's value. Quotation for cash No. 2 is 77½c.

Visible Supply of Grain.

	This week.	Last week.
Wheat	50,479,000	51,759,000
Corn	7,325,000	7,165,000
Oats	10,921,000	10,629,000
Rye	1,012,000	1,022,000
Barley	4,905,000	5,082,000

Flour, Feed, Provisions, Etc.

Flour.—Unchanged. Demand is good. Receipts of flour on Tuesday were 800 bbls., and shipments 400 bbls. Quotations are as follows:

Clear	\$5.00
Straight	5.15
Patent Michigan	5.75
Ordinary Patent	5.25

Hay and Straw.—Prices unchanged. Carlot prices on track are: No. 1 timothy, new, \$10.50@11; No. 2 timothy, \$9.50@10; clover, mixed, \$9@10; rye straw, \$7.50; wheat and oat straw, \$6.50 per ton.

Feed.—No change in prices. Bran, \$24 per ton; coarse middlings, \$25; fine middlings, \$28; corn and oat chop, \$25.50; cracked corn and coarse cornmeal, \$28.50.

Potatoes.—Although the price for good stock is about the same as a week ago the cold weather is giving the trade new

life by increasing the demand and restricting the offerings. Good stock is selling at 70c.

Oils.—Lined in barrels, 52c per gal; boiled, 53c; lard oil, extra winter strained, 80c; extra No. 1, 60c; No. 2, 50c; No. 3, 45c; headlight kerosene, 9½c; turpentine by the bbl., 47½c per gal.

Provisions.—Family pork, \$17@17.50; mess pork, \$16; light short clear, \$18.50; heavy short clear, \$19; pure lard in tierces, 10½c; kettle rendered lard, 11½c; bacon, 11½c; shoulders, 7½c; smoked hams, 10½c; picnic hams, 7c.

Hides.—No. 1 green, 9½c; No. 2 green, 8½c; No. 1 cured, 11c; No. 2 cured, 10c; No. 1 green kip, 11c; No. 2 green kip, 9½c; No. 1 cured calf, 15c; No. 2 cured calf, 13½c; No. 1 horsehides, \$3.40; No. 2, \$2.40; sheepskins, as to wool, lambs, 40c@1.25.

Dairy and Food Products.

Butter.—This trade has a very firm tone. The demand continues fair considering the high basis on which the trade is being conducted. Dairy butter has improved in price. Other kinds are unchanged. Quotations: Extra creamery, 32c; firsts, 30c; packing stock, 19c; dairy, 22@25c.

Eggs.—Market higher. Supply is limited. Fresh stock is quoted at 31c per dozen; refrigerator extra, 27½c.

Poultry.—Poultry is scarce. Chickens are in good demand with quotations slightly advanced. Quotations: Dressed chickens, 14@14½c; fowls, 13@13½c; ducks, 14@15c; geese, 12@13c; turkeys, 18@20c per lb. Live—Spring chickens, 13c; fowls, 12@13c; ducks, 13@14c; geese, 11@12c; turkeys, 15@17c per lb.

Fruits and Vegetables.

Apples.—Market higher. Best grades are quoted at \$3.75@5 per bbl. Western apples in bushel boxes, \$2.25@3.50.

Onions.—Spanish, \$1.65 per bu; home-grown at 60@65c per bu.

Cabbage.—Home-grown selling at 2½c per lb.

Vegetables.—Green onions, 15c per doz; radishes, 30c per doz; cucumbers, \$1.90 @2 per bu; lettuce, 17c per lb; head lettuce, \$3.25 per hamper; beets, 40c; turnips, 40c; carrots, 40c; watercress, 40c per doz; celery, 40c; spinach, \$1 per bu; parsnips, 60c per bu.

OTHER MARKETS.

Grand Rapids.

Prices in most lines of produce are firmer, owing in part to the colder weather. The egg and butter market is firm at quotations. Dressed hogs are bringing as high as 7½c. Potatoes are a little higher, but the movement is still very light. It is an interesting situation, with regard to potatoes. Buyers have predicted for several weeks that the farmers who, in holding their stock for higher prices, will get bumped, but the growers apparently are not worrying much about it as yet.

Quotations follow:
Grains.—Wheat, 99c; corn, 62c; oats, 52; buckwheat, 80c per bu; rye, 70c.
Beans.—Handpicked, \$1.90 per bu.
Butter.—Buying prices: Dairy, No. 1, 24c; No. 2, 17c; creamery in tubs, 31½c.
Cheese.—Michigan full cream is selling at 13@14c per lb; brick, 15c; Swiss, 16c; limburger, 15c.
Eggs.—Case count, 27@28c; candled, 30@31c.

Apples.—75c@1.25.
Potatoes.—60@65c per bu.

Cattle.—Cows, \$2.50@3 per cwt; steers and heifers, best quality, \$3@4; dressed mutton 6c; dressed veal, 6½@7½c; dressed beef, cows, 4½@5½c; steers and heifers, 5½@7c.

Hogs.—Dressed, 7@7½c.
Live Poultry.—Fowls, 9@10c; spring chickens, 10@11c; roosters, 7@8c; turkeys, 16@18c; young ducks, 10@11c; geese, 9@10c.

New York.

Grain.—Wheat, No. 2 red, \$1.05½@1.06½; corn No. 2, 67½c; oats, mixed, 54½c.

Eggs.—Higher. Western firsts, 33c; seconds, 31@32c.

Butter.—Creamery specials, 33@33½c; western factory firsts, 21½@22c.

Potatoes.—Firmer. Western, in bulk per 180 lbs., \$2.25@2.50; per bu, 80c.

Chicago.

Potatoes.—Car lots in bulk. Fancy, 72 @74c per bu; ordinary, to good, 63@69c.

Wheat.—No. 2 red, \$1.03½; May, \$1.04½; July, 96½.

Corn.—No. 2, 59@59½c; No. 2 yellow, 59½@59¾c; May, 61¾c; July, 61¾c.

Pittsburg.

Butter.—Creameries, 34½@35c per lb; firsts, 32@33c; prints, 35@35½c.

Eggs.—Lower. Fresh candled, 35@36c; current receipts, 33@34c.

Potatoes.—Market steady. Michigan, 80 @85c per bu.

Cincinnati.

Potatoes.—Market higher. Bulk on track, 78@80c per bu.

Butter.—Creamery prints, 34½c per lb; extra, 34c; firsts, 31½@32c.

Eggs.—Lower. Extra, 30c per doz; firsts, 26@29c.

Elgin.

Butter.—Market firm at 32c, which is last week's quotation. Sales for last week amounted to 587,200 lbs., compared with 598,300 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

January 11, 1909.
(Special report by Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of sale stock here today as follows: Cattle, 140 loads; hogs, 26,000; sheep and lambs, 28,000; calves, 700.

With 43,000 cattle in Chicago today our market opened dull and it was a late hour before much business was transacted and sales from the beginning were from 15@40c a hundred lower than last week.

There was quite a number of pretty good cattle on the market that sold from \$5.75 @6.50. A large percentage of the Michigan cattle were not good enough to demand very strong prices. They would bring more if we could sell them for feeders. But as there is no outlet here for feeders they have to be sold to kill. We think it would be a good plan for shippers to hold this kind of cattle back for a short time and see if there won't be an outlet for them for feeding purposes.

We quote: Best steers \$6@6.75; best 1,200 to 1,300 lb. shipping steers, \$6@6.50; best 1,000 to 1,100 lbs. feeding steers, \$5 @5.50; best fat cows, \$4.75@5; fair to good cows, \$3.50@3.75; trimmers, \$2; best fat heifers, \$5.50@5.75; butcher heifers, 800 to 900 lbs., \$4@4.25; light fat heifers, \$3.25@3.50; best bulls, \$4.25@5; bologna bulls, 3.50@3.75.

With a heavy run of hogs here and 78,000 in Chicago, our buyers held off and asked a strong 25@35c concession. Sellers held off for a long time but finally had to drop in line and sell at quotations. There was a fair clearance for all that got yarded in time for the market with a few late arrivals going over unsold.

We quote: Best medium and heavy, \$6.15@6.20, few choice Ind. \$6.25; best yorkers, \$6@6.10; light yorkers, \$5.85@6; pigs, \$5.50@5.60, few strong weights \$5.65; roughs, \$5.50@5.55; stags, \$4@4.50.

The lamb market today was 35c lower than Saturday but fairly active. We look for higher prices the last of the week. We quote: Top lambs, \$7.65@7.70; fair to good, \$7@7.50; cull lambs, \$5.50@7; skin culls, \$4.50@5.25; yearlings, \$6@7; wethers, \$5.50@5.75; ewes, \$5@5.25; cull sheep, \$2.50@3.50; best veals, \$9.50@9.75; medium to good, \$7.50@9; heavy, \$4@5.

Chicago.

January 11, 1909.

Cattle.

Received today 21,000 85,000 26,000
Same day last year 41,946 71,862 19,556
Received last week 72,236 215,093 86,133
Same week last year 71,732 285,275 73,062

Cattle declined largely 15@25c on Monday last week under extremely large receipts, although some sales were not more than a dime lower. The demand was active, however, and the receipts were well taken. Later in the week buying continued strong, and there were good rallies in prices, with much smaller receipts. The demand ran mainly on the lighter-weight beef cattle, and heavy beefs were discriminated against strongly, these being the last to advance and the first to show weakness. Beef steers sold largely at a range of \$4.75@6.75, with sales of the best offerings at \$6.80@7.50, while the commoner light weights found buyers at \$4.50. Competition from cattle feeders helped to make a strong market for steers on the feeder order. Cows and heifers were good sellers at \$3@6, fat little heifers showing great firmness. Canners and cutters had a fair sale at \$1.50@2.95, with sales of bulls at \$2.80@5.50, while calves were active at \$4@9.50 per 100 lbs., prime light vealers being scarce at all times. The stocker and feeder trade was extremely animated, with sales at \$2.75@5.10, and a limited number of prime heavy feeders were sold by yard speculators to Ohio cattlemen at \$5.15@5.60, with prime 700-lb. stockers selling above \$5. Milk and springers had a fairly large demand at \$25@55 per head, the best demand being for choice cows for eastern shipment. There are enough cattle feeding now in cattle sections to insure a sufficient supply of beef for the future, large numbers having gone to feeding districts of late, but various places report a scarcity. But "this is a big country," and a beef famine is almost an impossibility.

