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FARM NOTES.

Restoring Soil Fertility.

As I have been a subscriber to your valuable paper for some time I should like to tell through its columns what I have observed here on our farms in the past 15 years. Any one passing through this country 15 years ago could not help but say, "what a fine, fertile country this is. See the mammoth stacks of straw, and hay. The land must be good or we would not see such crops of hay and grain." Now let us take a trip through the same country, over the same road, and what do we see? We notice the straw stacks are not more than half as large as they used to be and no large stacks of hay, while the corn does not have that dark green color, and the stalks are shorter and don't bear the ears they did in former years. Now one farmer will say to another farmer, "I don't know what is the matter, I can't get the catch of clover that I used to get." Another farmer will say, "did you ever use any fertilizer?" I got a dandy catch on my wheat." Now nearly every farmer is using commercial fertilizer. I know of one man that will pay \$22 to \$24 a ton for fertilizer and leave a pile of manure behind his barn year after year, and yet he says it pays to buy fertilizer. Now I should like to ask the question of some one who is older and wiser than I, "how is this going to end?" Is it possible that our farms are going to go the same as the farms of the New England states? They raised crops as long as the soil could raise crops and when the fertility was exhausted, deserted their homes and went west, where the land was new, and started over again at robbing the soil. The same condition prevails on thousands of the farms in Virginia and other parts of the sunny south. The fertility of the soil is gone. They baled it with their cotton, barreled it with their sugar and all that is left is a barren waste. Now I don't know anything about commercial fertilizer. It may be all right, but it seems to me that when new land will become exhausted in about 15 years, that it is going to take more than commercial fertilizer to bring it back to where it ought to be.

Sanilac Co.

B. C. WIGGINS.

The above quite accurately describes the condition which exists over a considerable portion of our agricultural territory. Michigan soils, as a whole, have been robbed of their available fertility in much the same manner as have New England soils, but not for so long a period and, thanks to modern knowledge of agriculture and better educational facilities, not to the same extent. Mr. Wiggins asks where all this is going to end. We believe it to be a necessary lesson for the farmers of America to learn. It is also an expensive lesson, but they will learn,

and with increased knowledge will come better methods. The example of New England's deserted farms is now before them, and the example of their rehabilitation will be before them, for those lands will not long remain barren of useful products. Already men are being attracted to them who will restore their lost fertility and make them again fertile and productive. This will be more expensive, of course, than it would have been to conserve their fertility before it was exhausted, but the lands are being sold cheaply because they are unproductive,

eral elements of fertility must in many cases be supplemented by the application of commercial fertilizers. It is not a simple problem, but it can be done, is being done and will be done on an ever increasing scale, and the farmer of the next generation will not see the abandoned farms that are to be found in the regions mentioned today, nor will he see those same lands changing hands at the values for which they can be purchased today.

The same thing is true of Michigan lands. Our farmers will awaken to the

aid in getting a stand of clover in the building up process. They will furnish needed available plant food, but can not benefit the mechanical condition of the soil. They do not add an appreciable degree of humus, which is as necessary to a fertile soil as is available plant food. They should not be substituted for stable manure, but used in connection with it, to balance up the needed elements of plant food, just the same as we use concentrates high in protein to balance up the ration for our live stock. Used in this way fertilizers are valuable aids in securing profitable crops and maintaining soil fertility, but to be thus beneficial they must be used intelligently. But the days of better farming are here. Agriculture is not only "the most noble and most useful occupation of man," but it is at the same time the most interesting, and when a man becomes interested in it from the standpoint of a student, as well as from a business standpoint, he will solve the vexed questions which have not been clearly seen, much less understood, by those who have robbed the abandoned farms of the country of their virgin fertility. There are many potent educational forces to help in the solution of these problems, which were not available to the farmers of an earlier day, not the least important of which is the agricultural press. But as the problems are solved by individuals in any community, the good work will spread the more rapidly, for there is no educational force so potent as the power of example. This inquirer has grasped the problem, and by solving it in a personal way he can hasten the day when it will cease to be a problem, as can any one of our progressive readers in his own sphere of action.

The Bean Crop.

I would like, through your columns, some information regarding the growing of beans. I have grown beans in a small way for my own use but wish to try it commercially. What is the best way to plant them, to be cultivated both ways, or in drills? My land is new land; this will be the first crop. When should they be harvested, when they begin to ripen or when fully ripe and the leaves off? I suppose the small Navy is the best bean to grow. What yield may one reasonably expect per acre if well cared for? Any other information will be appreciated.

Grand Traverse Co.

W. F. J.

The bean crop has become one of the most important of the cash crops grown by Michigan farmers, Michigan being the first state in the union in the production



Western Michigan Farm Residence, Home of David Steeby, of Allegan County.

and the loss falls on the soil robber, as it properly should. The fertility which has been taken from them must be partly returned in the form of vegetable matter to make humus, and fertilizers to furnish available plant food. Judicious crop rotations must be established and maintained. Legumes must be grown to furnish humus and nitrogen. Better cultural methods must be practiced to liberate the latent and unavailable plant food now locked up in the soil. In many cases lime must be applied to correct soil acidity and promote the development of beneficial soil bacteria. Live stock must be maintained in proper amounts, and forage crops grown and fed to them and the manure returned to the soil, while the min-

fact that they are confronted by a condition which must be met, rather than with a theory which may be laughed at, before their farms get into a condition which will make their further cultivation wholly unprofitable. But the best way to remedy this condition is to avoid it by conserving and building up the fertility of our soils by these same means before they get into the depleted condition which characterizes the abandoned farms of the east and south. In this work commercial fertilizers are useful, but they should not be made the main dependence, for such a dependence will surely result in disappointment. They are helpful in securing better yields of crops while the fertility of the soil is being built up, and incidentally an



A Good Crop of Alfalfa, Curing Under Hay Caps on the Farm of A. J. Russell, of Manistee Co. This was the Fourth Crop Cut from the Field Since Seeding.

of beans. During the early days of bean growing in the state, the production of this crop was largely confined to the lighter and poorer soils, and the least complimentary thing that was said of a soil was that "it is too poor to grow white beans." Then in most cases the bean crop was simply made an added crop in the rotation, generally following corn instead of summer fallowing as a preparation for wheat. As a consequence the crops grown were usually small, and the effect of this treatment on the soil was to deplete it rapidly of humus and available fertility, with the result that it became increasingly difficult to get a stand of clover on land where beans were made a regular factor in the crop rotation. This fact brought the bean crop into somewhat general disfavor with the class of farmers whose soil was not the best for wheat or other grains, and they gradually dropped out of bean production. But there were some among them who had learned to give the bean crop a better chance, and the farmers on the heavier soils began to grow beans and to profit by the experience of others, until today it is the more common practice to give the bean crop the first place in the crop rotation, plowing a clover sod and fitting a good seed bed for the crop, instead of making it a catch crop or extra crop in the rotation. The result has been larger and more profitable yields and a consequent great increase in the bean production of the state without the ill effects upon the land which characterized the earlier experiences with the crop in Michigan.

So far as varieties are concerned, most growers prefer the pea bean, which is classified as a "Navy" on the market, although there has been an increasing acreage of red kidney beans in recent years, and other varieties are grown to a considerable extent on contract for seed houses. As to methods of planting, the majority of growers now favor drilling in rows from 28 to 32 inches apart, using from one-half bushel to three pecks of seed per acre, the last named amount being more commonly used. If the ground has been plowed comparatively early and well fitted, there will be no serious trouble from weeds in the row, as the beans will come up very quickly and can be cultivated in from one to two weeks from the time of planting, depending upon the weather conditions. As to the best time to plant, most growers prefer to get them in during the first half of June, and if they can be planted during the early days of June all the better, as they will ripen in August when the weather is apt to be better for securing them than if they mature later. A word of caution with regard to the seed used will not be out of place here. Beans are subject to several fungous diseases, the most destructive of which is called anthracnose. This disease becomes apparent in the rusty condition of the plant, and the appearance of brown spots on the pods, which affect the beans growing in them. The spores of the disease remain in the bean until the following year, when they grow with the plant and damage the succeeding crop. There is no remedy but to plant clean seed, and in selecting seed beans or buying the seed, care should be taken to get healthy seed if possible, as this is the only available means of preventing loss from anthracnose. In this connection, it may be well to state that the prevailing idea of bean growers that it injures the crop to cultivate the beans while the vines are wet with dew or from a shower has a sound, scientific basis which is directly due to this disease. The spores of this disease are more readily spread when the vines are moist, since they adhere to the vines more readily and the conditions are more favorable for their growth through the tissues of the plant. Thus, while there would no harm result from the cultivation of beans when the vines are wet where there is no anthracnose present, the idea that such cultivation causes the beans to "rust" where it is present is well founded.

Some judgment is required to know just when to harvest the crop, as it will ripen a little differently in different seasons, owing to different climatic conditions. But generally the crop should be harvested when the pods are nearly all ripened, but before the leaves have fallen, as there will be considerable loss from the shattering or shelling of the beans in harvesting if they are allowed to stand too long. So far as yield is concerned, we know of cases in which more than 40 bushels per acre have been secured, but this is very unusual. Twenty bushels per acre is considered a fairly good crop, and is said to be about the average yield in

the best bean sections of the state this year, but it is probable that more growers get less than 20 bushels than more. However, there is no good reason why any farmer with a suitable soil and with good cultural methods should not grow 20 bushels per acre, or more, in the average season, which at present prices makes the crop a fairly profitable one. Of course, for economy in the production of the crop it should be harvested by the special machinery now made for the purpose instead of by hand methods, but this is now the general practice where beans are grown on a commercial scale.

Managing a Poor Field.

Will you advise me how to get the best results with a very poor field? I have it rented for five years. One side is a hill with a gravelly loam soil in which there are spots of clay. On the other side it runs down to an elm, ash and cedar swamp, which is drained. One half was to corn. The high land is fall plowed and I expect to sow it to oats and barley and seed with 12 lbs. of alsike and six lbs. of timothy per acre. The other was partly summer fallowed and sowed to rye on Sept. 1. Lots of sheep sorrel and thistles in the field.

Tuscola Co.

H. H. S.

Where one is to have possession of a field for but five years, he must plan to improve the soil and get a profit from it at the same time for best results all around. This would appear to be a difficult thing to do, but there is no doubt that in the five-year period proper management will leave the land in better condition than it is now and at the same time return a better profit from it than could be secured if the land were further depleted by poor management. Manifestly, the best thing to do is to get it seeded at the earliest opportunity, as is contemplated. In the writer's opinion it would be better to sow a mixture of June and alsike clover rather than alsike alone with the timothy. Then where the oats and barley are to be sown the use of a light or medium application of a good grain fertilizer, say 200 lbs. per acre, would tend to better the chance of getting a seeding and at the same time pay out in the crop secured. In seeding to either oats or barley on worn land, where it is desired to get a seeding of clover it is better to sow the grain rather thinly. This, however does not necessarily mean that a smaller crop will be grown. The writer knows of a farmer who sowed but one bushel of oats per acre this year as he intended to seed the land to alfalfa with the oats and desired to get a good stand if possible. He got the stand of alfalfa and was also surprised in the fact that the oats were the best he had, yielding 60 bushels per acre. When a stand of grass is secured it should be mowed only once, and the sod plowed down for some other crop, when by supplementary fertilization good results should be secured. By beginning now it can be again seeded to clover and another cash crop grown within the five-year period, and the land will be gotten into better mechanical condition through the addition of vegetable matter from plowing down the sod. The fact that sorrel is growing rather luxuriantly on this land would indicate that it really needs an application of lime. It is possible that it is in an acid condition and that for this reason it will be difficult to get a stand of clover on it. In this case it would doubtless pay to give it a light application of lime next spring.

AN EXPERIENCE WITH ALFALFA.

I sowed five acres of alfalfa three years ago next spring, and as it has not yielded as well as I expected, I will, for the benefit of those who are intending to sow it, tell how I managed it. My soil is a sandy loam which always yielded a ton or more of clover hay or 75 to 100 bu. of potatoes, or 60 to 75 crates of corn per acre. It is what I call a good fair piece of land. In 1906 I cut a crop of clover from it and when the second crop was in bloom I plowed it down, and in the spring of 1907 planted the field to potatoes. The following winter I drew about 50 good loads of manure and spread it on two acres and on May 25th I sowed it to oats. After plowing, disking and harrowing three or four times, and getting the ground in good condition, I sowed three pecks of oats broadcast per acre, as they were so damp after treating them for smut that they would clog the drill. Then, instead of harrowing I took my drill and sowed 150 lbs. of good phosphate per acre, then sowed with a hand seeder 15 lbs. of alfalfa seed and rolled the ground. The seed came up nicely and when the plants were about three inches high, we had the hottest week I ever knew, then had two good rains. About the time I cut the oats we had a very severe drouth which lasted

four or five weeks. When winter came the alfalfa was from four to six inches high, with an occasional plant or small bunch that was 12 to 15 inches high. During that winter I manured one acre more.

When I mowed it the first time, June 25, 1909, the two acres that were not manured stood from 10 to 15 inches high and a pale green in color, and the three acres that I had manured stood 20 to 24 inches high, but of the same light green color. But all through the piece were little bunches that were of a dark green color and no matter whether these bunches consisted of only one plant or were two or three yards in extent they were always 8 to 10 inches taller than the light green plants that stood near them, and in one place I found one single stalk that was nearly three feet high while those that stood near were about 20 inches.

At first I could not understand why this should be so. One neighbor said that I had sowed two varieties, but I did not think so, for if there had been two varieties they would have been more evenly distributed all over the field. But I afterwards learned that where these dark green bunches were the soil was inoculated with the proper bacteria, and if it had all been inoculated I would easily have had twice as much hay as I got. As it was I only got two tons from the five acres. There was perhaps five per cent of the ground inoculated that had been manured, no doubt as a result of the manuring. I clipped it again in August but got very little hay and that was more weeds than hay. On June 20, 1910, I cut the three acres that had been manured and at this time about 80 per cent of the soil had become inoculated, as these bacteria multiply and spread rapidly, and this time I got 2,200 lbs. of hay per acre, and on the two acres not manured I got about 500 lbs. per acre. But by this time about 10 per cent of this ground had become inoculated from some source.

Inoculation Profitable.

In order to satisfy myself how much good inoculation would do, I took two or three quarts of soil where my alfalfa was the best and on a rainy day, (July 12), I selected a place where the alfalfa had never grown more than a foot high, and inoculated about two square yards of ground by pressing my spade into the ground four or five inches then pushing the handle forward and dropping a small handful of this soil back of the spade, then pressing the soil back to its place. I did this about 25 times to the yard of ground, and ten weeks from that day I made a frame one foot square of some pieces of lath and selected the best place in this inoculated plot and placed this frame down and cut with my knife all the alfalfa there was inside of the frame. At this time every plant on this plot was of a dark green color and stood six to 10 inches high and the bundle of grass I got weighed three ounces. I then selected the best place I could find at the side of this plot and cut it in the same way. These plants were from two to six inches tall and the bundle weighed just one ounce. This experiment, and my observation of other pieces that have been sown in this neighborhood has thoroughly convinced me that it is a waste of time to sow alfalfa without first getting the land into a high state of fertility and inoculating the soil from some good alfalfa field, and I would do this if I had to go 10 miles to get the soil and pay \$10 for a wagon load. To be sure, it will become inoculated from the manure but it will take three years to do it, as it has in my case.

Now, in order to show the difference between the yield, on land manured as mine was and on land in a high state of fertility, I will say there is a piece of alfalfa less than 50 rods from mine on just the same kind of land and sowed the same year that mine was, but which had been manured for three years in succession before the seed was sown. This field made about 3¼ tons of hay per acre this year, while mine made 1¼ tons, and the two acres not manured only ½ a ton per acre. Each reader can judge for himself which one of the three methods would be the most satisfactory.

As to the best time to sow the seed, I would say, sow it the same time you would any other clover, but the two best pieces that I have seen were sown with about 1½ bushels of wheat per acre, on August 10 and 15, about 16 lbs. of seed per acre being used on ground that was extra well prepared. In doing this way you can, if the wheat is good, cut it as soon as the wheat is ready and save the straw to feed. If the wheat is poor cut it for hay as soon as you can find one dozen blossoms to the square rod.

Oceana Co.

H. K. BRANCH.

KEEP HAY AND STRAW ON THE FARM.

A great mistake is made when hay or straw is sold from a farm, whether the seller be an owner or simply a tenant. He does not realize so much value from it in the money received direct from its sale, as he would if he fed to live stock and sold indirectly in the form of dairy products or increased value of live stock.

One's stock should be regarded as buyers of all farm produced feed consumed, as being sold to them. If hay is fed to milch cows and a record is kept, it will be found that the cows pay a price over the market valuation and a neat little profit besides. It is true that the money is received in smaller amounts, but when the total receipts are considered as a whole, they amount to more than the hay would have sold for in the market.

When fed to young stock, the increased valuation will generally overbalance the selling value of the hay, especially if the young stock be of first-class breeding. This is especially true if they are kept for stock purposes rather than simply feeders. In this way a farmer often gets ahead financially, while seemingly he is very short of funds. He may be short of ready money, but his stock is growing and saving him money, and in a few years will represent a snug little sum. One should so plan that all the hay and straw will be used on the farm, and keep stock enough to consume it all. Of course, the herd will increase from year to year and some must be sold. The surplus stock which may be sold every year, will exceed any returns that would be possible from selling hay and straw.

When the hay from an acreage of 15 or 20 acres is sold, the cash that would be received, especially on a rented farm, may seem like a big excuse for selling the hay, but if the matter is looked at from a feeding and manurial point of view, there will be just as big an excuse for keeping it on the farm and more money in it.

All the straw may be used by copious bedding. A ton of straw is really worth more for manure than it is to sell, because it is generally cheap, bulky to handle and little profit in it after labor is considered.

The fertilizer problem is getting to be a big one, and could be greatly reduced by keeping more stock and selling less hay and straw. Manure itself does not make a complete nor a balanced fertilizer, but nevertheless it may be made to solve a large part of the problem. One should not attempt to apply enough manure to supply the complete needs of a crop, because it is not economical. Manure does not supply the necessary elements of fertility in the proper proportion for most soils, and if enough is added to make a complete fertilizer, there will be a waste of a part of the excess elements. Apply less manure to the area, thus making it go farther, and balance it up with commercial fertilizer according to the needs of the soil and crop. The value of the manure from the hay and straw used on the farm is no small item. It keeps the farm up, and the increased yield and quality of the crops possible to produce, is one of the biggest arguments in favor of keeping all the hay and straw on the farm, from both the standpoint of the land owner and that of the tenant.

Sometimes there may be an excuse for selling the hay crop if the money is to be used for making other improvements on the farm. For instance, if one desires to drain part of the farm, and lacks the necessary means or does not feel like going in debt for the improvement, there may be no objection to selling the hay. The worth of the drainage would add more to the value of the land than the manure from the hay and straw.

It is true that the market must have hay for horses kept in cities and towns, but one is taking a wise stand to let the "other fellow" do the selling. Keep the hay and straw on the farm, feed it, bed it, and use it some way, and the final returns will exceed the selling value.

Pennsylvania.

L. J. HAYNES.

SORGHUM GRINDINGS AS A FERTILIZER.

In your issue of Nov. 26 a question was asked by E. L. F. in regard to sorghum grindings as a fertilizer. I wish to say that I have had experience with them and can say they are excellent. They should lay in the heap till spring, when they will handle very nicely, being different from cornstalks in the fact that they will come apart at every joint. I consider sorghum bagasse one of the best fertilizers I can obtain.

Allegan Co.

J. B. BUCK.

FARM WAGES VS. CITY PRICES.

The average boy on the farm looks longingly toward the man in the city who is drawing \$50 a month or better. If that boy, particularly if he be compelled to get out and earn his own living, takes the ordinary view of the thing, he will forthwith make tracks for the city. Furthermore if he has no special preparation for any special kind of work, he will find himself where he does not want to be. In such a case he will find himself without any special job and as a result will have to take some job where unskilled labor is required. Such work rarely pays more than \$2.00 per day, and furthermore the work is exceedingly irregular. Labor troubles and that sort of thing are becoming all the more frequent.

A man on the average farm draws \$23 a month, with his board, room, laundry, and the use of a horse once in a while. In the average city he will be lucky if he gets board for \$3.50 per week. A room will cost \$1.00 at least, 50 cents per week will about pay for his laundry. Five dollars per week may cover his expenses but it is altogether unlikely that he will get through as cheaply as that for necessary expense. That does not include the use of a horse or buggy. If he wants to sport up a little in that way it will cost at least \$2.50 and, generally speaking, all other amusements will be proportionately high. Thus, the man who is getting \$25 a month on a farm is really getting a better wage than the man in the city who is drawing \$50 or even better. Besides that he is living under conditions that are both physically and morally more healthy to the ordinary man. The same thing holds true of the man who is drawing an even better wage at some clerical work for he must spend more money on clothes and must, as a rule, live in a better way than the working man. Thus the fellow farmer's farm for the sake of some job who leaves an excellent chance to till his that is not likely to pay him better than \$100 a month is foolish in more ways than one. Yet every year there are thousands of bright-minded, capable young men who are doing this very thing. The question is, why do they do it? Is it because of a general ignorance of conditions in the city? The same thing may be said of the married man who has no capital. On the farm he usually gets \$300 a year, with house rent, the use of a garden, the keep of a cow and a horse, and usually a flock of chickens and perhaps 200 pounds of pork. A man that is now working for us on such terms, says that at present he is making more real money than he can lay away than he did in the city on a job that paid him \$70 per month.

Ohio. CLYDE A. WAUGH.

UNSANITARY CLOSETS.

It is safe to say that a large majority of the country water closets or outhouses are very unsanitary, to say the least. And the only wonder is that more sickness is not caused from this source. Of course, it is very difficult to have inside water closets in most country dwellings, on account of having them so situated that they can be freely flushed out during freezing, cold weather. Especially is this the case in most old style dwellings built many years ago. If properly constructed the outside closet need not be far from the house, but, of course, should not be very near the well. As cement is so cheap, and something that any farmer can use, a wall about two feet high should be built, about six inches thick, under three sides of the closet. Across the center build another wall the same height. Back of this wall put in a cement floor two or three inches thick. This makes the closet easy to clean out and prevents all moisture from soaking into the soil to produce bad odors. On the back of the closet where there is no wall, a door should be made of boards, fastened so it can be easily taken out, when necessary to clean out the contents, which should be done two or three times a year. By cleaning out in this way—which takes but a few minutes—and by the occasional use of some road dust or ashes, the closet can be kept free from any bad odors and made perfectly sanitary. This is no theory, but the result of years of experience by the writer.

Ottawa Co.

JOHN JACKSON.

ANOTHER WAY OF KILLING QUACK GRASS.

At Chatham I visited the Upper Peninsula Experiment Station, and there learned of a simple and inexpensive method of killing quack grass by means of smother-

ing it with sand vetch. The sand vetch is sown in August without any other plant with it. The sand vetch is a vine often growing seven feet in length, that falls flat on the ground, forming a dense mat. At first the quack will grow through the sand vetch, both in the fall and the following spring, but the vetch soon overtakes and rides down the quack completely smothering it.

This method has been tried for two years very successfully at Chatham. It has the added advantage of greatly enriching the soil while doing a cheap job of killing the quack grass.

Ogemaw Co.

H. B. FULLER.

SHOULD THE FARMER LEAVE HIS LAND?

During a long life I have been personally acquainted with a number of farmers who at different times left their farms and engaged in other business, with the expectation of obtaining easier, and more profitable work; but all of them did so to the detriment of their pecuniary interests, and three or four of them, at least, to the injury of their health, and the shortening of their lives.

For the benefit of Michigan Farmer readers I will describe some of these cases. S. was a mason by trade, and a good one, having worked at bridge building along the Erie railroad until he had saved money enough to buy a farm in the woods, only partly cleared. He had cleared about 75 acres, got the stumps out, and the farm in a good state of cultivation; his children had grown up and engaged in business for themselves, and he was living in comfortable circumstances, free of debt. When past sixty years of age, although a large, stalwart man, still hale and hearty—not bent in the least with age—and able to perform any kind of farm labor, he decided to leave the farm, and have more ease in his declining years. He traded his farm for a house and lot in a small village in the state of New York, and received about \$2,000 "to boot."

He moved to the village and commenced keeping a grocery store in competition with groceries already established. Without any experience in the business, without the art of obtaining, and retaining customers by advertising; with a sharp competition with men of experience and in a place where there were already groceries enough, it is not at all surprising that he fell behind every year. He was temperate in his habits, and economical in his expenditures, but in less than ten years he had lost every cent he was worth, was sold out by the sheriff, and returned to the neighborhood he had left. He said to me when I called to see him at the house of his son-in-law: "I suppose you know we lost all of our property, and now my wife and I are living on our children." I said, "They are glad of the chance of repaying a part of the debt they owe their parents for rearing them to get a start in the world." Like most old people supported by their children, he fancied he was a burden. His spirit was depressed, hopefulness had fled, my words failed to cheer him, and he lived but a short time after their return.

B. had earned money enough in running a saw-mill and lumbering to buy, and pay for, an improved farm. He was a careful, saving, successful farmer, and made a little clear money every year, (which is about all farmers can expect), and which he devoted to making improvements on his place. Having to go about four miles to attend the church to which he belonged, and beginning to feel the stiffness of age in his limbs, he determined to try some business easier than farming and get nearer a church and the convenience of a city. He sold his farm for \$6,000 cash and moved to a Pennsylvania city and engaged in the grocery business, for which he had no previous training. He was the son-in-law of S., and it seems that the failure of his father-in-law in the grocery business should have deterred him from venturing into it, but it did not. He was more fortunate than S. for after having been in business eight or nine years he sold out and returned to the neighborhood he had left, having lost his time, and nearly half his capital. He moved on a rented farm, but in the excitement, and fatigue of moving, he caught a heavy cold, and in a few days died of pneumonia.

T. was the son of an excellent farmer, had received a little assistance from home, and by working like a slave, (sometimes plowing by moonlight, and threshing seed grain by lantern light in the barn), he had become the owner of a valuable farm, with a fine new house and barn,

and was out of debt. When nearly 70 years of age, and desirous of taking more comfort in the evening of his life, he sold his farm for \$10,000, and moved into the village to live on his income. Every dollar he received for his farm was in the bonds of a coal company in Pennsylvania, bearing 8 per cent interest, and were quoted in New York at a premium. He supposed he was making a good investment, and so did his neighbors, but before a year had passed the coal company failed, and his bonds were as worthless as brown paper. The loss of everything in his old age after having worked so hard all his life, so preyed upon his mind that he sickened and died in a few months after his loss.

M., an industrious farmer, had begun poor but had become very comfortably situated on a farm of his own. Desirous of making money faster and with less labor, he took a contract for carrying the mail on a stage route, and in pleasant weather usually drove the team himself. He did well at this business and at the end of his contract put his son in charge of the farm, and with the money he had saved, moved to town and went into the grocery business. It would seem that every farmer thinks he is capable of running a grocery. He may have doubts whether he could handle silks laces and ribbons, but no doubt whatever that he is as competent to weigh out tea, coffee and sugar as anybody in the world. In about three years he came back to the farm, thin, pale, and careworn. He had lost his spare cash, and was thankful that he had not lost the farm. It would only have taken about three more years to sink everything. He lived only a year after his return to the farm. Whether he would have lived longer had he not gone to town, of course we do not know, but he certainly would have experienced fewer anxieties of mind, slept sounder, and left a larger estate.

G. was a farmer's son who succeeded to his father's farm, and improved it by industry and good management. He took great interest in politics, and was elected sheriff of his county, which made it necessary to move to the county seat. Party usage did not allow his re-election, and after his term had expired, having become accustomed to the conveniences, sociabilities and allurements of town life, he was unwilling to leave them. He sold the farm, bought a timber lot with a steam saw mill, and went at lumbering. He retained his residence in town, and drove out every day to look after his business. He did not drink, gamble, nor attend a horse race, but hard times came on, (as they do periodically), and lumber, which is the first thing to feel their effects, took a disastrous fall. He had notes in the bank which he could not meet at maturity, and all his struggles to avoid bankruptcy were unavailing. He and his wife then kept a boarding house until his death a number of years later.

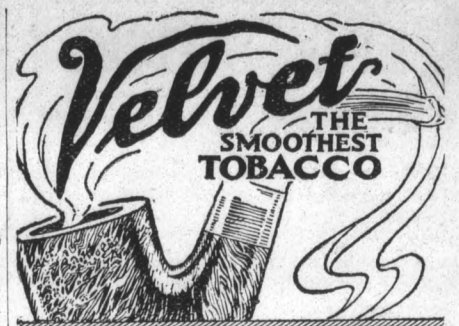
Moral. Think the problem out carefully before you desert the land, especially if you have passed middle life.

J. W. INGHAM.

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LIVE STOCK

THE REAL VALUE OF A PEDIGREE.

The amount of emphasis or value to place upon the pedigree is often a vexing problem. The beginner with pure-bred stock, or the man who buys pure-bred sires for grade females is apt to place entirely too much emphasis upon pedigree alone and to discredit individual merit in the animal.

The first value of a pedigree concerns the matter of prepotency. By prepotency is meant the power of the parent either male or female, to impress and leave its qualities and characters upon the offspring. Prepotency is just as strong in leaving undesirable characters upon the offspring as it is to leave the desirable ones. An animal who has any certain desirable features and whose parents have the same will possess some probability of impressing those characters upon his offspring. If his ancestors back for several generations have possessed those same characters he is all the more likely to transmit them to his offspring. Thus a pedigree enables a breeder to learn something of the ancestors of his breeding animals. And knowing something about the ancestors he can judge to a considerable extent what kind of offspring he is likely to secure.

The pedigree will show, if one knows the animals in the ancestry or can learn something about them, along what line or toward what type the animal has been bred. Take Shorthorns for an example. If the ancestry has been bred for dairy or dual purpose characteristics, the animal is most likely to breed dual purpose or dairy offspring. On the other hand, if the ancestry since the time of Cruickshank, have been selected for beef making tendencies, the offspring will in the majority of cases possess beef making tendencies. An example of extremes in type in different breeds may be cited. The English Shire horse has been selected for generations and generations for the definite purpose of producing a low down thick, heavy draft horse. The thoroughbred, on the other hand, has been bred for speed and the slender body and rather upstanding qualities that go with speed. As everyone would expect, the Shire will sire colts similar in conformation to himself. This will be true because he has a long line of ancestry back of him that was of a similar type. Likewise the thoroughbred will beget animals of his own general type because that is the kind of breeding back of him. A pedigree, then, enables a man to learn something of the characteristics of the ancestry and to judge with some degree of accuracy of the value of the animal as a future breeder.

In the mating of animals, individual merit should receive first attention and pedigree second. To reverse the order and put pedigree first usually results in disaster. Nearly every breed has suffered by such a practice. There are many owners of pure-bred stock, we dislike to call them breeders, who decide upon mating of males and females entirely from their pedigree. Such men have never accomplished much in live stock improvement. The sooner they can get out of the deep rut of error and will place individual merit first and pedigree a close second, the sooner will success crown their efforts.

This practice is wrong because it does not take into consideration the strong or the weak points of the animals. Two might be mated together that possess some weakness. Whereas each should have been mated with an animal especially strong in that particular in order that the offspring may not possess the same weakness. Placing individuality of the animal first in importance would select an animal desirable in itself, then seeing that he has a pedigree that will make him prepotent in those desirable characters seems to be about the best practice that can be followed.

Some animals are selected individually but prove to be failures as breeders. There may be several reasons to account for that, such as improper care or over-feeding for sale or show. Yet, after giving all due credit to those causes and others, it is safe to say that those animals that just "happened" to be outstandingly good ones and which do not have animals of similar type and characteristics back of them in their blood lines are in no wise as prepotent as those which have desirable blood lines. Many men who buy males that are most excellent individuals are disappointed in the

results. In such cases it not infrequently happens that the animal in question was the first in his whole pedigree to be an exceptionally good one.

A pedigree in itself does not prove anything in regard to the excellence of the animal. It merely shows that its ancestors are of that particular breed. It does not prove nor indicate that the animal in question has any excellence whatsoever. Too many make the mistake of thinking that because an animal has a pedigree that he is of superior merit. He may be but the mere fact of his having a pedigree does not prove it. If the animal first has the individual excellence desired, then a blood line as shown by his pedigree that indicates that he will be a prepotent sire he will be the proper one to select to head the herd.

Iowa.

H. E. McCARTNEY.

THE INTERNATIONAL.

(Concluded from last week.)

The Grand Champion Fat Steer.

On the opposite page appears a cut showing the grand champion fat steer at the International. As noted in our last issue, there is an interesting bit of history connected with the purchase and development of this calf, which was good enough to win the grand championship in the greatest live stock show in the world from the standpoint of competition. Prof. Kennedy, of the Iowa College, while looking about for material last spring, went to the farm of J. R. Donohoe, of Iowa, to buy a yearling steer to fit for this show. He could not agree with its owner on the price and was about to leave when Mr. Donohoe offered to throw in any two grade calves that he might pick from his herd if he purchased the yearling. Shamrock II, the winner of the grand championship at the International, was one of the calves picked and taken back to the Iowa College along with the yearling. For some time the calf was not given any particular attention, not being considered of extra quality as compared to the herd of fine steers that were being fitted this season. However, he improved rapidly and soon gave promise of the capabilities that were in him. He was given one nurse cow until Sept. 1st, when he was given two, and after that time he took the milk of both cows. He was kept in the barn during the day and allowed the run of a grass lot at night. As a grain ration he was given a mixture of three parts corn, two parts wheat bran and one part oil meal up to Sept. 1st. After Sept. 1st the grain ration was changed to boiled wheat and oats, and he was given green cornstalks and ears, with clover hay and roots for roughage. During the month of November he was eating from nine to eleven pounds per day of the cooked feed, about 25 lbs. per day of roots and five pounds of clover hay in addition to the milk of the two nurse cows.

As a testimonial to the feeder's art the herdsman's medal was awarded to John Brown, the feeder who fitted this steer along with fifteen that the college exhibited at the International, not one of which was outside the money in the classes in which they were shown. When it is considered that they competed with the best that the country affords, Mr. Brown's achievement not only earned for him the medal, but is undisputable evidence that he has mastered the feeder's art.

Regarding the quality of Shamrock II, Richard G. Carden, the noted Irish judge, said, "He is the best steer of any age or any breed ever shown at any show on either side of the water." Speaking further of his quality, Mr. Carden said, "He is a ripe beast for his age. In this calf is represented the acme of scientific feeding for beef purposes. He would be a champion in 99 out of 100 shows in the world. I could not conceive that such a beast exists. Either he or the roan that was reserve would be champion at the Smithfield show in any ordinary year."

It will be interesting to cattle feeders to give some detailed statistics with regard to the breeding of, and the gains made by, this calf. He was a grade Angus, as before noted, sired by Black Woodlawn 4288 and out of a good grade cow. The date of his birth was Jan. 10, 1910. The Iowa College purchased him in April and his preparation began near the close of that month. During the first days in May he tipped the scales at just 345 lbs. After 165 days of feeding he had reached a weight of 1,130 lbs., a gain of 785 lbs., or a gain of approximately 3% lbs. per day. Or, if his gain from birth to maturity, a period of 315 days, is computed, we find that he made nearly 3%

lbs. a day for every day that he had lived. These facts show something of the possibilities of scientific feeding where one is given an animal with perfect digestion and great power of assimilation. It is a further testimonial to the skill of his feeder that he was never off feed for a moment during the entire time of fitting him for this great show.