Cattle, under unusually large receipts today, ruled very dull and largely 15@25c lower, with prime beefs quotable at \$6.75@7.25 and good steers selling as low as \$6, while medium lots went at \$5.25 and upward.

Hogs have been coming to this market better in quality than several weeks ago, having had better allowances of corn, but light weights and pigs are still far too numerous at a time when the future looks so bright for feeders. The recent receipts have averaged in weight but 204 lbs., compared with 215 lbs. a year ago and 225 lbs. two years ago. Despite the increasing receipts, a stronger undertone has been developed under the influence of the marked improvement in the eastern shipping demand, and of late shippers have taken not only the heavier hogs, but also fat lighter weights ranging around 170 to 190 lbs. The Chicago packers gracefully acknowledge their defeat in their plans for lowering hogs to a \$5 basis and now prices are headed in the direction of \$7. Don't hurry immature hogs to market, but hold until maturity. Cold weather is here at last, and the consumption of fresh pork products and cured meats has increased. Severe cold weather today caused unusually large receipts, and prices broke 15@20c, hogs selling at \$5.25@6.15. The offerings ran largely to light hogs and pigs, and they declined sharply. About 12,000 head were left unsold at the close.

Sheep and lambs made still another great record for sellers last week by reaching extremely high prices for the better class, the demand being much in excess of the limited offerings. The daily receipts were, on the whole, sadly deficient in point of quality, and lively competition for the best lots between purchasers gave sellers the inside track. The best lambs jumped to \$8.10 per 100 lbs., the best little yearlings on the lamb order moving up to \$7.25, while fat wethers and ewes made correspondingly high records. The demand for mutton was stimulated by the appearance of cold weather, but inferior grades were slow of sale, and thin mutton on the hoof had to sell comparatively low in price. Prospects are regarded as extremely flattering for the future market so far as fat flocks are concerned. The market was active today, lambs selling at \$5@8, ewes at \$2@5.40, wethers at \$4.50@5.75, yearlings at \$5.50@7.15 and bucks at \$3@4.

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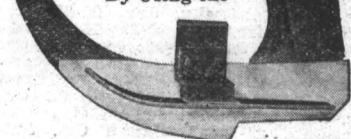
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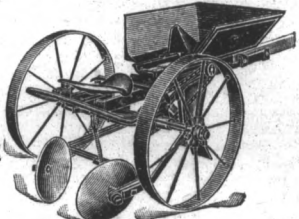


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JOHN J. WATSON, JR., Treasurer.

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THIS IS THE LAST EDITION.

In the first edition the Detroit Live Stock markets are reports of last week; all other markets are right up to date. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, the last edition Friday morning. The first edition is mailed to those who care more to get the paper early than they do for Thursday's Detroit Live Stock market report. You may have any edition desired. Subscribers may change from one edition to another by dropping us a card to that effect.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

January 14, 1909.

Cattle.

Receipts, 996. Market active and 10c higher than on Wednesday.

We quote extra dry-fed steers and heifers \$5.25@5.50; steers and heifers, 1,000 to 1,200, \$4.50@5.10; steers and heifers 800 to 1,000, \$4@4.65; steers and heifers that are fat, 500 to 700, \$3.50@4.10; choice fat cows, \$3.75@3.85; good fat cows, \$3.25@3.60; common cows, \$2.50@3; canners, \$1.25@1.75; choice heavy bulls, \$3.75@4; fair to good bolognas, bulls, \$3@3.50; light bulls, \$2.50@3.

Bishop, B. & H. sold Bresnahan 15 butchers av 685 at \$3.70, 2 cows av 865 at \$2, 2 bulls av 700 at \$3.20; to Kamman 2 bulls av 950 at \$3.75, 2 butchers av 630 at \$3, 9 steers av 826 at \$4.50; to Kamman B. Co., 5 butchers av 1,175 at \$3.85; 3 do av 740 at \$4.50, 1 cow weighing 1,070 at \$2; to Sullivan P. Co. 2 do av 1,190 at \$3.75, 5 do av 984 at \$2.60, 3 steers av 1,036 at \$4.50, 4 do av 1,175 at \$5.25, 1 bull weighing 1,000 at \$3.50; to Erban 4 butchers av 937 at \$4.50, 3 cows av 966 at \$3.50; to Caplis 8 butchers av 536 at \$3.50, 1 cow weighing 700 at \$2, 4 do av 930 at \$3, 8 do av 900 at \$2.75, 10 heifers av 730 at \$4; to Applebaum 4 cows av 990 at \$3.50, 2 bulls av 910 at \$3.50; to Sullivan P. Co. 2 bulls av 1,510 at \$3.75; to Newton B. Co. 2 cows av 1,075 at \$3.50, 1 do weighing 770 at \$1.50, 1 do weighing 1,200 at \$2, 3 steers av 880 at \$4.40, 8 do av 866 at \$4.35, 2 do av 1,215 at \$5.50; to Cooke 25 do av 980 at \$5.10.

Smith sold Kull 2 steers av 1,050 at \$4.25, 2 bulls av 575 at \$3.75.

Jones sold Regan 2 butchers av 625 at \$3.

Bergan sold Newton B. Co. 3 steers av 913 at \$4.50, 1 bull weighing 1,320 at \$4.

Weeks sold same 5 butchers av 732 at \$3.10, 19 do av 820 \$4.50.

Carement sold Fitzpatrick 4 heifers av 700 at \$4.

Cheney sold same 4 cows av 1,025 at \$2.95.

Mertz sold same 1 bull weighing 1,780 at \$4.25, 6 butchers av 1,030 at \$3.50, 5 heifers av 710 at \$4, 4 cows av 750 at \$2.50.

Haley sold Rattkowsky 10 butchers av 623 at \$3.

Morse sold Kamman 12 butchers av 745 at \$3.50, 2 cows av 1,015 at \$3.

Cheney sold Marx 2 steers av 800 at \$4.50, 2 cows av 940 at \$3.50.

Groff sold Lingeman 11 butchers av 815 at \$3.40, 4 cows av 852 at \$2.

Allen sold Markowitz 6 cows av 1,170 at \$3.30.

Roe Com. Co. sold Mich. B. Co. 6 butchers av 921 at \$3.35, 1 cow weighing 780 at \$2, 2 bulls av 1,175 at \$3.75, 1 do weighing 680 at \$3.25; to Rattkowsky 3 butchers av 1,016 at \$3.50; to Newton B. Co. 8 do av 700 at \$4.15, 13 do av 850 at \$4.20, 3 do av 600 at \$3.50, 15 do av 800 at \$4.25, 11 do av 1,000 at \$3.25.

Reason & M. sold Erban 1 bull weighing 900 at \$3.50, 9 steers av 830 at \$4.50; to Mich. B. Co. 5 steers av 960 at \$4.75, 4 heifers av 760 at \$3.75; to Fitzpatrick Bros. 3 butchers av 1,016 at \$4, 1 cow weighing 1,070 at \$3; to Rattkowsky 1 bull weighing 1,300 at \$4; to Sullivan P. Co. 1 cow weighing 1,250 at \$4; to Thompson Bros. 3 butchers av 1,033 at \$3.25, 3 do av 983 at \$3.

Spicer, M. & B. sold Sullivan P. Co. 1 bull weighing 1,370 at \$3.50, 9 cows av 1,146 at \$3.50, 3 do av 906 at \$2.75, 1 do weighing 750 at \$2.50; to Caplis 4 butchers av 450 at \$3.40, 7 do av 857 at \$4, 1 steer weighing 1,000 at \$4.75, 6 butchers av 648 at \$3.70, 17 do av 551 at \$3.30, 2 cows av 935 at \$2.

Winfield sold Sullivan P. Co. 1 bull weighing 1,340 at \$3.50, 2 cows av 920 at \$2.50, 7 butchers av 980 at \$3.50.

Cheney sold same 2 cows av 1,280 at \$3.80, 2 do av 1,105 at \$3.25, 1 bull weighing 1,180 at \$3.50.

Adams sold same 3 butchers av 850 at \$4.25.

Veal Calves.

Receipts, 402. Market steady at Wednesday's prices. Best, \$7.50@8; others, \$4@7. Milch cows and springers quarantined.

Lewis sold Burnstine 2 av 180 at \$7.50, 1 weighing 190 at \$6.

Adams sold same 1 weighing 150 at \$7.75.

Morris sold same 5 av 125 at \$7.25, 1 weighing 130 at \$6.

Groff sold Mich. B. Co. 9 av 150 at \$7.90, Bishop, B. & H. sold Newton B. Co. 7 av 145 at \$7.50; to Hammond, S. & Co. 8 av 135 at \$6.75; to Caplis 8 av 150 at \$7.25; to Kull 2 av 160 at \$7.50; to Hammond, S. & Co. 2 av 140 at \$7.50, 6 av 155 at \$7.50, 1 weighing 150 at \$8; to Fitzpatrick Bros. 2 av 125 at \$7.25, 5 av 160 at \$7.25, 1 weighing 90 at \$5.

Weeks sold Parker, W. & Co. 16 av 160 at \$7.

Mich. B. Co. sold same 6 av 150 at \$6.60.

Reason & M. sold Hammond, S. & Co. 1 weighing 130 at \$6.40, 13 av 150 at \$6.50.

Haley sold Sullivan P. Co. 2 av 305 at \$3.75, 2 av 100 at \$6, 2 av 175 at \$8.

Roe Com. Co. sold Barlage 1 weighing 320 at \$4; to Parker, W. & Co. 15 av 150 at \$7.50, 12 av 150 at \$7, 4 av 140 at \$6.60.

Reason & M. sold Hammond, S. & Co. 1 weighing 130 at \$6.40, 13 av 150 at \$6.50.

Haley sold Sullivan P. Co. 2 av 305 at \$3.75, 2 av 100 at \$6, 2 av 175 at \$8.

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Haley sold Sullivan P. Co. 2 av 305 at \$3.75, 2 av 100 at \$6, 2 av 175 at \$8.

Roe Com. Co. sold Barlage 1 weighing 320 at \$4; to Parker, W. & Co. 15 av 150 at \$7.50, 12 av 150 at \$7, 4 av 140 at \$6.60.

\$7.50; to Mich. B. Co. 8 av 125 at \$6, 4 av 140 at \$7.25, 2 av 140 at \$7.25.

Sheep and Lambs.

Receipts, 5,067. Market steady at Wednesday's prices.

Best lambs, \$6.50@6.75; fair to good lambs, \$5.75@6.25; light to common lambs, \$4.50@5.25; fair to good butcher sheep, \$3@4; culls and common, \$2.50@3.

Roe Com. Co. sold Sullivan P. Co. 30 lambs av 80 at \$6.50.

Allen sold Newton B. Co. 35 lambs av 65 at \$5, 37 do av 70 at \$6.50, 1 buck weighing 150 at \$2.50.

Groff sold Young 11 lambs av 130 at \$5, 86 av 85 at \$6.75.

Weeks sold Halse 1 sheep weighing 110 at \$3.50, 9 lambs av 85 at \$6.25.

Bishop, B. & H. sold Nagle & Co. 194 lambs av 93 at \$6.75, 11 sheep av 110 at \$3.50, 12 do av 95 at \$3.50, 44 lambs av 75 at \$6.25, 16 do av 80 at \$5.75, 22 do av 85 at \$6.75, 19 do av 60 at \$6, 24 sheep av 90 at \$3.25, 13 do av 100 at \$3.25, 25 do av 90 at \$3.50, 157 lambs av 90 at \$6.75; to Kull 49 lambs av 70 at \$6.75, 9 sheep av 100 at \$3.50; to Newton B. Co. 77 lambs av 90 at \$6.75, 27 do av 85 at \$6.50, 5 sheep av 100 at \$4; to Sullivan P. Co. 32 lambs av 80 at \$6.50, 20 sheep av 103 at \$4, 10 lambs av 52 at \$4, 42 do av 77 at \$6.10.

Haley sold Sullivan P. Co. 10 sheep av 95 at \$2.75, 20 lambs av 65 at \$6.

Spicer, M. & B. sold Nagle & Co. 21 sheep av 70 at \$3.50, 30 lambs av 100 at \$5.50, 99 do av 69 at \$6.15, 100 do av 80 at \$6.25; to Mich. B. Co. 15 do av 80 at \$5, 30 do av 65 at \$4.50, 23 mixed av 90 at \$4.25; to Newton B. Co. 2 sheep av 100 at \$3, 29 lambs av 70 at \$6; to Young 24 lambs av 85 at \$5.

Reason & M. sold Hammond, S. & Co. 5 sheep av 85 at \$4, 29 lambs av 77 at \$6.40.

Hogs.

Receipts, 6,636. Market strong and 10c higher than on Wednesday.

Range of prices: Light to good butchers, \$6.25@6.40; pigs, \$4.50@4.75; light yorkers, \$5.75@6; roughs, \$4.50@5; stags, 1/2 off.

Sundry shippers sold Hammond, S. & Co. 154 av 180 at \$6.10, 71 av 170 at \$6, 288 av 190 at \$6.20, 76 av 280 at \$6.25, 63 av 210 \$6.35.

Bishop, B. & H. sold Barlage 22 pigs av 115 at \$4.25.

Sundry shippers sold Sullivan P. Co. 265 av 210 at \$6.25, 121 av 148 at \$6, 44 pigs av 114 at \$5.

Roe Com. Co. sold same 132 av 217 at \$6.25, 27 av 148 at \$6.

Sundry shippers sold Parker, W. & Co. 86 av 206 at \$6, 137 av 189 at \$6.20.

Reason & M. sold same 198 av 180 at \$6.25.

Spicer, M. & B. sold same 67 av 139 at \$5.90, 167 av 145 at \$6, 99 av 190 at \$6.25.

Bishop, B. & H. sold same 190 av 180 at \$6.20, 112 av 200 at \$6.35, 45 av 160 at \$5.90, 274 av 185 at \$6.25, 141 av 190 at \$6.10, 106 av 175 at \$6, 65 av 210 at \$6.40, 116 av 175 at \$6.15.

(Wednesday's Hog Sales).

Bishop, B. & H. sold Parker, W. & Co. 142 av 190 at \$6.10, 76 av 210 at \$6.15, 28 av 160 at \$5.65, 321 av 185 at \$6, 23 av 150 at \$5.95, 52 av 175 at \$5.60.

Spicer, M. & B. sold Hammond, S. & Co. 132 av 215 at \$6.05, 14 av 185 at \$6.10, 116 av 190 at \$6.10, 96 av 175 at \$6.05, 117 av 162 at \$6.

Roe Com. Co. sold Sullivan P. Co. 37 av 200 at \$6.10, 31 av 185 at \$6.

Sundry shippers sold same 152 av 180 at \$6, 75 av 162 at \$5.90, 53 av 200 at \$6, 79 av 123 at \$5.85, 125 av 201 at \$5.80, 29 av 184 at \$6.

Friday's Market.

January 8, 1909.

Cattle.

Receipts, 65. Market steady at Thursday's prices.

We quote: Extra dry-fed steers and heifers, \$5@5.50; steers and heifers, 1,000 to 1,200, \$4.50@5; steers and heifers, 800 to 1,000, \$4@4.50; steers and heifers that are fat, 500 to 700, \$3.50@4; choice fat cows, \$3.75@4; good fat cows, \$3.50@3.65; common cows, \$2.50@3; canners, \$1@1.50; choice heavy bulls, \$4; fair to good bolognas, bulls, \$3.25@3.50; light bulls, \$3.

Bishop, B. & H. sold Sullivan P. Co. 3 bulls av 1,133 at \$3.50, 2 heifers av 940 at \$4.50, 8 butchers av \$15 at \$3.75, 1 canner weighing 880 at \$1.50, 3 cows av 1,106 at \$2.75, 3 do av 1,133 at \$3.50, 3 do av 1,050 at \$2.50, 1 bull weighing 980 at \$3.25, 4 heifers av 800 at \$3.75, 1 steer weighing 1,360 at \$4.

Sheep and Lambs.

Receipts, 270. Market 10c higher than on Thursday.

Best lambs, \$6.50@6.75; fair to good lambs, \$5.50@6; light to common lambs, \$4.50@5.25; fair to good butcher sheep, \$3.50@4; culls and common, \$2.50@3.

Spicer, M. & B. sold Barlage 18 sheep av 90 at \$2.50.

Roe Com. Co. sold Hammond, S. & Co. 56 lambs av 80 at \$5.50.

Bishop, B. & H. sold same 11 do av 85 at \$6.50, 9 sheep av 100 at \$3.25.

Roe Com. Co. sold Mich. B. Co. 104 lambs av 80 at \$5.50.

Hogs.

Receipts, 510. Market 15@25c higher than on Thursday.

Range of prices: Light to good butchers, \$6@6.25; pigs, \$4.50; light yorkers, \$5.25@5.75; stags, 1/2 off.

Lucke sold Sullivan P. Co. 298 av 200 at \$5.90.

VETERINARY.

Nasal Catarrh.—I have eight pigs which weigh from 30 to 60 lbs. each; two weeks ago they appeared to take cold, breathe a little heavy and have a discharge from nose. Two of them scour badly and are quite thirsty. A. W. B., Oxford, Mich.—The two that scour have perhaps been overfed, those that have catarrh need a tonic and expectorant. Mix equal parts ground gentian, ginger, charcoal and

muriate ammonia and give each pig 1/2 teaspoonful at a dose in feed or as a drench three times a day. Give those that scour 15 grs. sulfate iron at a dose three times a day.

Horse has Lice.—I have a horse that is troubled with lice. I have applied different remedies, but they fail to kill them. O. M. H., Litchfield, Mich.—Put 1 lb. of stavesacre seeds in 2 gals water, apply gentle heat until it reduces to one gallon, allow this mixture to stand a day or two, then add another gallon of water and apply it to your horse. Two or three applications will be all that is necessary to rid him of lice. A little mercurial ointment rubbed into mane and root of tail every two or three days will help to keep them off of him. Kindly understand your stable should be whitewashed or showered with dilute kerosene.

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101 ACRES, 9 miles from Detroit, on Ann Arbor car line. 3 large barns, brick house, 24 acres timber, 2 acres orchard, \$8,300, \$1,500 down. 124 acres, good buildings, \$7,500, \$1,000 down. 200 Fine Michigan Farms. Send for list. EYSTER & BRIGGS, 507 Majestic, Detroit, Mich.

CALIFORNIA LAND, \$1 acre cash payment; balance purchase 90 cents month per acre; close San Francisco; no taxes; no interest; 5-acre tracts; level, rich clear; ready to plow; irrigated; perpetual water rights; immediate possession; particulars, maps, photographs free. STEVENSON COLONY, 1414 Market St., San Francisco.