A cut of Roan James, the reserve champion fat steer of the show, and the closest competitor of Shamrock II for the high honor, is also published on the next page. This steer was champion in the yearling class and was bred and fitted by James Leaske, of Ontario. He is a half-brother of the calf, Roan King, with which Mr. Leaske won the grand championship honors in 1907; also a half-brother of Roan Jim, the steer with which Mr. Leaske won the reserve championship in 1908. All three steers were sired by Gloucester's Choice, a Duchess of Gloucester bull. The excellent quality of this steer is plainly to be seen in the cut and was also commented upon by Mr. Carden as above noted. In rendering his final decision as between the two, the noted judge gave as his reason for awarding it to the Angus calf, that his flesh was a trifle firmer than that of the Shorthorn yearling.

While both of these contestants may properly be classed as baby beef yet the fact that the younger animal, who was yet receiving a liberal portion of milk as a part of his daily diet, carried a firmer quality of flesh is a further argument for the feeding of young animals to as early a finish as possible for best results, not alone because of the cheaper gains which can be secured with them but as well because of the superior quality of the finished product.

The Breeding Classes.

This department of the show was certainly an inspiration for any breeder of pure-bred live stock, whether of cattle, sheep or swine. The general average excellence of the entries was superior to that of any other show which it has been the writer's privilege to attend and the large number in every class made the competition keen and the outcome most interesting. Space will not permit us to describe these exhibits in detail or give a list of prizes awarded other than the grand championships in the several classes, as was done in the fat stock classes in the last issue. These championship awards by breeds were as follows:

Cattle.

Shorthorns, grand champion bull, Ringmaster, owned by White & Smith, St. Cloud, Minn.; grand champion cow, Susan Cumberland, owned by G. J. Sayer, McHenry, Ill.

Herefords, grand champion bull, O. Harris, Harris, Mo., on Repeater. Grand champion cow, James E. Logan, Kansas City, Mo., on Scottish Logan.

Aberdeen Angus, grand champion bull, D. Bradfute & Son, Cedarville, O., on Eastern Star, of Meadowbrook, grand champion cow or heifer, W. A. McHenry, Dennison, Ia.

Polled Durhams, senior and junior sweepstakes bulls, J. H. Miller, Peru, Ind. Senior sweepstakes cow, J. H. Miller, on Queen of Miami 5th Junior do., W. H. Miller & Sons, Mulberry, Ind., on Queenly.

Hogs.

Hampshires, grand champion boar, Duke of Niles, owned by Wm. Essig, Tip-ton, Ind.; grand champion sow, same owner with Lady Rose.

Chester White, grand champion boar and sow, by D. H. Lewis, Geneseo, Ill.

Duroc-Jersey grand champion boar, H. E. Browning, Hersman, Ill., on Defender. Grand champion sow, Ira Jackson, Tippecanoe City, O., on Lady Ideal 8th.

Berkshire, grand champion boar and sow, W. S. Corsa, Whitehall, Ill.

Poland-Chinas, grand champion boar, Meherry & Hunter, Tolono, Ill. Grand champion sow, Francis & Sons, New Lenox, Ill.

Sheep.

Cheviots, champion ram, G. W. Parnell, Wingate, Ind.; champion ewe, W. D. Calland & Son, DeGraff, O.

Hampshires, champion ram, W. F. Renk, Sun Prairie, Wis.; champion ewe, C. O. Judd, Kent, O.

Dorsets, champion ram and ewe, W. H. Miner Chazy, N. Y.

Shropshires, champion ram, G. Howard Davison, Millbrook, N. Y.

Oxfords, champion ram and ewe, McKerrow & Sons, Pewaukee, Wis.

Cotswolds, champion ram, F. W. Harding, Waukesha, Wis. Champion ewe, Cooper & Nephews, Chicago, Ill.

Lincolns, champion ram and ewe, J. E. Lee & Sons, Highgate, Ont.

Southdowns, champion ram and ewe, Charles Leet & Sons, Mantua, O.

Shropshire, champion ram and ewe, Chandler Bros., Chariton, Ia.

The Horse Exhibit.

Never at any similar show were so many high class entries in the horse department gathered in competition. All of the draft breeds were represented in large numbers and in each case by individuals of outstanding quality. Unquestionably this department of the International has proven

to be an inspiration for the breeding of good horses throughout the country. We can do no more in this issue than to give the breed championships by classes, as has been done with the other exhibits. The championship awards were as follows:

Belgians.

Stallion.—Bonaparte de Boulant, owned by J. Crouch & Sons, Lafayette, Ind.

Reserve Stallion.—Bell Bros., Wooster, Ohio.

Mare.—Catherina, owned by J. Crouch & Sons.

Reserve Mare.—Souers & Sons.

Percherons.

Percheron, stallion, Helix, owned by Taylor & Jones, Williamsville, Ill. Reserve champion, Interne, owned by McLaughlin Bros., Columbus, O. Champion mare, Iolanthe, owned by H. G. McMillan & Sons, Rock Rapids, Ia. Reserve champion, Humere, owned by J. Crouch & Sons, Lafayette, Ind.

Shires.

Stallion, Dan Patch, and mare Shellford Pride, owned by Truman's Pioneer Stud Farm, Bushnell, Ill.

Clydesdales.

Stallion, Graham Bros., Claremont, Ont., on Mikado. Mare, James Kennedy, Utica, Ill., on Lady Effie.

Clydesdale, champion American-bred stallion, John Leitch, Lafayette, Ind., on Prince William. Mare, J. Kennedy, Utica, Ill.

BREEDERS' MEETINGS AT THE INTERNATIONAL.

Percheron.—The Percheron Society of America met with 180 members present, and proxies to represent 2,207 votes. The secretary's report showed that the society has recorded 1,305 imported stallions, 1,053 imported mares, 2,490 American-bred stallions and 3,313 American-bred mares since Nov. 30, 1909. Officers elected as follows: Pres., H. G. McMillan, treas., J. L. Delancey; sec'y, Wayne Dinsmore, Chicago.

Belgian.—The American Association of Importers and Breeders of Belgian Draft Horses elected Eli Springer, pres.; J. D. Conner, Jr., Wabash, Ind., sec'y-treas.

Shire.—The American Shire Horse Association met with 40 present. The secretary's report showed 1,086 entries received for the past year. The old staff of officers holds over.

Shetland Pony.—The American Shetland Pony Club elected the following officers: Pres., Joel Malmsberry, North Benton, O.; vice-pres., A. J. Lupton, Hartford City, Ind.; sec'y-treas., Julia M. Wade, Lafayette, Ind.

Shorthorn.—The American Shorthorn Breeders' Association elected H. C. Duncan, Osborn, Mo.; H. F. Brown, Minneapolis, Minn.; J. Hovenkamp, Fort Worth, Texas, and J. F. Prather, Williamsville, Ill., as board of directors. The old staff of officers holds over.

Aberdeen-Angus.—The American Aberdeen-Angus Breeders' Association held an enthusiastic meeting. The secretary's report showed 10,818 entries made during the past year, 12 being of imported animals. The total number of animals recorded is now 141,992. The election of officers resulted as follows: Pres., A. C. Binnie, Alta, Ia.; vice-pres., Stanley R. Pierce, Wabash, Ind.; sec'y, Chas. Gray Chicago; treas., C. J. Martin, Churdan, Iowa.

Rambouillet.—The Rambouillet Sheep Breeders' Association met and elected the following officers: Pres., R. A. Jackson, Dayton, Wash.; vice-pres., F. S. King, Laramie, Wyo.; sec'y, Dwight Lincoln, Milford Center, O.; treas., R. M. Wood, Saline, Mich.

Oxford.—The American Oxford Down Record Association elected officers as follows: Pres., R. J. Stone, Stonington, Ill.; vice-pres., I. R. Waterbury, Highland, Mich.; sec'y-treas., W. A. Shafer, Hamilton, O.

Hampshire.—The Hampshire Breeders' Association elected officers as follows: Pres., M. C. Ring, Millville, Wis.; sec'y-treas., C. A. Tyler, Coldwater, Mich.

Shropshire.—The American Shropshire Association met at Lafayette, Ind., and elected the following officers: Pres., J. C. Duncan, New York; vice-pres., G. Howard Davison, New York; sec'y-treas., Miss J. M. Wade, Lafayette, Ind. A proxy vote controlled the meeting. It displaced Mr. E. L. Troeger who had recently been elected secretary.

Dorset.—The Continental Dorset Club met and Secretary Joseph E. Wing reported a very active business. Imports for year amounted to 500; registrations more than 1,800; transfers, 877, with 14 new members. New officers elected were: Pres., Joseph Henderson; sec'y-treas., Joseph E. Wing; executive committee, H. H. Cherry, Arthur Danks and C. C. Jones.

Lincoln.—The American Lincoln Sheep Breeders' Association met and elected Richard Shier, Marlette, Mich., pres.; J. T. Gibson, Denfield, Ont., vice-pres.; Bert Smith, Charlotte, Mich., sec'y-treas.

Poland-China.—The American Poland-China Record Association met, with 16 states represented. J. M. Stewart, Ainsworth, Ia., was elected pres.; Y. L. McFadden, sec'y., and J. W. Blackford, treasurer.

Yorkshire.—The American Yorkshire Club elected Thomas H. Canfield, Sale Park, Minn.; B. T. Davidson, Menlo, Ia., and Prof. W. B. Richards, North Dakota Agricultural College, as board of directors. The old officers held over.

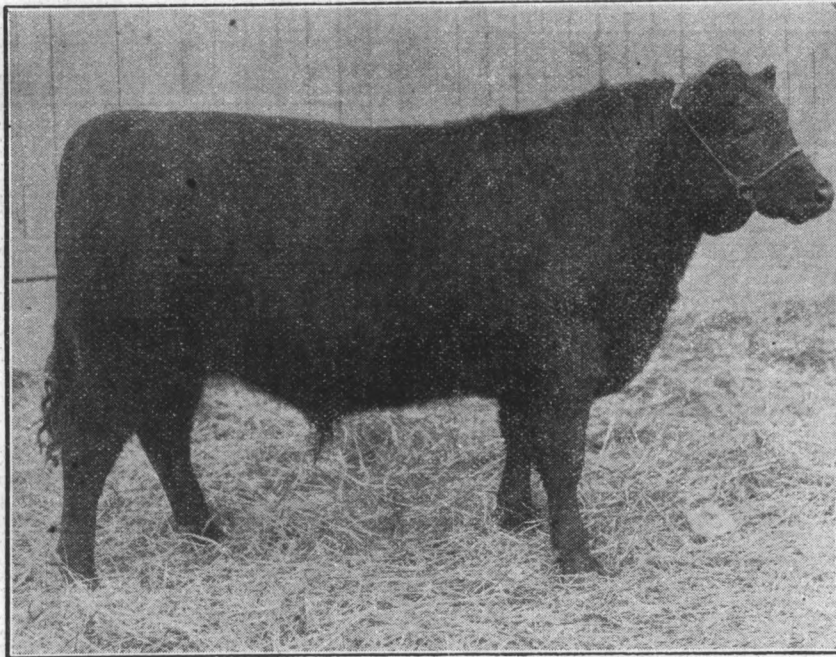
Tamworth.—The American Tamworth Swine Record Association met and elected officers as follows: Pres., J. P. McCollam, Ferris, Ill.; sec'y-treas., E. N. Ball, Ann Arbor, Mich. The secretary reported over 1,200 animals registered during the past year.

THOUGHTS ON BUYING THE STOCK RAM.

Every year as we are closing up our ram trade for the season we feel as if we would like to give a little advice to those who will want to buy a ram next fall.

Of course, this may look a little selfish but then, most advice is, and it looks to us as if many buyers blame the breeders for conditions for which they themselves are somewhat to blame.

Everyone who has handled sale rams knows how difficult it is to run a large flock of rams in the pasture after Sept. 1, without a great deal of annoyance and loss. If none of them are actually killed, (which quite often occurs), their head covering is so badly worn off that their appearance is greatly marred, so it is quite customary to shut them in a barn away



Shamrock II, Grand Champion Fat Steer at the International for 1910.

from other sheep in quarters so limited that they are prevented from doing each other much harm.

Then, too, if they are sold to be delivered by express they are in better condition to ship, being on dry feed, than they would be if just off from grass. It would therefore seem good policy for the buyer to make his selection early; he would not only be enabled thereby to make his choice before the best ones had been selected, but could get his ram again on pasture and keep him in better condition to breed the flock when mating time comes, but some one will say, "rams are so much bother, I don't want them around before I wish to turn them with the ewes." If an old ewe or a few wether lambs are turned with them and they are put in a pasture remote from the ewe flock, they are no bother at all and are in the best of shape for service when wanted.

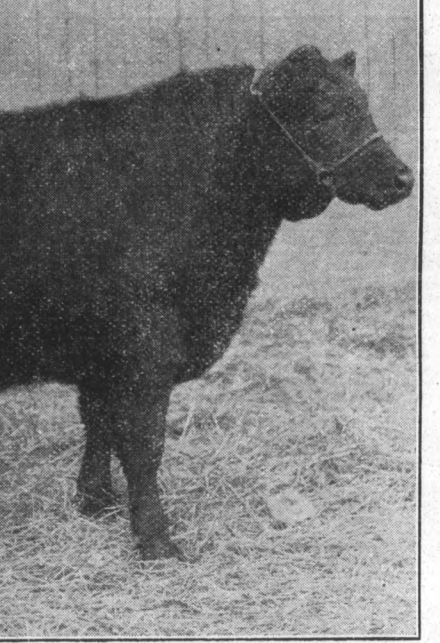
It is strange how many buyers will come to the barn and say they don't want a ram that has been fed up, and then pick the fattest one in the bunch. The breeder of fancy sheep finds it almost impossible to sell a ram thin in flesh.

Again, the buyer will say he had rather see them in the rough, but if one sheep that has been carefully trimmed is put with a dozen that have not, other things being equal, he will be the first one selected.

A great many buyers will write for prices and after two or three weeks will write again and will feel quite hurt to find that the one they had selected had been sold in the meantime. It would seem good policy, therefore, not only to select your stock ram early, but if possible, to inspect and choose him yourself; but if you are obliged to buy by correspondence, deal with a breeder that you can trust; not the one that makes the most glowing description in his advertisement or letter, but, of course, it would be best not to expect any one to send a \$50 ram for \$10 or \$15. Be willing to pay a fair price and then insist on getting your money's worth. Remember that the breeder has a great many expenses which are not generally thought of. He pays high prices for his foundation stock, his stock rams cost him three or four times what the ordinary farmer is willing to pay; he has advertising expenses, is obliged to belong to recording associations and is to quite an expense keeping his stock recorded. And then, too, he spends a good deal of time looking after details, answering correspondence or

showing his stock to people who may or may not buy, so be willing to pay a good price when you get a good animal.

Now, a few words as to the best sort of a ram to buy. You no doubt have made your selection for this season before this and may be well pleased or may wish you could have found something a little different. In either case, be sure you start early enough next year and with a fixed idea of what you want in your mind. We would advise looking for a blocky sheep of medium size. Remember, that long legs do not necessarily make a big sheep. Air under a sheep does not help much in making him weigh. Be sure he has a short, broad head with a broad nose, especially over the nostril; the neck should be thick and firm, the back level and broad; a broad back and well sprung ribs go together; the legs should be well apart and have plenty of



Roan James, Reserve Champion Fat Steer at the International.

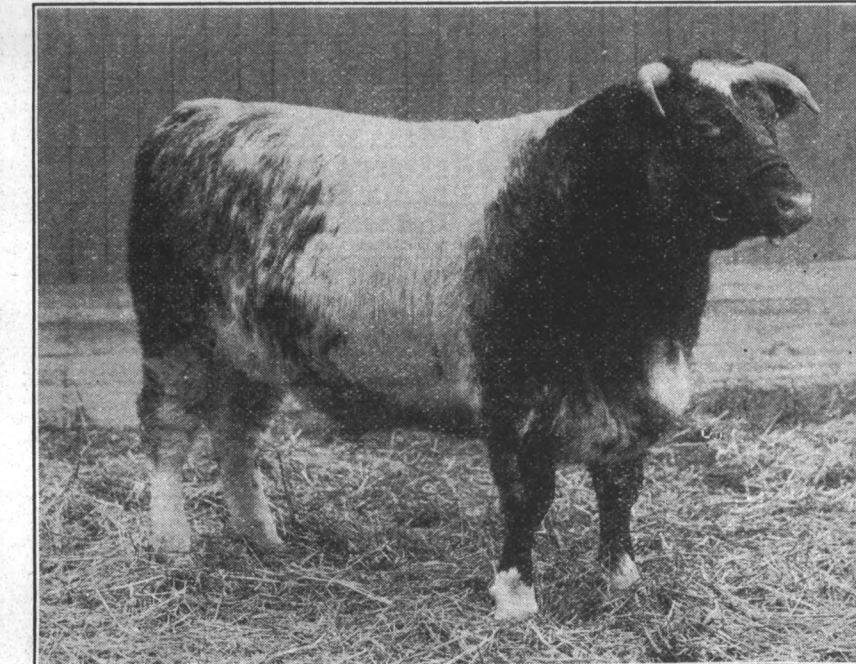
bone. I have said nothing as to wool. This depends entirely on the breed of sheep you are handling, but I am never afraid of getting too much wool, if I do not get it at the expense of the qualities mentioned. A good ram always has a proud look and a commanding appearance.

And after you have him, be sure he has good care, plenty to eat, and don't oblige him to run in the hog pasture. Remember, the ram is half the flock so far as the lamb crop is concerned, and treat him accordingly.

IONIA CO. H. E. POWELL.

WINTER CARE OF THE HOGS.

Lack of proper shelter frequently causes unthriftiness. Hogs need rather warm quarters. It is an evident fact that the hog receives less protection from his coat



Roan James, Reserve Champion Fat Steer at the International.

of hair than does any other farm animal. For that reason warmer shelter is required. When shelter that is sufficiently warm and comfortable is not given, the hogs pile up and are likely to injure each other by their weight or else they heat the ones in the lower part of the pile until they are injured thereby. The quar-

ters should be free from dust, and well bedded. If there is dust on the floor the hog will lie with one nostril in the dust and will draw the dust and the intermixed filth directly into his lungs, which is injurious and often causes a bad cough. Of course, while the quarters are to be warm, they are to be well ventilated. Fresh air is just as essential to the hog as to any other animal.

Protection in the yard is not given as much attention as it deserves. The hog is most comfortable when lying on the sunny side of a building on a bright winter day. Yet the hog always avoids the wind. If some protection such as a solid board fence or straw wall that sheep men use could be provided, it undoubtedly would add greatly to the comfort and fattening ability of the hog. Then, the feeding floor needs protection, for if it is not the hog will not stay out of the shed on cold days long enough to get the proper amount of feed.

Hogs often fail to get a sufficient amount of water during the winter time. It often happens that the only drinking place is an open trough near the main stock tank. Here the water may be dipped out ice cold and poured into a trough that is heavily coated with ice. Under such circumstances the hog will not drink one-third as much as he requires or would drink under more favorable surroundings. When one stops to think about the matter it is plain that the hog needs just as much water during the winter as in summer to properly carry on the digestive and other functions. If he does not get that proper amount of water his system cannot do its work properly and his general thrift will suffer as a consequence. Just how to meet this problem and to supply plenty of good water at all times is a problem to be worked out on every farm. Wherever the tank heater is used, and it should be used in every outside tank, the difficulty may be overcome. In some cases it is possible to have an inside tank so arranged that it will not freeze at all.

Regularity in feeding has much to do with keeping up the thrift of the bunch. Of course, in sections where there is much bad weather, provision will need to be made for inside feeding or else to have a very well protected feeding floor.

The feed should be served in something of an appetizing form. Less heed is given to this phase with swine feeding than with any other class of stock. It is quite true that hogs have not such dainty appetites as sheep, for instance, yet they will respond surprisingly to any increased attention in this respect.

Another cause of feed lot unthriftiness lies in the fact that pigs of different sizes are run in the same lot. In such cases the small ones are crowded back from the trough and prevented from getting their rightful proportion of the feed. Where the pigs differ in size the most successful plan is to divide them into two or more lots in each of which will be pigs very similar in size. In this way each pig will be given an even chance at the feed.

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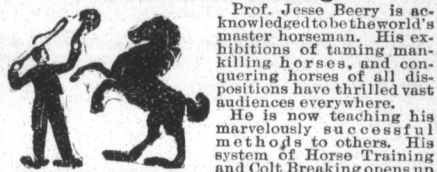
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VETERINARY

CONDUCTED BY W. C. FAIR, V. S.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to some one else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

Cough—Indigestion—Piles.—I have a pair of horses that are out of condition; the mare is perhaps in foal, but she is old. The gelding is also old and very thin; is coughing some but not as bad as he was some time ago. My three-month-old pigs are troubled with piles, the kind which protrudes, and are inclined to keep raw. P. H. R., Oak Grove, Mich.—You had better inspect their teeth and if you find them sharp and uneven float the points off the outside of upper rows and inside of lower. Give each horse a tablespoonful of the following compound powder at a dose in feed three times daily: Gentian, ginger, and bicarbonate of soda, equal parts by weight and mixed thoroughly. Perhaps they should be better fed. Your pigs will be benefited by giving them 5 drops fluid extract belladonna and 1 gr. quinine at a dose two or three times a day.

Diarrhoea—Worms.—My 17-year-old mare has been troubled for some time with a looseness of the bowels and I would like to know what drugs she needs. I thought it might interest your readers to know that I lost a colt, and no doubt his death was the result of worms. I have been told that worms never cause the death of colts; is this true? G. C., Libby, Mich.—Give her a teaspoonful of sulphate of iron and two tablespoonfuls ground ginger at a dose in feed two or three times a day. I have examined many hundreds of horses and other animals that worms killed. When horses and other live stock show symptoms of worms they should be treated. However, well horses should not be doped with drugs.

Skin Blotches.—I have a horse that is troubled with some sort of a skin trouble affecting one side more than the other. There are several large blotches and the hair drops out, leaving the parts bald and I would like to know how to cure him. J. R. S., Crosswell, Mich.—Apply one part iodine and ten parts vaseline once a day, also give 2 drs. Donovan's solution at a dose in feed three times a day.

Constipation.—I have a six-year-old horse that is inclined to be costive and he has been in this condition all his life, therefore I should like to know what to do. G. S., Summit City, Mich.—Have his teeth put in good condition to masticate food properly. Feed well salted bran mash, plenty of roots and silage. Give either aloes or raw linseed oil only when necessary, also keep in mind that daily exercise and a liberal allowance of water help the bowels to move. Give 1 dr. of ground nux vomica and a handful of oil meal at a dose two or three times a day.

Blood Poison.—One of my cows came fresh three weeks ago. Since then she has had some vaginal discharge, has not had a good appetite and is quite thin. Our local Vet. has been treating her and she seems to be improving. F. H. M., Grand Ledge, Mich.—Dissolve 1 dr. permanganate of potash in one gallon of tepid water and wash out vagina through a small rubber tube daily and give her a teaspoonful of sulphate of iron and two tablespoonfuls hyposulphite of soda at a dose twice or three times a day. Increase her food supply.

Cow Falls to Breed.—I have a cow seven or eight years old that had a calf 15 months ago and she fails to get with calf. She has been mated a dozen or more times. L. W. U., Adrian, Mich.—Dissolve 1/2 lb. cooking soda in one gallon tepid water and flush out vagina daily. Wart.—A yearling heifer has a warty growth on shoulder and a few smaller warts on different parts of body which I should like to have removed. S. W. B., Swartz Creek, Mich.—Apply acetic acid and if not convenient to do so apply vinegar daily.

Ophthalmia.—Some time ago one of my sheep went blind and I notice another is almost blind, but all my sheep seem to be in good health.—E. O. W., Concord, Mich.—Separate the healthy and diseased and blow some calomel into their sore eyes once a day.

Grub in the Head.—I enclose a grub in my letter which I presume you know all about. I found it on the end of my sheep's nose and suppose there are lots of them in the nostrils. W. H. C., Gaines, Mich.—Grub in the head of sheep are the larva of a small gnat which deposits its live embryo on the margin of the nostrils. It passes up the nasal cavities and nests just below the eyes. Place the sheep in a warm building and blow some scotch snuff up the nostrils and feed the sheep well.

Weak Stomach.—I have a dog that must have a weak stomach, for he soon vomits up what he eats. A. G. R., Holland, Mich.—Give the dog four or five tablespoonfuls black coffee, and it should be warm. Also give 5 grs. bicarbonate of soda at a dose in feed twice or three times a day. Some well cooked meat might not hurt him.

Well Pleased with his Advertisement. W. E. Livingston, Parma, Mich., breeder of large strain Poland Chinas, writes: "I am very pleased with the success my advertisement in the Michigan Farmer has brought me. I am sold out of spring pigs, so please change my advertisement."



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RECORDED MULE FOOTED HOGS are said to be immune from hog cholera. Stock of all ages for sale. John H. Dunlap, Williamsport, Ohio.

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P. C. BOARS—Big growthy fellows, worth the money. WOOD & SONS, SALINE, MICHIGAN.

12 P. C. Boars ready for service, sired by a Son of the World's Champion Meddler; dam, undefeated Lady Louise. Z. Kinne, Three Oaks, Mich.

Poland-China Gilts bred for spring farrow. Fall Pigs \$1 each. B. M. Wing and Son, Sheridan, Michigan.

Our P. C. Boars were sired by "Victor" by "Outlook", first prize at Ohio State Fair; dams by Medler Second, Oakwood Medler and others. A few large Minorca Cockerels. Satisfaction guaranteed. R. W. MILLS, Saline, Michigan.

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FOR SALE—Yorkshire Boar Pigs August farrow. Fine, thrifty fellows. \$15, registered. THE MURRAY-WATERMAN CO., R. 6, Ann Arbor, Michigan. Bell phone.

Watch this Ad. SHIRE BOAR of A. MCKAY & SON, R. F. D. No. 1, Hersey, Mich. Bell Phone.

Large Improved English Yorkshires. The hog that makes good. Boars ready for service, Gilts bred for next spring farrow. A choice lot of fall pigs, pairs not akin. Satisfaction guaranteed. COLON C. LILLIE, Coopersville, Michigan.

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Torpid Liver—Constipation.—I have a colt 15 months old that appears to be growing fairly well, but seems dull and dumpish. He also has a dropsical swelling under abdomen. For the past two winters my cows are inclined to suffer from constipation, but are all right during the summer. G. A. P., Aldin, Mich.—Give your colt 15 grs. calomel at a dose daily for one week, also give a tablespoonful of the following compound powder at a dose in feed three times a day: Powdered sulphate iron, gentian, cinchona, rosin, fenugreek and bicarbonate soda, equal parts by weight and mix thoroughly. The colt should be well groomed twice a day, kept in a warm, well ventilated stable and given walking exercise daily. Give your cows plenty of well salted bran mash and roots, besides add one or two ounces of either epsom salts or Glauber's salts to their feed night and morning until the desired effect is produced. Kindly understand, by giving animals plenty of common salt it increases their thirst, they drink more water and this loosens their bowels. Furthermore, walking exercise assists the bowels in moving.

Mammitis.—One of my two-year-old heifers calved some ten days ago; for four days it was impossible to draw milk from one quarter of udder, but I managed to draw off the milk and since then she is milked with difficulty. The bag is not caked but this diseased quarter does not fill with milk like the other three. H. W. B., Gobleville, Mich.—If the udder is not caked or much inflamed, gentle hand rubbing will stimulate the secretion of milk fully as well as the application of drugs. Be sure and bed her well, keep the bowels active and give a tablespoonful of powdered nitrate of potash at a dose in feed night and morning. Drawing milk from this blocked quarter would be accomplished much more easily by using a milking tube and if you use one boil it for ten minutes each time before it is used or dip it in a solution of carbolic acid and water, one to thirty.

Sore Eyes—Periodic Ophthalmia.—Have a horse that is troubled with sore eyes every three or four weeks. The white of eye becomes inflamed and eye ball seems dull. Our local Vet. treated him last spring and also treated one of my other horses. The last horse that had sore eyes recovered but the first one has been troubled every three or four weeks. J. R., Monroe, Mich.—A horse that suffers from periodic ophthalmia will perhaps never get well. However, it may not go blind for some time. When these attacks come on foment eyes with warm water two or three times a day, apply a saturated solution of boric acid, give 1 dr. iodide potassium and 2 drs. nitrate of potash at a dose in feed two or three times a day until the eyes brighten; also feed less grain and keep the bowels open.

Navicular Disease.—I have a 10-year-old mare that went lame for some time in left fore leg, then her lameness shifted to right. Rest seems to help her more than exercise and work. J. R. P., Jasper, Mich.—Blister coronet with red iodine mercury and lard every ten days—one part to eight of lard. The feet should be kept moist and try to have her shod by a good mechanic.

Slavering—Sharp, Uneven Teeth.—My seven-year-old horse slavers some and is not in a thrifty condition. What can be done for him? H. H. S., Postoria, Mich. Float off the sharp edges on outside of upper grinder teeth and the inside of lower rows and give him 1 dr. ground nuxvomica and ½ oz. ground gentian at a dose in feed three times a day.

LIVE STOCK NOTES.

William Lamprecht, of Nebraska, a prominent farmer and stock feeder, says that he has seen few seasons when there was less sickness among hogs. He attributes this partly to the unusually liberal supplies of old corn, but more largely to the exceptionally dry autumn, the weather having been fine, so that hogs have had dry places to sleep in. They have not been subjected to cold, wet days, which are so likely to produce sickness. Mr. Lamprecht states that the country around Bloomfield is pretty well stocked with hogs, and they are all thrifty, which gives the farmers the maximum output both as to numbers and weights. He says that cattle on feed are about the same in numbers as last year, and a great deal of corn has been put up for roughage, but farmers did not get a third of their usual hay crop, this forcing them to utilize all the roughage their farms produced.

It has been pretty well demonstrated recently that the big Chicago packers are in a position to put hogs much lower, and there has been a tremendous fall in values since the downward movement started, but the wisdom of a further break is doubted. Thousands of farmers who are feeding young hogs are watching market developments, uncertain as to whether to continue feeding or to market their stock without further delay. The country greatly needs a largely increased supply of matured hogs, and owners should be encouraged to feed their swine to maturity. The recent marketings have been all wanted, and it is going to take a considerable period to restore the pig crops to normal proportions, for the great increase in the population of the United States during the last ten years, as shown by the census, calls for far larger supplies of hogs than in the past.

The recent decline in prices for cattle in the Chicago market fell with especial force on the short-fed steers that have been fed for thirty to ninety days, placing plenty of steers below \$6 per 100 lbs. Killers claim that these warmed-up steers have cost as much on the hooks as steers that went at \$6@6.50, owing to lack of finish and lower dressing percentages. A difference of 3 per cent in dressing a steer making around 56 and the other 59 cuts makes a big figure in the cost on the hooks. Yearlings have been the last

to decline in price and the first to rally. At times a falling off in the feeder demand has thrown a great many steers of that class into killers' hands. During the week of the International Live Stock Exposition there was a great abundance of fancy beef cattle, lots of show cattle being sold.

Farmers all over the corn belt are cribbing corn more extensively than ever before, according to reliable advices, and enormous quantities of lumber have been used in building new cribs. Their incentive is found in the low prices that are being offered for the new corn crop, it being deemed wiser to crib corn and feed it more freely to stock than to sell around 35c a bushel. There is a shortage of hay and rough feed in the far west, but most sections have a superabundance of corn, and many farmers have decided to store their corn and buy feeder cattle later, as it is evident that vast numbers of short-fed cattle will be marketed this winter. Many old experienced stockmen will aim to market cattle after the first of March, acting on the belief that by that time most of the short-fed lots will be out of the way, and many have been waiting for further reductions in feeder prices. Country banks have loaned liberally to cattle feeders and have drawn heavily on their balances with Chicago banks.

Recently P. S. Johnson, of Michigan, marketed at Chicago a car load of prime 156-lb. wethers at \$4.50 per 100 lbs., for export to Bermuda, where it will be used for feeding the British army forces stationed there. These sheep were exceptionally choice and were bought as feeders last July, when they averaged 108 lbs.

Word comes from Gridley, Ill., that a good deal of new corn is being delivered there by farmers, not because of their willingness to sell, for they would greatly prefer to store the corn and feed it on the farm to cattle and hogs, but they are forced to sell the corn on account of lack of crib room. As in other parts of Illinois, much new crib room was built during the past summer, but those who did not enlarge their storage capacity find themselves short of crib room now. Most of the dealers in central Illinois are buying corn subject to moisture test, on account of so much of the new corn not being in suitable condition for storing in the elevators. If the farmer objects to selling under this condition, the grain dealer is usually willing to ship it for him, charging a small sum for handling, and let the farmer take what he can get in the Chicago markets. Farmers throughout that region realize fully the importance of feeding stock, and they would like to go into hog feeding more extensively, but not many stock hogs are offered on reasonable terms, and breeders are away up in price, owners usually not caring to sell prime brood sows.

Every year sees a more marked preference in the sheep markets of the country for lambs over sheep, and this is now much more noticeable than ever before. Occasionally there is a better outlet than usual for prime sheep, and whenever there is an export buying order extra heavy wethers are invariably called for, but the foreign outlet has long ceased to be of any especial importance, orders showing up but rarely. In the retail markets of the country nearly every buyer wants lamb meat, and sheepmen are learning to act accordingly. Lambs in western markets command an extremely large premium over the prices paid for sheep, with prime yearlings of light weight on the lamb order ranking next to lambs.

BREED SALES AT THE INTERNATIONAL.

Aberdeen-Angus.
The association sale of Aberdeen-Angus cattle held at the International, Nov. 30, sold 69 cattle for an average of \$126.01. Nineteen bulls sold for an average of \$154.68; 50 females averaged \$115.40. The top of the sale was \$485, paid for Proud Elmer 2d, by Thomas Broadfoot, Fergus, Montana.

Shorthorns.
The International sale of Shorthorns resulted in the sale of 47 head of breeding animals at an average of \$350. Thirty-three females averaged \$360, and 14 bulls averaged \$340. The top on females was \$1,230 paid for Miss Marshall, by F. W. Harding, Waukesha, Wis. The top on bulls was \$1,125 for Village Marshall, bought by E. M. Casares & Son, Argentina, South America.

Herefords.
Forty-two head of breeding animals were sold at the International Hereford sale at a general average of \$196.55. Twenty-one bulls sold at an average of \$222.38, and 21 females averaged \$170.71. The high price of the sale was \$660, paid by E. N. Casares & Son, Buenos Ayres, S. A. for the bull, Discourter.