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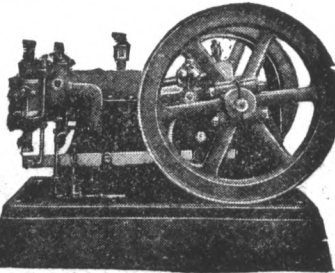
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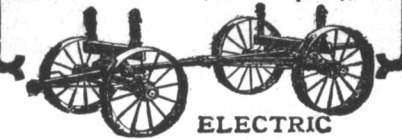
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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

THE MAN, HIS COW AND HER CARE.

The business of dairy farming has undergone a wonderful change during the past ten years. It has followed the trend of every other industry toward concentration and specialization until the mechanical side of the business is rapidly shifting from the farm to the cheese factory, creamery, condensary, powdered milk plants and to the city milk and cream trades. The great problem of improving the condition of dairy farmers seems to have been narrowed down to the great question of the man, his cow and her care. In order to make a permanent success of the dairy business and develop it to its full capacity a man needs to possess a full knowledge and understanding of the cow and her care.

It requires something more than a study of home buttermaking, or home cheesemaking, or the manufacture of cottage cheese, to influence a large number of dairymen to abandon old and unprofitable practices and try to put their business on a more permanent and paying basis. Successful dairying requires a study of the breeds and their adaptation to the farm and branch of dairying that is being pursued, a study of animal form and its relation to economical production, a study of dairy traits and temperament, a study of the utility of breeding along family lines and of inbreeding to intensify and make permanent desirable dairy qualities, a study of the advantages of grading up a herd of common dairy cows by the use of a pure-bred sire from one of the dairy breeds, a study of the kinds of foods best adapted to the economical production of milk and how to proportion them so that they will maintain a suitable flow of milk and promote the health of the cows that are being fed; the kind of stable and methods of keeping it well lighted and ventilated so as to keep the cows healthy; the best kind of stanchions or tie-ups to keep the cows neat and clean as well as comfortable; how to handle the milk in the most skillful manner so that it will be ready to market in the best possible condition. When all of these things are settled dairymen will be in a position to produce more good milk at a greatly reduced cost, and by that time the other minor details will be settled.

With the demand for dairy products rapidly increasing, with numerous breeds of special purpose dairy cattle selling for reasonable prices, with scientific men on all sides giving dairymen the benefit of their practice and demonstrations, and with the very best of literature at their command it seems almost incredible that there should be so much unprofitable dairying.

Secure Better Producing Cows.

The first essential to dairy improvement is to secure cows that have the ability to convert feed into milk at a profit. This may mean the reduction of the size of the herd, but the average profits from the herd will be greatly increased. Improvement must be brot about not only by eliminating the unprofitable cows but by eliminating the least profitable ones.

Buying cows never built up a high-producing dairy herd, and for that reason true dairy improvement involves the grading up of the herd not only by selection but by breeding. There is no question but that animals which have been bred for generation after generation for dairy purposes excel those of mixed breeding as economical producers in the dairy. We are very fortunate that we have such excellent breeds of dairy cattle as the Ayrshires, Jerseys, Guernseys, Holsteins and Brown Swiss that have come to us as a heritage—the fruits and labors of our forefathers—the development of which has required many a life-time of hard work and study. At present, with plenty of bulls from these excellent breeds of dairy cattle, we can by selection and breeding grade up a herd of excellent producers from common or grade cows in a comparatively short time.

There has been much confusion among dairymen brot about by a continual reiteration that it is not the special breeds of dairy cattle that dairymen need but the dual purpose animals, so that beef shall be a product as conspicuous as milk. However, these sayings come from men who are not versed in dairying or from those who are particularly interested in disposing of some of their cull beef-bred bulls. There is not one in-

stance where the profits from a special purpose herd have been increased by the use of a beef-bred bull, and it is time that dairymen found out that the so-called dual-purpose cow is a snare and a delusion. A breed never existed that has proven itself highly profitable for the dairy and for beef. The curse of the dairy business, whereby the average production of dairies has been so low, has been largely the use of any and all cows for dairy purposes, regardless of their special adaptability, together with improper feeding, poor uncomfortable stabling and the lack of knowledge as to which cows are paying a profit and which are not.

Feeding the Dairy Herd.

It matters little how well we select and breed the cows in the dairy, for the cost of production will not be lessened unless we introduce the most economical methods of feeding. The modern dairy cow is a hard-working machine and unless she is properly fed and kept in excellent condition she is not capable of doing her best. I feel certain that every dairyman who is familiar with the term "balanced ration," will agree with me that the cow's food should be reasonably well balanced to produce best results. Allowing that it is necessary to provide the cow with a palatable and reasonably well balanced ration, the great question is to secure such a ration in the most economical manner. I believe that almost without exception a ration of home-grown foods will prove the more economical and efficient and better adapted to promote the health and vigor of the cows. In most all cases I believe that it will prove more profitable to widen the cow's rations and utilize a larger proportion of home-grown starchy foods, thus encouraging the growth of clover, alfalfa and other kinds of proteinaceous fodders and forage crops. Succulence and palatability form a large share of the value of coarse fodders and we have only to point to pasture grasses, corn ensilage and roots to prove the fact.

Clover does not differ materially from pasture grass in the proportions of its constituents, but an animal fed on clover hay alone will soon tire of it and not eat enough to produce the best results, while root crops and ensilage, added to the ration and widening its nutritive ratio, will be eaten in maximum quantities and with great relish for long periods. They have good effect upon the animals and produce good results at the pail. Not that we should study balanced rations less, but that we should devote more study to combining our home-grown foods so as to get the most value out of them. Corn and clover should form the basis of our rations, supplemented with such grain foods as may be raised on the farm and such purchased nitrogenous foods as may be required to make the rations reasonably well balanced.

In feeding for production many dairymen seem to lose sight of the fact that producing a good vigorous calf is a matter of production as well as the giving of a large amount of milk. We are feeding not only for present results but for the development of the calf that is to some day take the place of its dam in the dairy. Cows that are carrying calves should be fed a ration rich in bone and muscle-building elements and succulent foods should never be lacking. With clover for hay, ensilage for succulence, and what grain foods may be raised on the farm, supplemented with a limited amount of purchased concentrates, we have a variety of dairy foods that stand unexcelled for economical production of dairy products, and with good pasture for summer we have a line of dairy foods unexcelled for maintaining the health and vigor of our cattle.

Stabling the Dairy Cow.

The matter of providing comfortable and sanitary stables for dairy cattle is a matter that is rapidly approaching a science. Years ago cow stables were perfectly ventilated with half-inch cracks between the boards, but these stables proved too cold for winter milk production and farmers were advised to build their stables tight, inclosing them with matched lumber, and not to allow their cows to go out during the cold weather. Some even went to the extreme of warming the cows' drinking water for them in the stable.

The result of these close, warm stables was vitiated air, lack of exercise, debility and tuberculosis. Next, dairymen were advised to allow a certain number of cubic feet of air space when building their stables, and many of these stables proved too cold for winter milk and too damp for the health of the cattle. Now the stable question seems narrowed

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The simplest, most durable, most economical of all Cream Separators. meets every requirement of the most modern dairy methods. Holds World's Record for clean skimming.

THE 1909 MODEL has solid, low frame, enclosed gearing, ball bearings, and is the easiest running separator made. Don't buy a separator without first seeing our FREE Catalogue No 111

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Choice Cotton Seed Meal @.....\$30.00 Per ton. (Mutual Brand 41 % protein.)
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Will crush and grind corn and cobs and all kinds of grain. Is a fast grinder and takes little power. Made in four sizes for 1 to 10 H. P. Free catalog **THOS. ROBERTS, Springfield, O.**

TELL the advertisers when writing that you saw their ad. in the Michigan Farmer.

How to Nip a Cold or Cough in the Bud.

In spite of all the experiences of the ages most people let a cough or cold go until it becomes troublesome, perhaps dangerous. This is probably because the proper medicine is not on hand ready to take. If you will make up the simple remedy described below and keep it in your medicine chest you can wipe out a cold or cough as soon as it appears. One or two doses will usually do the work. A whole pint of it costs only 54 cents, and it can easily be made at home in five minutes. Use:

Granulated Sugar Syrup 13 1/2 oz.
Pinex 2 1/2 oz.

Put the 2 1/2 ounces of Pinex (50 cents' worth) in a pint bottle and fill up the bottle with Syrup made as follows: Take a pint of Granulated Sugar, add one-half cup of water, stir and let boil just a moment. Cork it tight and it will never spoil. Take a teaspoonful every one, two or three hours as required. The taste is very pleasant, a feature which makes it easy for children to take.

Use the ingredients as given here. Granulated Sugar makes the best syrup, and no better syrup could be bought at any price. There are many pine oil and pine tar preparations, but there is far more medicinal value in the real Pinex itself, which is, as you probably know, the most valuable concentrated compound of Norway White Pine Extract. In a great degree, therefore, this simple recipe possesses the same curative agents that make the ozone of the pine forests such splendid medicine for lung and throat troubles. It is excellent for these things, as well as colds, whooping cough, pains in the chest and similar ailments.

down to a practical system of ventilation and many of the most practical dairymen are putting in such systems.

Suitable feed, pure water, good ventilation, proper exercise and good care are all necessary. The great question is for us to draw a line between the essentials and the non-essentials, for there is such a thing as being too nice. Water in front of each cow is a nice thing, but if it is used as an excuse for not turning the cows out for exercise every day it is a question whether it is a good thing or not.