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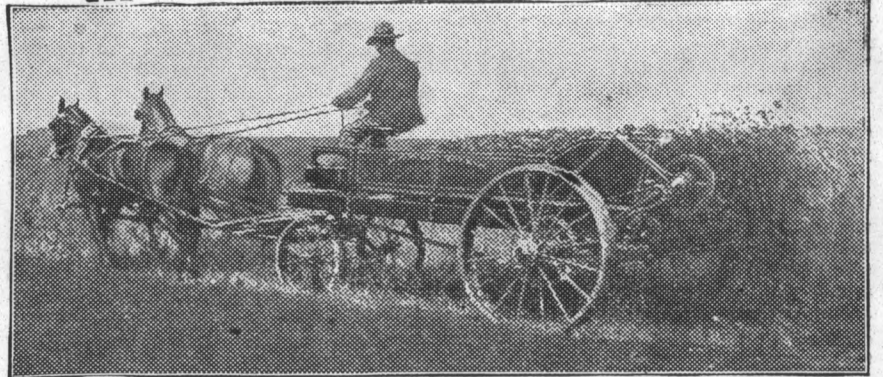
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POULTRY AND BEES

THE MENACE OF BEE DISEASES.

For some time the Department of Agriculture, at Washington, has been investigating a class of bee diseases which appears to be steadily gaining ground in many of the leading honey-producing states. The diseases referred to are the several varieties of foul brood, and the investigation developed the fact that they exist much more generally than had been anticipated, and this in the face of the fact that in a number of states laws designed to keep these diseases under control have been in force for some years. In Michigan a law providing for the inspection of apiaries has been in existence since 1901, the State Dairy and Food Department being charged with the supervision of the inspection work. Only recently the co-operation of individual beekeepers was urged by this department, to the end that the spread of foul brood in this state may be prevented.

The results of the investigation made by the Department of Agriculture, together with all essential information bearing on these diseases and their treatment, will be given to the public in a bulletin which should prove of extraordinary interest and value to beekeepers everywhere. A press notice of the forthcoming bulletin, which was issued by the Department last week, says:

The honey bee annually produces a crop of honey valued at around \$20,000,000, and there are vast opportunities for increasing this output. The most serious handicap to bee-keeping in the United States is the fact that there are contagious diseases which attack the brood of the honey bee. There are now recognized two such diseases, known as American foul brood and European foul brood. From data recently obtained by the United States Department of Agriculture, it is known that American foul brood exists in 232 counties in 37 states, and European foul brood in 160 counties in 24 states, and it is conservatively estimated that these diseases are causing a loss to the bee-keepers of the country of at least \$1,000,000 annually. This estimate is based on the probable value of the colonies which die, and the approximate loss of crop due to the weakened condition of diseased colonies. The states in which the diseases are most prevalent are California, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Missouri, Nebraska, New Jersey, New York, Ohio, Pennsylvania, Texas and Wisconsin, and it is unfortunate that these are the states in which honey production is most profitable, making the future outlook of the bee-keeping industry so much the worse, unless active measures are taken to control the diseases. Furthermore, the distribution of these diseases is by no means fully known, and they are constantly spreading.

The cause of American foul brood has been found by the Department to be a specific bacterium, and enough is known of the cause and nature of European foul brood, which is also a bacterial disease, to make it possible to issue reliable recommendations concerning treatment for both diseases. Both attack the developing brood, and as the adult bees die from old age or other causes the colony becomes depleted, since there are not enough young bees emerging to keep up the numbers. When the colony becomes weak, bees from other colonies enter to rob the honey and the infection is spread.

Both of these diseases can be controlled with comparative ease by the progressive bee-keeper, but the chief difficulty encountered in combating these diseases is the fact that the majority of beekeepers are unaware that such diseases exist; they therefore often attribute their losses to other sources, and nothing is done to prevent the spread of the infection. It is therefore necessary in most cases to point out the existence and nature of the diseases, as well as to spread information concerning the best methods of treatment. Several states have passed laws providing for the inspection of apiaries for disease, and the bee-keepers in other states are asking for the same protection, so that careless or ignorant beekeepers can be prevented from endangering their neighbors' bees. This inspection is a benefit in the spread of information concerning disease, in so far as the inspectors can cover the territory. The Department is helping in this work by sending out publications to beekeepers in infected regions, by examining samples of brood suspected of disease, and by send-

ing out information concerning the presence of disease, so that bee-keepers will be informed that their apiaries are in danger. The co-operation of agricultural colleges, state bee-keepers' associations, and other similar agencies is also being urged.

A TRIED SYSTEM OF FEEDING FOR EGGS.

The feeding question is deserving of considerable thought if we are to get eggs during the cold months. We all know there are lots of farmers who make no effort whatever to get eggs in winter when eggs are worth double what they are in the spring, and that a little intelligent effort at this time would mean money in their pockets.

I do not know that there is any one best method of feeding for winter eggs. There are numberless different systems advocated, and no doubt all of them have their good points. I like the method recommended by the Maine experiment station and follow it as closely as consistent. It has given me remarkably satisfactory results from my White Leghorns up to the present time.

I feed in the morning, just at daylight, or about the time the fowls leave the roosts, three quarts of whole corn for each 60 pullets, and at 10 to 10:30 o'clock, the same quantity of white oats. This grain is all fed in litter of oat straw which is six to eight inches deep on the floors. As most of the grain is immediately hidden in the straw, it is a pleasing sight to watch the pullets at work digging for the grains. This exercise starts their blood circulating, warming them up for the day, and is in my opinion a more rational way of accomplishing this end than stuffing their crops with a warm mash which tends to induce idleness. The second feeding might be made half wheat and half oats, or a portion of corn might be put in for cold weather feeding. A grain ration composed of two-thirds corn is all right for cold weather, but more than this will be apt to make the hens put on too much fat.

At noon I give them whatever green feed has been provided—cabbages, mangels, etc. A good-sized head of cabbage hung in a pen will last 60 pullets from one noon to the next, and it makes an excellent green feed.

The above is all the regular feeding my chickens get. I keep in each pen a hopper filled with a ground grain mixture, composed of 2 parts grain, 1 part middlings, 1 part corn meal, 1 part gluten meal, and 1/2 part old process meal, by weight. Beef scrap is kept before them in a hopper, all the time, also mealed alfalfa, the latter proving an excellent green feed. Then they always have grit, oyster shell and charcoal. Fresh water, with the chill removed, is given the first thing mornings, and renewed at noon during freezing weather.

I was a trifle skeptical when trying out this method of feeding, as it had always been my pet theory that fowls should have their crops filled with corn at night, but results have been exceedingly good and I find that they never go to roost with empty crops. They work like beavers all day in the litter, and have the dry mash to supplement their grain. They do not gorge themselves on the dry mash as might be supposed. While they like it, they seem to like the hard grains better.

This system can be varied to suit conditions. For instance, the morning feed can be thrown in the litter at night after the fowls have gone to roost. This would save the attendant getting out so early in the morning. The mid-morning feed might be fed at noon, thus saving one trip. I trap-nest the layers and consequently am obliged to visit the pens frequently anyway.

Oakland Co.

A. N. DEAN.

CHICKENS HAVE LEG WEAKNESS.

A Branch Co. subscriber writes that her chickens have weak legs, staggering and even falling down when trying to walk. The fowls are Brown Leghorns, a breed in which this trouble is not so common as in the heavier kinds. If there are only a few cases it is possible that the condition is due to the fowls injuring themselves in some way. Otherwise it is either rheumatism or the result of improper feeding, most likely the latter. An excess of starchy foods coupled with a lack of foods that are strong in mineral or ash constituents will produce this result. Reduce the grain allowance, cut out or greatly reduce the quantity of any other starchy food that may now have a place in the ration, and give your

chickens some meat scraps and a little green, cut bone, following directions given in recent issues of The Farmer in feeding these foods. They should also have access to a liberal supply of finely crushed oyster shells. If the fowls' legs are feverish and inclined to swell at the joints the trouble may be rheumatism, in which case put in a warm, dry place and rub the legs with carbolated vaseline.

PURE VS. MIXED BREEDS.

In poultry, as well as live stock of all kinds, I have always been a stickler for pure breeds and, in general, have thought the policy of crossing questionable, to say the least. This I still believe to be true in the main but there are exceptions which, under certain conditions, may be profitably followed. Personally, I have always been more interested in egg production than in raising poultry for the market, and this leads naturally to the question of the best breeds for either purpose. Nearly every poultry raiser, whether in the business for pleasure or profit, has his choice of breeds and in nine cases out of ten, he will succeed better with his favorite than with any other. So preference often becomes a patent factor in the problem and a point not to be ignored.

As stated above, my work has been chiefly along the line of egg production, and naturally my preferences have been for the Mediterranean breeds. I have considerable to do with the Asiatic and the Rock breeds, but for layers these are not in a class with the former. The single comb Brown Leghorn, as an all-seasons' layer is the best I have ever tried and, all in all, the most profitable as an egg producer. The oft-repeated objection of their wild nature I believe rests with the care-taker as much as with the hen. They are nervous I admit, but that is only natural and the best possible indication of their business qualifications. Naturally we do not look for very great layers in hens that have to be put onto the perch at night.

A Case of Advantageous Crossing.

But I started to say something of crossing breeds and wherein I thought it might sometimes be profitably done. For instance, I have depended more upon natural mothers than incubators, and for this purpose I have to go outside of my favorite breed to find the sitters. Occasionally I have found a Brown Leghorn that would take a notion to sit and hold down her job; but they are not dependable, so I have always sought elsewhere for help in this line. I have usually chosen Plymouth Rocks for this work, as they usually carry their undertakings, in this line at least, through to a finish. This induced me to try the expedient of crossing a pure Brown Leghorn cock upon pure Barred Rock hens for the purpose of getting sitters and to produce a heavier fowl for table use. The experiment, although successful as to both points, produced a mifty-maxy motley group, for I had everything that one could desire. Among the males, to the casual observer, there were excellent types of Plymouth Rocks and others closely resembling Silver Laced Wyandottes. These were all of good size and, as table fowls, superior to any of the large breeds I have ever tested. Among the pullets I had from coal black through various colors to those seemingly almost pure Leghorn. Among these were almost persistent layers, while others were just as fully given over to sitting.

So by the crossing I secured the three classes: sitters, layers and table fowls. While for family purposes this was successful for the purpose described, the ting eggs for hatching, it would not pay, in fact, would be an unwise undertaking. While I have found this plan quite successful, it is allowed to only a certain extent. The fowls are not kept separate but allowed to run together promiscuously. However, I am not troubled with crossing farther than is desired as no males other than pure-bred Brown Leghorns are kept during the hatching season, and the eggs of the crossbred hens are yellow while the Brown Leghorn are white. I would not recommend the plan for general use but only for a special purpose.

I have learned some of the ups and downs of poultry raising and, I believe, have solved some of the problems involved. There are profits in the business but, on the other hand, whole chapters might be written of the wrecks along the way. Many factors enter into the problems of breeding, feeding, marketing, etc., and in a future article I hope to have something to say regarding some of them.

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WHITE HOLLAND TURKEYS.

White Holland turkeys are supposed to have originated in Holland, from which country they have inherited their name. This is disputed by some modern writers. Certain it is that the White Hollands of this country are much larger and finer turkeys than those of Holland, which has been brought about, perhaps, by a dash of blood from white sports from the Bronze. The Standard calls for hens weighing 15 lbs. and toms 26 lbs. Many breeders have raised these weights to 24 and 40 lbs. respectively.

In sections where farms are small and crowded closely together, the White Hollands are especially adapted to the situation. They are much more domestic than the Bronze. They usually make their nests in, or close around the farm buildings, and are excellent mothers during the incubation season, being quiet and easily handled. When the poults are hatched they readily take to the fields, never loafing about the barnyard, and yet nearly always keeping within sight. With but little attention they are always at home at night. They are hardy and quick growers, and excellent layers. One of my yearling hens laid 50 eggs this season, besides hatching a brood of 24 poults from 25 eggs.

A flock of pure White Hollands, with their red heads and pink legs, is certainly a pretty sight, and a benefit to any farm as well as to the farmer's pocketbook.

Ohio. J. F. FETTER.

SELECTING BREEDERS FOR THE COMING YEAR.

In selecting breeders for a farm flock I would advise the buying of pure-bred fowls, but it is not well to lose sight of the fact that general utility points should be the first consideration. The returns as regards meat and egg production will be most satisfactory from breeding stock that is strong and vigorous, even though they may not be as perfectly feathered.

Many flocks of excellent general-purpose fowls have been ruined by the introduction of male birds from some fancier who has bred and developed fowls that were beautifully feathered but lacking in vigor and vitality as well as compactness. These males reduced the meat and egg production of the flocks. Their descendants were finely feathered but lacked in most other qualities that go to make up a good general utility fowl.

In buying male birds therefore great care should be used in selecting them. Get them of a breeder who gives attention to utility points. This is easily possible, as there are many breeders of poultry who keep this in view while developing their flocks. On the other hand, where a general-purpose flock is desired, there is danger in buying fowls from a flock that has been too highly bred and developed along meat or egg producing lines alone.

New York. W. MILTON KELLY.

MICHIGAN POULTRY SHOWS.

Dates thus far claimed by the various poultry organizations throughout the state, so far as we have been able to obtain them, are as follows:

- Holland, Ottawa Co., Dec. 15-21.
- Salem, Washtenaw Co., Dec. 20-23.
- Lansing, Central Michigan Poultry Association, Dec. 26-31.
- Vicksburg, Kalamazoo Co., Dec. 28-Jan. 1.
- Jackson, Jackson Co., Dec. 31-Jan. 5.
- Grand Ledge, Eaton Co., Jan. 2-7.
- Manistee, Manistee Co., Jan. 12-15.
- Kalamazoo, Kalamazoo Co., Jan. 10-14.
- Bay City, Bay Co., Jan. 23-28.
- Detroit, State Poultry Assn., Jan. 25-Feb. 1.
- Sturgis, St. Joseph Co., Feb. 1-6.

BOOK NOTICES.

Dumb Animals and How to Treat them. By E. K. Whitehead, of the Colorado Bureau of Child and Animal Protection. The work is made up of sensible reading, wise suggestions, many questions and observations. It is a work for the teacher, for the home, and for class use in fourth and upper grades. Illustrated, 144 pages. Cloth. Price, 50c. A. Flanagan Company, Chicago.

Nature Study for Higher Grammar Grades. By Horace H. Cummings, B. S., formerly Supervisor of Nature Study, State Normal School, University of Utah. The subjects treated cover a wide range of observation and experience, and an effort is made, in the eighth grade, especially, to develop the uses and methods of classifying knowledge. Cloth, 12mo, 274 pages, with illustrations. Price, 75c. American Book Company.

Practical Algebra—First Year Course. By Jos. V. Collins, Ph. D., Professor of Mathematics, State Normal School, Stevens Point, Wis. An extremely simple book for first year courses, omitting unessential, and treating everything essential. Cloth, 12mo, 301 pages. Price, 85c. American Book Company.

FREE PREMIUMS OFFERED

In addition to the offers on other pages.

These offers not good after January 1, 1911.

Description is necessarily brief on account of limited space. While these premiums are given free, they are not shoddy or worn, but are practical and good. We buy thousands of them and thereby get them at the lowest possible price.

A Class A Premium is given with a 1 year subscription at 75c, or 2 years at \$1.20. A Class B Premium, or two Class A Premiums are given with a three year's subscription at \$1.50, or a five year's subscription at \$2.00. We pay all postage, making the premiums absolutely free. We believe all premiums will carry safely thru regular mails. Those who desire premiums insured must send 10 cents extra.

Articles sent by express safely insured but subscriber pays charges. The additional value of the articles about equals the express charges.

Premiums must be ordered at the same time the paper is. No attention will be paid to requests such as "send me premium —, my subscription has already been sent in," or anything similar. It might take a day or two to look the subscriber's order up and it would be impossible to send the premium merely on a request. While we give them away, they cost money and we must follow good business principles. On the other hand, should a premium have been ordered and not sent we will immediately investigate and learn if it has been mailed, or if a premium is not as represented we will make it right. All the premiums are not mailed from our office but from the factory. We have no way of knowing if such are always as we describe them, but we will make it right. We take every precaution in packing and mailing premiums, and will not be responsible if they are miscarried or broken.

Class A.

No. 101, Double Purse.—Leather lined, blocked and welted, with double pockets. By mail.

No. 102, Bill Fold and Coin Purse.—One pocket for coins and separate fold for bills. By mail.

No. 198—Floral Post Cards. 32 in a set. Every one a different subject.

No. 109—Pen Knife.—Two razor steel blades with imitation pearl handle. By mail.

No. 120—Dominoes.—Double six set, black with white spots. By mail.

No. 124—One Silver-Plated Milk-Tube.—For sore teats. Three lengths, 2½, 3 or 3½ inches. Mention size. By mail.

No. 125—Teat Plug for hard milking cows or leaky teats. By mail.

No. 127—Farmer's Calculator.—Veterinary advice alone makes this valuable Book of farm record. By mail.

No. 128—A Stamping and Printing Set.—Type is ½ inch high, in outline. Eight colors of paints and brush. By mail.

No. 132—Composition Whetstone.—Fast cutting for all kinds of knives, scythes, etc. By mail.

No. 137—Fountain Pen.—Hard rubber, fancy chased barrel with two gold plated points. By mail.

No. 144—Magic Ruffler.—For any sewing machine. Slips on the foot in a minute's time. Gathers, shirrs or puffs all kinds of goods. By mail.

No. 145—Darnier for Sewing Machines.—Fits any sewing machine. Darns stockings, towels, underwear, making a smooth even darn. By mail.

No. 148—Gape Worm Extractor.—For removing gape worms from young chicks. By mail.

No. 155—Roger's Nickle Silver Teaspoons.—Genuine silver nickle teaspoons. Solid metal. No plating to wear off. Heavy weight. By mail.

No. 157—Perfection Cherry Seeder.—Stems and seeds at the same time. Does the work quickly and better than by hand. By mail.

No. 158—Silver Plated Napkin Ring.—Satin finish with fancy engraving. By mail.

No. 159—Patent Tension Shears.—Eight inches long, with patent adjustable spring bolt. Prevents the blades from spreading. By mail.

No. 160—Watch Fob.—Oxidized silver finish on hard white metal base. Black strap with a nickle buckle. By mail.

No. 161—Tobacco Pouch.—All leather with drawn strings and button fasteners. Will hold a good supply of tobacco. By mail.

No. 163—Duplex Poultry Marker.—For marking poultry by perforating the web of the foot. By mail.

No. 164—Cut Up Puzzle Map of North America.—Map is cut into irregular size and shape pieces which puzzles the children to get it together. By mail.

No. 166—New Reference Wall Chart.—Including world map and map of Michigan and many other attractive features. By mail.

No. 167—Rough and Ready Knife.—Two razor steel blades, ebony handle, strong and substantial. By mail.

No. 186—50 Tour of the World on Post Cards. By mail.

No. 190—50 Post Cards, "How Cook and Peary Discovered the North Pole."—By mail.

No. 192—"The Conquest of the North."—An authentic account of the finding of the North Pole by Peary and Cook. Biographies of each and short history of Arctic discovery. By mail.

No. 197—Farmer's Universal Account Book.—So simple and practical that every farmer can keep a complete record of his business. By mail.

No. 198—A Handsome Lace Scarf.—Nearly an exact reproduction of the genuine lace. Can be used as a cover or a small curtain for window. By mail.

No. 199—An Illustrated Story Book.—Something that will amuse and entertain the young folks. By mail.

Class B.

No. 104—Extra Deep Coin Purse.—Black kid leather, 3-inch, 3-ball nickle frame. One pocket is the size of an ordinary coin purse. By mail.

No. 105—Squaw Bag.—Colored oze leather with fringed end. Double strap handle. By mail.

No. 107—Ladies' Pocketbook.—Coin pocket, two extra pockets and card case pocket with a leather lining. By mail.

No. 123—Lock Stitch Sewing Awl.—With straight and curved needles. For harness, sack, canvas or any heavy sewing. By mail.

No. 134—Roman Gold Locket.—Holds one picture. Good quality. Guaranteed for five years. By mail.

No. 139—Rubber Holder Fountain Lead Pencil.—Extra leads are contained in the upper end of the barrel, which has a screw cap. By mail.

No. 143—Magic Ticker.—Fits any sewing machine. Is easily adjusted. By mail.

No. 149—French Poultry Killing Knife.—Of best instrument steel. Finely tempered and ground. By mail.

No. 151—Rolled Gold Cross.—With stone setting for ladies' neck chain. By mail.

No. 153—Ladies' Gold Shell Ring.—Will wear and look like solid gold. Made of 14 kt. solid gold, drawn over composition base. By mail.

No. 154—Gold Shell Band Ring.—For ladies or gentlemen, same quality as the ladies' ring. By mail.

No. 168—Gentlemen's Strap Wallet.—Made of genuine sheep skin leather, one drop pocket for bills, and three card pockets. By mail.

No. 177—Bon-Bon Dish of Silver Plate.—Quadruple silver plate. Full gold lined, crimped sides. By mail.

No. 180—Cook Book.—A very convenient size with white oil cloth cover which can be washed clean when soiled. By mail.

No. 147—Rolled Gold Link Cuff Buttons.—Roman gold finish. By mail.

Special Premiums For Clubs.

No. 169—Handsomely Dressed Doll. This is a beautiful dressed doll 16 inches tall, soft body with bisc head, open mouth showing teeth, moving eyes, floating hair with side curls. Fancy dress with blouse, streamers, removable shoes and stockings, ings, and trimmed hat. Pull a string and it says papa and mamma. Sent for a club of four subscriptions, for any length of time. Special Note.—Doll is sent securely packed, by express at the expense of the receiver.

No. 170—Outfit to Cure Milk Fever.—The outfit will protect you against loss. Save Veterinarian fees, and if used once will be worth the price of a valuable cow. Sent for nine subscriptions. By express.

No. 173—Wall Hat Rack.—The frame is made of pressed steel. Ormola gold finish baked on. Mirror in center, with six removable hooks. Sent for seven subscriptions. By express. If 11 subscriptions are sent we will prepay charges.

No. 174—Imported German Razor.—Best quality English razor steel. Ground by German grinders and imported by us. Sent for five subscriptions. By mail.

No. 175—Boy's Watch.—This is a good dependable watch and will last a long time, if not abused. Sent for only three subscriptions. By mail.

No. 176—Silver Berry Set.—These three pieces are quadruple silver plate, full gold lined and crimped sides. Sent for seven subscriptions. By express. If nine subscriptions are sent we will prepay charges.

No. 179—Moving Picture and Magic Lantern.—Machine stands 10½ inches high on a base 7x3½ inches. The body is made of polished blue steel, fitted with oil lamp and glass chimney. Sent for seven subscriptions. By express.

No. 181—Toilet Clippers.—Best quality, ¼-inch cut, concealed spring. Sent for five subscriptions. By mail.

No. 182—Fancy Gift Clock.—Reliable one-day movement, with alarm attachment. Given for eight subscriptions. By express. If 11 subscriptions are sent we will prepay charges.

No. 183—Post Card Album, 300 Cards.—Handsome black alligator grain paper cover. Title embossed in gold, reinforced binding. Stitched and stubbed to prevent bulging. Sent for five subscriptions. By express. If six subscriptions are sent, we prepay charges.

No. 195—Berry Spoon.—The same design and quality as the Wildwood teaspoons. Sent for \$2.18 with the Michigan Farmer for five years. By mail.

No. 200—Gasoline Blow Torch.—For any purpose where cheap, clean and intense heat is desired, either in hand work or bench. Free with four subscriptions to the Michigan Farmer. By mail.

No. 201—Combination Tool.—Can be used for ten different things. Very convenient, light and strong. Contains set of ten oil tempered, well finished, forged steel tools. Sent free for a club of three subscriptions. By mail.

For added premiums watch closely our paper each week.

PREMIUMS FOR CLUBS.

For each club of two subscriptions we will send you any one Class A premium. For each club of three subscriptions we will send you any one Class B or any two Class A premiums.

For each club of four subscriptions we will send you one Class A and one Class B premium.

For each club of five subscriptions we will send you any two Class B or any three Class A premiums.

The subscribers will also get their choice of premiums with their subscriptions as given above.

Your own subscription may be included in the club in which case you get premium with the subscription and also for the club.

Always mention Premium Number.

THE MICHIGAN FARMER, Detroit, Michigan.

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 \$1.85. If, for instance, 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.

If you want the MICHIGAN FARMER THREE YEARS and the other papers one year add 75c to the second column price. For the Michigan Farmer 5 years add \$1.25. We do not send samples of other papers. Address the publishers direct.

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

We will take your order for any publication you want whether it is or not. Write for rates.

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 three or five-year subscriber does not lose the advantage of the reduced price if he wants any other paper next year or the year after.

Subscriptions ordered to Canada require postage. Write for rates unless postage is known, in that case include with order. Postage on Michigan Farmer alone to Canada is 1 cent per week.

NAME OF PUBLICATION.	See explanation above.
Daily, (6 a Week.)	\$ \$ \$
Journal, Detroit, Mich on rural route	2 50 3 25 2 55
" " " off	5 00 5 00 4 75
Times, Detroit	2 00 2 50 1 75
News Grand Rapids, Mich.	2 00 2 00 1 50
Courier-Herald, Saginaw, Mich., (inc. Sunday) on R. R.	2 50 2 30 1 60
News, Cleveland, Ohio	2 00 2 60 1 85
Tribune, Bay City, Mich.	2 00 2 50 1 85
News-see, Toledo, Ohio	2 00 2 25 1 65
Tri-Weekly, (3 a Week.)	
World, New York, (3 a week)	1 00 1 45 75
Semi-Weekly, (2 a Week.)	
Journal, Detroit, Mich.	1 00 1 35 75
Weekly Newspapers and Current Comment	
Blade, Toledo, Ohio	1 00 1 05 35
Commoner, Wm J. Bryan, Editor, Lincoln, Neb.	1 00 1 35 65
Inter Ocean, Chicago (w)	1 00 1 10 75
Cattle, Sheep Swine, Poultry, etc.	
American Poultry Journal, Chicago (m)	50 1 05 35
American Poultry Advocate, Syracuse, N. Y. (m)	50 1 05 35
American Sheep Breeder, Chicago (m)	1 00 1 50 80
American Swineherd, Chicago, (m)	50 1 05 35
Breeders' Gazette, Chicago, (w)	1 75 1 65 1 00
Farm Poultry Boston, Mass. (s-m)	50 1 05 35
Gleanings in Bee Culture, Medina, O. (s-m)	1 00 1 45 75
Hoard's Dairyman, Fort Atkinson, Wis. (w)	1 00 1 45 1 00
Horse World, Buffalo, N. Y. (w)	2 00 2 00 1 50
Horseman, Chicago, (m)	2 00 2 80 1 60
Jersey Bulletin, Indianapolis, Ind. (w)	1 00 1 60 1 00
Kimball's Dairy Farmer, Waterloo, Ia. (s-m)	40 1 05 35
Poultry Keeper, Quincy, Ill. (m)	50 1 05 35
Poultry Success, Springfield, O. (m)	50 1 05 35
Reliable Poultry Journal, Quincy, Ill. (m)	50 1 05 35
Swine Breeder's Journal, Indianapolis, Ind. (s-m)	50 1 05 35
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American Magazine, (m)	1 00 1 70 95
Etude Philadelphia, Pa. (m)	1 50 1 70 1 00
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Metropolitan Magazine, N. Y. (m)	1 50 1 70 1 00
Mechanical Digest Grand Rapids (m)	50 80 25
McClure's Magazine, N. Y. (m)	1 50 1 80 1 50
Musician, Boston, Mass. (m)	1 50 1 80 1 10
Outing Magazine, N. Y. (m)	3 00 3 15 3 00
People's Home Journal, N. Y. (m)	50 1 00 30
Pearson's Magazine, New York (m)	1 50 1 50 1 50
Red Book Magazine, Chicago, Ill. (m)	1 50 2 05 1 25
Success, N. Y. (m)	1 00 1 50 80
Ladies' or Household.	
Designer, N. Y. (m)	75 1 30 60
Everyday Housekeeping, Salem, Mass. (m)	50 1 15 35
Harper's Bazar, N. Y. (m)	1 00 1 75 1 00
Housewife, N. Y. (m)	35 1 00 10
McCall's Magazine, N. Y. (m)	50 1 10 40
Mother's Mag., Elgin, Ill. (m)	50 1 10 50
Modern Presidia, Boston, Mass (m)	75 1 30 60
Pictorial Review N. Y. (m)	1 00 1 50 80
Woman's Home Companion, N. Y.	1 50 1 80 1 25
Religious and Juvenile.	
American Boy, Detroit, Mich. (m)	1 00 1 40 75
Little Folks, Salem, Mass. (m)	1 00 1 50 1 00
Sunday School Times, Philadelphia, Pa. (w)	1 00 1 55 85
Young People's Weekly, Elgin, Ill. (w)	75 1 20 75

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

FREE 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.

The above second column combination prices will advance 25 cents after Jan. 1, 1911.

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Avoid further trouble, by refusing to subscribe for any farm paper which does not print, in each issue, a definite guarantee to stop on expiration of subscription.
 The Lawrence Pub. Co.,
 Detroit, Mich.

DETROIT, DEC. 17, 1910.

CURRENT COMMENT.

The annual report of Secretary Wilson's the Secretary of Agriculture is always Report. anticipated with a great deal of interest by business men as well as farmers, owing to the fact that it is an index to the prosperity of the country. Secretary Wilson's report for the current year, which was made public on December 8, was anticipated more eagerly than any similar document in recent years for the reason that business conditions in the country are somewhat unsettled and because men who are generally recognized as authorities on business conditions have been making pessimistic prophecies regarding the future. But so far as the financial prosperity of our basic industry is concerned, this report would seem to be of such a character as to settle all doubts and misgivings. Commenting upon the value of the crops of the country for 1910, Secretary Wilson well says that "nothing short of omniscience can grasp their value," which, in round numbers, is given as \$8,926,000,000. According to this report the increase in the value of the country's farm products during the past decade has been progressive without interruption for a single year. If the value of the farm products in 1899 were placed at 100, the value of the crops for 1910 would be 189, or almost double the value for the census year eleven years ago, and during this period of unexampled agricultural production, a period of twelve years, during which the farmers of this country have steadily advanced in prosperity and wealth and in economic independence, in intelligence, and a knowledge of agriculture, the total value of farm products is \$79,000,000,000. Taken by crops, the production and value of the staples produced by the farmers of this country is still almost beyond comprehension. The corn crop of the present year which is estimated at 3,121,381,000 bushels, exceeds the record crop of 1906, and is greater than the average crop of the preceding five years by 14 per cent, and while its value is below that of the crops of 1908-9, owing to a decrease in the market price, its aggregate value, which is estimated at little if any short of \$1,500,000,000, is still beyond the comprehension of the average mind. It is a sum sufficient to pay the interest-bearing debt of the nation, buy all the gold and silver mined in the world last year and

still leave a balance on the right side of the ledger.

The value of the hay crop is estimated at \$720,000,000, an amount which is 13 per cent above the average for the past five years and which has been exceeded in only one year, 1907.

The total production of wheat, including both spring and winter varieties, is placed at 691,767,000 bushels, which is about an average crop for the past five years, but the value of the crop, which is placed at \$625,000,000, is 7.6 per cent above the five-year average.

The oat crop for the current year is estimated at 1,096,396,000 bushels, or 22 per cent greater than the average for the past five years. The value of the crop is placed at \$380,000,000, which is 12 per cent above the five-year average.

Next in order of relative value is the potato crop, which is estimated at 328,787,000 bushels, or eight per cent above the average crop for the past five years.

Other crops have been about normal, with the majority of them going slightly above the five-year average, and a few, notably flaxseed, falling off badly. But in no previous year has the production of cereal crops as a whole, been so large as this year, when they reached a grand total of 5,140,896,000 bushels, an amount which is 13 per cent above the five-year average. The value of this immense crop, while \$230,000,000 below the value of cereals produced in 1909 and \$50,000,000 below the value of the crop for 1908, is still 11 per cent above the average value for the past five years.

The comparisons of the value of different classes of products for 1910 with those for 1909 are also interesting. The report says: "The farm value of the cereal crops declined \$230,000,000 in 1910 from 1909 and the value of all crops declined \$119,000,000. A gain was made, however, in the value of animal products amounting to \$424,000,000. It has been a year of high prices for meat and animals, for poultry and eggs, and for milk and butter, and for these reasons the total value of all farm products increased in 1910 \$304,000,000 above the estimate for 1909."

With the products of the farms of the country given an increased valuation of more than \$300,000,000 above the value of the same products for 1909, it would not appear that there is any valid reason for our farmers to be pessimistic regarding the immediate future, and with the urban population of the country increasing even more rapidly than the production of our farms there is every reason for confidence in the future of the country's greatest industry.

Under this head The Farmer's Share of Secretary Wilson's report contains some very Consumer's Prices.

interesting information, which is the result of investigations conducted by the Department of Agriculture. This information bears upon the question of the high cost of living, which has been agitating the country during the past year as never before. As before noted in these columns there is a very general impression among consumers that the farmers of the country are getting exorbitant prices for their products. This is a very natural conclusion, since they are compelled to pay high prices for the farmer's products when purchased in small quantities at the corner grocery. They fail to figure on the excessive cost of distribution under present conditions, but the general publication of the figures given in this report should enlighten them in this regard. Those figures will also prove of interest to the producers, who realize that they are not receiving as large a proportion of the consumer's dollar as they should, just as fully as those who consume their products realize that their dollars do not go as far in the purchase of the necessities of life as they wish they might. If the investigations of the Department along this line inspire both producers and consumers to cooperate in the sale and purchase of those necessities they will be productive of results of incalculable value. But this is probably too much to expect, and even if the public attention is directed toward the conditions which now exist in the distribution of farm products a vast amount of good will result, for when public thought is once earnestly directed along any line, beneficial results are, sooner or later, sure to follow. The report says:

In the farmer's aspect of the matter he receives various percentages of the consumer's prices for farm products. In the case of milk, 78 cities distributed throughout the United States where the subject (Continued on page 547).

Subscriptions Expiring After January 1, 1911

Subscribers whose time expires after January 1, 1911, (no matter when), will be given the benefit of our present subscription prices, providing their renewal orders reach us before January 1, 1911. But no orders, either new or renewal, will be accepted at the present rates after that date.

We advise those who can conveniently do so to send their renewal orders now and the subscriptions will be extended from their present date.

For only \$2 we will extend your subscription for five years or longer at the same rate, (the most liberal offer made by any publication), so that the advance to \$1 per year to be made January 1, 1911, will not affect you for five years to come. It will be an investment that will pay for itself many times over and at the same time save you the trouble of renewing each year.

Kindly tell your friends and neighbors of our present offers and get them to order with you. Also tell them about the free premiums.

ANSWERS TO SUBSCRIBERS' AND AGENTS' QUESTIONS.

Premiums for Small Clubs.

If a club is raised for a premium, such as a boy's watch, chair, or anything else offered, each subscriber is entitled to one of the free premiums we offer, and the sender gets the premium for the club. He also gets a free premium with his subscription if it is one of the club. All subscriptions must be paid for at full subscription price.

Agents and the Gold Specials.

Agents, are you working for some of that \$200.00 in gold we are offering? This is only for December work. There are 25 prizes. The top prize is \$50.00. Do you want it? It will require some work, but that is expected. The gold specials, however, are in addition to all the commission, etc.. The specials go to those who make the most in commissions. Write for particulars if you haven't them already.