How to keep the cows clean is another question, and for most dairymen I believe that a swing stanchion will prove the best and most economical form of a tie-up. The floor planks upon which the cows stand should be the right length so that all droppings will fall into the gutters behind the cows. By keeping the cows free from all stains and manure much subsequent labor will be saved.

New York. W. MILTON KELLY.

DOES FEED INFLUENCE THE PER CENT OF BUTTER-FAT?

Will you kindly tell me whether cottonseed meal or oil meal enriches the quality of milk or do they just increase the flow? Which is best to feed with corn meal to dairy cows? I have been told that they just increased the flow of milk.

Kalamazoo Co.

FARMER.

As has been explained a great many times in The Farmer, feed does not, except in a very general way, influence the per cent of butter-fat. If you change feed abruptly you may get the cow out of normal condition and she may give either richer or poorer milk than she did before. But when the cow is in normal condition the feed has little to do with the per cent of butter-fat which she puts into her milk. This power to put a certain per cent of butter-fat into the milk is a power born in the cow. This, of course, can be easily demonstrated in any man's stable. He will have two cows standing side by side, eating the same kind of feed, the same amount of feed practically, and yet one will give 5 per cent milk and the other one will give 3 1/2 or perhaps 4 per cent milk. Now, why doesn't one give just as rich milk as the other? Then, too, if the feed would change the per cent of butter-fat, or have any influence over it, we could make Holstein cows give just as rich milk as Jerseys or Guernseys. You can take Holstein cows and, by breeding and selecting for generations, increase the richness of their milk, but that would be an entirely different proposition.

THE BUTTER WILL NOT COME.

I have two cows, one nine years old, due to be fresh March 1, the other five years old and due to be fresh the middle of April. About three weeks ago the butter came after about one hour's churning and the time has gradually increased to two hours. The last time I churned 2 1/2 hours and failed to get any butter. The last time I churned the cream of each separate cow but with no better results. At times the butter is bitter. I churn twice a week. Am feeding well-cured clover hay and good corn fodder, all they will eat up clean. The last two weeks I have added bran and oil meal night and morning. Cows seem to be in good condition. Have churned at about 65 degrees temperature. W. B. R.

Very often in the winter, when the cows are on dry feed entirely, and during the latter part of the period of lactation, people have trouble in getting the butter to come. Very many people have experienced this. Sometimes it is one thing and sometimes it is another which prevents the butter from coming. There seems to be something about the milk from the stripper cows that makes it more difficult to separate the globules of fat from the milk and get them to collect in the form of butter. A succulent feed like corn silage, or roots, helps very materially in this. Then again, some people entirely overcome the difficulty by scalding the milk, or pasteurizing it. After the milk is strained, set it in pans upon the stove until it gets scalding hot. Don't let it boil. Then set it away until the cream raises. I think this will enable you to get better results. The cows are certainly being fed properly and there can be no difficulty from that direction.

SUGAR FACTORIES CLOSED.

Now that the factories have finished drying pulp, we find that there are but ten cars of pulp on hand after present orders are filled. If your dealer does not handle pulp we will sell to you direct at wholesale price. Dried Beet Pulp can be substituted for a portion of any grain ration for any class of live stock, with a saving of \$3 to \$5 per ton, and with better results.—T. F. Marston, Bay City.

FITTED TO LESS THAN A HAIR'S BREADTH De Laval Cream Separators

When you buy a DE LAVAL Cream Separator you buy mechanical perfection. You get the product of the greatest painstaking mechanical skill and the finest of manufacturing tools. Of special note in this connection is the fact that the bearings and revolving parts of DE LAVAL machines are fitted to less than the one thousandth part of an inch, or, in other words, to about one-fifth the breadth of a human hair. Such a degree of exactness is invisible to the naked eye and can only be determined by the finest of gauges. It is nevertheless the set standard to which all DE LAVAL spindles and bearings must be fitted. Any parts which do not come within this degree of accuracy are thrown aside by the DE LAVAL factory inspectors and much material and many hours of work are sacrificed in this way annually. It is this very sacrifice, however, that makes the DE LAVAL cream separator so extremely durable and capable of lasting from fifteen to twenty-five years under the hardest of farm usage and of always doing easily the very best work under any and all conditions. It is the reason for their remarkable ease of operation and absolutely perfect working in every part. No other separator or farm implement made today has anywhere near the care, time, or expense devoted to its manufacture that the DE LAVAL has. When you buy a DE LAVAL you get the best that money can possibly buy and skill can make in a cream separator way. Moreover, you pay less for it than for any would-be competing separator of similar actual capacity. The DE LAVAL catalogue explains and illustrates these all important points. It is to be had for the asking. Write today.

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DON'T HESITATE BECAUSE OUR PRICE IS LOW. The quality is high; we guarantee it. It is up to date, well built and well finished. It runs easier, skims closer and has a simpler bowl with fewer parts than any other cream separator. Don't accept our word for it. Judge for yourself. Our offer enables you to do this at our expense. Write us a postal card or a letter and receive by mail, postpaid, our 1909 catalogue. It is handsomely illustrated, showing the machine in detail and fully explains all about the Low Down AMERICAN. It also describes the surprisingly liberal LONG TIME TRIAL proposition we can make you. Competition is defied by the quality and price we make. Our generous terms of purchase will astonish you. Remember, we are the oldest exclusive manufacturers of hand separators in America, and the first to sell direct to the user. You are not dealing with any agent, middleman or catalogue house when dealing with us. Not one single profit is paid anyone between ourselves and our customer. You save all agents' dealers' even catalogue house profits and get a superior machine by dealing with us. Our New Low Down AMERICAN Waist High Separator is the finest and highest quality machine on the market and our own (the manufacturer's) guarantee protects you on every AMERICAN Separator. We can ship immediately. Western orders filled from Western points. Write us and get our great offer and handsome free catalogue on our New Low Down AMERICAN Separator. Address

AMERICAN SEPARATOR CO., Box 1061, BAINBRIDGE, N. Y.

I'll Give You Plenty of Time to Prove that the CHATHAM Fanning Mill is the Best Seed Grader and Cleaner Made

—And Will Pay for Itself in a Year. You can prove this by simply taking my proposition and cleaning your grain—before you sell it—or before you sow it. Grain is a low estimate. You won't haul it to be cleaned before you sell your grain, so you are "docked" on the price because of dirt in every bushel. Just take me up on my offer—get a CHATHAM Fanning Mill and save its price easily by using on your place. Take 30 Days' Free Trial first.

WHAT IT DOES BESIDES GRADING
Cleans—wheat for market, oats out of wheat, cockle out of wheat; garlic, chess, mustard and all other foul seeds out of wheat; buckhorn plantain out of clover, separates rye from wheat. Cleans beans—oats—barley—timothy seed. Grades seed corn. A general purpose seed grader and fanning mill all in one. Has screens and riddles for all purposes.

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This valuable book tells many other ways than those above that a Chatham Fanning Mill will make and save for you. As a practical man you know that all I've said above is true and you also know that in selling direct from our factory—preparing freight to you—giving you 30 DAYS' FREE TRIAL—and our wholesale price—we have simply got to give you a CHATHAM Fanning Mill that does all we claim for it. Our business life depends on our mills making good. Remember that I Prepay the Freight I'll send you a CHATHAM Fanning Mill on 30 Days' Trial without any advance payment, just to prove it will do all we say it will. 250,000 sold already in U. S. and Canada. Experiment Stations endorse them, and Agricultural Papers recommend them to subscribers. So why take low prices for dirty, mixed grain, or sow seed that grows weeds and mixed crops? Write nearest office for full particulars, prices and New Catalogue.

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UNICORN DAIRY RATION
a new feed in Ready to Feed Form that every Farmer and Stock Raiser should know all about. 72% of digestible organic matter, and 22% protein—No salt or filler. This is far more digestible food material than any other dairy feed ever marketed. Made of Ajax Flakes properly balanced. Write, CHAPIN & CO., Box 18, Buffalo, N. Y.

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WOOD SAWS

SAW your own wood and save time, coal and money; or saw your neighbors' wood and

MAKE \$5 TO \$15 A DAY

Hundreds are doing it with an Appleton Wood Saw. Why not you? We make six styles—steel or wooden frames—and if desired will mount the saw frame on a substantial 4-wheel truck on which you can also mount your gasoline engine and thus have a

PORTABLE WOOD SAWING RIG
that is unequalled in effective work and profitable operation.

We make the celebrated Hero Friction Feed Drag Saw also, and complete lines of feed grinders, corn shellers, corn huskers, fodder cutters, manure spreaders, horse powers, windmills, etc. Ask for our Free Catalogue.

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WESTERN CANADA

320 Acres Instead of 160 Acres

As further inducement to settlement of the Wheat-Growing lands of Western Canada, the Canadian Government has increased the area that may be taken by a homesteader to 320 acres—160 free and 160 to be purchased at only \$5.00 per acre. These lands are in the grain-raising area, where mixed farming is also carried on with unequalled success. A railway will shortly be built to Hudson Bay, bringing the world's markets a thousand miles nearer these wheat fields, where schools and churches are convenient, climate excellent, railways close to all settlements and local markets good.

"It would take time to assimilate the revelations that a visit to the great empire lying to the North of us unfolded at every turn." Correspondence of an Illinois Editor, who visited Western Canada in August, 1908.

Lands may also be purchased from Railway and Land Companies at low prices and on easy terms. For pamphlets, maps and information as to low Railway Rates, apply to Sup't of Immigration, Ottawa, Can., or to the authorized Canadian Government Agent.

M. V. McInnes, 6 Ave. Theatre Block, Detroit, Mich.; O. A. Laurier, Marquette, Mich.

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What miller gets, pays for a Star Grinder in 6 months. Grind feed yourself. Then it's fresh, tastes better to stock. No hauling, no waste. Convenient, strong, durable, guaranteed, grind coarse or fine any feed. Full line; Sweep and Belt Power Mills. Write for free booklet—now.

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Double row plows. Equals 20 men with saws. Catalog free.
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Baby Laugh

It belongs to health for a baby to eat and sleep, to laugh and grow fat.

But fat comes first; don't ask a scrawny baby to laugh; why, even his smile is pitiful! Fat comes first.

The way to be fat is the way to be healthy.

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is the proper food, but only a little at first.

Send this advertisement, together with name of paper in which it appears, your address and four cents to cover postage, and we will send you a "Complete Handy Atlas of the World" :: :: SCOTT & BOWNE, 409 Pearl Street, New York

Test My Seed Corn

This year I grew 10,000 bushels of corn. For years I have been selecting for a more prolific crop—for full sized, perfect ears. I kept at it until I succeeded. That's why I grew this year's big crop. It is the finest type of corn I ever saw and I have selected the best of it for seed. I guarantee it. I will refund your money if you do not find it satisfactory. Send us your orders now—before it is all sold. An order means a full corn crib for you next fall.

My new oats and seed potatoes are the same high grade. Catalogue free. If you are interested in fruit, I will send you a nice plant—free.

W. N. SCARFF,
Dept. N, New Carlisle, Ohio.

HOW TO GROW ROSES

We tell you how to succeed no matter how "green" you are. Our new catalog is "different" because under each heading we have given detailed instructions how to grow flowers, vegetables, etc., listed there. It's a handsome catalog filled with good, clear cuts and concise descriptions of reasonably priced garden and flower seeds, bulbs, implements, etc. It's a little bit more valuable than the average seed-list because we have taken so much pains with it. Specify catalog H. It's free.

SHERMAN & EBERLE, Albany, N. Y.

GOOD SEEDS

BEST IN THE WORLD
PRICES BELOW ALL OTHERS

I give a lot of new sorts for trial with every order I fill. A Grand Big Catalog FREE Illustrated with over 700 engravings of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Illinois

Cabbage Seed 60 cts. per acre

See Salzer's catalog page 129.

The biggest money making crop in vegetables is cabbage. Then comes onions, radishes, peas, cucumbers. Big catalog free: or, send 16c in stamps and receive catalog and 1000 kernels each of onions, carrots, celery, radishes, 1500 each lettuce, rutabagas, turnips, 100 parsley, 100 tomatoes, 100 melons, 1200 charming flower seeds, in all 10,000 kernels, easily worth \$1.00 of any man's money. Or, send 20c and we add one pkg. of Earliest Peap O'Day Sweet Corn.

THE SALZER SEED CO., LaCrosse, Wis.



Seeds, Plants, Roses,

Bulbs, Vines, Shrubs, Fruit and Ornamental Trees. The best by 55 years' test. 1200 acres, 60 in Hardy Roses, none better grown. 44 greenhouses of Palms, Ferns, Ficus, Ever-blooming Roses, etc. Seeds, Plants, Roses, Bulbs, Small Trees, etc., by mail postpaid. Safe arrival and satisfaction guaranteed. Immense stock of CHOICE CANNAS, queen of bedding plants. 60 choice collections cheap in Seeds, Plants, Roses, etc. Elegant 168-page Catalog FREE. Send for it today and see what values we give for a little money.

THE STORRS & HARRISON CO., Box 176, Painesville, O.

FRUIT TREES

MICHIGAN GROWN are best for MICHIGAN PLANTERS. Healthy, finely rooted. Direct to you at great money-saving prices. Catalog and Price List FREE. Write to-day.

CELERY CITY NURSERIES, KALAMAZOO, MICH.

300,000 CHERRY TREES, 2 years old, 4 cents each. Boxed Free. Catalog free to Everybody. Sheerin's Wholesale Nurseries, Dansville, N. Y.

PEACH TREES, 3c; Apple, 5c; Cherry, 12c. All kinds of fruit trees and plants. Get cata. ERNST'S NURSERIES, Moscow, O.

HORTICULTURE

LOOKING AHEAD.

Of all the seasons of the year, just now the general truck grower finds himself more nearly between "hay and grass" than at any other time. Nothing to sow and nothing to grow or gather into his garner gives one a sort of lonesome feeling. If, however, the past season was sufficiently successful to give a winter surplus for market the case is not so bad, good vegetables well handled need not go begging, and prices are amply high, for the consumer at least. And now that there is a sort of lull in the general rush it is good policy to be looking ahead to see what of the future.

The seed catalogs are in evidence now, and most of them are free for the asking. Now, while it is hardly fair to gather them in out of mere idle curiosity, yet they are always freely given to the prospective buyer and many of them would be well worth buying for the large fund of information contained in them. A postal card request will bring almost any of them without further cost; and it is none too early now to find out what we shall require for next season's sowing, and also what we lack. Many serious losses to next season's crops may be avoided by the simple expedient of securing our seed supply in ample time to thoroly test the seed before the planting season. So often is this important point neglected and ere long we find ourselves with a seed bed upon which no end of labor has been bestowed, "salivated" with a worthless lot of seed. Well, it is a case of locking the stable after the horse is stolen, and the fault is easily traceable to our own door. By this, it is not to be inferred that all seed which fails to germinate satisfactorily and make a good

tion right upon our own grounds is of the utmost importance.

This by no means precludes the idea of testing new varieties, but rather is an argument in its favor. By no means "be forgetful to entertain strangers," for sometimes we thus "entertain angels." This plan carries with it extra labor and painstaking effort; in the long run, however, it surely brings its reward. The same general principles hold good with nearly all varieties of crops, both farm and garden. And thus we may prove all things, holding fast to that which is good.

In Conclusion.

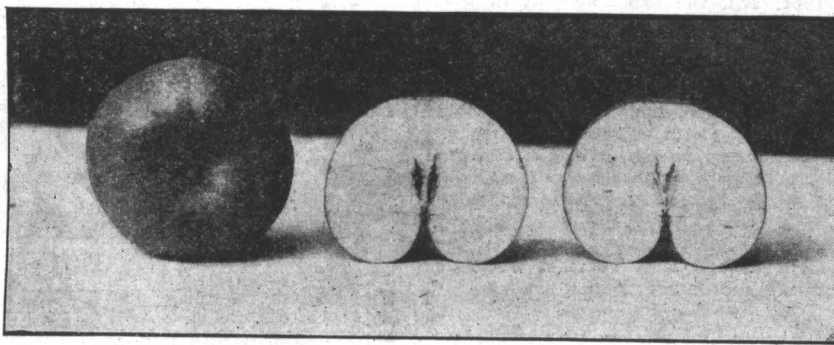
To some it may seem that the above is as one "born out of due season," but if after reading it appears thus, file it away for a few days or weeks, then refer to it again. Get busy as soon as possible with well matured plans, so that when the season for active operations really comes we shall not be as the hunter who first finds his game then goes for his gun. Begin right, and that means for every member of the family, both old and young, to become interested. Resolve the entire family into a committee of the whole, search the catalogs and your own private seed stores as well, get the best seeds to be had then work and plan for the highest possible development. It is not too early for that work, I think. One thing is certain, it can never be started at an earlier or better time than now. Familiarity with catalogs of the various seedsmen and a knowledge of their specialties will add interest to this work.

Wayne Co.

J. E. MORSE.

THE MAKING GOOD OF A POOR APPLE.

In looking over the orchard early in the spring of 1908 preparatory to engrafting some choice varieties of apples, the men employed for the purpose selected one tree as especially vigorous, and the



Intelligent Fertilizing Produced Apples of Improved Quality.

stand of plants is poor, for the fault often lies in the preparation of the bed and the slipshod manner of planting. But the losses in so far as the seed is responsible, may all be minimized, or entirely eliminated, by the simple expedient of properly testing.

Home Grown Seed.

For those who have neglected this important work it is too late to save the day for next season's planting, but not too late to resolve that in future the home-grown stock of seeds shall receive our most painstaking efforts. I mention it thus early to stir up the pure minds by way of remembrance along these important lines.

I know of no reason why every garden and farm for that matter, should not be an experimental ground, and every gardener and farmer to a great extent, at least, his own seed producer. One thing is certain, if we know our own soil conditions as we ought to know them, and our market demands, we ought to be the best judges of the varieties that will most nearly meet those conditions and demands. For my own trade, which has almost invariably been private, I have found certain special varieties more profitable than those in more general cultivation. For instance, with tomatoes, our general market demand is almost exclusively for the crimson or purple varieties, while for my trade I have found nothing better than Success and Honor Bright, which are among the very reddest of red varieties; these for the medium or late sorts, while for a first early I think it will be long before the June Pink will be superseded by a better one. These have proved eminently successful with me, while other growers with different soil and unlike trade demand, are sure that they could not use them at all. Thus circumstances must largely enter into, and to a great extent shape, our plan of action, and this of itself is sufficient reason why intelligent seed selec-

most healthy of the really thrifty trees of which the orchard is composed. Accordingly, fifty scions were put in from several of the choicest sorts of apples. The ingrafters said that they had never worked upon a tree so perfect in regard to maturity of hardness of wood, with clean, bright colored twigs and limbs.

This tree is probably twenty years old, perhaps more. It was a large tree when we bot the farm eight years ago, and was remarkable for its beauty and profuse bloom, as well as the enormous quantity of apples which followed. The variety of this fruit I am unable to name. It is of extra large size, russet with red streaks at the stem. We found these apples of extra good cooking quality even before maturity, turning to a snowy softness as soon as boiling began. But altho there were many bushels upon this tree, it was impossible to save one bushel for storing. These apples, at maturity, were as stated, of very large size and beautiful in appearance, yet it required but little exertion to crush them in the hand. There was not one apple that was not utterly worthless on the inside, over one-third of the fruit about the core being a brown rotten mass.