When Premiums Are Not Sent.

Premiums will not be sent unless the subscriber asks for it when he sends his order for the paper. We cannot pay any attention to a request for a premium when the subscriber writes he sent his order before and wants a premium now. We cannot refer back even one day. We get hundreds of letters and orders a day, too many to look through. We may know the order was sent in by the change of his date, but that would not assist us much in finding his order, which we would have to do. The premiums are free with the subscription only when the premium and subscription are ordered at the same time.

Subscribers' Club Rates.

No subscriptions must be taken by agents or club raisers at less than the regular price. However, when subscribers desire to raise small clubs of five or more in their immediate neighborhood they may do so, and deduct 10 per cent from the regular price of the Michigan Farmer to pay expense charged, or if they prefer they may choose some of the special premiums offered for small clubs. See this issue. No discount is allowed for papers clubbed with the Michigan Farmer. The ten per cent can be taken only when they send clubs of five or more at one time. Each subscriber is entitled to his choice of a free premium according to the time he subscribes for. See list of free premiums given in this issue.

Insured Delivery of Premium.

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The tendency to put things off until a more convenient time, is quite general. In some cases this means that it has not

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A Special Christmas Present.

As a special Christmas present and as an inducement to get orders in early, we will send free to all subscribers whose orders are mailed to us between the dates of Dec. 16, and Dec. 25, a copy of Concrete Construction on the Farm. This small book contains illustrations and instructions for building foundations, silos, walks, floors bridges, cisterns, culverts, posts, tile, drains, etc., or one of our Farmer's Pocket Account Books. This is a small book of 72 pages with seven pages of general information. Pages are suitably ruled for daily egg record, hired help time table, field and crop records, also purchases, sales and individual accounts, with instructions how to keep them. Mention which one you want. It will be sent postage paid, providing your order is mailed before Christmas, Dec. 25. Sent only when asked for.

We wish you a Merry Christmas and a Happy New Year.

YOUR MONEY!

The money you spend for reading matter. Is it well invested? Do you read what you pay for? These are pertinent questions. Answer them to yourself then act on your convictions. No person can profitably put money into publications they or some member of their family do not read. While this is a matter for your own judgment we believe from the many who tell us, and our agents, they are taking more papers than they can read, that a word of caution just now might not be amiss. A farmers' trade paper, and such a good farm paper is, should be carefully considered before ordering. Influence of others, that is, the advice of agents or others, to subscribe for a paper you believe neither yourself or your family can get good value out of, should be turned down and only those you are quite sure will be read, and good derived from, should be subscribed for. Papers you are solicited to sign for, offered without a payment down, should be refused. Some time you will have to pay for it, and it goes to make up the list you have no time or inclination to read. Your farm paper reading should be your first consideration. It should be a paper you can depend upon for suggestions which will help you in your chosen work. The one which gives reliable matter for thought regarding the farm, the garden, your stock and fruit, combined with good substantial, uplifting reading for the home, such a paper you will have to buy and pay for, but as a rule, it is operated along strictly business principles, is original in matter, employs the best correspondents, contains reliable advertisements and stops when the time is up to which it is paid. A few other publications, those of a special nature on subjects you or your family are especially interested in should, with the local paper, comprise the extent of your reading, the superfluous publications not read should be ordered stopped and the money saved.

EXPLANATION OF DATES.

1Jan1—1Jan2, Etc.

When "1Jan1" appears on the name tab on your paper, it means that your subscription will expire Jan. 1, 1911, and that the last paper you will get will be the last issue in December of this year unless you renew your subscription. 1Jan2 indicates that your subscription will expire one year later. 1Feb1 means that your paper will stop with the last issue in January, 1911, etc. The number following the month on the date tab is simply the last figure in the year when the expiration occurs, and the subscription expires with the last issue of the month previous to the one appearing on the name tab in each case throughout the entire list of dates.

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION



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

THE GATES OF BAKAPPLEIN—By Elizabeth Jewett Brown and Susan Jewett Howe

Chapter I.—Ned and Merle Jackson.

The death of Edward Jackson would have produced no great change in the lives of his two children, Edward and Merle, if it had not been coupled with the entire loss of their little fortune. He had always been rather an impersonal factor to them, one whom they saw but for a few moments at a time, and who stood more in the relation of a benevolent banker who supplied them with plenty of money and asked no questions as to how they spent their allowances, than he did in the line of a personal father whose interests were inseparable from theirs; accordingly they had never given the subject of their finances any serious thought whatever until the lawyer's announcement that their father's sudden death had been hastened by the shock of learning that all his money, as well as theirs, which had come to them from their mother, had been lost in a final desperate venture whereby he had staked everything and—lost.

After the first shock was over and they had time to think calmly of their future, the daughter, Merle, who was at a private school, was obliged to make the first move, for her brother seemed utterly incapable of planning or devising anything whereby they could make their own way in the world. His letters to her were vague and unsatisfactory. He was really glad to be able to leave the preparatory school where he was idling away his last year. He hated study, and his head was full of great ideas as to what he could do, when once free from the irksome routine of school life. The loss of the fortune was a far greater blow to him than the death of his father; and the bare thought that perhaps he might have to work for a living was so repugnant that he would not even consider it. He was a gentleman and he did not doubt but that he would soon make a fortune in some gentlemanly way when once away from school. Thus his letters ran, and when she suggested that they write to their only relative, their cousin, Searls Jackson, who lived on a fine old farm not many miles from Boston, he had agreed. In his early boyhood he had spent many vacations on the ancestral farm, and though he had really no great affection for his stern cousin, yet he knew they would have a home and welcome there, and he did not doubt but that his cousin would help him carry out the schemes which were already formulating in his brain whereby he could make money without earning it. So two weeks after their father's death Merle sent the following letter:

"We do not know anything about earning our own living, Cousin Searls. And we do not know you very well either, as it is fully four years since Ned was at the farm and six or seven since I was there. But I am writing to ask if you will not invite us to the old place this summer as we must go somewhere, and I can think of no other spot in the world which could be a home to us but the farm where our father was born.

"You know how we have been brought up and how we have always lived. In looking back I have no very distinct recollections of any home life, and neither of us ever knew our parents intimately. Mother was always too busy with society and father with his business to bother with us. A hotel apartment is never a home, for it was always nurses and maids there; and teachers at boarding school the rest of the time, and now I am positively longing to get into a real home for the first time in my life. Ned is indifferent as to where we go. Your home will suit him, I know, and that is the reason I am writing this letter to you, for now we are all alone in the world.

"Since mother's death, two years ago,

we have seen very little of father. He seemed to bury himself completely in his business and we had no idea he was failing in health. We supposed, at least I did, that it was as much a business trip as anything which took him to Arizona, for I knew that his salary as superintendent continued while he was there; but the lawyer writes that after everything is paid—the bills and expenses I mean—we will not have anything at all for it seems, as the enclosed letter will

frankly he is only killing time. He is nineteen and I wish you would ask us both there and set us to work. He must work; he is a spoiled boy, always good natured and jolly folks, ready for anything that is fun, but he never yet earned a penny, and I am ashamed to say that I do not believe that he knows how to earn anything. I heard a lecture once about the market value of a person, and lately I have been thinking that neither Ned nor myself have any market value.

Christmas in the Old Home.

By Dora H. Stockman.

"Come, fill up the wood-box, Father,
And make the big stoves roar,
While I light the lamps, and brew the tea,
Heap the plates from the pantry store.
For children and grandchildren, and great-grandson,
Will very soon be here
To spend Christmas Eve in the old farm home—
All our family together this year."

The sleigh-bells rang the Christmas chimes
As the load drew up at the door,
A merry, laughing, shouting crowd
Made the rooms re-echo once more.
Mother's eyes were soft with the old light,
On her cheeks was the bloom of the rose,
As she bustled about, pulling mittens and scarfs,
Patting cheeks and warming small toes.

Then such a supper! Roast pork and mince pies,
Doughnuts, cookies and cake,
And all those dainty turn-overs and tarts,
That a grandmother knows how to make.
After the supper a wonderful tree,
Decked with pop-corn and apples red,
And loaded with heaps of presents
From a bon-bon box to a sled.

Such talking and laughing together
In the jolliest, merriest way,
Till small tired heads, grown sleepy,
Were in trundle-beds tucked away,
And the sons and daughters gathered
Around the low fire to hear
Father tell, "how Bird, the horse, had died,
And the crops turned out this year."

It was late that night when Mother
And Father dozed away,
Dreaming of days when the "boys and girls"
Were children again at play,
And Father for Santa was building
A marvelous home-made sled,
And Mother listened to childish prayers
As she put wee ones into bed.

That golden circle is broken now,
The children are scattered far;
And Mother has passed through the Shining Gate
Where the Christmas glories are;
Yet those happy, blessed, memories
Will live in our hearts for aye
Till together we meet in that beautiful house
Where 'tis always Christmas Day.

show you, he risked everything on a final throw and lost. Poor father.

"Mother, you know, was an aristocratic Hill; and as she had a life income from her family estate she was able to keep her place in society, her's and father's, and educate us; since then, father's salary has kept us in school; but now we will both have to leave. I am not sorry on my account, for I have taken a post graduate course here this year, mostly because I had no other place to go. As for Ned, he hates discipline and I can say

I have half-learned lots of things, but I do not know how to do one thing well, that is, well enough to get money by doing it. I remember that when you wrote us of your marriage to Nell Beverly you said that you and she had adopted a little girl, who must now be about three years old. I know that children need nurse-maids and I honestly believe, if you will let me come, Cousin Searls, that I can earn my living taking care of the baby.

"I never yet had a real baby to play with and I do, hope you will invite us to

come there and then give me the chance to take care of her; though I do not suppose she is exactly a baby now, for I remember you wrote that she was about two when you adopted her. And her name, Yvonne, appeals to me strongly. I remember meeting my new cousin, Nell, years ago, and I have also pleasant recollections of her brothers and sisters, and her home, 'Old Beverly,' whose lands join yours. I am sure that when you show her this letter she will say, 'yes, if you are willing;' and I am very hopeful that as your hearts were big enough to adopt a little orphan, they are large enough to give two big orphans a chance, who must make their own way in the world and do not know how. I want Ned to be with me, too. I think I can influence him for good, and I do want him to get over his foolish notions of his own importance and be willing to work at anything he can get to do. He is smart enough to do most anything, and that is the reason he has always been such an indifferent scholar. He is glad enough to get away from school, and he is really glad that now he is not obliged to go to college. He has big ideas about making his own way in the world, though I doubt very much if he will ever make anything but mistakes until he learns how to do something that is worth while. But he knows, as well as I, that at Easter we will each have to leave school, so I am hoping to come to West Winthrop where we can earn our board at least.

"Father once said that he had sold his birthright in the estate for a mess of pottage. And he also said that he hoped his children would return to the old farm; that there was nothing like out-of-door life to develop the best there was in a man, and I think that is what we both need—life in the country and a home with our own kin."

And so they had come to West Winthrop at Easter, to the home of their ancestors, the large old colonial mansion which yet bore the same name it had for two hundred years—The Jackson Stand—when it had been known far and wide as a famous hostelry of the olden time, standing as it did on the broad turnpike leading from Boston to other large towns of that day. Though its glories as an inn had long since departed, it was still locally famous as the oldest and handsomest house of colonial architecture in the country. The estate, consisting of more than a thousand acres of cultivated, timber and sprout land, was also one of the finest farms in the country, and for generations the Jackson family had maintained more style than did any of their neighbors. The house stood a little back from the road in the midst of a large, well-kept lawn where grand old shade trees arched the circular driveways, casting their grateful shadows over velvety green in summer and the delicate tracery of bare leafless branches over the frozen snowy ground of winter. It seemed to stand apart in dignified, stately exclusiveness from the frivolous modern residences, though its wide, heavily pillared porch extended a hospitable welcome to all comers, and its many windows glowed with light from the western sun, for the house faced the westward, looking across the fertile fields and meadows as if searching for the Little river which flowed at the foot of the long westward slope between the lands of Beverly and Jackson.

As such it seemed to Ned and Merle Jackson when their cousin drove up the winding driveway under the arching elms, just as the setting sun was turning every pane to ruddy gold, and the very walls seemed to vibrate with the welcome which was awaiting them from their cousin's wife, who, with the little girl, stood in

the full glow of the sunset to welcome them to their ancestral home.

It was so good to have a home at last that even Ned came under its influence at once. He was proud of being a Jackson, and he felt as if he belonged there as much as did his cousin, either forgetting or ignoring the fact that his father had sold his birthright in the old farm years ago, and that he and his sister were there only through the kindness and hospitality of his cousin and his wife.

Their cousin Searls was a successful farmer and business man. The farm was in charge of a capable manager, Ben Baker, and his wife, Mary, the latter acting as housekeeper, but who had been in reality the head of the house for many years before Searls' marriage. Both Ned and Merle remembered them well, and, while they were glad to see Merle, neither had a good word for Ned who had developed from a teasing boy into a foppish young man who felt immeasurably above everyone who was obliged to work for a living, although he tried hard to conceal his snobbishness when his cousin, in order to help him to help himself, had offered him light work on the farm at better wages than he could earn anywhere else, for he was absolutely incapable of doing anything well enough to earn his own living. He detested indoor work of any kind; what he really desired was a chance to buy and sell. He was naturally shrewd, and if he had been brought up differently he would have made a good peddler, but as his cousin failed to appreciate his high-flown schemes of getting rich without work, Ned was obliged to accept his offer, though he essayed to treat his employment on the farm as a joke. In a few days he began doing light team work, for he had all the Jackson love of horses and was really ashamed of being dependent upon his cousin for support.

Merle had fallen into the new life easily. Her new cousin had taken her into her heart as well as her home, and the girl was the happiest she had ever been. Little Yvonne was a constant joy, and Merle began to learn to do light tasks around the house, though Mary Baker's autocracy prevented her from learning as much as she would have liked to learn about cooking and housekeeping. The good woman had resented Searls bringing a wife to the domain. She had reigned so long, during the lifetime of his invalid mother and also afterwards when he was alone, but the new Mrs. Jackson had managed the domestic wheels so tactfully, that there had been no friction and Mary still ruled triumphantly over the kitchen and bossed the men who ate at her table. Ned affected to despise the neighborhood, though he good-naturedly mingled with them and with the help on the farm. There was Old Joe Green, a day man, whose gossip kept everybody informed about what everybody else was doing; Young Joe, his son, who, like his father, worked on the place by the day. Jimmy Malley and Raymond Carver two other young men, who with Ben Baker lived on the farm and ate in the kitchen. And then as neighbor, there was Manning Beverly, Nell's brother, who lived on the Old Beverly homestead. He was somewhat older than Ned and, as he had recently lost his wife, he was making his way alone the best he could with his old grandfather, who helped look after the house and home when he failed in securing proper help, for his young wife's death had left him with a tiny daughter, Baby Nell.

And so there was plenty of work for Ned to do. And, although Searls had said nothing about the boy's financial straits, after the first novelty wore off Ned began to feel angry and humiliated about being expected to keep proper hours the same as the other men on the place. It was irksome and he chafed at the fact that he, a Jackson like Searls, should be obliged to work, when Searls did none of the actual labor himself. He was a member of the legislature and his time was fully occupied by many duties. Having given Ned the best chance he could, he dismissed him from his mind, thinking that if left alone he would soon be glad of the chance he was giving him by helping him to help himself.

Chapter II.—At the Jackson Homestead.

"If folks have got to die I don't see why they can't take a convenient season for it when the spring work ain't rushin'," growled Mary Baker as she stood impatiently on the piazza early in the morning waiting for Raymond to come from the barn with the horse and carriage. "Here it is Wednesday, and baking day, and I have to be gone all day," she continued sourly, "and Ben needs all

his time here, too; it's a pretty time for folks to up and die, I say."

"You talk as if this second cousin of yours had died for mere pleasure," laughed Merle. "Don't fret, Mary. I fancy that I have learned enough about housework in these two or three weeks so that I can help Nell get dinner."

"I doubt it," she answered glumly. "I don't like to have folks pattering around my kitchen, on baking days especially. Now if this funeral could have been put off till tomorrow I could have gone as well as not. I thought of 'fome-in over and askin' them if they couldn't postpone it, but land sakes, they are in another division and I couldn't stand the quarter, when like as not they wouldn't have done it."

"But who ever heard of postponing a funeral?" asked Merle in astonishment.

"Nobody, as far as I know, but it could be done I should think. Ben is as upset as I be. We wont get back till after dark. I know them Shelleys—allus behind in everything. But what gets me is havin' to go as a mourner when I never could bear her when she was livin'. It goes agin' my conscience to use folks decent dead when I despised 'em alive. It's bein' a hypocrite I say, but when they are dead you have to go anyway. If that boy don't come with that hoss soon we will never get started."

"He is coming now," said her husband, as he came out, red and uncomfortable in his store clothes. "I wish Mr. Jackson was here today; I would feel more easy in my mind about goin' away. Old Joe Green ain't here today neither, and with nobody to look after things but them three boys it ain't very pleasant goin' away, I can tell you."

"Can't you trust me for one day, Ben?" asked Nell laughingly. "I don't believe the boys will burn things up, so go away and forget about the place for awhile. I can look after the work all right."

"You could," he admitted, "if it wan't for Ned. He won't do one thing if I ain't watchin' him. When he gets back with that load of fertilizer I want him to put it just where I said."

"If he ever does get back," snapped his wife as she climbed the carriage. "I never saw such a feller as he is to get started. He come back three times after somethin', and when he went away he looked like a dude with his white collar and shiny shoes. His brains are in his heels and I told him so. He is nothin' but Trot Back Jackson all the time."

"If those folks were not such good workers I would tell them what I think of them," cried Merle indignantly as they drove away. "They do not seem to think that anybody can do a thing out themselves. I wish they would not scold about Ned all the time, but he likes to provoke them and I can't help it."

"They are not common 'help;' they are more than that, for they could not work harder or take more interest if they owned the farm. Sometimes I think they are interest and principal both," observed Nell. "They have been a great help to me since I have been helping Manning, for they do not wish him to rent the farm any more than I do. And, since Searls became so engrossed in politics I believe that Ben takes more interest here than he does," she sighed unconsciously. "I wish the office bee had never buzzed around his head."

"I don't know as I do, for when he is governor how proud we will all be," laughed Merle. "Then Mary Baker will 'fome over' for sure to those Shelleys, even if it does cost a quarter. She wanted to slap Ned yesterday when he asked her what kind of foam she found on a telephone."

"Yvonne has got Barb'ry," said a small voice behind them and the child appeared in her little nightgown hugging a bantam hen in her arms. "Yvonne took Barb'ry to bed with her," she explained unconcernedly.

"You did not," reproved Merle. "I put you to bed myself and you did not have Barb'ry then."

"Neddy put Barb'ry in a basket in the corner and put the lid on when it got dark," she continued seriously, "then he took her out and she roosted on a chair. Barb'ry wants some bek'fus."

"Yvonne should say 'I always,'" corrected Nell gently, "and she was a naughty baby to take Barbara, to bed with her and hide her from Merle. Put her down on the walk now, and then you can feed her some corn later."

The child reluctantly released the hen and trotted back into the house, when a big dog came rushing up the walk, frightening the hen so that she flew into the crotch of one of the nearest shade trees,

where she cackled wildly, causing the child to scream in terror and plead for her pet to be taken down.

Merle hurried away with the dog, and Nell, bringing a piazza chair, mounted it and tried to reach the still fluttering hen. The child was still crying and, making a desperate effort, Nell caught hold of the frightened bantam but in so doing overbalanced the chair and fell heavily to the ground, painfully wrenching one ankle besides striking her head against a stone. When Merle returned she found her sitting disconsolately trying to fight down the pain and wholly unable to rise.

"See what has happened," she said, "and as usual, Barbara is at the bottom of it, Barbara and Buster. I know how the hen came here, but how did Buster get loose?"

"I don't think Ned chained him at all

ORIGIN OF PRESENT-DAY CHRISTMAS FORMS AND CUSTOMS.

BY M. Y. M.

Have you ever wondered about the origin of Christmas and of the numerous customs connected with it. Many queries arise when we recall the various modes of celebrating the day.

Many of the modern Christmas ceremonies are taken from the old pagan forms, like those of the Saturnalia, the Druids, the ancient Scandinavians and Germans. These forms were in existence long before the Christian era, and in the endeavor to replace such pagan fetes with those of Christian significance, without too great irritation, some of the less harmful customs were incorporated, and to this day are followed.

Christmas is supposed to have been observed first in the year 98 A. D. Pope Telesphorus ordered it as a solemn feast in 137 A. D. However, the first absolute certainty of its celebration dates no earlier than 140 A. D. It was celebrated in our country first by the early Dutch settlers in New York, or New Amsterdam, as it was then called. The Puritans considered such celebrations the height of folly, paganistic, in fact, and partaking of Roman Catholic rites, and their families were forbidden to countenance them in any way. There are records of the punishment of young men who did not work on this day during the governorship of Bradford, and in 1659 the General Court of Massachusetts forbade its observance. This act was repealed in 1681, greatly against the wishes of the old Puritans, who continued to work against it, these objections continuing in greater or less degree until the beginning of the 19th Century, since which time the day has been universally celebrated throughout the country, being now a legal holiday in every state.

The greeting "Merrie Christmas," originated in England. The spelling of the word in the old Saxon form, "Merrie," instead of the later "Merry," meant agreeable or pleasant, rather than gleeful. Shortening the word "Christmas" to "Xmas" came about simply enough. X is the Greek letter Ch, being therefore an abbreviation of Christ.

Use of Holiday Greenery Adopted from Pagan Celebrations.

There are something like one hundred and fifty varieties of holly grown in various parts of the world, so that almost every country has its holly for use during the holiday season. It and the mistletoe were used in the pagan celebrations, and were incorporated by the early Christians in their festivities as a harmless usage of those of other days. Holly is supposed to have been the bush from which Jehovah appeared to Moses. The Druids especially prized mistletoe which grew upon an oak tree. During their winter solstice it was gathered and hung over their doors as an assurance to the gods of the forest of shelter from the cold.

While recognized authorities give no credence to the tale, there is in existence an old Celtic legend which states that the mistletoe was formerly a tree, but its wood was utilized for the cross upon which the Savior was crucified, and ever since that time it has been relegated to parasitic growth. It is most frequently found upon apple trees, but also grows upon pear, hawthorn, poplar, evergreens and very rarely upon oaks. It is evergreen itself, and usually about four feet long with many branches and leaves, the latter growing upward or downward as the case may be. The white berries seen upon its branches are not found until the plant is at least four years old, although it blossoms each year. The variety in

this morning," Merle explained. "I know that he fed him and the dog was loose when he went away. I think he tried to follow Ben and they must have sent him back."

"Another of his careless ways and some more of Yvonne's naughtiness; together they have used me up for this day. Now if you will help me into the house I will try and see how many bones I have broken," she said with a forced smile as, leaning heavily on the girl's arm, she limped into the sitting room.

It was over an hour before Merle could find time to go back to the kitchen and attend to the work. Nell's accident had totally prevented her from stepping on her foot again that day; besides the blow on her head had made her ill. Consequently, after an ineffectual effort to sit up, she had been obliged to lie down and (Continued on page 542).

this country is unlike that in Europe or other foreign lands.

In cold climates some form of evergreen tree must of necessity provide the Christmas tree, and the custom is consequently followed in every country where such celebrations are carried out. The fir seems to have precedence over the pine, spruce or hemlock, probably because it was the tree mentioned in the German legend. The story goes that while Saint Winfrid was cutting down a sacred oak of the Druids, the wind split it in four pieces, while behind it rose a beautiful young fir tree with its green spire pointing to the heavens. He named it the Christ-child tree, and considered it a sign of everlasting life because of its evergreen character, asking the people to gather about it in their homes where it was to shelter only gifts of kindness and love. The use of a tree at the Christmas celebration dates back to 1600, but its exact origin is unknown. It is probably due to some of the numerous mythological trees of the ancients.

At the ancient Jewish feast of Lights or of Dedication, candles were kept burning in the windows of the homes and in the places of worship. These were undoubtedly lighted at the time of the birth of Christ, which doubtless accounts for the use of candles upon the Christmas trees. The giving of these gifts was a custom of the old Romans during their festivals, and since the Wise men carried gifts to the Christ-child it is quite natural that the custom of making presents to our friends should be followed in these later years.

Christmas carols were sung by the earliest Christian bishops, and Christmas cards have been in use since 1846 when they were first printed in London. The burning of the Yule-log was an ancient custom of the Scandinavians at the turning of the year, this being done in honor of the god Thor. The custom was also followed at various winter festivals in England, France, Italy and Servia, and the ashes resultant therefrom were considered magical in power.

Legends of "Santa" and His Reindeer.

"Santa Claus" is derived in a perverse fashion from the "Sinter Klaas" of the Netherlands, and in that country the 6th of December was formerly celebrated as St. Nicholas Day. St. Nicholas, the patron saint of children, was originally the Bishop of Myra in Lycia, who died 326 A. D. Following his death it was customary for someone to dress up as a bishop and distribute gifts to the children. After the celebration of Christmas became so universal this custom was gradually omitted in favor of the Christmas one, but in many places the "Santa Claus" still retains the name of "St. Nicholas."

In Germany the custom of impersonating Santa, which was followed for a long time, was finally supplanted by the habit of placing the gifts about the hearth. Since this was done without the knowledge of the children, they very naturally wished to know how they came there, and were told that Santa Claus came down the chimney with them, then going on his way. Reindeer were not originally associated with Santa, his appearance being upon a white horse in many of the older legends. There is, however, an old Spitzbergen legend which claims that reindeer having certain marks came from the far north country once a year, and since Santa was usually supposed to reside in the frozen north-land, it is quite likely that this legend has given rise to the story of his driving teams of these exquisite animals. The hanging of stockings is another survival of the St. Nicholas Day customs. "Kris Kringle" comes from the German "Kristkindlein," or Christ-child.

Japanese Color Prints

By Eva Dean.

THE fact that we must use the term "prints" in describing these charming pictures starts many of us out with a wrong impression. For we can not forget that prints, as we know the term, especially the smaller-priced ones, are not often very choice or very beautiful. But although properly a print, the Japanese work is not related in the slightest way to western work.

A brief explanation of the process used in the making of Japanese prints is necessary. The process is purely a Japanese one, and represents a great deal more care and labor than an Occidental would



Panel of Ducks, by a Great Japanese Artist.

give to such a matter. For that reason, they are much more charming than any western work. The artist draws his design on thin paper, in outline. This paper is pasted on a block of cherry wood, and the wood carefully cut away from the lines, leaving them standing up in high relief. Then, after the design is colored as it is intended to be, more blocks of wood are cut the exact size of the outline block, but each block bears in relief only that part of the drawing that is to be printed in any one color or shade. All one shade of red will be on one block. If there are three reds used, there will be three three red blocks. So it often happens that even for a cheap 25-cent print (the prints of modern Japanese artists range in price in this country from 15 to 75 cents) as many as fifteen blocks will have been used. In olden times as many as a hundred blocks are used occasionally in the making of a single print. For widely varying shades of a color, different blocks will be used, and so it happens that in a print that is mostly gray, a color of which the Japanese are very fond, there may be as many as six gray blocks.

After the blocks are all cut they are painted in water-color, and then the paper is laid over them, and by rubbing it on the back with a little tool called a baren, the paint is pressed onto the paper. This process is repeated until impressions have been made from all the blocks, and the print is completed. Each block has to be freshly painted for each impression.

In making these prints a large number are made at a time, and the impressions of all of them from block 1 are made before block 2 is taken up. This expedites the printing, and as thousands can be made from one set of blocks after they are once cut, one can readily see why really good work can be had for so small a sum that every one can afford to own it. The very opposite is true of the art of western nations. Perhaps this fact alone explains why it is that, as a nation, the Japanese people are the most artistic nation alive today, and we, of the greater nations, are probably among the least so. In Japan it is said that a whole family will go out into the street to discuss the best possible place to put an article in a show window. And the arrangement of flowers in vases is as important a part of a young lady's education as music lessons are with us.

But we must not approach a Japanese print with a pre-conceived idea of what it should be, expecting it to look like the pictures we have been in the habit of seeing all our lives. It is much better to view it humbly, in a spirit willing to be taught. For if we do not at first recognize all the true charm and power of their certain, simple lines, we are bound to do it eventually. And the fact that we must never forget is that Japanese art and our

art differ so widely in every respect that they should not in any sense be compared one with the other.

Imagine, if you can, our art with no such thing as a religious picture in it. All our old masterpieces would vanish with the Madonnas and kindred subjects. And then take away all portraiture, and what is there left? Japanese art contains no religious pictures, no portraits, and no imaginary creations, such as nymphs, angels, etc. When they draw a man or a woman, they will not think it desirable or proper to make it look like any individual man or woman. It is this fact which westerners are slowest to understand and to become reconciled to, much to the bewilderment of the Japanese.

The things that the Japanese best love to do, and of course, the things which they portray the most charmingly, are small bits of nature. A flight of birds, or even a single bird, a few leaves or a branch of flowers, or even a group of paper toys are quite sufficient for a picture. Whatever they do will be so studied and arranged as to delight the beholder as perhaps a weightier subject could never do. And they never "draw from life," as we say. The man who draws swallows will watch swallows, and live and study swallows until he knows them and their habits so well that he draws them from memory in any position that is natural to them. And naturalists, who thought that by the use of the modern quick camera they had discovered motions of the wings of birds too quick for the human eye, have been chagrined to find these motions carefully portrayed in old Japanese drawings.

The Japanese work does not depict any one thing so truly as it depicts the spirit of it. It is not the wave, but the swirl of the wave, that they draw; not a landscape, but a feature of it; not a raven, but the whirl of a raven's wing across a sunset. It is not a portrait of nature they paint, but simply a record of their own feeling and love for nature.

In composition, or the arrangement of lines and masses in any given space, the Japanese are studied by the artists of all the world. They seem incapable of making a mistake in this matter, and they nearly always, especially when working for their own use, are as unlikely to err in color combinations.

For children, there are no pictures of any kind that could be so beneficial as the Japanese color prints. For the Japanese are passionate lovers of nature. Their drawings breathe a reverence for it

childhood. A great part of its charm lies in what it only suggests or implies, and these qualities open with the years and experience of its beholders.

Many of the most simple drawings of the old Japanese masters, now mellow and brown with years, are today eagerly sought by collectors and it is only recently that the Japanese people have awakened to the fact that much of their best work has found its way into France, England and America. The French were among the first to appreciate Japanese art and the productions of Hiroshige, the

CHRISTMAS IN DISTRICT No. 4.

BY ANNA GIRMUS.

"What did those little heathen call you when you taught here?" I demanded almost before Kate's genial hello reached me.

Kate looked at me in surprise and slowly a smile gathered in her eyes. "Those little heathen are now, in many cases, the influentials of this community, madam," she informed me, "and are given the title of papa, mama, dad, daddy and in a few instances good, honest



From a Landscape by Hiroshige, the First Great Japanese Landscape Artist.

great landscape artist, are popular with them as well as with Americans.

The prints illustrated herewith do not, of course, give any idea of the beauty of the coloring of the originals, though they do show the drawing and the simple arrangement that distinguish Japanese pictures from those of any other nation. Note how, in the duck panel, only the heads and breasts are pictured. The original print from which this half-tone reproduction was made measured 2 1/2 @ 14 inches, and contained exactly the same proportion of the bodies of the ducks as represented in the half-tone. This is characteristic of the simple suggestion of all Japanese art. The old landscape masterpiece by Hiroshige, illustrated herewith, is an interesting study in drawing as well as in coloring. The sky in the print is a grayish green low down, deepening into a dark blue-green above the pale buff moon. The sea is also the same pale buff, shaded near the land by faint parallel lines. The mountains are gray-brown, the bluff top a very light brick

simple father and mother by the little heathen of today."

She made another dive with her hand into the package of rolled oats which she had just opened and hauled out a small plate. The look of disgust on her face was good to see. "Did you ever try to get a set of oatmeal dishes with your oats?" she inquired.

I confessed that my ambition had never aspired to such high things.

"That makes twelve of those miserable, good-for-nothing little plates that I don't want at all, three cups and saucers, one larger plate and only two oatmeal dishes, and they are not mates. If you ever should want to get a set in that way, just want something else and you'll be sure to get the oatmeal dishes."

"All right," I acquiesced meekly. "I'll want soup tureens. But what did they call you?"

The smile reappeared in Kate's eyes. "What's the matter? You want them to call you Miss Mary and they insist on calling you Miss Marks?" The question of what was in the oatmeal package being settled, she gave my troubles her full attention.

"No. I want them to call me Miss Marks and they persist in calling me Miss Mary." Under the influence of that smile my irritation was disappearing. After all it was such a little thing. "What did they call you?" I persisted.

Kate looked at me reminiscently. Slowly a faint color covered her face. The ghost of an old embarrassment caused her eyes to drop. "But Miss Mary is not bad at all. Why do you object to it?" looking up with the old smile.

"It's so kindergartenish," I defended myself. "They are all too old for it. You haven't told me yet what they called you."

The memory of that old embarrassment again covered her face. "Teacher," she admitted. "Just old-fashioned teacher, and at every institute, every teachers' meeting, every gathering that related at all to teaching, someone would talk for an hour or more on the abominable sin of permitting oneself to be called teacher."

We both laughed. One of my troubles vanished at least for the time. If Kate, of whom so many of those boys and girls of that former generation spoke so highly, had a like trouble, perhaps, after all, I might succeed as a teacher in time.

Then I remembered another worry. "Did your boys ever fight?" I was serious enough now. This was a real breach of discipline.

Kate immediately reflected my mood. She gazed thoughtfully at me for several seconds. "Never heard of but one fight all that winter."

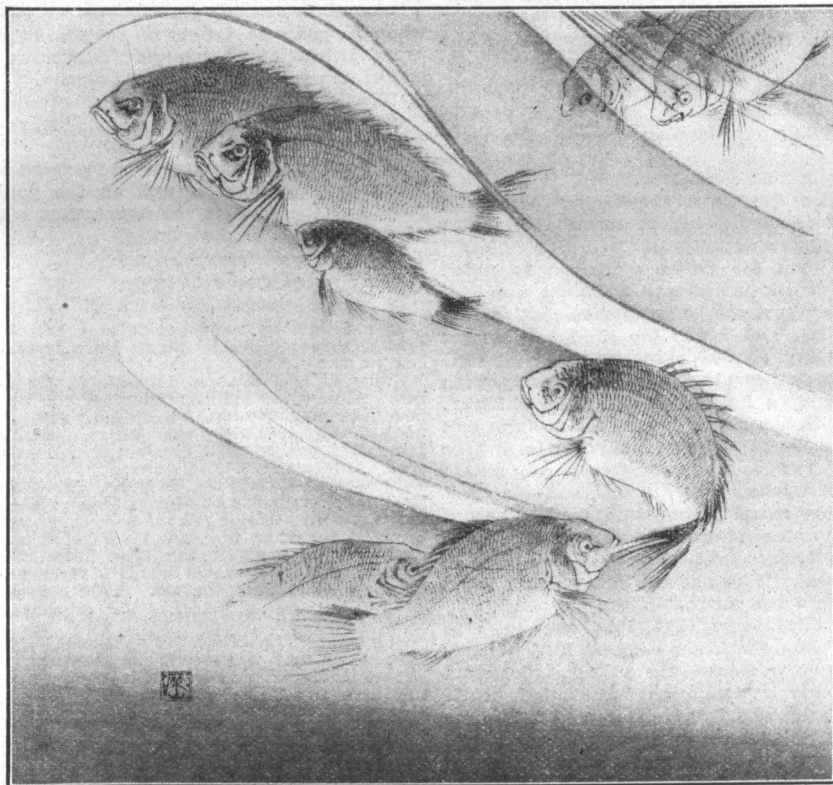
I withered. I was sure that I'd never succeed.

"Do your boys fight?" she asked.

"Yes," I admitted shamefacedly.

"Did you see them?"

"No."



The Pink Iridescence of these Fish Blends Exquisitely into the Marine Blue of the Water in the Colored Print.

with which teachers and parents should only be too glad to surround their children. And, too, animal and plant life are things that a child can understand, in his little childish soul, years before he can the Madonna which his mother so earnestly places in his room.

But Japanese art is not outgrown with

red, with the sides darkened by heavy strokes of black and brown. Note how the parallel line shading of the water deepens to indicate the valley leading toward the mountains. The trees are black. In the immediate foreground, just above the houses, the coloring is a dull green.

"Have the parents complained?"

"No."

"Has the licked boy complained?"

"No, but you'd not wait until someone complains, would you?" I inquired in surprise.

"How do you know that they fight?"

"I overheard Luella Sims and Grace Walker talking about it."

"You should not overhear such things," Kate advised comfortably. I looked perplexed and she laughed. It was one of those memory laughs of hers and I waited until she would be ready to enlighten me of its source.

"You have never had any brothers," she began in a moment, "and so take the fighting too seriously. Years ago when we were going to school, Bob, Frank Wheeler, Jack Wood, Fred Sims and Tom Bryan all came up this way and really I don't believe there was one night without a fight or two. We'd reach the first corner where Frank left us and there would be a battle in his honor. Farther down, Jack turned to follow the railroad and there was another fistic encounter, and so on until we came in sight of home. I don't believe it ever hurt them much physically, and morally they needed some such outlet. I never knew one of them to torment a younger child or a helpless animal."

I thought of all five of those men. "I don't believe one could hire them to fight now," I ventured, forgetting my youngsters entirely.

"I don't know," she mused. "I hope they would on occasion. It's not entirely pleasant to see the fight instinct leave a man."

I hoped so too. The sin of fighting had assumed a new aspect, but one could not have it in school or on the way to and from school. That is contrary to all school discipline. Of course, you may ignore it for a time, but it will be sure to make trouble. Then I remembered that Kate had confessed to having had one case in her day. "What did you do about the fight of which you heard?" I asked.

Kate's eyes twinkled. "It was a week or two before Christmas. Jack Sims saw two of my smaller boys going home one evening and got them to fight, the big scamp. So when we began preparing for our tree I stopped him one morning and told him that he must give us something toward it as a sort of punishment for leading those little fellows from the straight and narrow path of school discipline."

"He cheerfully handed me a dollar. It was worth it, he said. Well, after that every old bachelor in the district, good naturedly, produced a dollar as soon as I began talking tree to him. Bachelors were quite as well represented in this community then as they are now and it helped our tree wonderfully. In those primal times, you know, a dollar was much larger in value than now."

"Did a fight follow the gift of each dollar?"

"Not that I heard of."

My sarcasm was wasted, but the mention of Christmas put me in mind of another perplexity.

"How did you get them all so interested in that tree and have even the older people come? They say that the room was crowded and some of those who were pupils still talk of it."

"Do they? That's good. I didn't know that they were as interested. It must have been because so many gave toward it. I remember that one or two men stopped in that afternoon to watch us trim the affair, which was two trees, not one."

"I wish that I might get them as interested," I blustered.

Her eyes turned on me in surprise. "Why your Thanksgiving entertainment was ever so much better." The compliment came so easily, in such a matter-of-fact tone, that I never thought of thank you.

"They came to please the children," I persisted.

"Didn't they say a few nice things to you?"

"Yes—but—"

She laughed. "Their presence alone ought to be satisfying. Do you know that the night of that tree or trees which you seem to think was such a success, I came home and cried like a great big baby because one child forgot his part and the mother of one family would not permit her children to attend? Why it was twenty years later when I realized that it was a success and that people had really been very nice to me all that winter. Twenty years is too long to wait before enjoying such things when we might enjoy them at once, to say nothing of the

help it is to one to realize that her work is appreciated."

There was such a tone of regret in the low voice that I felt that the criticism was not all for me. We were silent a while. Then the old smile reappeared. "Better value every bit of success at a hundred per cent and don't look for the failures with a microscope, if you want to be at all comfortable. On the other hand, don't let it be more than a hundred per cent."

That light tone brought back the present. "I don't know what to have them do for Christmas." I hope that the dollars had disappeared from my voice by this time.

"It's so near Thanksgiving," Kate remonstrated. "Your entertainment was so good then. Do you need to have anything extra for Christmas?"

"They seem to expect it. They were planning today on taking oranges and candy to the poor farm. They have taken a treat out every winter for the past two or three years. You know the up-to-date idea is to teach children to give at Christmas."

"Not a bad idea, but I am afraid that the scamps are still children and expect to receive a little, too. What makes you think, however, that they expect some extra doings at school?"

"Some of the girls were wondering today what we would do. They had a box last year and each child put in what it wished for the others. Grace Martin said that was so slow. Then I remembered that Miss Hines told me that some of the children carried home their arms full of packages, while others received the one little gift provided by her. Little Ruth Sloan proposed a tree but Grace squelched that idea. 'We have had trees so much,' she declared with that world-weary air of hers, 'and they are so old-fashioned.'"

I knew before I had finished that Kate was already planning for me. "Why don't you have them give that little play and drill that they gave Thanksgiving, at the poor farm when they take the oranges and candy," she asked presently. "That would be carrying out the idea of giving instead of taking, and it would give them that half day off, which is a treat of itself if I remember my school days."

I just stared. "I hadn't thought of it," I admitted after the idea had sifted through my gray matter. "Only a few of the boys have gone in other years, to take the treat," I ventured cautiously.

"I am certain that those old people out there would be pleased with it and the superintendent would surely be willing to have you come."

We talked over the details. Kate has a way of growing enthusiastic and I am usually weak enough to let her enthusiasm not only lead me but to thoroughly master me. When I went home that night the trip to the poor farm was the only thing to be thought of for the school.

The next day being Saturday, I went to interview the superintendent. He gave his consent, but did not act overcome by our kind intentions.

"You kin have the dining-room," he condescended. "We'll move the tables out of the way."

It took the entire afternoon to finish the arrangements and by night much of my enthusiasm had vanished, but it was too late and I was too tired to plan for anything else.

Monday evening, before dismissing, with inner fear I proposed it to the children. The trolley ride appealed to the boys and the role of dispenser of charity to the girls, so they received the proposition with a whoop.

Next morning, however, trouble began. "My mamma wants to know if they have no diseases out there," Grace Martin queried. "She's afraid that we may bring home some germs."

"Daddy says that I'll have to give Grandma Clark her candy," Ruth Sloan's blue eyes looked big at me. Grandma Clark is not real bright but she is a gentle old soul who loves children and tries to caress them, although they are afraid of her and Jim Sloan must tease if it's only his little daughter.

It did seem as if I heard all objections a half of the time and encouragement the other half. I was mighty glad that we had only that week in which to prepare.

The children were anxious to give the play again, so it was not difficult to get them to rehearse once or twice, and when one-half wanted to give up the expedition the other was determined to go. I was glad when Friday afternoon arrived and almost sorry that the youngsters, with few exceptions, were ready to go.

Grace Martin stared after us, but her mamma was still afraid of the germs, so she had to return home. The two Flint children bore her company. "My kids goin' among the dirty paupers? Not if I know it," said Jake Flint whose mouth is always plentifully supplied with tobacco and his overalls and boots generously decorated with barnyard filth.

The trolley conductor had some trouble in crowding us into a car. It was two o'clock before we had our curtain up and were ready to begin. Our audience was waiting for us. "Why, they look as nice and clean as anyone," whispered Luella Sims.

"Sure, of course! What'd you expect?" answered Harry Sloan who had been out with the oranges in previous years.

The boys pulled the curtain and our actors sallied forth. They really did do better than at the Thanksgiving performance. One old man in the audience insisted on applauding whenever there was the slightest excuse for a laugh. After it was all over, and the children were passing their treat, I overheard him still chuckling.

One old lady insisted that the world was sadly degenerated. "In my day," she croaked, "the children learned such nice pieces like 'It was the Eve Before Christmas.' That was a good deal harder than this marching. I learned my Harry 'The Eve Before Christmas,' every word, 'fore he was eight.'" I was sorry that I had not had the children commit a few of those old gems of literature.

The smaller children appeared to be general favorites. Little Ruth of her own accord carried a nice orange and a sack of candy to Grandma Clark and, when the gentle old soul laid her trembling hand on the little maid's head, she raised her young blue eyes to the tired old ones and Grandma softly stroked her hair. "I never was one bit afraid," Ruth confided to me. "She's a nice old lady, isn't she?"

Just then there came a regular war-whoop from the boys. I turned to see what was the matter. The curtains had been parted and there stood a regulation Christmas tree, lighted tapers and all. A real Santa Claus was waiting to distribute the gifts. Little Ruth stuck to me closer than a sister, and when old Santa offered to kiss her she hid behind Grandma Clark.

I think that the old people enjoyed the tree as much as the children, and the old bachelors who trimmed it enjoyed it the most.

The superintendent and his entire family laughed at my surprise. Of course, they had known of it and had given those old bachelors permission to come out there and surprise us. It was really two celebrations.

"Not quite as good as that tree we had when Kate Smith taught in old No. 4," I heard Hiram Sloan remark. Hiram was one of the instigators of the surprise.

"That's twenty-five years ago," grinned Gerry Sims, another instigator. "Maybe things look different to us now."

I hope that my youngsters may remember this Christmas as well as the good people of the district remember that one of a quarter of a century ago.

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GOING HOME TONIGHT.

BY LUCY ELWELL.

Through frosty air that cannot chill
Because my heart is warm and bright,
O'er frozen snow plains that but fill
My soul with Christmas-tide delight.
From care and toiling free at last,
To days too brief, with heart so light,
All sober thoughts aside I'll cast,
For I am going home tonight.

Friends re-united there will be.
Fast beats my heart at the joyful sight.
Sisters and brothers I shall see,
Gathered again round the fireside bright.
Father and mother waiting for me—
Hair that is touched with silvery light,
Dear eyes that brighten when they see
All of us coming home tonight.

Many the Christmases yet to come
On every dear one's blessed face
As we shall gather in the home.
Sorrow and toil will leave their trace,
Yet we'll be happy while we may,
Merry in warmth and love and light.
Many the years that we may say,
We all are going home tonight.

HOLIDAY PASTIMES.

BY GENEVA M. SEWELL.

The holiday season should consist of something more than mere eating, drinking, and giving. When the home folks are beneath the home roof is the time to plan for some games in which all may take part.

Some time during the week invite the children's small friends and relatives to spend the afternoon and stay to supper. Let them play with the new toys and games until supper time, then after supper light up the tree for the last time and while they sing a song ("The Wonderful Tree" is a good one) and march around until the candles are burned out, divide the decorations left on the tree among them. See that some small gift is there for each one, besides the usual treat of candy and nuts. This gift may be hidden in an orange, apple, or popcorn ball. It should be some small article which may be secured at a cost of only a few cents.

On New Year eve gather all the family together and have each one bring his old calendar. Then in turn have each tear the last leaf off and tell the most interesting thing that has happened to him (or her) during the year. After all have told of pleasant times or something else, and the leaves are all burned, pass around leaves made from note paper and cut in the shape of a maple, oak, or grape



Leah and Ducks she Helped to Raise.

leaf. These are to write resolutions for the new year on. Much merriment will be caused by the many things meant to be done and obstacles to be overcome. These are all signed and kept by the hostess, to be carried to the family meeting next year. Even little children may take part in this; if they cannot write their desires themselves, someone else may for them.

On the last evening before the party breaks up, try having a guessing game. Place small articles in boxes of various sizes and shapes. Have the box well filled with something, if only paper and small pebbles, if the present does not fill it and it must not, for the smaller the present the bigger the box. Write something suggestive of the contents on the

outside and then pass sheets of paper and pencils around and let each one guess what he thinks the contents are. The one guessing the most of them correctly gets first choice of boxes, the second gets second choice, and so on. Have a tiny looking glass in one box and mark the box "A Place for Reflections." A Negro doll would be "In Darkest Africa;" a small bell "A Morning Caller;" a table of writing paper, "Nothing But Leaves;" two spoons "Lovers;" a top slipper for a watch case, "The Family Regulator;" a couple of pennies "Common Sense;" sixteen pieces of candy "Sweet Sixteen;" a small child's broom "A Woman's Weap-

on." Continue the list until there will be a present for each one, including the children. Have each souvenir marked with the place and date, so they may be kept as remembrances of a pleasant week.

For place cards for the family dinner try making a Christmas tree out of paper. First draw one, or copy it, with candles and all. Color the tree green and the candles red, and put on touches of gilt. Fix it so it will stand by placing a cardboard rest behind it. If the tree seems too big an undertaking try making one by copying a tiny Santa Claus, or plum pudding, or turkey. They are simple to make when copied.

Filling the Christmas Pocketbook.

How Wide-awake Barry County Farm Boy and Girl Earn the Money they Need for the Holiday Season.

BY MRS. K. T.



The Home-like Barry County Abode of Louie and Leah Terpening.

Louie and Leah Terpening, aged 13 and 10 respectively, have for three years been raising ducks for pin money. Three years ago their grandma gave them a pair of ducks. They set two hens on 11 duck eggs each and raised 12 ducks which brought them about \$6.00. The next year they sold 20 and this year they have 22.

They have done all the work connected with the raising of these ducks, which has been considerable. The work begins early in spring. When the old ducks begin to lay they have to be shut in every night, else they go to the nearby pond and deposit their eggs in the water. Sometimes they refuse to leave the pond at night. Then Louie and Leah get a ball of binder twine and stretch it across the pond. Stretching this twine from opposite sides they sweep the pond with it, thus literally scraping the ducks off.

When the little ducks hatch, which is usually in June or July, they take them from the hens and raise them by hand. Why leave them with the hen? They will not follow her, so she has to run after them, which she soon tires of doing. So the little ducks are gathered into a basket at night and set in a safe place. They are kept from the pond until well grown, and this is not an easy thing to do, as ducks can scent water at a considerable distance. If they get to the pond while young the mud turtles are almost sure to get them.

This year the hens refused to set and it looked as if there would be no little ducks. At last a second-hand hot-air incubator was found for sale for one dollar. It was a very cheap single-wall machine, but did very well, the weather being warm. This incubator held 50 duck eggs. The ducks were not laying regularly and the hatch was not a grand success. Only 20 live ducks were secured, a great many dying in the shell. They laid this to the eggs not all being perfectly fresh.

When the old ducks got through laying each built a nest and went to setting. They had to buy some eggs for them. In all 36 ducks were hatched, of which 26 were raised. However, someone borrowed four of them one dark night, which leaves only 22. During the summer the ducks got to wandering so far in the fields that they failed to come back at night. After a three-days' search by a very anxious boy, they were finally found, brought home and shut in a yard, where they have been ever since.

Louie looked after the incubator with but little help, and did it as well as a much older person—better than some I know. He often looks after his mother's incubator while she is in town doing her trading.

The ducks, being late hatched, are ready

for market just before the Christmas holidays, at which time the money is fully appreciated, as you can imagine. One thing I am sure of is that, in years to come, neither of these youngsters will venture into the poultry business with a mistaken idea as to the amount of labor required to get results.

TRIMMING CHRISTMAS TREES.

It is not necessary to spend a lot of money in trimming the Christmas tree, but the exercise of a little thought and ingenuity is called for where one desires to introduce new and novel features in this line. A rather popular idea, especially for a church or school tree, is the "National Christmas tree." The tree itself should be a stout, well branched evergreen. On the very top is placed the shield of the United States, with a gilded star poised upon it. Below this, on the topmost branches, tie a circle of small flags that have been washed over with thin glue and sprinkled with diamond dust while still moist. Attach narrow red, white and blue pennants to the upper branches, and hang red, white and blue balls here and there.

Instead of the usual decorations, substitute something that is symbolical of the life and products of the nation, and of the peoples who dwell beneath its flag. For example, negro dolls carrying little baskets of raw cotton on their arms or heads, yellow china dolls in Filipino costume, sitting on little palm leaf fans or in tiny thatched huts. Indian dolls in blanket and head-dress; Chinese laundrymen in national costume; rifles, bows, arrows, tomahawks, the Filipino bolo, and various characteristic objects.

Fruits and vegetables, real, not make-believe, will make effective decorations, and carry out the dominant idea. Oranges, lemons, bananas, pineapples, apples, cranberries, ears of corn, carrots, potatoes, and even cabbages—all these are in order, with heads of wheat and rye and barley, and whatever else of that sort can be secured.

The presents should be wrapped in white paper and tied with red and blue ribbons. The base of the tree must be draped also in the national colors. When an extra touch is desired, as, for instance, in school celebrations, little girls and boys may be dressed in the general color scheme and employed to deliver the presents.

A frost-covered tree is made by cutting off some of the smaller branches and the tips of the larger ones, then wrapping loosely around them some white yarn and dipping them into a saturated solution of

alum. Twist more yarn into ropes and "alumize" these also. Then wire the cut-off branches into place again, and arrange the frost ropes here and there over the tree, and especially near the ends of the branches. Touch some of the stems and leaves with transparent varnish and dust with diamond dust.

If further frost decorations are desired in the shape of circles, stars, Maltese crosses, hearts and shields, cut them out of cardboard, varnish and dust them with the diamond dust. Popcorn strings with the dust on them will add to the charming effect of the decorations, and color can be given by ropes of cranberries. Use tinsel cord and a darning needle in stringing the berries, and put them in groups of five or more about the tree. If candles are hung in the tree, be careful that the flame can not come in contact with the yarn. And just here it may be well to sound a warning. Do not use candles where cotton batting is used in decoration, as in the snow-covered tree.

For the very little folks very simple decorations will give quite as much delight as the most expensive. Strings of popcorn dyed in colors, strings of cranberries, and a dozen or so of the little penny Japanese lanterns and open parasols will give plenty of color and life to the tree, and a few mirror balls and tiny flags will add to the gaiety.

Split some English walnuts, take out the meats and replace them with a tiny doll or bits of candy; gild or silver the shells and glue them together with a loop of baby ribbon to hang them by. Small rabbits made of tarlatan overcast with bright worsted and filled with nuts and candies and raisins and popcorn, one for each little guest, will give more solid joy than many an expensive gift. Balls may be made from empty egg shells gilded, with a tinsel cord or bright ribbon pasted on to hang them by. Duck eggs are best for this purpose, being more showy than hen eggs.

A LITTLE GIFT.

BY PEARLE WHITE M'OWAN.

The quaint and humorous little booklets presented by two girls, having more wit and ingenuity than money, to their friends upon their birthdays last year, were very popular. Boys and girls alike vied with each other in a good-natured attempt to win their favor and receive one of the much prizes little burlesques upon their lives.

The booklets themselves consisted of several leaves of heavy brown or green paper tied together with ribbon. Printed



The Ducks do not Receive All Attention.

in fancy gilt letters upon the covers were the titles, using in each case the name of the recipient and, if possible, having reference to some actual experience or peculiarity of theirs. One was "The Fortune of Anna Deane," Anna's fondness for having her fortune told being well known; another, "The Tale the Gypsy told to Helen." Helen actually had yielded to temptation and "listened to the gypsy's fortune but never would tell what was told to her. The "Experiences of a Bad Boy" was given to one of the irrepressibles who was always getting into scrapes, and the pictures which followed caused much hilarity among his friends, for they hit pretty true in most instances. "What the Fire Fairies Revealed to Fred" was given to a quiet youth who was giv-

en to gazing long and silently into the fire. When especially fitting names failed there was always "The Biography of John Newman" or "Grace Steadman" as the case might be.

Wit, a talent for little pen-and-ink sketches, and a pile of old magazines furnished the body of the booklets. The first pages were usually given up to baby pictures, a stork carrying a baby, presumably cut from some baby food advertisement, a tiny crying infant, or a comic picture of fond parents examining the first tooth, or father walking the floor in the night, with appropriate labels such as "John's First Journey," "The Squall," "His First Tooth," "Already Making Trouble," etc., etc. Old magazines and papers can usually be relied upon to furnish a number of quaint or ludicrous pictures of youngsters and their doting elders. Then came pictures of "His First Day at School" and "His First Piece." In one instance the few quaint lines which he actually recited were written beneath the comic picture showing his fright. "The First Time He Saw Her Home" was written beneath a picture of a big-eyed scared little fellow of six peering back to see if sister, the safeguard, was still following at a respectful distance. Swings, ball games, canoe rides, etc., were all pictured out and comic rhymes or sentences appended. When magazines failed, the girl with her pencil was ready to draw a picture to fit.

One page was headed "Girls, Girls, Girls," and sketches and magazine pictures of pretty girls, with penny pictures of the donors, were scattered indiscriminately over the page with a charming disregard for order, while in the center was a picture of a big boy which imagination said was "Him."

Then there was "His Pretty Girl," "His Summer Girl," "His Winter Girl," "His Witty Girl," "The Girl He Loved First," "The Girl He Loved Best," etc. Then a wedding scene and finally a young couple seated at a table with a lively youngster between them, and beneath it "Johnnie Junior—The Absorbing Topic." And here it left him, presumably with the thought that after the advent of Johnnie Junior, John senior would be relegated to a back seat.

To make my meaning clear, I have described one of the boy's books, but those received by the girls were equally as witty and appropriate, while the "Diary of a Bad Boy" was simply irresistible.

THE GATES OF BAKAPLEIN.

(Continued from page 538).

leave the household affairs to the girl's willing but untrained hands.

Merle had willingly offered to get the dinner. She was sure that she could manage it alone, so she went bravely to work. The kitchen was invitingly clean, for Mary Baker had risen at four in order to bake her bread and do all the work she could before going away. She had laid the table for the men's dinner in the cosy little dining-room opening at the farther side of the kitchen. The kitchen floor was spotlessly white as ever, the range was like an ebony mirror and in the pantry the half dozen large loaves of fresh bread, with the pan of beautifully browned biscuits by the side of them, spoke of her industry.

The girl looked around for other baking, but aside from a few cookies and a half pie there was nothing else. She had neglected to ask Nell what she should cook for dinner so she tiptoed back to the sitting room. Finding her asleep she returned, wondering what she should do. As yet she had not washed the breakfast dishes they used on their table. That was the one thing she really had learned how to do, but in the excitement of the adventure with the hen she had forgotten them. The fire had gone out in the range and the water in the boiler was not more than warm, so she kindled the fire, filled the teakettle with water and then busied herself with the chamber work until ten o'clock.

Yvonne had been with her constantly, hindering all that she possibly could, and when the girl returned to the kitchen she was dismayed at the lateness of the hour. She hurriedly washed the dishes and had just decided that she would fry some doughnuts for dinner when Yvonne pulled a chair over on her head, receiving such a bump that in order to quiet her screams Merle allowed her to bring Barb'ry into the kitchen again.

It seemed easy to make doughnuts according to the recipe. One by one she put the ingredients on the pantry shelf,

then she placed the kettle of lard on the stove and, with the mixing bowl in one hand and the spoon in the other, she stood helplessly wondering what she should put in the bowl first when she was startled by a masculine voice in the doorway. Turning she saw a young man holding out his hand in greeting and smiling as if sure of recognition.

"Miss Merle Jackson?" he asked cordially. "I am sorry to startle you, but I can't find anyone about the place but you and Yvonne and Barb'ry."

She hesitated for an instant. "I am sure that you are one of the Beverly boys," she said slowly. "You resemble Nell, but I do not know which one you are, unless you are Manning."

He laughed. "Then I shall have to introduce myself as Manning. I must apologize for not having really met you before, but I was away the day you called and have been very busy since."

"I know and accept your apology," she answered, holding out a floury hand. "I will shake hands if you do not object to flour, but you see that I am trying to cook and I must confess I do not know what to do first. Nell is crippled," she related the accident, "the Bakers have departed as unwilling mourners to a funeral, and Yvonne and I are housekeepers."

"So I see. I wished to see Nell very much but I shall wait till she awakes. I suppose I am too blame for the Barb'ry affair for I gave that hen to Yvonne and, so far, she has caused no end of misadventures and episodes. Now what is it you are trying to make? I am quite a cook. Will you let me help?"

She whisked one of Mary Baker's big aprons out of the drawer, which he donned serenely. "Now I will cook anything from a pudding to flap-jacks. What is it?"

"Doughnuts, and to save my life I don't know whether to put the cup of sour milk, or the sugar, or the egg in first and whether the egg is put in whole or beaten."

"We usually remove the shell," he answered gravely. "Suppose you break it in a bowl and beat it separately while I mix the other things. But where are the eggs?"

"The eggs, why I had them here in a basket! They are gone—basket and all," she said in bewilderment.

His eyes twinkled. "You had better interview Yvonne," he suggested.

She ran into the kitchen. There, on the patchwork cushion in Mary Baker's big rocking chair Yvonne was endeavoring to force Barb'ry to sit on a dozen eggs which she had put there for a nest, with the result that the indignant bantam had broken two or three and knocked the others on the floor, which Yvonne had finished smashing under her feet. She was smeared with broken egg, and the floor, chair cushion and hen were a sight, but the child persevered, crying and scolding until Merle forcibly took her away.

"Such a sight and such an awful mess," she cried, laughing in spite of her vexation. "Yvonne I have a good mind to give you the hardest whipping you ever received for this scrape."

Manning was laughing heartily. He picked up the crying child, pulled off her soiled dress, carried her to the sink and washed her hands and face while Merle endeavored to clean up the muss. "As long as Yvonne did it, Mary won't scold very much," she said, "but she would not have hardly dared so much mischief if Nell had been around."

"Guess nobody ever makes her mind but Nell," said Manning, still laughing. "I know I don't and I don't believe you do either; but if there are any eggs saved from the scramble we must get at those doughnuts. It is nearly eleven now."

"Here are more and I will keep them so high she can't reach them. Anyway she will be busy for awhile, for she is washing Barb'ry in ivory soap. Now what is first?"

Manning was reading the recipe. "This is our old Beverly recipe true and tried. I have made them myself several times." He hesitated and his face grew sober.

"First put the sour milk in the mixing bowl, then the cup of sugar and stir them well. Next the teaspoonful of ginger; that keeps them from soaking fat; then the teaspoonful of salt, a tablespoonful of melted lard, now the egg, which you have beaten enough, then four cups of sifted flour with the teaspoonful of soda. There," and he deftly stirred the ingredients together, mixed them into loaf and proceeded to roll out preparatory to cutting before Merle recovered from her astonishment.

"I don't believe Mary Baker could have made them any quicker or any neater,"

she gasped. "How did you ever learn so much?"

"I had to," he answered laconically, proceeding to cut them out in neat rings. "Perhaps Nell has told you about our housekeeping."

The girl nodded. She knew the brief story of Manning's wedded life with its tragic ending, and how since February he had been a widower with a baby daughter now two months old. And although Nell had never said very much about Manning's trials, Mary Baker had told her of the young wife who detested farming and, with real and fancied ailments, had done as little work as she possibly could, with the result that Manning had been obliged to do the greater part of the housework while his farm had suffered woefully. And Mary Baker had not been averse to declaring that the good Lord knew what he was about when he called her away, for with her as his wife Manning would have been on the town in five years, she delighted in predicting.

There was an awkward silence. Merle did not know what to say and Manning was apparently in a blue study. She noticed that his face was thin and his broad shoulders drooped as if discouraged. He was not the same happy, round-faced boy she remembered of years past, but Yvonne furnished diversion by suddenly screaming that Barb'ry had flown into the water pail and could not get out.

Merle went to the rescue again and this time she carried a very wet and bedraggled hen outdoors and proceeded to change a dirty wet apron for a clean one on a rebellious little girl who was determined to bring the hen back into the kitchen.

"That hen shall not come in here again this morning," she said firmly, "and if Yvonne cries or makes any fuss she shall be set upon the broad shelf to stay until she is good."

"Yvonne won't be good," she declared, stamping her foot.

"Then up she goes!" Merle lifted her forcibly, carried her across the kitchen and set her on a high wide shelf. "That is where Nell puts her when she is naughty, and she has to stay there till she behaves," she explained.

"I'll give her a doughnut by and by," laughed Manning, "but they will never be done, Miss Merle, if you expect me to fry them in this lukewarm lard. I thought the kettle was over the fire."

"It was, but I set it back because I was afraid it would burn. It was smoking hot and I thought that warm lard would do," she explained hurriedly, flushing with annoyance at her mistake. "You see," she continued, "I really do not know how to do anything but wash dishes, and it takes me twice as long to wash them, as it does either Mary Baker or Nell. But lately I have been gaining time. I am almost a minute a day faster than I was a week ago and if I keep on gaining a minute a day I shall have them washed sometime even before I begin," she laughed merrily. "And there is one thing more I can do and that is to clean harnesses. Ben says I beat Ned at that job."

"And you can do one more thing well," he added, indicating Yvonne who had subsided into a quiet child on the high shelf, "you can make her come to terms. You must have learned that from Nell."

"I did," she replied, nodding her fluffy head vigorously. "The high shelf never fails to effect a cure. It is much better than whipping or scolding and it always brings her to terms, for she has to stay there till she is good."

"Yvonne good now," smiled the cherub. "Uncle Manning take Yvonne down." She held out her dimpled arms and he lifted her off gently, rewarding her with a couple of fresh doughnuts. He tossed one to Merle. "You will have to sample it yourself and see if they are good."

"Delicious," she cried, between satisfied bites. "I'm going to learn to make doughnuts before I'm a week older if I have to lock Mary Baker out of the kitchen. I am ashamed of being so useless, but I find it hard to teach my hands to work properly. My head wants to work but my hands don't know how," she added dolefully.

"You will have to hustle your hands around if we have dinner by twelve o'clock," he cautioned, glancing at the kitchen clock. "It is quarter after eleven already. What else were you going to have but doughnuts? Potatoes, I suppose, and what meat?"

"There is a big ham in the store room. Perhaps we could boil it. I like boiled ham," she added confidently.

His laugh convinced her that she had

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"At times my appetite was voracious, but when indulged, indigestion followed. Other times I had no appetite whatever. The food I took did not nourish me and I grew weaker than ever.

"I lost interest in everything and wanted to be let alone. I had always had good nerves, but now the merest trifle would upset me and bring on a violent headache. Walking across the room was an effort and prescribed exercise was out of the question.

"I had seen Grape-Nuts advertised, but did not believe what I read at the time. At last when it seemed as if I was literally starving, I began to eat Grape-Nuts.

"I had not been able to work for a year, but now after two months on Grape-Nuts I am eager to be at work again. My stomach gives me no trouble now, my nerves are steady as ever, and interest in life and ambition have come back with the return to health."

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The Factories Sales Co. of 833 Wyandotte St., Kansas City, Mo., is making an offer to send a lamp, free to one person in each locality to introduce this FREE marvelous, new, incandescent 100 candle power oil lamp. Simply send name and nearest express office.

NOTICE.

At the annual meeting to be held in the City of Hastings on January 3rd, 1911 at one o'clock, P. M., the members of the Michigan Mutual Tornado, Cyclone and Wind-Storm Insurance Company will vote on amendments to and revising the charter of the said Insurance Company. Dated Hastings, Mich., Nov. 25, 1910. D. W. ROGERS, Sec.

made another blunder. "Well, we boil potatoes anyway, so I will get a panful and you can do what you please with the ham," she retorted as she hurried to the cellar.

When she returned he had removed the grease kettle and was slicing the ham. "I'm afraid that you will have to study up cook books before you boil hams," he said with a smile. "Now, can you peel potatoes?"

She shook her head. "I can peel apples, so I suppose you do potatoes the same way."

"Very much. Here, I'll help while you put the kettle on, then if there are any more eggs in the house we will have fried eggs and ham—good enough for a king."

"I don't believe I know enough to fry an egg," she said hesitatingly. "You understand that Mary regards this kitchen as sacred, and as Nell does not do much cooking I don't have any chance to learn, but I'm going to learn, and that as quick as possible," she declared threateningly as she began to help with the potatoes.

She was disgusted at her slowness. Try as she might she could not make her small, white hands fly as did his large, firm brown ones. But the potatoes were boiling and the ham frying almost before she realized it. Then she tiptoed into the sitting room and found Nell still asleep.

"I shall not wake her," she said resolutely. "I know she was sewing for Yvonne until late last night and consequently she needs her rest. Would you mind eating out here with the men? I think it would be a lark."

"Would I mind? Not very much, I think, when we always have our men eat with us," he answered. Then he added that the Jacksons were the only family in the neighborhood that did not. "It was the arrangement Searls' mother had made, and it had worked well with them to have the men eat at a separate table, but I doubt if any other family in West Winthrop could do so," he explained.

"Ned won't mind," she said as she quickly arranged the table. "I shall pour their coffee, that is, if they have any, though I don't know how to make it," she cried in alarm, picking up her cook book.

"I can," he said, "and I pride myself on my coffee. You will find that I am a very handy housekeeper, Miss Merle. So much for having considerable of such work to do;" his face was grave again. "And if I could learn, a mere clumsy man as I am, why couldn't you?"

"You heard my declaration," she returned decisively. "I shall never let you or any man again teach me cooking. Why, I don't believe I could boil the tea-kettle without the water scorching," she laughed merrily. "I'm afraid the men would have starved if you had not appeared so opportunely."

Ned had not yet returned with his team; he was late, as usual, but the other boys were on hand promptly, subdued from their usual noise and fun at the sight of Merle presiding in Mary Baker's place and Manning in Ben's chair. The girl did not feel acquainted with them as they were around the house only at meal times, and they in turn felt awkward and embarrassed in her presence. They talked with Manning while she busied herself with Yvonne who sat by her side in her high chair and suddenly began calling for Ned.

"I don't see why he isn't here," she answered perplexedly. "Where did you leave him, Jimmy?" she asked the oldest of the three young men who had been teaming that morning.

"He stopped at the blacksmith shop to have a shoe tightened," he explained, "but that ought to have been done an hour ago. Guess he's found somebody to swap horses with."

"He could not swap one of Cousin Searls' horses," she answered indignantly.

"He likes to talk swap though. He is as much of a trader as Jackson himself, but if he don't make his two trips today he will hear from Old Ben," he chuckled.

She was more disturbed than she cared to show over his absence, but she made no further comment. As soon as the dinner was over she was relieved when Manning went immediately out with the men, leaving her to wash the dishes and attend to the table. It was slow, hard work for her. She had never before entirely cleared away the dishes and food after a dinner, and she was dismayed at the sight of a full sink; nevertheless she went to work at them, making up in zeal what she lacked in knowledge. She was about half through when she accidentally burned her hand. While wrapping it up in a liniment-soaked cloth she heard Ned driving

into the barn. She glanced at the clock; it was half-past one; the other men were at work and Manning was in the sitting-room with Nell. She could hear their voices in earnest conversation. Leaving her unfinished work she ran to the barn to learn what had detained him.