This condition continued for two years (as it had been for a long time according to the statements of neighbors), when we decided to try fall applications of muriate of potash. The soil was dug up enough to admit of working the potash into it without disturbing the fibrous roots, and the winter and spring rains did the rest.

There was a decided improvement in the quality of the apples the following autumn. Three applications since of five pounds of the potash put on in the fall have entirely transformed them from worthless to the most perfect crisp apples, which are in fine condition for late marketing.

The illustration shows how perfect the centers are, without a suspicion of decay. This treatment has been of the same benefit to peaches and pears, which have

Thorburn's Seeds

Catalogue Ready January 1st.

One customer writes:—

"For 32 Years Your Seeds Have Been Unfailingly Good."

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NEW SEED BOOK—FREE
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NO MONEY IN ADVANCE—no bank deposit. Shipped direct to you at dealer's WHOLESALE prices. Spray first, then pay out of extra profit. We pay freight and guarantee sprayers 5 yrs.

THE HURST POTATO AND ORCHARD SPRAYER
doubles your crop. IT SPRAYS ANYTHING—trees, potatoes, vineyards, truck, etc. High pressure. Easy to operate. Cheap in price, light, strong and durable. Brass valves, plunger, strainer, etc. Hurst Horse-Power Sprayer for orchards, vineyards, potatoes, etc. "No tree too high, no field too big for this kind of sprayer." These and other sprayers sold on same liberal No-money-in-advance plan. Write today and ask us for our Free Spraying Guide, Catalog and Special Free Offer to first in each locality.
H. L. HURST MFG. CO.,
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WHICH SPRAY PUMP?

shall you buy? Buy the Pump that fully meets the demands of the Government Agricultural Scientists and all Practical Fruit Growers. These pumps are known as **Deming Sprayers** made in 23 styles for use in gardens or orchards. Write for our 1909 Catalog with Spraying Chart. Add 4 cents postage and get "Spraying for Profit," a useful guide book.

THE DEMING COMPANY.
705 Depot St., Salem, Ohio

"KANT-KLOG" SPRAYERS

Something New
Gets twice the results with same labor and fluid.
Flat or round, fine or coarse sprays from same nozzle. Ten styles. For trees, potatoes, gardens, whitewashing, etc. Agents Wanted. Booklet Free.

Rochester Spray Pump Co.
9 East Ave. Rochester, N. Y.

Please mention the Michigan Farmer when writing to advertisers.

DIFFERENT MACHINES FOR DIFFERENT SOILS.

The seeding conditions in the corn growing states are not all alike. Some sections require the use of artificial fertilizers—other sections do not. Some soil requires a runner or shoe furrow opener; other land seems to demand a single or double disc for that purpose. Some growers "check" the corn in hills so it can be cultivated both ways, and other men plant the corn in drills and cultivate it one way. This has forced upon the manufacturers of corn planters—if they wished to meet all requirements—the making of many different styles. The Hoosier Corn Planter line is admittedly one of the most complete in the world. Many of the most prominent corn growers go still further and openly declare the Hoosier Planter to be the most accurate and up-to-date planter on the market. There must be a great deal of truth in it, because the demand is constantly increasing and the words of commendation received show that the Hoosier is everything claimed by the manufacturers. At any rate, The American Seeding-Machine Co., Incorporated, Richmond, Indiana, fully guarantees every Hoosier Corn Planter to do all they claim for it. They simply must do the work right. Send to the makers for a copy of their Hoosier Corn Planter catalog and any special information you may want. Read it carefully, and then go to your implement dealer and insist on seeing the Hoosier before purchasing any other planter.

Johnston NOT IN THE TRUST

Orchard Harrow

Will not cut the roots of fruit trees or grape vines.
Depth of cutting out middle or ends regulated by easy moving gang hinges.
Disks adjustable to any angle, regulating the amount of soil thrown.
May be set to cover or throw soil away from roots.
Works well on side hill or on level or even soil.

**Solid or cut out disks.
Eight or ten disks.
Steel frame, one piece.
No other farm implement more quickly repays its cost.**

NOTE:—Extension Frame Attachment cut to width of 10 feet.
Write today for 1909 Library describing all the Johnston farm tools.

The Johnston Harvester Co.,
Box 219, Batavia, N. Y.



SUNLIGHT
DOUBLE-GLASS
SASH PATENTED

FOR
HOT-BEDS
AND COLD FRAMES

The double layer of glass does it

Lets in the light always.
Never has to be covered or uncovered; no boards or mats needed.
Retains the heat, excludes the cold.
Saves three-fourths of the labor and expense and makes stronger and earlier plants than single-glass sash.
Ask for catalog, K. It tells all about it.

Address,
Sunlight Double-Glass Sash Co.
506 Floyd Street LOUISVILLE, KY.

"Strawberry Plants That Grow."
All Standard varieties. Also Raspberry, Blackberry, Currant and Grape Plants and Asparagus Roots in Assortment. Warranted True-to-name, and of Grade represented. Catalog with Cultural Instruction Free.
C. E. WHITTEN, Box 14, BRIDGMAN, MICH.

Clover Seed Large crop of fancy quality. Ask for sample and prices.
WYSONG'S SEED HOUSE, Lebanon, Ind.

FRUIT TREES at wholesale prices direct from grower. Catalog free. REILLY BROS., Dansville, N. Y.

been almost worthless before these applications. Many of our extra early peaches were worthless because of decay before maturity, but the potash remedy has rendered them of fine texture, and they are now money makers.
Ohio. E. A. SEASON.

WINTER WORK IN THE SMALL FRUIT PLANTATION.

If the strawberries are not yet mulched I believe it should be done at once even if the expense be considerable. The open winter, with bare ground and freezing and thawing, is not conducive to the best wintering of plants, and this, coupled with the poor growth on account of dry weather last summer and fall, and the rapid drying out the ground may undergo next spring where not protected by a mulch, may reduce the crop considerably on unmulched beds.

According to report the prospects for a crop are poor at the best and prices of both fruit and plants are likely to be high, hence we can afford to put a little more expense than usual on a good bed of strawberry plants. While our plants did not set thickly yet they are well rooted and I believe will produce a good yield if nothing else happens to them. I attribute this chiefly to the early layering by which we got the plants started before the last heavy rain in August and to the thoro cultivation afterward.

We have had another hook made to cut out the old raspberry canes and the surplus new ones. This was made from an old wood file and inserted into the handle of a short handled dung fork. The hook is sickle-shaped and sharpened on the inside curve and the center of the outside curve so as to allow of either a pulling or a chisel cut. The inside diameter of the curve is about three inches. We expect to use this when the ground is frozen and there is little snow to clean out the old canes from the raspberry and blackberry rows and to thin the new ones where too thick so they will average about one cane to each six inches in length of row.

Calhoun Co. S. B. HARTMAN.

RUST-RESISTANT ASPARAGUS.

Owing to the prevalence of rust in the asparagus beds of New England and the Pacific Coast, serious consequences have been feared among the growers in those sections. This disease, it appears, comes on after the beds have been well established and by gradually weakening the plants results in great loss to the grower and in the ultimate destruction of the plants. When the attention of the Department of Agriculture was called to this condition it was found that while spraying met with but a fair measure of success, it seemed to be most desirable that attempts should be made to secure types of asparagus which would be able to resist the rust. To this end collections of asparagus have been made from various sections of the world, and in co-operation with the Massachusetts Experiment station, work was begun in the matter of securing rust-resistant types.

In the greenhouses of the Department of Agriculture, a hybrid has been secured by crossing native varieties with a species of South African asparagus which seems to be rust resistant. This South African species it is claimed has some other advantages over our types. The young growths are edible even when a foot high, and altho the stalks are more slender than those of our cultivated types, this variety will probably prove a valuable addition to our stock of horticultural crops. Successful hybrids have been secured between the South African species and various varieties of our own asparagus. The ability of these plants to resist rust is yet to be determined, but the fact that the Department has been able to secure the hybrids and that these hybrids, so far as appearances go, give every indication of possessing qualities of value, is worthy of note.

G. E. M.

Michigan fruit growers will be interested in the announcement of the annual meeting of the Western New York Horticultural Society which will be held in Rochester, of that state, January 27 and 28. The climatic conditions of the fruit sections represented by the members of that organization are so like those of Michigan that experience in one place fits one for operating in the other; hence, what New York growers say about their work is pretty sure to act as a guide for growers in the Wolverine state and vice versa. Besides, Michigan will be represented upon the program in the person of Hon. Chas. W. Garfield, of Kent county.

THOUSANDS HAVE KIDNEY TROUBLE AND DON'T KNOW IT

Weak and unhealthy kidneys are responsible for more sickness and suffering than any other disease, therefore, when through neglect or other causes, kidney trouble is permitted to continue, serious results are sure to follow.



Your other organs may need attention—but your kidneys most, because they do most and should have attention first. If you are sick or "feel badly," begin taking Dr. Kilmer's Swamp-Root, the great kidney, liver and bladder remedy, because as soon as your kidneys begin to get better they will help all the other organs to health.

Prevalency of Kidney Disease.

Most people do not realize the alarming increase and remarkable prevalence of kidney disease. While kidney disorders are the most common diseases that prevail, they are almost the last rec-

ognized by patient or physicians, who content themselves with doctoring the effects, while the original disease undermines the system.

A Trial will Convince Anyone.

The mild and immediate effect of Swamp-Root, the great kidney, liver and bladder remedy, is soon realized. It stands the highest for its remarkable health restoring properties in the most distressing cases.

Symptoms of Kidney Trouble.