She did not obtain much satisfaction. "Just talking, that's all," he replied lightly. It was a hot day for spring and he was not going to sweat the horses for anybody. Besides, he was not obliged to get back on the hour as the other men were. He was as much his own boss as was Searls, and he should do as he pleased. Besides, he could make more money by trading than he could by working. He had nearly dickered his gun away at the shop. At night he was going back to finish the bargain and thus make about three dollars! "Oh, they can't get ahead of me if they try," he boasted.

Merle was troubled. She ventured a remark about his unloading the fertilizer properly. "If you don't, Ben will complain of you to Searls and then you can't drive this span any longer," she said anxiously.

He whistled indifferently. "Who cares? I don't like heavy teaming anyway. It is too dirty work, besides there is too much lifting about it. I am getting sick of the whole thing. I was never made to work under anybody. If Searls would only let me drive some bargains for him I'd put him in the way of more money than he has seen yet. Just look at that three dollars I made today. I've a good mind to chuck the whole thing and be independent."

"If you do you will be sorry," she answered. "Just see what you are getting for working. You can't expect, now that you are as poor as anybody, that you can get along without working for a living. I don't expect to, and it is something to have this lovely home. I don't care if folks do know we are working here."

"Guess they know it all right," he answered. "Old Joe Green was in the shop and he was bragging about the snap you and I had here on the Jackson farm. He thinks this is the only place on earth. He was telling me a lot about how Searls came to adopt Yvonne. Her folks were the Benois, you know, and just because her father filled up to the brim on Searls' hard cider when he was already drunk, and then went home and killed his wife and himself, why Searls adopted her before he was married. Did you know it?"

Merle nodded. "Nell told me something about it and I think it was a lovely thing for Searls to do," she said warmly. "Yvonne is the dearest child on earth."

"That's right," agreed Ned. "but he ought to be as good to his own kin. What he ought to do is to take me into partnership with him on this farm. I've as good a business head as he has. But he won't do it; he thinks I'm nothing but a boy," he said disgustedly. "I've half a mind to go over and see Bob Beverly at Winthrop. He is Nell's brother, the oldest one of the boys, you know. He married a rich girl and is in the lumber business. Perhaps he'd give me a chance."

"You won't do any such thing," she retorted. "You will stay here as you agreed to, and when the Beverly fruit wagon starts you will drive it. You promised Nell you would do that for she is to run her market wagon also. Manning is in the house talking with her about it."

"I heard at the shop that he would have thrown the farm up this spring if it hadn't been for Nell," continued Ned, sociably. "He was pretty well cut up over the death of his wife and he wanted to rent the farm in spite of his grandfather's opposition. That's why Nell is helping him run it this year. Did you say he was in the house? How long has he been here?"

"He helped me get dinner," she replied, blushing in spite of herself.

He dropped his harnesses on the floor as he wheeled around to look at her.

"Blushing! upon my word," he said teasingly. "You are a goose Merle. Well, after all, Manning is a fine fellow and so are the other two boys who are away at college. Old Joe Green says his sister, Madaline, will be home from college this summer and keep house for him. Then you will have some society. The other sister, Lucille, married a professor, so you see there is some class to the Beverlys."

"I am not blushing," she returned. "I've nothing to blush about. That's where you ought to be—in college. Then you could talk of class, too."

"Smart men do not need to go to college. I can make money without it. Come on to the house. I shall let the boys un-

load this fertilizer when they get around to it. I'm hungry as a bear. Ben can swear if he wants to, but I'm not under him by a jugful. There's Manning coming this way. Wait a minute," he urged, but she sped from him to the house, while he sauntered after her, absolutely indifferent to the work which he was expected to do.

(To be Continued.)

"When I was once in danger from a lion," said an old African explorer, "I tried sitting down and staring at him as I had no weapons."

"How did it work?" asked his companion.

"Perfectly. The lion didn't even offer to touch me."

"Strange! How do you account for it?"

"Well, sometimes I've thought it was because I sat down on a branch of a very tall tree."

A customer having bought a pair of shoes for \$5, discovered that he had only \$4 with him. He therefore asked the boy who had made the sale if he couldn't pay \$4 and return the following day to pay the balance. The boy agreed, and the man walked off with the shoes.

"That was a very foolish thing to do," said the proprietor, when the boy told him what he had done. "Suppose the man should never come back."

"Oh, but he will," returned the boy confidently, "because I wrapped up two shoes for the left foot."

KINKS.

Christmas Kink—Bob's Letter Home.

Fill in blanks with names of common trees).
My dear mother, the city now is grand.
But I p— for my old country home,
To b— eered by your dear old face;
It tempts me r— to roam.

I long for a sight of a— d—r,
And the d— be good to see;
To have M— my hair as of old
Would be like b— to me.

A— in hand I hold, I'm thinking mightily
What jolly good times we'd have,
And how p— I would be
If I'd show up, you see.

I'm sure that L—n will be there;
I see the h— firelight
Play bright on L—'s hair—
She's the a— of his eye.

Aye, s— me on to drop
Commercialism for a week,
Ye rushing memories of old;
"T— h be very joyous, sweet.

I'm sure the business w— n— fail
If I do leave this year,
At any rate it b— n—,
So I'll s— up and veer

Across the continental divide,
To p— the scales from off old time,
And land again a boy beside
The meals that mother used to find.

We'll have T— put on the sled—
A b— n't do, 't would be too small—
We'll line it well with robes and straw,
Hook on the b—s, restive from stall.

We'll have a C— t— again
Just as we used of yore,
We'll find s— g—s and other sweets
Stuck on its twigs, and more.

We'll play the same old Christmas jokes
On each other, yes, we will;
And, father and mother, you'll raise your hands
And call us the same old h—.

We'll make the same old noisy noise,
And sing the same old song,
There'll be the second edition of boys
And girls to help the thing along.

Prizes for Straightening Kinks.—To the sender of each of the ten nearest correct answers to the above Kink, we will give choice of a package of 50 postcards of general interest, an imported dresser scarf, or a lady's hand bag. Where contestant or some member of his family is not a regular subscriber a year's subscription must accompany answers. Answers must not reach us later than Jan. 14, as correct solutions will be published in issue of Jan. 21. Address answers to the puzzle Department, Michigan Farmer.

Answers to Nov. 5 Kinks.

Kink 1. Kings of Israel Rebus.—Solomon, David, Omri, Jehu, Pekahiah.

Kink 2. Floral Journey.—Johnny Jump-up, four-o'clock, Wandering Jew, Jack-in-the-Pulpit, Bouncing Bet, aster; hickory cane or gentleman's cane; Indian pipe or Dutchman's pipe, bluebell or Canterbury bell, Ragged Robin, poor man's purse or shepherd's purse, love-in-mist or balm of Gilead; bleeding heart; thyme or heartsease or balsam; bachelors' buttons; Spanish needles or Adam's thread; Lily, Rose, foxglove.

No Prizes Awarded.

None of the answers to Kinks of Nov. 5 being entirely correct no prizes were awarded.

Bargain In Pocket Knives

For \$1. I will send postpaid two strong stag handled brass lined pocket knives worth 70c each or one knife for 60c. Length over all 6 1/2 inches, one large blade and one punch blade, silver shield. Invaluable for farmers and carpenters. Responsible references furnished.
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For Sale—50-acre farm, 11 miles from Detroit. Soil fertile. Buildings good. Other improvements. Address Chas. E. Smith, Redford, Mich. R. F. D. No. 3.

I SELL FARMS in Oceana, best County in United States. Fruit, Grain, Stock, Poultry. Write for list. J. S. HANSON, Hart, Mich.

\$4,500 buys 186 acres, \$2,000 worth timber, first-class buildings, fruit and water. Creek road 1/2 mile to school, 1 mile church, creamery and town. \$2,000 cash, balance time. Write for other farm bargains. Valley Farm Agency, Owego, N. Y.

780-ACRE STOCK AND GRAIN RANCH for \$5,000, terms. Log house, two log barns, 6 miles fence, 160 acres level farm land, balance spring watered pasture. Would consider trade for Michigan farm. Wilson Walter, Terry, Mont.

120-ACRE FARM—One half mile east 100 acres improved, good buildings and fences. \$30,000 an acre. J. E. CLARK, Milford, Michigan.

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Woman and Her Needs

At Home and Elsewhere

ABAS WITH SCROOGES.

CHRISTMAS extravagances have been the theme of writers for so long that the very mention of Yuletide conjures up pictures of men and women hurrying about with untied purse-strings, vying with each other in an effort to see which shall spend his money quickest. Giving is the thought uppermost in each mind, even though it is couched in this way, "I must give to Mary because she will give to me." We never think of the Scrooges, at least we never do unless they are brought right home to us. But all the same, I am sure there are hundreds of them living right around us city folks and hundreds more scattered over the state. Every community has its Scrooge, and it is to that gentleman I am going to

But in real life it doesn't work that way. The lord of the manor never sees a ghost, never loses his favorite child, never has a bad dream or a single prick of conscience. He just keeps on the even tenor of his way and his family pass Christmas after Christmas with not so much as a spray of holly or an extra dish for dinner to give them a hint of the day.

It is a positive crime to childhood that such conditions exist. It not only robs the little folks of the good times which are theirs by rights, but keeps their father before them always in a light which is not at all enviable, to say the least. Children are always silently weighing their parents, little as the elders suspect it. The boys and girls from cheer-

starved childhood will be stronger with them on their death bed than the thought of the wealth they inherited. Of course, each has his idea of what is the most desirable thing in life. For

some, money stands ahead of everything else. But I would rather have the love and respect of one small child than the bank account of a Morgan without it. DEBORAH.

A GLOVE PROTECTOR and OTHER GIFTS

BY MAE Y. MAHAFFY.

Every one who carries a muff knows how quickly the lining becomes sufficiently soiled to readily mar the purity of a new pair of delicately colored gloves, even if worn but a few times. This may in a large measure be avoided if a dainty separate lining is provided for the muff for the special occasions when such gloves are requisite. These linings are easily made and will provide charming gifts for one's girl friends.

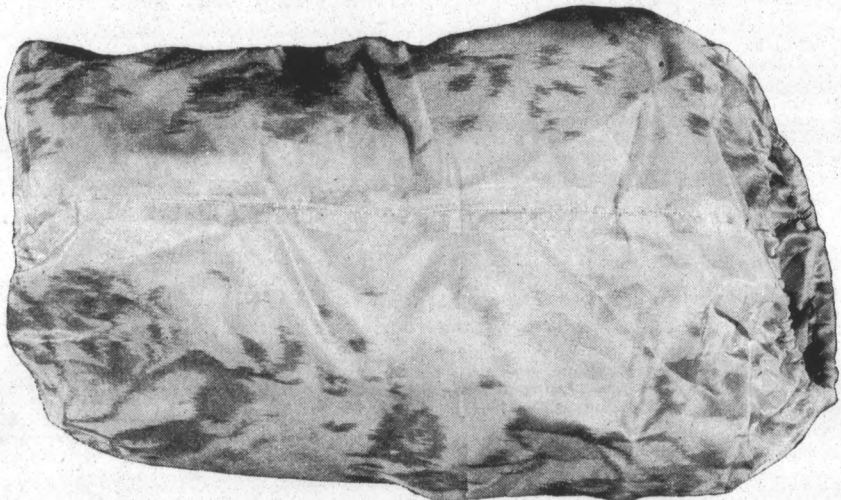
A third of a yard will usually be found, sufficiently long for the muff, but if one is able to obtain the exact measurements it will, of course, be best to follow them. The one in the illustration is a third of a yard long. Three lengths of six-inch wide ribbon of a dainty figure were utilized, pink and white being the predominating shades. These may, of course, be varied to suit the wearer. Lengths of collar boning are bent to form circles three and a half inches across, and over these the lengths of ribbon, which were previously overcast together to form a tube, are turned and firmly sewed, one at either end. These hoops form the openings for the hands when the lining is slipped into the muff at such times as it may be needed.

Two simple, easily fashioned, yet decidedly acceptable gifts for the boys of the household are shown in the other illustrations. Either may be made by even inexperienced workers with the needle.

The tie rack is formed by wrapping inch-wide blue ribbon around an eight-inch embroidery hoop, completely covering the wood itself. Hangers are then provided by loops of ribbon, prettily knotted. Any color may be chosen, one which will be appropriate in the room where it will be used being preferable. Collar boning may be made to answer in lieu of the hoop by bending it into a circle and fastening the ends securely.

The whisk broom holder shown is embroidered in quaint fashion, but this is not essential, although any embroidery design may be utilized. However, if one is not familiar with fancy stitchwork, or has no time to devote to it, other background fabrics may be brought into use which will not only look dainty, but will serve every purpose. A circle is cut

from pasteboard measuring eight inches in diameter, and this is covered on one side with the material, embroidered linen, figured cretonne, tapestry, which is the most popular material for fancy work just now, brocaded satin, silk, sateen, or any



Dainty Muff Lining for Protecting the Gloves.

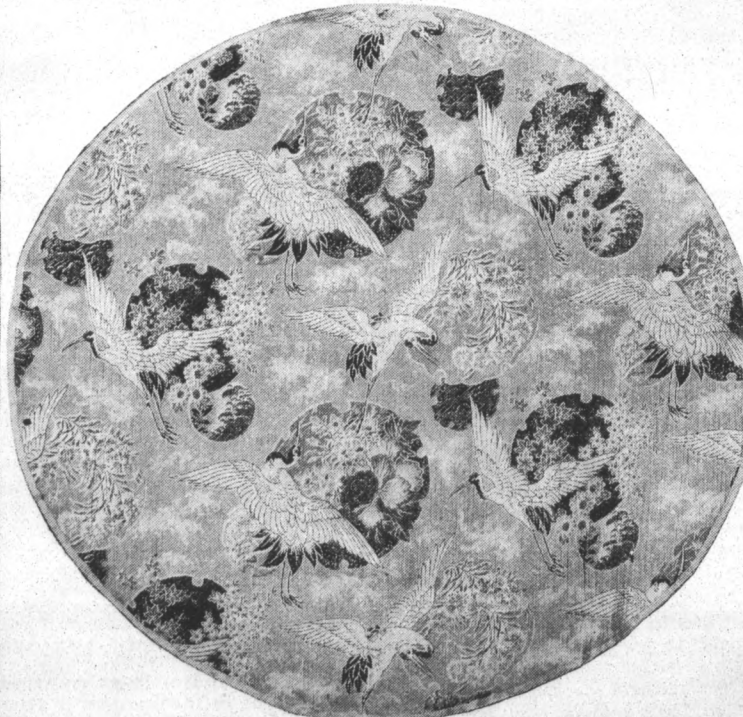
preach. You spendthrifts get your admonitions from your family, friends, and your conscience.

"Bah!" said Scrooge, "Humbbug!" when his nephew ventured to wish him a "Merry Christmas." And his words are repeated with variations when these other Scrooges hear timid, childish voices mentioning the happy, happy day. Christmas to these merry gentlemen means but a day when they are a bit sterner, a bit more sour and a bit more tightfisted than at any other time of the year.

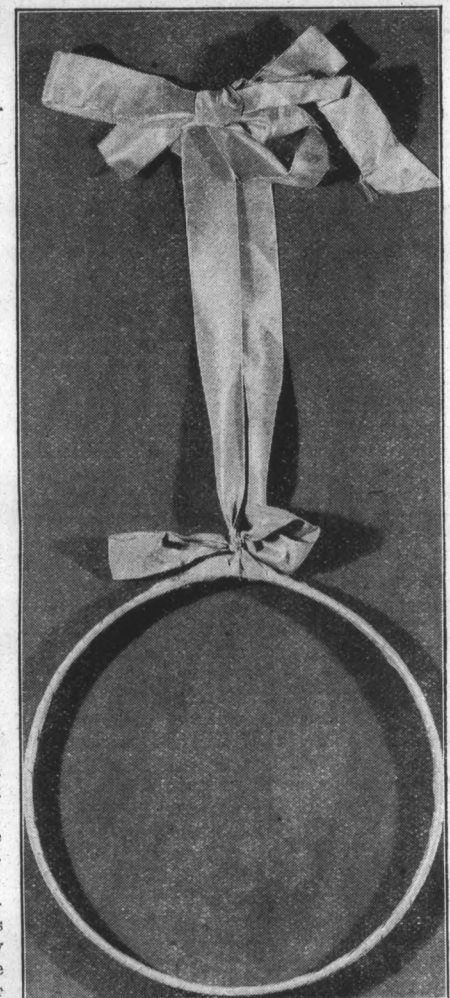
I don't like to meet these men at any time and it is my honest belief that every living thing feels the same way. Their children close up like clams when they appear. The wife, a cheerless enough being at any time, is a bit more colorless and subdued in their presence. The dog, if one is allowed to exist on the premises, crawls under the porch when the master approaches, and the cattle make themselves as inconspicuous as possible when he approaches the barn. This throughout the year. But when Christmas approaches the spiritual atmosphere of the home grows even more frosty than the air outside. The little ones hear the other children planning at school for the Christmas tree and goodies. They beg their mother for a tiny bit of Christmas cheer and she, poor woman, knowing the futility of appealing to her husband, puts the little brood off with stories of a bad year and no money, though she knows there is money enough in the bank which she has helped to earn, to give her children the finest Christmas spread of the community.

I never can understand the attitude of these Scrooges, nor for that matter, of the Mrs. Scrooges either. How any man can go through life turning everything to vinegar, grinding his family down to the barest necessities, denying them the most innocent pleasures so that he can add a cent more to his bank account is a mystery to me. And it is a bigger mystery that the wives can sit tamely by and let them. In story books something always happens just before Christmas to make the miser loosen his grip on his gold.

less homes unconsciously measure their parents by the parents of their playmates. Johnnie Jones always has a Christmas dinner at his house and loads of presents, a sure sign his father has money. The Scrooge children have nothing, therefore their father can not have money, therefore he is not as smart a man as Mr. Jones and thus he falls in the respect of his children. As they grow older they learn it is not because he has not money, but because he will not spend it. His meanness and avarice is apparent in a hundred ways and the respect of his children is gone forever. Outwardly they may respect him through fear, but inwardly they despise him and always will, no matter how many farms he may bequeath them. The memory of their



Dolly Roll and Cover.



A Neat and Serviceable Tie Rack.

other medium weight goods of pretty pattern and coloring. It is best to glue this material to the cardboard with library paste, but do not use paste which will run through the material and ruin its colors. If one is not sure on this point try a small scrap first, or sew the fabric into place by overcasting it to a similar circle laid over the wrong side. If glue is used a circle of paper will answer for the wrong side, its edge covering that of the fabric.

An oblong piece of the pasteboard six inches long and a little more than three inches wide, is then covered in like manner. A half-inch from each end holes are punched, those in the material being buttonholed to prevent raveling. Measuring in from the center of the outer edge of the circle a two-inch row of corresponding holes are made at either side. Ribbon about an inch wide of a suitable shade is then laced through these holes, securely fastening the oblong strip to the circle in such a manner that it bulges away from the circle a trifle, this space being for the broom. Ribbon hangers complete the useful little article. Children sometimes are able to make similar gifts of wall paper, and even these are often very attractive in appearance, though by no means as durable as the stronger fabrics.

Every housewife knows that to fold linen in such a manner as to form decided creases is not only very wearing on

the linen, but also creates unnecessary ironing whenever the article is to be used. Some possess wide drawers in which all such pieces may be laid out perfectly flat and smooth as soon as laundered, but not every one is so fortunate. For those who must make a limited amount of drawer space answer all purposes the dolly roll pictured will prove a blessing, indeed.

Cut a circle of cretonne, sateen, linen or crepe cloth large enough to accommodate the largest of the dollies or centerpieces, and bind it all around with washable silk tape or binding ribbon in some harmonious color. A strip of the material is then overcast around a mailing tube of almost the same length as the diameter of the circle, the ends being turned in, gathered and drawn up close together over the openings. The dollies are then laid on the circular piece of cloth, the roll placed near one edge, and all are rolled together smoothly. A length of the tape or ribbon secures the roll. This may be attached to the edge of the circle or left free, as the worker prefers.

If one has no tube of the necessary length it is usually possible to secure them at book stores, but if even this fails a short one may be lengthened by rolling



An Attractive Whisk Broom Holder.

a flexible piece of cardboard a trifle smaller than the tube at hand, thrusting the end into the tube, allowing the remaining end to project to the required length. A few stitches will hold it in place. Entire tubes are often made by rolling stiff paper, or light-weight, easily handled cardboard. Several thicknesses of crinoline will also answer the purpose.

CHRISTMAS SWEETS.

BY FRANK H. SWEET.

To make brown almond bar, place two pounds of sugar, one-third teaspoonful cream of tartar and two-thirds cupful of water in a granite saucepan; when it begins boiling add one pound of almonds, stirred in slowly; boil until the nuts are as brown as desired, which will be when they will slide off the lifted spoon easily; pour the candy until an inch thick into a greased pan, and when cool cut into strips with a hammer and strong knife. Blanched almond bar is made in the same way as brown almond only that the almonds are blanched. Peanut bar may be made similarly, using two pounds of peanuts instead of one. Brazil-nut bar may be made with two pounds of sugar, one-third teaspoonful cream of tartar, two-thirds cupful of water; cook to hard crack; pour out one-half candy into a greased pan, then scatter over this one pound of Brazil nuts, after having trimmed the brown skins off; add to the top the rest of the candy; when cool cut into bars. It should be one inch thick when done. English walnuts may also be used with good effect. Delicious sliced cocoanut bar is made by cooking two pounds of sugar, one-third teaspoonful of cream of tartar, two-thirds cupful of water to hard crack, then adding slowly one sliced cocoanut; stir carefully; then pour into greased pan and cut any shape wished. The cocoanut should be pared, cut into

halves and sliced very thin with a sharp knife.

To make molasses sliced cocoanut bar, pare and slice with a sharp knife two fresh cocoanuts; place on slow fire one pint of New Orleans molasses and two ounces of butter; when it boils add the cocoanuts; stir all the time over a slow fire until it reaches soft crack in winter and hard crack in summer; pour in a greased pan, spread thin with knife and cut into bars. A good recipe for fruit bar is the following: Two pounds of sugar, two-thirds cup water, one-third teaspoon cream of tartar; cook to a hard crack, and add carefully one pound of candied fruit, such as pineapple, cherries, figs and seeded dates; stir slowly until the fruit slides off spoon easily; pour into greased pan and cut into bars.

Good cocoanut bars can be made as follows: To two pounds of sugar add one pint of water; set on fire and when it boils add one freshly-grated cocoanut and stir until "thread" degree is reached, or 220 by the thermometer. To determine this degree try after the sugar has boiled a few minutes by raising the spoon from the candy and passing the finger, which has previously been dipped in cold water, across it, retaining on the finger some of the syrup. Then join the finger and thumb and if a thread is formed when they are separated, which breaks and settles on the thumb, this degree is reached. Then take the candy off the stove and work the batch against the side of the pan with the spoon until it begins to look cloudy; continue this until the whole batch becomes a thick white mass. Pour out on a pan on which powdered sugar has been sifted; spread with a knife until of even thickness, and when cold cut into bars as sold in stores. This may be colored pink or yellow, if preferred, in which case coloring is added in the pan just before stirring. Cocoanut cakes are made in much the same way as the bars. Take one pound of sugar, one grated cocoanut and one pint of water; cook just to a thread, stirring all the time; remove from the fire and rub sugar on the sides of the basin until the sugar just begins to turn cloudy. Now with a tablespoon dip a spoonful from the pan and drop on the sugared pan, removing it from the spoon by means of a fork held in the other hand.

Molasses Cocoanut Cakes.—Put into a basin one pint of New Orleans molasses and one-fourth of a pound of butter; place this on the fire, and when it boils add one freshly-grated cocoanut; stir until the batch reaches hard ball. Have a very slow fire, as the candy becomes very thick before it is done and burns easily. Pour into a greased pan and spread of even thickness with a knife; when cold cut into cubes.

Cocoanut macaroons are made from the white of one egg, one freshly-grated cocoanut and one-half pound of pulverized confectioners' sugar. Work into a stiff paste and form with the hands into small cakes. Lay these on buttered paper; dust them with powdered sugar on the top and put them in a hot oven; as soon as they brown a little remove them and set away to cool.

Burnt almonds are rather tedious to make, but when well done will repay one for the labor expended. Shell one-half pound of good almonds, and dust well but do not blanch. Place on the fire one pound of sugar, one-half pint of water, and when it commences to boil add the nuts and stir until the nuts begin to crack. Then place the pan on the table and with a spoon work the syrup on the sides of the basin; stir the candy thoroughly and quickly until the sugar granulates, which will require only a few minutes. Throw the whole batch of candy into a flour sieve and shake off all the loose sugar; then place a flannel cloth over the nuts to keep them warm. Put on the fire the sugar sifted from the nuts and one-half pint of water, and add enough sugar to make the whole amount of sugar one pound; cook to a soft ball, which is known by dropping some of the candy into ice water, and when the candy can be gathered between the fingers into a soft ball the desired degree is reached. Take the basin off and throw in nuts; stir as before until sugar granulates again; this time most of the sugar will adhere to the nuts. Again retain the sugar which remains after sifting, adding sugar enough to make one pound; put on the fire with water enough to dissolve; cook to a soft ball; set off and add a little red color and one-half ounce of dissolved chocolate heated quite hot; stir this through batch and throw nuts into candy again; stir as before until sugar granulates; empty into sieve and shake off any loose sugar. Have

ready a small amount of gum-arabic dissolved in a little water kept warm on the back of the stove until ready to use. Then add to the little remaining sugar the gum-arabic and set on fire; stir quickly until sugar dissolves, then set off and throw in nuts; stir carefully until all are coated; spread in one layer on a pan and set in a warm place to dry. Peanuts and filberts can be treated in the same way as the almonds, but are not so nice.

To make cocoanut drop, take two grated cocoanuts, one pound of confectioners' powdered sugar, and the grated yellow rind and juice of two lemons; work together well and form into drops the size of an English walnut. In the center of each cake put a small piece of citron; place on buttered tins and bake in a hot oven until the tops are brown.

To make French nougat, boil one pound of granulated sugar and one teacupful of water over a sharp fire until it begins to turn yellow. Do not stir while boiling. Have ready one-half pound of almonds blanched and dried. Put them in the oven and leave door open; when they begin to look yellow add to the candy as it reaches the turning point described above, and quickly pour into a well-oiled tin or iron pan about one-half an inch thick. Mark with a sharp knife into bars before it cools. By bending the tins between the hands slightly the candy will come out easily.

To make almond rock, cook one pound of brown sugar and a teacupful of water until the thermometer shows 290, or when dropped in water and taken between the fingers it will crack like an egg shell. Flavor with lemon. Clean one-half pound of almonds by rubbing between two cloths but do not blanch. Slightly warm the nuts and pour as many into the candy as it will take, then pour into an oiled pan two inches thick. Cut with oiled sharp knife into bars before it is cold. Both of the above candies will burn if left for a moment on the fire after they are ready, so great care must be taken.

Delicious pan creams may be made by boiling three pounds of sugar, one pint of water and one-half teaspoonful of cream of tartar to a soft ball. Let it cool, and then add a little orange flower water and stir until white. Pour into a pan and when cool mark into squares and break apart. Other flavors and colors may be used.

Butter-scotch of a delectable quality may be made by cooking three pounds of sugar, one-half cupful of molasses, one-half teaspoonful of cream of tartar and four ounces of butter until it reaches crack; add a few drops of flavor and pour into a greased pan and mark into squares.

Glaze nuts and fruits, equal to any confectioner's, may be made by cooking two pounds of sugar, one-third teaspoonful of cream of tartar and one-third quart of water to hard crack; pour into deep pan; place the pan at the side of a marble slab or another flat pan; throw into the syrup, one piece at a time, the nuts and fruits which you wish to glaze; remove them with a fork and drop on the slab or pan. Candied fruit, such as cherries, pineapples, limes, apricots, etc., can be cut into squares and dipped, as can walnuts, Brazil nuts, dates and figs. Fresh Malaga and California grapes, tangerines and sections of oranges can also be glazed if you are careful to select only such fruits as have skins to protect the juice.

ABOUT SEVERAL THINGS.

Aye! Aye! To J. B. D.'s article anent the service on the farmer's table. If our friends come to see us, they do not want us to spend all our time serving a dinner and washing dishes on their account, and if they come for what they get to eat, why should we care whether they come at all or not? Give them the best of what we have, served in a simple manner and if they are considerate people, they will enjoy the meal far more than if served in courses. I have known a number of people who were obliged by circumstances to live in hotels, and how they always enjoyed a simple, home meal, even if it were nothing but johnny-cake and milk served on the kitchen table.

I heartily agree with the article recently published about teaching boys to be husbands and fathers. Fortunate is the mother whose husband's practice aids her in this teaching; for, say what we will boys are apt to feel that mothers, being women, do not understand and they may be all their lives learning that they and not their mothers, are the ones who do not understand. Teach them to be considerate in little as well as big things,

and it will become a habit that their wives will bless the mothers for. Teach them the true value of woman's work, and that it is meant to supplement man's and without it the real aim and profit of man's work is lost. In this connection, show them what is the wife's right in regard to the family income and by common ownership of many things accustom the boy to the use of the pronoun "our" so his wife may be spared a very common, but sharp sting, in their relations.

Don't allow a boy to be unnecessarily critical. Many a bride who really did well, has been discouraged because "it didn't taste like mother's" when, in all probability it was not meant to hurt. Our tastes are not all alike and why shouldn't the man do his share toward a "mixed ration," you might call it.

Teach boys to want and expect to have homes of their own some time and that crops of wild oats are not good foundations for them. Above all, teach them to be fair. If they expect the girls who are to be their wives to spend time to prepare themselves to be good housekeepers, they should do their share toward encouraging it by showing that they appreciate the qualities in girls that go toward the making of good home-keepers, instead of flirting with every pretty face that comes along, leaving the real girls to be wall-flowers till such times as they may choose to hold out their arms expecting the well trained girls to consider it an honor and fall into them.

Aside from the desire to help their mothers, who can blame girls for not wanting to learn to keep house, when they can see no use for it in the future, since most boys now are taught, "Oh, don't tie yourself down. See the world. Have a good (?) time," and alas! too often taught that that liberty should belong to a man, even if he is married. Too often they hear matrimony treated only as a joke or worse. Teach your boys to be husbands and fathers and you will not have any trouble getting the average girl to learn to be a housekeeper, home-keeper, wife and mother.

MARIAN.

A DAINY APRON.

Aprons are an absolute necessity and one can hardly have too many of them. Of course, variety of design is essential because of the various occasions on which



they are worn. Here is one that is very convenient when just a little work is to be done. The apron and bib portions are each in one piece, joined together by a belt. A pocket at each side is useful as well as a finish. This apron may be made of calico, gingham, or white lawn and the edges may be bound with braid which comes in all colors.

The pattern (5160) is cut in one size. To make the garment will require 2 1/2 yards of material 27 inches wide, or two yards of 36-inch material. The pattern can be obtained by sending 10 cents to the office of the Michigan Farmer.

Please get your subscription orders in early and thus avoid the rush and possibility of error.

Milk as a Food and a Disease Carrier—No. 31.

By Mrs. Alta L. Littell.

MILK has been called a perfect food, and in a way it is. Yet if adults were to attempt to live upon it solely, trouble would probably result. True, it contains nitrogenous foods, fats, sugar, salts and water, but an adult would have to drink so much to obtain the carbohydrates he needed that he would secure more protein and fat than his system could stand.

The milk of different cows varies so greatly that a true analysis is difficult to get. A fairly accurate one shows milk to contain 4 per cent protein; 4 per cent fat; 4.5 per cent sugar; 6 per cent salts, and 87 per cent water. The salts are chloride and phosphate of soda, potash, lime and magnesia, and a little iron, but not enough to make it a perfect food for adults.

The fat of milk is readily seen as cream. Cream is composed of small globules of fat presumably covered with an albuminous membrane which is broken up by churning, allowing the fat to run together in the solid mass we call butter. The buttermilk which is left contains the same constituents as milk but in different proportion. Of course, most of the fat is gone and much of the sugar has been turned into lactic acid. The composition of buttermilk is 90.6 per cent water; 3.8 per cent casein; 1.28 per cent fat; 3.38 per cent milk sugar, and .9 per cent ash. Buttermilk is a favorite beverage with many, and it is often a good drink in case of feverishness.

The sugar in milk is different from beet, cane, or maple sugar, and in the case of bottle babies it should be used instead of such sugar if the milk is to have sugar added.

Milk to be fed to infants should always be sterilized, first, because it is more digestible, and second, because, being an animal secretion, it is peculiarly liable to take up disease germs which are only destroyed by sterilization. For ordinary purposes it need not be boiled. Simply raise it to a temperature of 155 degrees and keep it there for five or ten minutes. A double boiler is necessary for this. Some writers go so far as to solemnly

warn everyone to refrain from uncooked milk. However necessary or wise this injunction is, it is certain that it would absolutely prohibit the spreading of disease by milk.

On this subject, the spreading of contagion or infection by milk, too much stress can not be laid. Milk, and butter, too, readily absorb vapors and gases, and sickness is often caused from milk which has absorbed sewer gas. It should always be kept in a cool, sanitary place where there is absolutely no chance of bad odors and gases. Scarlet fever, diphtheria, typhoid and other serious diseases are frequently spread by milk which has taken up the germs of these diseases. Cows sometimes have a disease resembling scarlet fever, and milk from them at such a time has been the cause of an epidemic of scarlet fever among the consumers of the milk. Dairymen who have such sickness in their family should see to it that no exposed person go near the cattle or milk, and that nothing from the sickroom be allowed to pollute the water supply or milk. One mother who ignored this rule and bought milk for her baby from a scarlet fever home, today mourns the loss of the infant.

Milk, either alone, in egnogg, gruels, junkets or with puddings is an important article of food in most sickrooms. There are few forms of sickness which call for it to be stricken from the dietary. For infants, cow's milk unmodified is hardly a suitable food as it is unlike human milk in composition. The curds are more difficult of digestion, and something should be added to render them more digestible. Occasionally a baby is found who can not take cow's milk, however modified. For them condensed milk is sometimes good. It should never be tried except as a last resort as it contains too much sugar to be an ideal food for infants. Condensed milk is made by first evaporating the water, then adding sugar, sterilizing the milk and hermetically sealing it. Evaporated milk has less water removed and is unsweetened. Condensed milk will keep for days after the can is opened while the evaporated milk will sour in the same time as ordinary milk.

A LITTLE PREACHMENT TO MOTHERS-IN-LAW.

BY ELLA E. ROCKWOOD.

LIVES there a woman however unselfish who has not felt a tinge of resentment when her child gave to another the first place in his heart, sacredly her own for so many years?

Women who would scorn the mere thought of jealousy, who give up gladly their own flesh and blood to be of one flesh with another, cannot, after all, entirely suppress this feeling.

Not long ago I was talking this over with a friend whose eldest son is soon to marry and go out from the parental home into one of his own. It is the first marriage among her children, for this son is her first born. To me she confessed with just a suspicion of tremor in her voice that it seemed as if she could never endure it in the proper spirit. This woman being a true mother, realizes that the course her son has taken is the only one she would have him pursue. She would not have him go through life unmated, yet it seems like tearing her very heart strings to permit it.

Claiming priority of experience along this line, I had a good friendly talk with her, and when we parted I think her heart was lighter. Her boy has chosen wisely and will undoubtedly be happy in his new life. This in itself is such a blessing that the thought should surmount every other. After a time she will forget the twinges of heartache brought about by his seeming transference of affection and welcome in fact, as well as in form, the new member of the family with all the love of her noble nature.

One of the things which she said to me in the course of our conversation was that there usually is more or less of a severance of home times in the case of a son who marries, that he is more apt to enter the family circle of his bride than is she to come into his. In other words, "A son is a son till he gets him a wife, But a daughter is a daughter all the days of her life."

In some instances this is undoubtedly

true, but much depends upon the attitude to go to almost any length rather than cause the slightest feeling of difference between "your folks and my folks." And while she cannot be expected to realize exactly how the mother feels—for which one of us older ones ever gave it a thought when we married—still she cannot help knowing that John's mother is as dear to him as is her own to her and will try to be as nearly a true daughter as possible.

I cannot help thinking that where there is not the pleasantest of relations between the mother and her new daughter-in-law it is as much the older woman's fault as any one's. Of course, there will be little things which she must expect to yield. There will be times when it will seem as if she is taking second place, she who has suffered and borne for him all these years and whose right heretofore has been unchallenged. But after all, what does this amount to! The affection is there just the same, for a boy's mother will always be mother to him, no matter who else may come into his life. And the best thing for her to do is to open her arms wide and take the new daughter right to her heart and keep her there. Let her feel that she has two mothers now instead of one. And she must be a queer girl if she does not prove worthy of such affection. This course is much better than to maintain an aloofness as trying to one as to the other, which is so apt to engender misunderstandings and hard feelings somewhere or other.

Take it from me, mothers of sons who are about to be married, that your new daughter wants you to love her just as much as you want her to love you. And furthermore, nothing can cement the bond between your boy and yourself more surely than to show him that you are pleased with his choice and that you welcome his wife to the family circle with open arms.

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The test is in the real service. Get the testimony of the users of the NEW HOME, it will be convincing proof of superior qualities. The NEW HOME has no complicated parts to get out of order; is Simple, Strong, Silent, Sure, and can be relied upon at all times for perfect sewing. Not sold under any other name.

Write Dept. 4 for our Catalog and 1911 Calendar.

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New York Exporters Handle More FURS

than all the rest of the U. S. We are one of them and want your furs. Send for price list and ship to

M. F. Pfalzer & Co.,
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New York City.

(Continued from page 536).
was investigated by the Department, the farmer receives a scant 50 per cent, or one-half of the price paid by the consumer. The railroads get about 7 per cent, so that the remaining 43 per cent of the consumer's price is received mostly by the retailer.

"The milk wagon of the retailer has a long route. It stops at a house or two in one city block, perhaps passes several blocks without stopping, and so proceeds to serve customers thinly distributed along a route of miles. At the same time the milk wagons of other retailers are covering various portions of the same route, and so there is a great waste of effort and of expense in the distribution."

The farmer receives hardly more than half of the consumer's price in the case of poultry; 69 per cent in the case of eggs; cabbage 48 per cent when bought by the head and 65 per cent when bought by the pound; celery, 60 per cent when bought by the bunch.

The apple grower receives 56 per cent of the consumer's price when the purchase is by the bushel and 66 per cent when by the barrel; the strawberry grower gets 49 per cent of the consumer's price in purchases by the quart, and 76 per cent when by the crate. When the consumer buys a peck of onions at a time, the farmer receives 28 per cent of the retail price; when he buys a barrel the farmer receives 53 per cent. So, in the case of oranges, when the purchase is by the dozen the grower receives 20 per cent of the consumer's price, whereas, when the purchase is by the box the grower gets 59 per cent. The rule seems to be, the smaller the retail quantity the smaller the farmer's share of the consumer's price.

Among the many other products represented in the list are oats, with 74 per cent of the consumer's price going to the farmer when bought by the bushel; melons, 50 per cent when bought by the pound; parsnips, 60 per cent when bought by the bunch; potatoes, 59 per cent when bought by the bushel; string beans, 30 per cent when bought by the barrel; sweet potatoes, 61 per cent when bought by the barrel; turnips, 60 per cent in purchase by the bunch; watermelons, 34 per cent when bought singly.

The serial story, the first installment of which we are presenting to our readers this week, will furnish entertaining reading during the closing weeks of December and the early months of the new year—the period when good reading matter is most appreciated. It is the story of those unfortunate individuals who, born to wealthy parents and reared in luxury, grow up utterly unfitted to go out into the world and earn a livelihood when fortune fails. It teaches the wholesome lesson of the dignity of labor and demonstrates how hard it is to learn that lesson after the individual has reached man's estate. The authors of this excellent story have been successful competitors in serial competitions, and several of their productions have been published in book form.

PREMIUM QUESTIONS ANSWERED.

Please tell me if I send subscribers for any of the premiums offered for clubs will the subscribers be entitled to the premiums offered to subscribers?

Kent Co. Mrs. F. A.
Yes, if the premium is mentioned when the order is sent they will be allowed premiums as offered according to the time they subscribe.—Eds.

1JAN1.

If you find this following your name stamped on your paper you will know your time is up January 1, and that the last issue in December is the last paper you will receive unless you renew.

Please renew now.

HAPPENINGS OF THE WEEK.

National.

The steamship Olympia with 123 persons on board, was wrecked on Rocky Blight island, 40 miles from Cordova, Alaska, where a heavy sea continues to roll and threatens to break the boat in pieces. After waiting 15 hours the frightened occupants of the vessel were rescued from their sea prison by the launch Donaldson.

The supreme court of the United States upheld the decision of the Michigan supreme court in the case of the Grand Rapids hydraulic company against the officers of that city, in having the charter of the company repealed as done by the Michigan legislature in 1905.

President Taft has appointed Judge Edward Douglas White, a democrat of Louisiana, chief justice of the United States Supreme Court to succeed the late Mel-

ville W. Fuller. He also appointed Joseph R. Lamar, another democrat of Georgia, and Judge Willis Van Vandeventer, a republican, to the same bench to fill the vacancies caused by the advancement of Justice White and by the resignation of Justice Moody. The personnel of the new commerce court should the selections of President Taft be confirmed, will be as follows: Presiding judge, Martin A. Knapp, of New York; judges of the court, Robert W. Archibald, of Pennsylvania; Wm. H. Hunt, of Montana; Emmet Carland, of South Dakota, and Julian W. Mack, of Illinois.

Assassins are examining James J. Gallagher, who shot Mayor Gaynor of New York, to determine his sanity, the theory having been advanced that the would-be assassin was demented at the time of committing the crime.

A decision Monday by the federal supreme court opened the way for the federal authorities to proceed with the trial of the directors of the American Sugar Refining Company who are charged with violating the Sherman anti-trust law, and thereby closing the Pennsylvania Sugar Refining Company of Philadelphia. It was expected that the sugar directors would get out on technicalities.

Foreign.

Spain was visited by violent wind storms this past week. The western part of the country was first swept by a cyclone, and on Sunday the whole land appeared to be helpless in the path of another storm more terrible than the first. Many people are reported killed or injured, a vast amount of property is destroyed and the valleys are flooded. The lower part of the city of Seville is submerged and it is expected that the whole city may be under water shortly. Railroads are washed away in many places. Communication is suspended over most of the telegraph and telephone lines. The storm reached to Italy where wind and water accomplished great damage in the rural sections and towns of the northern provinces. Here, too, traffic is demoralized by washouts and debris.

The Brazilian marines who mutinied a fortnight ago and who were granted practically all their demands by the government, did so again last Saturday to their sorrow. As a result of the fight which started by the revolting sailors firing upon the city of Rio de Janeiro, 200 of the marines are dead and about an equal number of citizens. The loyal government troops captured the remainder of the mutineers. Martial law has been declared in the federal district for 30 days.

The progressive canvass by the department of state for outside business has resulted in contracts for battleships for the Argentine navy with a consideration of \$22,000,000, railway equipment to cost \$2,400,000; two ships for the Cuban government to cost \$900,000, armor and armament for Argentine at \$1,000,000, and paper at \$200,000. The canvass also resulted in an equal share with other countries of the \$30,000,000 contract for the construction of a railroad to the central provinces of China, together with the building of harbors and other improvements in Manchuria amounting to \$10,000,000 more.

Cholera conditions in Italy are now rapidly improving. During the 24 hours up till Sunday no new cases were reported.

The Peruvian ministry has resigned. It was appointed on Oct. 28.

The Mexican government is collecting troops in Chihuahua where an early engagement with the insurgents is anticipated. On Sunday the two armies were about 20 miles apart.

The English elections, while not complete, show that the former government will be returned to power with substantially the same majority as it had in the last parliament.

John W. Garrett, who now occupies the secretaryship of the American embassy in Rome, has been named by President Taft as United States Minister to Venezuela.

An imperial order of Czar Nicholas, of Russia, opens up many places for Jews of the first guild. Business conditions appeared to be the reason of this move, it being the opinion of the cabinet and the Czar that the Jews could remedy the situation by their industry and business acumen.

With the hope that their presence at the Canadian capital will aid in securing favorable legislation, 500 farmers from the northwest grain section of Canada have left for an excursion to Ottawa, where they will demand reciprocity with the United States in order that machinery will be delivered to them cheaper and that the government take over the terminal elevators on Lake Superior and the building of a government line to the Hudson Bay. The farmers represent the grain growers' association which is a strong organization numbering 40,000 members on its rolls.

The court of appeals of Portugal has ordered, in the action brought against former Premier Franco and others for issuing illegal decrees and making improper expenditures, that the suit be quashed.

More than 70,000 pilgrims visited the shrine of the Virgin of Guadalupe, the patron saint and protectress of the country of Mexico, on the occasion of the 379th anniversary of the greatest feast day on the Mexican calendar. The shrine is just outside the City of Mexico.

Language Series—Book One. By Robert C. Metcalf, D. Litt., Ex-Supervisor of Schools, Boston, Mass., and Augustine L. Rafter, A. M., Assistant Superintendent of Schools, Boston, Mass. Book One is designed for the fourth, fifth and sixth years, and, by its presentation of subject matter, leads the pupil to express his thoughts spontaneously and with some degree of accuracy. Cloth, 12mo, 256 pages, with illustrations. Price, 40c. American Book Company.

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of part of its most valuable and fertile properties—ammonia, potash and phosphorus—every time you grow a corn crop.
These must be replaced regularly or in a few years all the fertility of the soil will be exhausted.

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contains all the foods necessary to the perfect development and maturity of corn.
Drill Jarecki Fertilizer, 200 to 400 lbs. to the acre, and you will get 80 to 100 bushels of better, more fully developed corn per acre.

Write for free memorandum book. Contains the A, B, C, of fertilization. Free to all growers.

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Coal Dealers are Sore Don't Like This Invention

New Invention That will Give You Just as Much Heat as You are Now Getting, With Half as Much Coal.

Inventor Says Any Reader of the—g— Anywhere Can Try it for 30 Days without Paying One Cent.

If you heat your home with either coal or wood stoves you ought to give thanks to a man over in Akron, N. Y., who has discovered a way to give you twice as much heat as you are now getting for the same money, or just as much heat as you are now getting for 40 to 60% less money.

The inventor has sent us the illustrations showing the Parlor Furnace, as he calls his invention, attached to a stove pipe in an upstairs room above the parlor.

It has been proven time and time again that with the Parlor Furnace this cold upstairs room can be heated a whole winter through without burning one extra rod of coal.

If you have a room over the kitchen stove, or over any other stove, it can be comfortably heated all winter at no extra cost.

Or if you have an adjoining room on the lower floor you can easily heat it for the same price you are now heating the one room.

If you have only one room to heat, mind you, you can heat it with about half the coal you are now using.

And best of all, the Parlor Furnace is so constructed that it keeps the floors warm. There are no cold feet in the homes where the Parlor Furnace is used.

The Parlor Furnace is, without doubt, a money saver to all people who heat their homes with stoves. It puts warm, pure air in circulation throughout the

rooms, and utilizes the heat that would otherwise go up the chimney.

There is no other invention like the Parlor Furnace; it is built on an entirely new and novel plan.

It is extensively used in stores, offices, schools, churches, and workshops where one stove is not sufficient and where cold floors endanger health.

The Parlor Furnace is made of polished blue steel, trimmed with nickel, and is an ornament in any home. It is easily attached to any stove; any man who can put up the pipe of an ordinary stove can connect a Parlor Furnace.

THE INVENTOR'S LIBERAL OFFER.

I will send the Parlor Furnace to any address in the United States. Try it for 30 days and if it doesn't give satisfaction, or do all I claim it will do, return it at my expense. If it does give satisfaction, send me \$12.00.

If you want further information and testimonials drop me a postal or letter today.

If you want to take advantage of my 30 days' Free trial offer right now, mail me the coupon below, and tell me what room you intend to heat with the Parlor Furnace. George E. Cady, Pres.

Use This Coupon.

GEORGE E. CADY, Dept. G.
Pres. Akron Heater Co., Akron, N. Y.

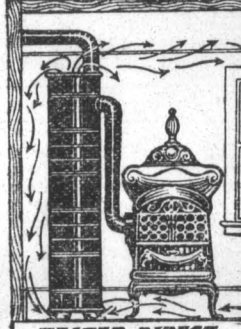
Dear Sir:

Please send me a Parlor Heater on 30 days' free trial. If I am satisfied with it, I will send you \$12.00. If I am not satisfied I will return it at your expense.

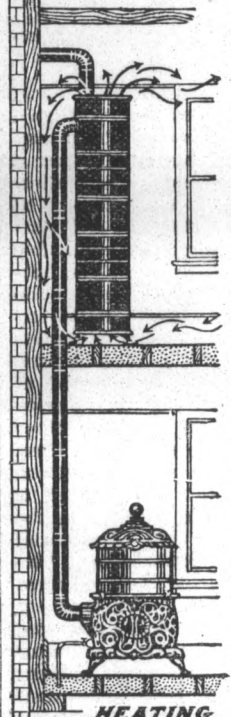
Name.....

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HEATER DIRECT-CONNECTED WITH PARLOR FURNACE



HEATING AN UPPER ROOM

THE DAIRY

CONDUCTED BY COLON C. LILLIE.

BALANCING A RATION.

Please formulate us a balanced ration from the following feeds: Cottonseed meal, \$1.75 per cwt.; bran, \$1.30 per cwt.; dry beet pulp, \$1.20 per cwt.; corn meal, \$1.15 per cwt. Roughage, cut cornstalks and good rye hay.

Leelanau Co. C. E. E.
With dry corn stalks and hay for roughage, one would want to feed pretty liberally and would hardly expect to have the cows eat up this roughage very clean. Where one has no corn silage to feed, he should certain want to feed beet pulp in the ration, and with the feeds named and prices, I would mix corn meal, beet pulp and cottonseed meal together for the grain ration, mixing 100 lbs. of corn meal, 100 lbs. of dried beet pulp and 100 lbs. of cottonseed meal together. Then I would feed each cow per day in two feeds as many pounds of this grain ration as the

as readily in cold weather as it does in warm weather. Well ripened cream churns more readily than sweet cream, and in the summer time your cream will probably ripen to a greater degree of acidity than it does in cold weather, consequently it will not churn as readily now. After you skim your milk and get the cream, you should set the cream where it is warm so that it will ripen; and, in making ripened cream butter, this cream ought to be warmed up to about 70 degrees and set in that temperature for about 12 hours, then it should be cooled down to 60 degrees and churned.

Now, if you will do these things, I don't think you will have much trouble in getting your butter to come, but if your butter does not come, it is because of the fact that your cows are getting well along in the period of lactation. Then it is a good thing to pasteurize the cream, or the milk when it is set. The average housewife calls it scalding the milk. Set your milk on the stove and keep it there until it gets real hot, then set it away in crocks and when the cream comes it will churn more readily than where you do not pasteurize

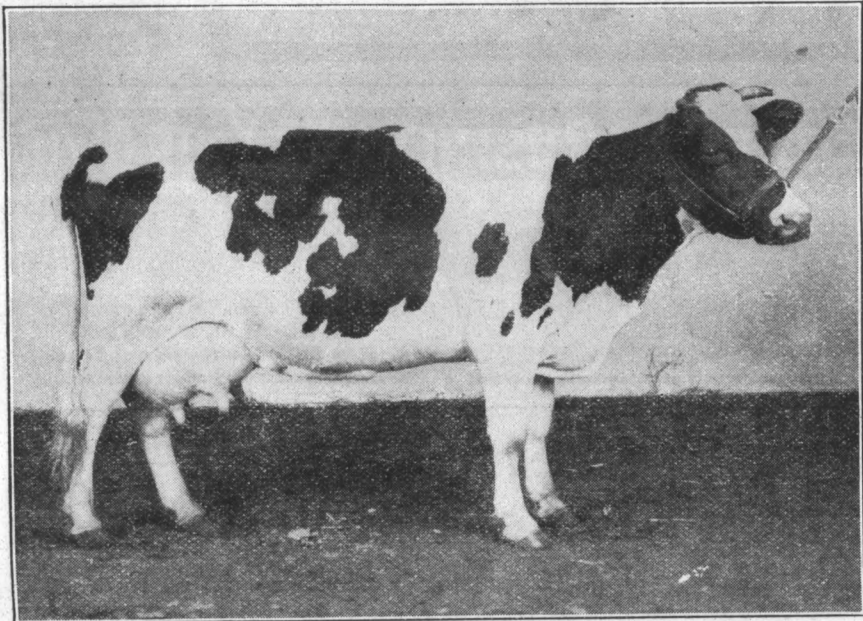
at Chicago, the standard over-run was 16% per cent. According to this, 100 lbs. of butter-fat ought to make 116% lbs. of commercial butter. On the average, I think this is more than the creamery gets. Some get higher in some churning and lower in others but I don't believe the average will exceed 16 1/2 per cent over-run.

STALLS OR STANCHIONS.

I have built a cow barn 16x40 ft., and I am undecided just how to fix the inside for the cows. My silo is at one end and I have an alley in front of the cows. Would like your advice through the Michigan Farmer. Would you advise stalls instead of stanchions? I like stanchions if the cows are just as well in them. Can you give me plans for the best stanchions for the cows? How long ought the floor to be for medium sized cows, from stanchion to gutter? Would you advise putting in a gutter? Is a cement floor all right for the cows to lay on or had there ought to be plank on the cement? Do you keep your cows that are soon to freshen, in stanchions?

Allegan Co. T. W. K.
As I have stated many times in the Michigan Farmer, this question of stalls, or stanchions, or the best kind of stalls, is one that cannot be settled by any discussion. It's a question where people do not agree. A man becomes used to stanchions and he likes them. Another man becomes used to a certain kind of a stall and he likes them and would have nothing else, so there is not much trying to settle this question. I have-always said, that in my opinion, if cows could talk, they would tell you that they would prefer a stall to a stanchion, and yet I know a majority of the cows of this country are kept in stanchions and the modern stanchion is a great improvement over the old-fashioned, rigid one. If you are going to keep the cows in stanchions, I do not think you can make them and have them as comfortable as the modern stanchion. I should say that you had better look over the advertisements in The Farmer and write to the manufacturers of stanchions and select one from them. You will be much better satisfied with the swing chain stanchion, or modern stanchion, than you will with the rigid one, and certainly the cows will be better satisfied. If you have stanchions you must have a gutter or you can not possibly keep your cows clean. The cows must be lined up to the gutter, consequently the gutter should not run straight through the barn, but so there will be a narrower space at one end between the gutter and the stanchions than at the other; then put the shorter cows on the narrower platform. I cannot tell you just exactly how far it ought to be from the stanchions to the gutter. It will depend entirely upon the length of your cows. When the cows are standing up straight in the stall in the stanchions, their hind feet ought to stand just on the edge of the gutter. This is necessary in order to keep the cows clean. I believe, on the average, you would want the gutter about 4 1/2 feet back from the stanchions. It will be better to round off the corner of the gutter just a little bit, because the sharp square edge is unnecessary, is liable to chip off, and a cow is apt to rake her leg across it and injure herself somewhat, although injuries from this source are not dangerous.

I have just learned of a new way of tying cows and I believe if I were to build another cow barn, I would put in a few of these stalls to try them. I got my idea from Prof. Erf's talk in some recent dairy meetings. It consists as follows: A two-inch gas pipe is driven down through the floor of the stable just back of the manger and right at the place where you would put the stanchion. The dirt is taken out from the inside of this pipe, then an inch and a quarter pipe is slipped through, down into the two-inch pipe and plays up and down with a collar on it so that it cannot be pulled out. Now a strap with a link is fastened to this inch and a quarter pipe. The strap has a ring, so that when you put the cow into the stall you snap the strap around her neck. When she lies down the inch and a quarter pipe settles down into the two-inch pipe. When she gets up, the inch and a quarter pipe is raised out of the two-inch pipe, and works up and down, adjusting itself to the position of the cow. It seems to me that this might work out nicely. I would want the cows to stand in stalls which, I should think, ought to be short, coming back at least half way on the bodies of the cows, because if they were tied in this way they would have such freedom of their heads that they would be fighting. But it seems to me that this would give the cow a great deal of free-



A Champion Holstein-Friesian Cow.

cow gives pounds of butter-fat in a week. This is rather liberal feeding of grain, but if you have good dairy cows I think they will well pay for the generous feeding. It will not be necessary to wet the beet pulp, they can eat it dry and get good results. Pains should be taken in mixing these feeds to get an even distribution of the cottonseed meal with the beet pulp and the corn meal.

THE BUTTER FAILS TO COME.

Will some one please inform us as to the reason we can not get butter from our churning? The two cows from which we are making butter came fresh in the latter part of May and were on pasture until six weeks ago, since that time have been fed liberally on corn fodder, beet tops and cabbage leaves, but no grain while on pasture. They were salted regularly but since being confined I neglected salting them very much for a month. Then we began to find it difficult to obtain the butter; but for the past 16 days they had all the salt they will use. Nevertheless, churning conditions are growing worse each time. Is it because they were not salted, or are there other causes? We set our milk in pans and it does not stand longer than three days, nor does the cream. We thought conditions ought to begin to improve by this time if it is only caused by neglect in salting them.

Antrim Co. W. K.
I do not believe that neglecting to salt the cows regularly for a month would have any effect upon the churnability of the cream. There are various reasons why the butter might not come, and no one can tell just exactly the reason without experimenting a little. When cows get pretty well along in the period of lactation the churning does not come as readily as when they are fresh. Your cows are getting along well in the period of lactation, and this may be the fault. Then again, the butter does not come as well in cold weather as it does in warm weather unless you take extra pains in warming the cream. You should never churn until the cream is at a proper temperature, neither winter or summer. In the summer time you should cool the cream to the desired temperature and in the winter you should warm it. Temperature has more to do with your failure to get butter than any one cause. Ordinarily, the cream ought to be at about 60 degrees to have the butter come readily. Again, the cream does not ripen or sour

or scald it. I think if you try one after the other of these remedies, you will find the cure of your trouble. Your cows should have a grain ration.

CASEINE IN BUTTER.

Will you please explain through the Michigan Farmer about caseine in butter? How much butter should 100 lbs. of butter-fat make? Have understood the law allows an overrun of 16 per cent. Does this 16 per cent include the caseine? Our creamery man says the caseine is an extra over-run.

St. Clair Co. SUBSCRIBER.
In churning the cream the globules of butter-fat are broken up and gathered into a mass known as butter. This butter contains not only butter-fat, but a certain amount of caseine, or the albuminous part of the milk which is part of the cream, also some added salt and water, or moisture. It would be impossible to separate all the moisture from the butter-fat in churning, if one wished to do so. Moisture is a part of the butter itself, so, also, is caseine and it is impossible to separate all of the caseine from the butter. When butter is churned at a certain temperature, it will absorb more of the moisture than it does at other temperatures so that the moisture varies. The caseine is rather a fixed ingredient and, of course, the salt being added is also variable but there is usually, on the average, about four per cent of salt and caseine in good commercial butter. The limit of moisture in butter has been fixed at 16 per cent. If butter contains 16 per cent more of moisture it is denominated adulterated butter, so that the butter maker must see that the water content or the moisture content of his butter does not reach 16 per cent, hence the 16 per cent is the moisture limit and not the over-run limit. Butter can contain about 20 per cent over-run and yet have the moisture content within the limit.

There is much talk now and discussion in the creamery circles to have a butter standard instead of a moisture standard and it is probable that this will be worked out and in all probability the standard will be fixed at 82 1/2 per cent fat for butter. When butter contains 82 1/2 per cent of fat, one can be assured that the moisture content will be below 16 per cent, and your over-run will be something like 16% to 17 per cent. At the World's Fair

How Long Should a CREAM SEPARATOR Last? It Depends Upon the Kind

The average life of the common "mail order" type of cream separator is one year; many of them barely hold out for three months; others for six; but this gives the "mail order" man plenty of time to get his money before the buyer discovers his mistake.

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2. More about feeding and caring for her.
3. More about keeping the records and doing the work of the co-operative cow testing associations; then take the short course at the Grand Rapids Veterinary College. Write for catalog and information.

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FREE CHURN To introduce the Challenge Churn 1 to 10 gal. capacity. Makes good butter from milk or cream, easy in from 1 to 5 minutes. Write today sure, get one FREE.

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FARMERS who will need a TANK HEATER should see the NELSON. No heat wasted, all under water. Two weeks free trial. Send for catalogue No. 23, and prices.

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Please mention the Michigan Farmer when you are writing to advertisers.

dom, and yet it would keep her in place just as well as a stanchion and you could keep her just as clean. It certainly would be economical to install because anybody can get the pipe and properly fit it, and there would be no royalty to pay. I think the idea is well worth trying.

DISTILLERS' GRAIN VS. WHEAT BRAN.

Will you please give me the best balanced ration for cows in milk? Will feed ensilage twice a day, a little clover hay twice and oat straw once. Wheat bran at \$1.25 per cwt., cottonseed meal at \$1.85 per cwt., buckwheat at 60c per bu. When cottonseed meal is worth \$1.25 per cwt. what is dried distillery feed worth per cwt.? Would it be cheaper to feed the distillery feed than bran?

J. L. P.
I suppose by distillers' grain is meant a refuse from the whiskey distillery and not from the brewery where barley is malted to make beer. Dried distiller's grain, where the whiskey is made largely from rye, contains only about 10 per cent of digestible protein, while dried malsters' product contains about 18 per cent and dried brewers' grain contains about 15 per cent. Wheat bran contains a little over 12 per cent digestible protein, consequently the distillers' grain is the by-product of the whiskey distillery where rye is made into whiskey. It would not be as valuable as wheat bran, taking into consideration only the protein, and this is usually the only part that we figure on in making up a ration because we have the carbohydrate in the corn silage, and clover hay and other roughage that is fed. In any case, there would be little difference between the dried distillers' grain and the wheat bran at the prices named. Cottonseed meal at \$1.85 per hundred would be much cheaper in balancing a ration with corn silage than either one of these. I would not use ground buckwheat. If you will get buckwheat, sell the buckwheat flour for human food and take the residue or buckwheat bran, or buckwheat middlings rather, which contains over 20 per cent digestible protein you ordinarily can buy it at a price which makes it cheaper than distillers grain or wheat bran. A good ration for the cows, with the feed named, would be to feed all the corn silage the cows will eat up clean night and morning and feed liberally of clover hay what your supply will allow, and also put in a feed of oat straw. Then I would make up a grain ration of 200 lbs. of wheat bran, 100 lbs. of cottonseed meal and 100 lbs. of distillers' grain, if you can get it handy, and mix this all together. They will give variety to the feed and make a splendid ration of grain for the dairy cow. Now feed each cow as many pounds per day of this grain ration as she produces pounds of butter-fat in a week. If you don't care to feed the distillers' grain, use 300 lbs. of bran to 100 lbs. of cottonseed meal.

BEST STABLE ABSORBENT.

I have been thinking of starting in pure-bred Holstein cattle in a small way. Where can I get a description or short treatise on this breed? I need some kind of absorbent for my cow stable. What would you recommend? Gypsum, kaint, or something else? State where I can get it and how much it should cost per 100 lbs. I have been using straw in my cement gutters behind cows but this don't absorb all the liquid. I desire your advice about it. I would like to save all the liquid some way conveniently.

A. L. D.
I know of no better description of the Holstein-Friesian cattle than that written by Mr. H. Gardner, superintendent of the advanced registry of the Holstein-Friesian Association, of Delavan, Wis. If you will write to Mr. Gardner he will be very glad to send you this treatise on the outlines of the Advanced Registry System, which contains his article, description of the Holstein breed.

Now as to the best stable absorbent, we used to think that land plaster was the very best stable absorbent. It not only had the power of absorbing about four times its own weight of moisture, but it was believed, by many chemists, that a chemical combination took place which held the volatile ammonia of the manures. When you go into a stable you get a strong smell of hartshorn. This is carbonate of ammonia. Now, the idea was that this chemical combination rendered the carbonate involatile, fixing it in the form of the sulphate of ammonia. I understand that recent investigation in chemistry brings out the fact that the sulphuric acid is so strongly fixed in the sulphate of calcium, that there is no chemical combination takes place when it is brought in contact with the carbonate

of ammonia. Taking this for granted, then land plaster is no better absorbent for the stable than road dust, or dry dirt of any kind, or dry muck. It will simply help absorb the moisture, but it will not trap the ammonia. But the chemist tells us that acid phosphate, which is phosphate rock treated with sulphuric acid to make the phosphoric acid water soluble, is not only a good absorbent, but that there is enough free sulphuric acid left in it so that a chemical action, takes place when it comes in contact with volatile carbonate of ammonia and fixes it as sulphate of ammonia, which is a substance soluble in water, but does not readily volatilize. Now when phosphate rock, which is phosphate of calcium, is treated with sulphuric acid, the sulphuric acid sets free the phosphoric acid and forms a combination with the calcium, making sulphate of calcium, or land plaster, so that you have in acid phosphate soluble phosphoric acid and land plaster and some free sulphuric acid. Land plaster will absorb four times its own weight of moisture and free sulphuric acid will form a chemical combination with the volatile salt of ammonia and fix them and you get phosphoric acid as an added plant food which is valuable to all Michigan soils. Now the question is, can we afford to use acid phosphate? Fourteen per cent goods will cost a farmer, delivered, about \$15 or \$16 a ton in car lots. But when the farmer buys acid phosphate, he is buying phosphoric acid and paying for the phosphoric acid that it contains only. The land plaster which it contains and the free sulphuric acid are thrown in. He pays nothing for it. Now, if our land needs soluble phosphoric acid to grow the most profitable crops, why can we not afford to buy acid phosphate as a stable absorbent? The land plaster helps absorb the moisture, the sulphuric acid fixes the ammonia and the phosphoric acid is worth all or more than we pay for it as a plant food. We usually put on acid phosphate with the wheat drill and a couple of hundred pounds to the acre to grow wheat, or oats. Can we afford to mix it with the stable manure and draw it out and spread it on the land? That is the question that every farmer must determine for himself. Why is it not just as well to use phosphoric acid in this way and get it into the land as it is to use it with the wheat drill and distribute a small portion in that way. By using it freely as an absorbent in the stable and drawing the manure out and spreading it on the soil we get the distribution of the phosphoric acid just as well, perhaps not quite so evenly when first thrown onto the soil, but it will be distributed by plowing and harrowing. Of course, we would not use much of this, a handful for each animal every day.

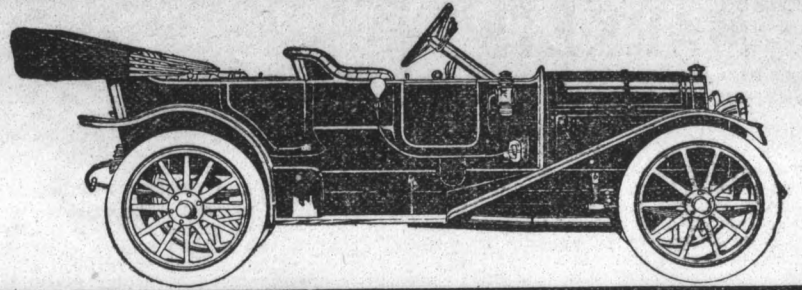
I can go to the plaster quarries here near Grand Rapids and get land plaster for \$4.00 a ton if I furnish the sacks to put it in. I can buy 14 per cent acid phosphate say, for \$16 per ton. Now, in the acid phosphate I have got the land plaster just the same, but it cost me nothing, because in buying the acid phosphate I am simply charged with the phosphoric acid which it contains. The free sulphuric acid combines with the ammonia and makes my stable manure much more valuable than if I had not used the acid phosphate. I have enough faith in acid phosphate as a stable absorbent so that I ordered a car load for my own use. I will be better qualified in a year or two to tell you something about it in a practical way. There is one thing about acid phosphate that I am not just ready to give an opinion on, and that is the odor of it. Will the odor of acid phosphate affect the cow stable?

COLON C. LILLIE.

SILO HERE TO STAY.

A Kent county subscriber asks if it is true that silos are going into disuse in many sections where they have been tried. Mr. Lillie replies as follows:

Some silos have been torn down and replaced by new ones. The reason the old ones were torn down was because they were not properly constructed, and had decayed so that they were no longer air tight. Once in a while a farm changes hands and the new owner is not a dairyman or stockman; he has no use for the silo. In such instances silos that had formerly been used may be no longer used. Now, as a matter of fact, last year one dealer in Grand Rapids sold over 40 silos, and he has sold more than that this year. Dairyman of this vicinity are putting up silos every year, and they are all in use.



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more. The double feed of the gasoline tank gives an extra 25 miles. No other automobile can use this tank.

This car fairly sails over ruts and ditches with a big free swinging motion, flexible, balanced and powerful. Built especially for farm conditions, it fords streams and climbs hills in the screaming storm, unflinching in emergency.

Our guarantee protects you absolutely in the purchase of an Abbott-Detroit. Just send us a postal to get the whole absorbing story—and the bang-up catalog. Do it today.



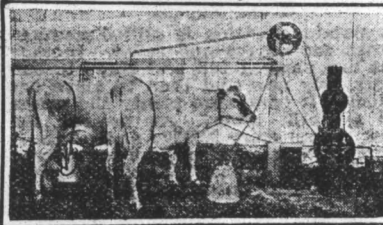
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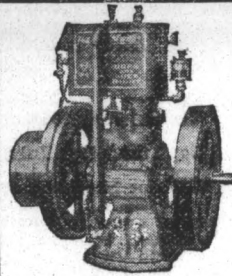
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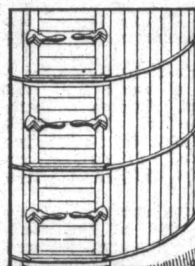
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MARKETS

DETROIT WHOLESALE MARKETS.

December 14, 1910. Grains and Seeds.

Wheat.—Prices the past week have declined slightly from those of the previous period. Better crop conditions prevail generally. The decrease in the visible supply in Europe is not so large as a year ago while stocks there are larger than in 1909.