Swamp-Root is not recommended for everything but if you are obliged to pass your water frequently night and day, smarting or irritation in passing, brick-dust or sediment in the urine, headache, back ache, lame back, dizziness, poor digestion, sleeplessness, nervousness, heart disturbance due to bad kidney trouble, skin eruptions from bad blood, neuralgia, rheumatism, lumbago, bloating, irritability, wornout feeling, lack of ambition, may be loss of flesh, sallow complexion, or Bright's disease may be stealing upon you, which is the worst form of kidney trouble.

Swamp-Root is Pleasant to Take.

If you are already convinced that Swamp-Root is what you need, you can purchase the regular fifty-cent and one-dollar size bottles at all drug stores. Don't make any mistake, but remember the name, Dr. Kilmer's Swamp-Root, and the address, Binghamton, N. Y., which you will find on every bottle.

If You Need a Medicine You Should Have the Best.

Swamp-Root is always kept up to its high standard of purity and excellence. A sworn certificate of purity with every bottle.

SAMPLE BOTTLE FREE.—To prove the wonderful merits of Swamp-Root you may have a sample bottle and a book of valuable information, both sent absolutely free by mail. The book contains many of the thousands of letters received from men and women who found Swamp-Root to be just the remedy they needed. The value and success of Swamp-Root is so well known that our readers are advised to send for a sample bottle. Address Dr. Kilmer & Co., Binghamton, N. Y., be sure to say you read this generous offer in The Detroit Michigan Farmer.

TREE TANGLEFOOT



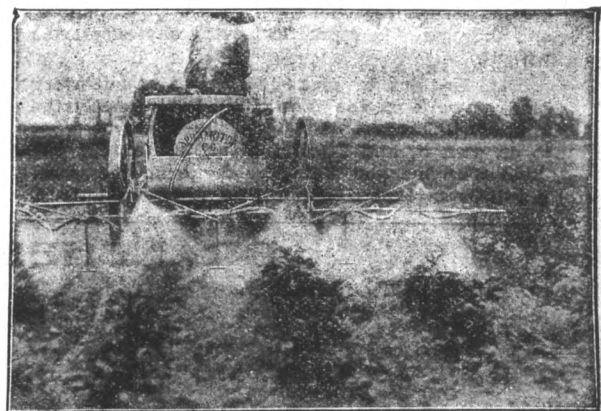
A Sticky Preparation Applied Directly to the Bark of Trees.

Will not injure trees. Remains sticky three months fully exposed to weather. Easily applied with a small paddle. A pound makes a band 7 to 8 feet long. Once applied needs only occasional inspection to remove leaves, etc. Unequaled to protect trees from Spring and Fall Canker Worm, Tussock Gypsy, and Brown-Tail Moths, Fall Web Worm, Bag Worm, Climbing Cut Worm, or any climbing or creeping pests.

(THAT SETTLES IT)
Should be used before the insects begin to ascend the trees. Put up in 1, 3, 10 and 20-pound cans. Price 24c. to 30c. per pound. SEND FOR BOOKLET.

THE O. & W. THUM COMPANY, Grand Rapids, Mich.

THIS shows the H. P. Spramotor arranged for spraying potatoes, three nozzles to a row and four rows, two spraying from the sides and one from the top, adjustable as to height and width up to 40-in. rows. Nozzles absolutely will not clog. 12 gallon air tank. Automatic and hand controlled; 100 lb. pressure guaranteed with 12 nozzles open. An acre can be sprayed in 20 minutes. Has agitator clean-out pressure relief into tank, and nozzle protector all under control of the driver from seat. For 1 or 2 horses. Fitted for orchard, vineyards and grain crops. Can be operated by hand. This ad. will not appear again in this paper. If interested write now.



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the most liberal proposition
ever made on a gasoline engine

WHEN a company like this, the oldest and biggest exclusive gasoline engine manufacturers in the world, make such a proposition, it means something. Do not neglect to get it. Other engine makers say we cannot do it, **but we do.**

Write to me or to my nearest representative and you will receive it by return mail.

J. B. SEAGER, Gen. Mgr.,
OLDS GAS POWER CO.

OLDS ENGINES WILL SAVE YOU MONEY.

For Gasoline, Kerosene and Gas.

They give you the power you need at the price you can afford to pay for it. They are the cheapest engine you can buy—simple in construction, most economical to run, do not get out of order, easy to start winter or summer—a ten-year-old boy can run the Olds Engine just as well as a man.

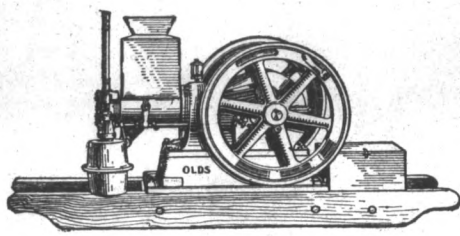
Thousands of farmers have found out the superiority of the Olds over all other engines. The United States Government must have found it out also because they buy Olds Engines for their military institutions, forestry and irrigation departments. Uncle Sam thor-

oughly investigates everything he buys. The Olds Engines stood the government test just as they will stand every other test.

For thirty years we have made nothing but Olds Engines. We know the engine business just as you know your sitting room. Our business has steadily increased during that time. What made it? Why, because the Olds Engine did just what we claimed for it—every user was satisfied and knew he had got more than his money's worth, and he told someone else about it.

Olds Engines are of the highest efficiency at the very lowest price because we can produce them without wasting a penny's worth of labor. There is a machine for every operation, and each piece, down to the smallest bolt or nut, is made of the very best tested material at a cost that could not be lower without cutting quality. Don't be misled by statements about "cheapness" in engines. Nobody can afford to buy a poor engine at any price, but there is a point where the highest quality can be had at the lowest cost, and the Olds Engine, because of the factory in which it is made, and the workmen who make it, stand with a superior in this respect. They are not slighted in places you cannot see, or where only an expert can discover it, but thoroughly well built through and through, in a factory that is known the world over as one of the most modernly equipped engine factories that has been built.

That is why we give you a durable, simple, strong, high grade, perfect-working, long lived engine at a low price.



Olds Hopper Jacket Engine on Skids

Do Not Think of Buying an Engine Without Getting My Liberal Proposition

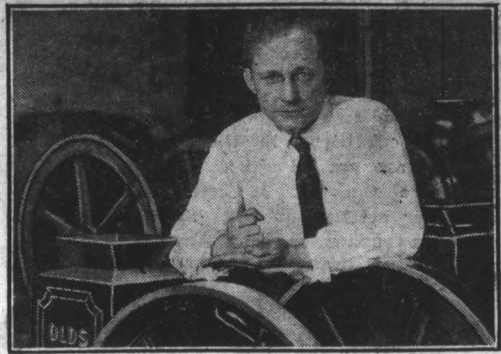
and when you are sending for it, ask for our catalogue also. It contains many fine pictures of the very latest models of Olds Engines with a detailed description that makes the engine question as plain to you as an open book. It contains letters from farmers who have used the Olds Engines, and they give their practical every day experience with it.

Olds Engines are made in all sizes to suit every kind of work on the farm. We have exactly the kind of engine you want. Tell me what you want to do with it, and I will tell you just exactly the kind of engine you want to buy to do the work. It will be an expert opinion that costs you nothing.

Our hopper jacket engine on skids or wheels, 3 to 12 H. P., is ready to run when you get it. Fill it with gasoline, throw on the switch, turn the wheel, that's all. No piping to connect, nothing to set up, always ready, can be moved anywhere.

We also make regular engines 8 to 50 H. P. for heavier work.

Every Olds Engine is fitted with the Seager mixer which is recognized as being the most effective mixer that has ever been invented. They also have a removable water jacket so if through carelessness the water should freeze, but very little damage is done.



YOU cannot afford to do without an Olds Engine. The first cost is saved so quickly in time, labor and money, that no shrewd farmer should try to get along without one. The daily cost of an Olds Engine is so small it is hardly worth while counting, compared with the work it does.

There are not two farmers out of a thousand who could not use an Olds Engine with profit to themselves on their farms. You know what can be done with an engine on a farm better than I. You know an engine is needed on every good farm, but probably the reason you have not one now is because you have felt you could not afford it, or had some idea an engine was a difficult thing to run, and an expensive thing to keep in order, or perhaps you have had an engine that did not give you satisfaction. Not so with an Olds. You can afford it. Thousands and thousands of successful farmers have felt just as you do, but each man owns an Olds Engine today, and now he wonders how he ever got along without it.

Do you think the big successful men of this country would be where they are today if they had not kept up with the times? They bought the things they needed to increase their earning power. A successful man can always find a way to pay for a necessity in his business.

I guarantee every Olds Engine that leaves the factory to be in perfect running order. I do not spend much time in the office. I am out in the shop with my coat off watching every detail.

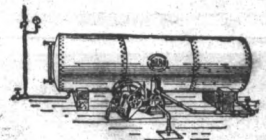
By keeping right out among the workmen, seeing that all the little things are actually done, I know the engine you get is all right, and that the high Olds standard is maintained. I also know the engine is "Best by every test," because I look after the testing and inspecting myself. They are the best you can buy; whether you pay less or more than the Olds price.

Write me about your own particular case. Let me advise with you. What I can tell you will fit your case exactly. Then you can decide what engine to buy.

J. B. SEAGER, Gen. Mgr.

The Olds Pneumatic Water System.

Simple, Reliable and Economical—water for the farmhouse. Let us know your requirements and we will quote you prices. Satisfaction guaranteed.



It is to your decided advantage to send for our catalog and get my liberal proposition.

Do it now before you forget it. A postal card will do, but better still write me a letter, telling me what you want the engine to do, and you will get a personal letter from me that will give you the facts you want.

Write me or my nearest representative. See addresses below.

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