Table with columns: Thursday, Friday, Saturday, Monday, Tuesday, Wednesday. Rows: No. 2 Red, No. 1 White, May, July.

Corn.—Corn rules a cent lower than a week ago. There was a lack of cash and export demand during the week and farmers have been busy hauling the new corn to the market.

Table with columns: Thursday, Friday, Saturday, Monday, Tuesday, Wednesday. Rows: No. 2 Corn, No. 1 Yellow.

Oats.—In common with wheat and corn, oat values declined this past week. The margin, however, is small and the market is firm at the new prices.

Table with columns: Thursday, Friday, Saturday, Monday, Tuesday, Wednesday. Rows: Standard, No. 3 White.

Beans.—As usual, little has been done in the bean market this week. The prices given out by the board were lower.

Table with columns: Thursday, Friday, Saturday, Monday, Tuesday, Wednesday. Rows: Cash, Dec.

Clover Seed.—The present situation of the clover seed market points to further advances in prices. In all grades improvement has been made during the past week.

Table with columns: Thursday, Friday, Saturday, Monday, Tuesday, Wednesday. Rows: Prime Spot, Mar., Alsike.

Rye.—Market is higher and there is no increase in offerings. Quotation for No. 1 is 84 1/2c per bu.

Table with columns: Wheat, Corn, Oats, Rye, Barley. Rows: This week, Last week.

Flour, Feed, Provisions, Etc.

Flour.—The flour trade is easy with prices unchanged. Quotations are:

Table with columns: Clear, Straight, Patent Michigan, Ordinary Patent.

Hay and Straw.—Hay values are steady. Quotations on baled hay in car lots f. o. b. Detroit are:

Feed.—All prices are steady with those of last week. Carlot prices on track are:

Potatoes.—There are no changes in prices or conditions of this trade. Demand is fair and supply ample.

Provisions.—Family pork, \$23@24; mess pork, \$21.50; medium clear, \$21@22; smoked hams, 13 1/2c; briskets, 13c; shoulders, 11 1/2c; picnic hams, 11 1/2c; bacon, 18c pure lard in tierces, 11 1/2c; kettle rendered lard, 12 1/2c.

Dairy and Poultry Products.

Butter.—The market was unable to hold to the reduced prices of a week ago and a cent advance was made. The supply and the demand seem to be well adjusted for a steady market.

Eggs.—The scarcity of eggs is still a feature of the trade. Dealers are unable to find any offerings and hence cannot supply the demand.

Poultry.—Poultry is coming to market quite liberally with the exception of turkeys, the latter being scarce and for them prices have advanced.

Cheese.—Michigan, 17c; Michigan sharp, 17 1/2c; York state, 17 1/2@18c; York state sharp, 19c; limburger, old, 16@17c; Swiss domestic block, 20@22c; cream brick, 17@18c.

Dressed Pork.—Price is improved and it is now 9@10c lb.

Veal.—Choice, 12@12 1/2c; ordinary, 9@10c per lb.

Rabbits.—Lower. Per dozen, \$1.75.

Fruits and Vegetables.

Apples.—This fruit is moving quite freely. Choice consignments selling at \$4@4.50; common kinds and grades, \$2@3 per bbl.

Cranberries.—Scarce and high. Quoted at \$3.50 per bu.

Cabbage.—Steady. Selling at \$1.50 per bbl. for new.

Onions.—65@70c per bu.

Honey.—Choice to fancy comb, 15@17c per lb.

From Farmers' Wagons on Detroit Eastern Market.

There is not a large volume of business on this market, and the products offered are staples, consisting of potatoes, apples, pork, roots, celery, cabbage, and other vegetables in smaller quantities.

OTHER MARKETS.

Grand Rapids.

The potato situation is still discouraging, both for buyers and seller. Storage houses are plugged full and shippers can get cars only now and then to move out the stock.

Chicago.

Wheat.—No. 2 red, 93@94c; May, 95 1/2c; July, 93c per bu.

Corn.—No. 2, 48 1/2@49c; May, 47c; July, 47 1/2c.

Oats.—No. 2 white, 31@32c; May, 34 1/2c; July, 33 1/2c.

Butter.—The market is unsettled and slow. Advances were forced by outside influences.

Eggs.—The high price for fresh stock with the heavy offerings of storage goods has affected a slow market at unchanged values.

Hay and Straw.—Prices have clung to the position attained a week ago with the market ruling firm.

Potatoes.—Receipts are running heavy. Dealers do not take hold of the trade with any interest.

Beans.—Offerings are liberal and prices show weakness. Pea beans, choice hand-picked, are quoted at \$2.18@2.23 per bu; prime, \$2.10@2.12; red kidneys, \$2.75@2.90.

New York.

Butter.—All grades are higher. The market is anxious for the better grades. Creamery specials are quoted at 31c; extras, 29 1/2@30c; thirds to firsts, 23@28c.

Eggs.—Fresh offerings go quickly and the trade is lively considering the small supply.

Elgin. Butter.—Trade firm at 30c per lb. which is an advance of 1c from last week.

Poultry.—The poultry situation is firmer and higher for many kinds. The approach of the holiday season is bringing a broader demand.

THE LIVE STOCK MARKETS.

December 12, 1910. (Special report by Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of stock here today as follows: Cattle, 210 cars; hogs, 21,760; sheep and lambs, 29,000; calves, 1,000.

With 210 cars of cattle on the market here today, and 41,000 reported in Chicago, all the heavy cattle of 1,200 lbs. and up sold a strong quarter below last week where sales could be effected.

We quote: Best 1,300 to 1,400 lb. steers \$6.25@6.50; good prime 1,200 to 1,300 lb. steers, \$5.50@6; best 1,100 to 1,200 lb. shipping steers, \$5.25@5.75; medium butcher steers, 1,000 to 1,100 lbs., \$5.25@5.50; light butcher steers, \$4.75@5; best fat cows, \$4.50@5; fair to good cows, \$3.25@4; common to medium do., \$2.75@3.25; trimmers, \$2.50@3; best fat heifers, \$5.50@5.75; good fat heifers, \$4.50@5; fair to good do., \$4@4.25; stock heifers, \$3.50@4; best feeding steers, dehorned, \$4.75@5; medium to good feeding steers, \$4.25@4.50; stockers, all grades, \$3.75@4; best bulls, \$4.75@5.25; bologna bulls, \$4@4.50; stock bulls, \$3.75@4.25; fancy milkers and springers, \$6@7; good to fancy milkers and springers, \$45@60; common to good do., \$25@40.

Milkers and springers sold from \$5@10 lower than last week. Stockers and feeders sold 15@25c lower than last week.

With 136 cars of hogs on sale today, market opened steady to strong with Saturday's best time, and closing strong at the opening prices, with good clearance.

We quote: Mixed, medium and heavy, \$8@8.10, mostly at the latter. Yorkers, \$8.05@8.10; few choice light at \$8.15; pigs and light yorkers mixed, \$8.20@8.25; strictly pigs, \$8.25@8.35; roughs, \$7@7.25; stags, \$6@6.25. Prospects look fair for the near future.

The lamb market opened slow today; few choice handy lambs sold early at \$6.35@6.40; heavy lambs, \$6@6.15; lambs weighing over 100 lbs., \$5.75@5.85, and very hard to sell at these prices.

We quote: Best handy lambs, \$6.30@6.40; heavy lambs, \$5.65@5.75; bucks, \$2.50@3.25; heavy ewes, \$3.75@4; yearlings, \$5@5.25; wethers, \$4@4.25; cull sheep, \$2.50@3; handy ewes, \$3.85@4; northern Michigan lambs, \$5.85@6.15; veals, choice to extra, \$10@10.50; fair to good do., \$7.50@9.50; heavy calves, \$5@6.50.

Chicago.

December 12, 1910. Cattle. Hogs. Sheep.

Received today 43,000 38,000 40,000 Same day last year 45,640 48,294 37,709 Received last week 72,251 146,862 100,289 Same week last year 77,078 121,199 118,293

When last week closed cattle on the heavy order were selling 15@25c lower than a week ago, with yearlings in greatest favor and showing a decline of but 10@15c; while butcher stock, the best excepted, was 15@25c lower.

The cold snap caused an unusually big supply of cattle today, and while the best yearlings and heifers were steady, with steers going as high as \$7.35, other kinds of cattle were slow and 10@15c lower.

Hogs advanced 50@60c last week, with an \$8.05 top at the close the market being the highest since Nov. 12, when there was an \$8.10 top.

Today saw an early \$8.10 top, with the best hogs ruling 5c higher under good buying by speculators and shippers.

Local packers held off, however, and after the best lots were sold prices eased off. Sales were made all the way down to \$7.50, with the best light and heavy butcher weights going at top figures.

Stags sold at \$7.60@8.10, subject to 80 lbs. dockage per head, while boars brought \$3.50@4. Hogs received last week averaged in weight, 232 lbs., compared with 225 lbs. a week earlier and 216 lbs. a year ago.

Lambs advanced 50@60c last week, with a \$6.80 top, but weakened at the close, while prices today fell 15@25c under the large receipts, lambs going at \$4.50@6.60.

Sheep rose 15c last week, with a \$4.50 top, but declined 10@15c today, with wethers salable at \$3.60@4.35 and ewes at \$2.25@4.15.

Yearlings sold at \$4.25@5.50, with sales last week as high as \$5.75@6.

Cattle are in such extremely large supply in most feeding sections, farmers having been stimulated to place good numbers in their feed lots by the high prices received a year ago, that it will be several months before marketings will become much lessened.

Short-fed cattle have been hurried to market freely for many weeks, few owners caring to hold them through the long winter, and any threatened storms at this time may be reckoned upon as sure to swell the receipts here and at other prominent western markets.

There has been most of the time as large a general demand for beef cattle as could be expected during

a period of such exceptionally high prices for beef, but with such excessive offerings sellers have been forced to submit to much lower prices than were seen a few months ago. Still the showing is by no means so bad as this would at first indicate, and cattle prices will average well up if compared with most former years. Beef steers have been selling chiefly at \$5@6.50 for a week past, the cheaper class of light steers going at \$4.35@5.35 and the better class of corn-fed steers at \$6@7, with limited sales of prime steers up to \$7.35.

Hogs have been placed in recent weeks in a very much stronger position than for a long time before by the sudden development of a really good eastern shipping demand for hogs of the better class.

To a considerable extent this new important outlet was lessened at different times last week by the material rise that had taken place in the market, but it was still much better than a few weeks ago.

A reliable shipping demand is usually needed to make good prices, as it means competition among buyers, and when eastern packing points began receiving smaller supplies of hogs from their home territory, they had to look to Chicago for larger numbers.

The advance in hogs has checked the decline in fresh pork prices, and it has effectually blocked any lowering of prices for cured meats, thereby checking their consumption.

Hogs have sold closer together than heretofore, and there is a very much narrower spread between the best and the commonest consignments.

Strong-weight pigs have sold extremely well, and 41-lb. roasting pigs sold as high as \$9.50 per 100 lbs. under a good demand.

Hogs have averaged well in quality, and confidence is again shown by stockmen in the market.

Sheep have not been nearly as good sellers for a week past as lambs and light-weight yearlings on the lamb order.

There was a regular scramble among buyers part of the time to get hold of fat lambs of medium weight, and heavy lambs were invariably strongly discriminated against by buyers, such lots selling at a big discount.

Wethers and ewes had a fairly active demand, and breeding ewes were bought freely at firm prices for the better class.

There was as large a call for feeders as could be expected in December, but, of course, this outlet was a small affair as compared with that of several weeks ago, when the movement was at its best, with liberal offerings from the range country.

Not much that was desirable in quality for feeding was shown, but buyers from Michigan, New York and other states did not do much.

MICHIGAN CROP REPORT.

Wheat.—The condition of wheat as compared with an average per cent is 96 in the state, 95 in the southern counties, 98 in the central counties, 99 in the northern counties and 92 in the upper peninsula. One year ago the per cent was 92 in the state and central counties, 90 in the southern counties and upper peninsula and 95 in the northern counties.

The total number of bushels of wheat marketed by farmers in November at 124 flouring mills is 181,236 and at 115 elevators and to grain dealers 127,159, or a total of 308,395 bushels.

Of this amount 193,690 bushels were marketed in the southern four tiers of counties, 96,146 in the central counties and 18,559 in the northern counties and upper peninsula.

The estimated total number of bushels of wheat marketed in the four months, August-November is 4,500,000. Sixty-two mills, elevators and grain dealers report no wheat marketed in November. The total number of bushels of wheat yet remaining in possession of growers is estimated at 10,700,000.

Rye.—The condition of rye as compared with an average per cent is 96 in the state, 95 in the southern counties, 98 in the central counties and 94 in the northern counties and upper peninsula. One year ago the per cent was 91 in the state and central counties, 90 in the southern counties, 94 in the northern counties and 92 in the upper peninsula.

Live Stock.—The condition of live stock throughout the state is 97 for horses, sheep and swine and 96 for cattle.

Fall Pasture.—The condition of fall pasture as compared with an average per cent is 91 in the state, 90 in the southern counties, 92 in the central counties, 94 in the northern counties and 89 in the upper peninsula.

NATIONAL CROP REPORT.

The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture estimates, from the reports of correspondents and agents of the Bureau, as follows:

Winter Wheat.—Area sown this fall 2.5 per cent more than the revised estimated area sown in fall of 1909, equivalent to an increase of 828,000 acres, the indicated total area being 34,485,000 acres. Condition on December 1 was 82.5, against 95.8 and 85.3 on December 1, 1909 and 1908, respectively, and a ten-year average of 91.3.

Rye.—Area sown this fall 1.2 per cent less than the revised estimated area sown in fall of 1909, equivalent to a decrease of 25,000 acres, the indicated total area being 2,138,000 acres. Condition on December 1 was 92.6 against 94.1 and 87.6 on December 1, 1909 and 1908, respectively, and a ten-year average of 93.5.

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.
December 15, 1910.

Cattle.

Receipts, 833. Best steers and canners steady; common cow grades 25@35c lower. We quote: Best steers and heifers, \$6; steers and heifers, 1,000 to 1,200, \$5@5.50; steers and heifers, 800 to 1,000, \$4.50@5; steers and heifers that are fat, 500 to 700, \$3.75@4.25; choice fat cows, \$4@4.25; good fat cows, \$3.50@4; common cows, \$3@3.25; canners, \$2.75@3; choice heavy bulls \$4@4.50; fair to good bolognas, bulls, \$3.50 4; choice feeding steers, 800 to 1,000, \$4.25@4.75; fair feeding steers, 800 to 1,000, \$3.75@4; choice stockers, 500 to 700, \$3.50 @3.75; fair stockers, 500 to 700, \$3@3.25; stock heifers, \$3@3.50; milkers, large, young, medium age, \$40@50; common milkers, \$25@35.

Best grade of milch cows closed \$5@10 lower and common cows \$10@15 lower than last week.

Roe Com. Co. sold Prince 2 stockers av 515 at \$4; to Newton B. Co. 4 butchers av 902 at \$4.50, 7 do av 864 at \$4.50, 13 do av 841 at \$4.75, 1 bull weighing 820 at \$3.75, 1 do weighing 1,150 at \$4, 3 cows av 1,013 at \$3, 4 do av 990 at \$3; to Rattkowsky 1 do weighing 1,080 at \$3.50, 2 cow and bull av 1,225 at \$4.

Bishop, B. & H. sold Mich. B. Co. 6 cows av 960 at \$3, 2 do av 1,095 at \$4, 2 do av 890 at \$3, 7 do av 1,260 at \$4.50, 1 bull weighing 1,380 at \$4, 1 cow weighing 960 at \$2.50, 4 do av 882 at \$2.85; to Hammond, S. & Co. 2 bulls av 1,055 at \$3.75, 1 do weighing 1,150 at \$4, 1 heifer weighing 800 at \$4; to Parker, W. & Co. 12 steers av 1,178 at \$6, 1 do weighing 1,400 at \$4.50, 1 do weighing 1,300 at \$6.25; to Thompson Bros. 12 butchers av 760 at \$3.70, 3 cows av 1,007 at \$3.75; to Newton B. Co. 6 butchers av 630 at \$4; to Starrs 1 cow weighing 960 at \$3.35; to Kamman B. Co. 3 do av 950 at \$4.25; to Prince 3 stockers av 400 at \$4, 5 do av 575 at \$4.15; to Hammond, S. & Co. 3 canners av 830 at \$3, 3 bulls av 937 at \$3.75, 1 ox weighing 1,470 at \$4.50; to Mich. B. Co. 9 butchers av 777 at \$4.25, 2 do av 1,000 at \$4.75; to Regan 3 do av 587 at \$4; to Hammond, S. & Co. 6 canners av 930 at \$3.25; to Breitenbeck 7 cows av 871 at \$3.50, 1 cow weighing 930 at \$3.25; to Thompson Bros. 8 butchers av 1,016 at \$3.50, 1 bull weighing 1,150 at \$3.50; to Rattkowsky 3 cows av 1,143 at \$3.75, 2 do av 1,015 at \$3.60; to Thompson Bros. 2 do av 810 at \$3.25.

Haley & M. sold LaBoe 1 cow weighing 950 at \$4, 6 butchers av 771 at \$4.65; to Cooke 1 steer weighing 1,380 at \$5, 3 do av 980 at \$5.25; to Sullivan P. Co. 3 do av 980 at \$5.50; to Kalkowsky 1 cow weighing 1,230 at \$4, 5 do av 1,116 at \$4.30; to Applebaum 7 butchers av 671 at \$3.75, 1 cow weighing 950 at \$3.50; to Cooke 13 steers av 935 at \$5.10; to Mich. B. Co. 2 bulls av 1,825 at \$4.35; to Hammond, S. & Co. 3 cows av 1,020 at \$3.25, 1 do weighing 830 at \$3, 1 bull weighing 830 at \$3.75, 1 do weighing 1,510 at \$4.25, 2 oxen av 1,635 at \$4.50, 1 cow weighing 1,050 at \$3.50, 2 do av 775 at \$3, 8 butchers av 740 at \$4.40, 2 oxen weighing 1,475 at \$3.75; to Regan 6 butchers av 680 at \$4.30; to Cooke 2 steers av 960 at \$5.20; to Newton B. Co. 17 do av 930 at \$5.15; to Prince 7 stockers av 571 at \$4, 3 do av 700 at \$4.15, 4 do av 642 at \$4.15.

Spicer & R. sold LaBoe 1 cow weighing 1,050 at \$4, 4 steers av 1,020 at \$5.25; to Thompson Bros. 1 cow weighing 1,050 at \$3.50; to Sullivan P. Co. 6 cows av 865 at \$3; to Goodwin 8 do av 975 at \$3.80, 1 do weighing 660 at \$3.50; to Goose 2 do av 1,040 at \$3.25; to Schuman 3 bulls av 757 at \$3.75; to Parker, W. & Co. 29 butchers av 852 at \$4.25; to Rattkowsky 1 bull weighing 1,110 at \$4.20, 4 butchers av 777 at \$4.10; to Sullivan P. Co. 5 cows av 956 at \$3; to Breitenbeck 26 heifers av 780 at \$4.25, 4 butchers av 865 at \$3.75; to Kamman 3 do av 893 at \$4.75, 2 cows av 1,000 at \$3.75; to Sullivan P. Co. 1 bull weighing 1,430 at \$4.50, 11 butchers av 845 at \$3.85; to Fry 10 do av 700 at \$4.15, 3 do av 833 at \$4.15; to Sullivan P. Co. 1 steer weighing 1,140 at \$5.50, 3 cows av 1,170 at \$3; to Thompson Bros. 4 do av 1,200 at \$4.

Johnson sold Cooke 3 steers av 916 at \$5. Same sold Regan 10 heifers av 668 at \$4. Kendall sold same 3 do av 603 at \$3.65. Bohm sold Sullivan P. Co. 1 cow weighing 1,350 at \$4.25, 2 heifers av 890 at \$4.35.

Sandall & T. sold same 7 cows av 960 at \$3. Kendall sold same 2 do av 1,180 at \$4. Allington sold same 2 do av 875 at \$2.50. Bohm sold Fronn 2 cows av 1,000 at \$3.35.

Johnson sold Goose 5 cows av 1,068 at \$3.60. Adams sold Heinrich 4 butchers av 970 at \$4.50.

Allington sold Newton B. Co. 7 cows av 888 at \$4. Downing sold same 5 steers av 988 at \$5. Kendall sold same 2 do av 1,120 at \$5.50. Sandall & T. sold Mich. B. Co. 17 butchers av 760 at \$4.25.

Calves.

Receipts, 550. Market steady at last Thursday's prices; quality common. Best \$8.75@9; others, \$3.50@8; milch cows and springers, \$8@10 lower.

Haley & M. sold Parker, W. & Co. 3 av 170 at \$9, 1 do weighing 90 at \$7; to Breitenbeck 2 av 100 at \$6.50, 6 av 150 at \$8.

Roe Com. Co. sold Nagle P. Co. 5 av 150 at \$8.25. Johnson sold Hammond, S. & Co. 3 av 140 at \$8.

Spicer & R. sold Breitenbeck 3 av 100 at \$7.50; to Parker, W. & Co. 6 av 115 at \$7; to Goose 5 av 364 at \$3.75, to McGuire 2 av 130 at \$7.50, 1 weighing 150 at \$8.50; to Goose 1 weighing 280 at \$3.50, 3 av 140 at \$6.50; to Mich. B. Co. 9 av 145 at \$8.75.

Sharp sold Newton B. Co. 1 weighing 140 at \$7, 6 av 145 at \$9. Leach sold same 7 av 135 at \$8.50.

Adams sold Burnstine 3 av 140 at \$8. Haddrill sold same 8 av 150 at \$8.50, 1 weighing 130 at \$7.

Waterman sold same 13 av 180 at \$7. Bishop, B. & H. sold Parker, W. & Co. 11 av 130 at \$8.50, 4 av 155 at \$7, 8 av 140 at \$8.75, 3 av 145 at \$8.75; to Breitenbeck Bros. 3 av 130 at \$8, 1 weighing 100 at \$6; to Goose 1 weighing 230 at \$4.50; to Breitenbeck Bros. 5 av 145 at \$9, to McGuire 1 weighing 190 at \$5, 10 av 139 at \$7.50, 1 weighing 160 at \$9, 7 av 140 at \$7.50.

Sheep and Lambs.

Receipts, 4,597. Market 25@50c lower than last week; heavy lambs very dull and strong, 50c lower. Best lambs, \$5.75 @6; fair to good lambs, \$5.25@5.50; light to common lambs, \$4.50@5; fair to good sheep, \$3.25@3.75; culls and common, \$2@3.

Spicer & R. sold Breitenbeck 26 lambs av 75 at \$5.80; to McMillan 9 do av 93 at \$6.15, 29 do av 90 at \$6.15, 71 do av 77 at \$6, 9 sheep av 110 at \$3; to Gordon 3 lambs av 100 at \$5.50, 7 do av 85 at \$6; to Newton B. Co. 21 do av 85 at \$6.

Roe Com. Co. sold Nagle P. Co. 187 lambs av 85 at \$5.75, 4 sheep av 120 at \$3. Haley & M. sold Nagle P. Co. 15 lambs av 80 at \$5.60; to Stocker 15 do av 78 at \$5.50, 3 do av 120 at \$4.50; to Fitzpatrick Bros. 50 do av 70 at \$5.50.

Bishop, B. & H. sold Swift & Co. 212 lambs av 76 at \$6.10; to Breitenbeck 6 do av 90 at \$6, 5 do av 52 at \$4.75, 13 do av 58 at \$4.75, 15 sheep av 90 at \$3; to Parker, W. & Co. 198 lambs av 73 at \$6.10, to Lyons 54 do av 90 at \$6.10, 38 sheep av 73 at \$3.65; to Sullivan P. Co. 23 do av 90 at \$2.50, 8 do av 105 at \$2.75; to Mich. B. Co. 21 do av 105 at \$3.25; to Nagle P. Co. 147 lambs av 85 at \$5.75, 17 do av 77 at \$6; to Mich. B. Co. 9 sheep av 70 at \$150; to Sullivan P. Co. 10 lambs av 40 at \$3.50.

Adams sold Nagle P. Co. 18 lambs av 75 at \$5.80. Sandall & T. sold Young 48 lambs av 80 at \$5.45.

Carmody sold Sullivan P. Co. 17 lambs av 70 at \$5.60.

McLaughlin sold Mich. B. Co. 41 lambs av 85 at \$5.70, 45 sheep av 120 at \$3.50. Sharp sold Newton B. Co. 8 sheep av 100 at \$2.75, 25 lambs av 83 at \$6.

Leach sold same 9 sheep av 90 at \$2.65. Sandall & T. sold Hammond, S. & Co. 27 sheep av 85 at \$3.15.

Waterman sold same 7 do av 95 at \$2.85, 2 lambs av 110 at \$5.50.

Hogs.

Receipts, 6,700. Bidding 10@15c higher than last Thursday. None sold at noon. Range of prices: Light to good butchers, \$7.70@7.75; pigs, \$7.75; light yorkers, \$7.70@7.75; stags one-third off.

Bishop, B. & H. sold Parker, W. & Co. 4,310 av 175 at \$7.70. Roe Com. Co. sold Sullivan P. Co. 540 av 200 at \$7.70.

Sundry shippers sold same 210 av 175 at \$7.60. Spicer & R. sold Hammond, S. & Co. 1,715 av 190 at \$7.70.

Haley & M. sold same 450 av 180 at \$7.50.

Farmers who filled their feed lots with lambs several months ago were in many instances borrowers from the country banks, such loans usually running for a period of three months, and as fast as these loans matured they were called in, necessitating the prompt marketing of the flocks. To a very large extent the industry has proved an unprofitable one, and so long as the large movement marketward is kept up there will be a poor show for a majority of sheepmen, the business having been overdone as a general rule.

CROP AND MARKET NOTES.

Ottawa Co., Dec. 10.—The ground is covered with snow, and there is more falling, but there is not enough yet for sleighing. Many fields of wheat in this section looked some yellow when snow came. It was on the ends of the leaves. It is the opinion of the writer that the cause was on account of the favorable condition of the soil and weather when wheat was sown, so the plant made a very rapid growth, which made it tender when the first hard freeze came, which caused the ends of leaves to turn yellow, as a close inspection reveals no sign of insects. Some farmers in this vicinity just finished husking and shredding their corn before snow came. There is still some corn standing in the field unhusked. About the same amount of hogs being fattened as last year, but the corn crop is not quite as good. Most of the hogs, veal calves, cattle and sheep are bought by a man who ships them to Buffalo. This has a tendency to keep up prices in the local market.

Genesee Co., Dec. 10.—Considerable snow has fallen so far this month and as the ground underneath was not frozen when it first came, very bad roads resulted. Now, however, they are frozen and are becoming leveled down and hauling is rather more brisk. Our market consumes a large amount of loose hay and it is not uncommon to see ten to a dozen loads in a single day. This sells at

\$14@16 per ton for good quality at the present time. Prices on beef and pork are steady, with no perceptible tendency toward weakening. Of course, the quotations are considerably lower than last season. Wheat, 92c; oats, 34c; corn, 50@52c; potatoes quoted at 60c, but not many being moved owing to cold; onions, 75c; eggs, fresh, 34c and very scarce; butter, 34c and also very scarce; live turkeys, 17c; dressed, 19c; chickens, 10@12½c; dressed beef, 6@8c; hogs, 8½c; baled hay, \$12@14; apples, \$1.75 per bu. and hard to get. A heavy snow storm has set in and bids fair to make sleighing.

Isabella and Southern Clare Co.'s., Nov. 28.—Four inches of snow fell last night on ground that was not frozen and we have neither wheeling nor sleighing. Crops nearly all housed except now and then a field of corn. A good many farmers are marketing their hay at about \$14 for the best. Most farmers are holding their beans for the \$2 mark. Potatoes plentiful at 25c. Apples scarce and selling at \$1 per bu. for good stock. Horses are selling cheaper than they were 90 days ago. Farms are selling well. Beef, live weight, \$3@5; pork live weight, \$6@6.75; fowls, live, 8½c; chickens, 9c; butter, 27c; eggs, 30c; white beans, hand-picked, \$1.80; red beans, kidneys, \$2.50; white wheat, 85c; red wheat, 86c; rye, 72c; oats, 30c.

Indiana.

Laporte Co., Dec. 12.—Winter seems to have come to stay. Stock was in pasture until Nov. 30, but the weather has continued cold and wintry since. Stock is in good shape and there will be plenty of feed and prices for same are cheaper than a month ago. Bran, \$22; middlings, \$24; buckwheat bran, \$20; butter, 35c; potatoes, 40c; ten degrees above zero the lowest temperature up to date. Hogs have declined to 6½c, live weight, but will soon advance, in the opinion of most farmers. Cow peas, which are grown here, make an extra feed for dairy cows and keeps up the flow of milk with an increased yield of butter-fat.

Illinois.

Perry Co., Dec. 5.—The month of November was ideal weather for fall work. Little or no rain fell, which was hard on fall wheat, but fine for gathering corn. Wheat is in rather poor condition, mostly on account of being sown late and no rain after it was sown. Corn turned out fairly well considering the drawbacks. The storm on August 23 blew it all down and chinch bugs damaged it badly. Yields from 25 to 50 bu. per acre. Mostly all cribbed now. Potatoes were good, but not many potatoes are raised here, hardly

enough for home use. Oats did well, from 30 to 60 bu. per acre. No fruit; apples coming in from other points. Having our first winter weather today; snowing hard. All kinds of stock scarce and high. Hogs, \$7.50; beef cattle, 5@6c; hens, 9c; turkeys, 16c; eggs, 30c; butter, 25c; wheat, 90c; corn, 40c; oats, 35c; hay, timothy, scarce; red top, \$9 per ton baled; apples, \$2 per bu, shipped in.

Ohio.

Carroll Co., Dec. 6.—Some snow here, but not enough for sleighing, and the roads are rough for wagons. Farmers are busy butchering. The weather has been cold for about a week. Some corn still unhusked in the field. Sheep still run out on pasture and most of them are in good condition. Stacked hay can be bought at from \$11@13 a ton; corn, 55c bu; oats, 40c; wheat, 90c; eggs, 36c; do; butter, 36c.

Williams Co., Dec. 10.—November, and December also up to the present time, has been very cold with much wind. The ground has been covered with snow nearly all of this month so far. Corn husking is about finished and most of the fodder hauler. A good many have shredded the fodder, thinking it makes better feed. Hogs took quite a drop in price during November, but are picking up some now. Cattle not quite so high as earlier in the fall. Horses not very good sale just at present. Not very much fall plowing was done this fall on account of hucking being late and cold weather setting in too soon. Hay is about \$14 per ton; eggs, 30c doz; butter, 28@30c lb; milk, \$2 per cwt; corn, 50c per cwt. Rough feed seems to be quite plentiful.

Wisconsin.

Ashland Co., Dec. 4.—Fall work nearly all done and chances are that no more will be done, as November has been cold enough so ground is frozen and we have three or four inches of snow, and wood hauling, skidding of logs, underbrushing and wood cutting now the work being done. In this part of the country, which is mostly new, the farmers best harvest is in the winter, marketing the products of the forest, and the work of the farmer here is never done, as a general rule, and most of them put in longer days in winter than in summer. Potatoes, as a general rule, were stored, but some sold at 45, 50 and 60c, according to time delivered. Better prices are expected in the spring. Dairy butter, 32c, and scarce; creamery, 33c; eggs, 30c; oats, 50c. Hay still holds high, \$20 per ton, none being shipped in that sells for less. Meats, which have been lowered at some points, have not been lowered here yet.

Household Accidents

RATTLE—BANG SMASH



are common, they may cause BRUISES, SPRAINS, BURNS, CUTS, SCALDS, or worse. Don't suffer yourself or let others suffer. Keep constantly on hand the soothing oil that

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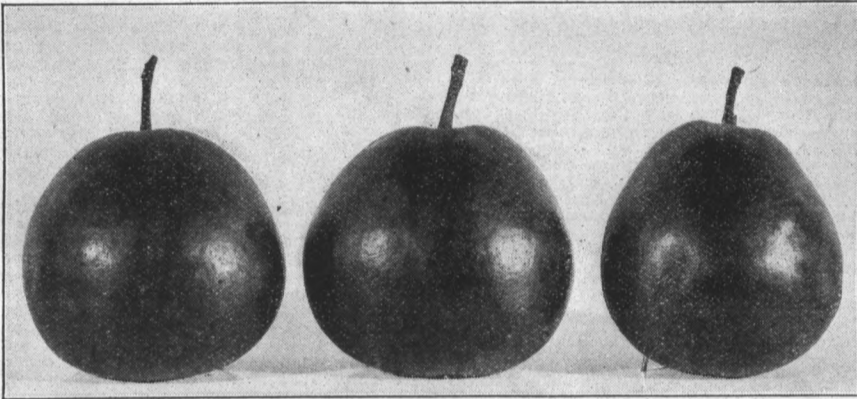
CIRCULATION DEPT., THE MICHIGAN FARMER, Detroit, Mich.

HORTICULTURE

PLYMOUTH TOMATO GROWERS ORGANIZE.

For several years past the tomato growers of Plymouth have been recognized as leaders in the production of very early tomatoes for the Detroit market and because of the very favorable soil condition a great many farmers have taken up tomato growing; but, up to three years ago they had no place to dispose of the remaining crop after the market price in Detroit fell to fifty cents per bushel as at this price it would not pay the grower to haul to Detroit. As a natural result, many tomatoes went to waste in the fields.

A catsup manufacturing company rec-



W. L. Kline, of Oakland county, presented to this office a number of pears grown upon grafts brought from Germany, from which specimens were photographed for the above illustration. The variety is unknown, but upon sampling they proved to have a very fine texture and splendid flavor and though picked ten weeks not a single specimen showed signs of decay, or of breaking down. Although Mr. Kline practices spraying upon his large orchards, the trees with the German grafts were not treated. And for this reason the results were the more remarkable since the specimens were smooth and free from blemishes and we have Mr. Kline's word for it that the fruit appears to withstand the attack of our insects and fungous troubles better than our old varieties.

ognized that this condition meant an opportunity to secure cheap tomatoes. They sent a representative who canvassed the territory and secured contracts from farmers and early growers at \$6.00 per ton, (a trifle over 17c per 60 lb. bushel), delivered at their factory at Plymouth. The growers were willing to contract at this price at that time in order to secure a pulp mill at this place and to assist a new enterprise, but they felt that the price was too small. However, they delivered their tomatoes as agreed and at the end of the season many growers found that no money could be made at this price and refused to grow again unless a higher price be paid. While the catsup company argued with these growers, they were securing new contracts by telling newcomers what a profit there was in growing tomatoes at \$6.00 per ton, by pointing to some grower who had a tremendous yield the previous year. This same argument has been used by the company from time to time, thereby holding the price to an unprofitable one for the grower.

This year the growers took time by the forelock and organized a Plymouth Tomato Growers' Association and long before it was time to contract for another year the association had nearly every tomato grower in the vicinity of Plymouth as a member and when the question of contracts for 1911 arose the catsup company found a different condition confronting them, for now they must deal with the growers through their association and not as individuals, since no individual grower would contract with any company that was not first approved by the association. This the company did not like for they could foresee that they could not use the old stock argument of profitable growing at \$6.00 per ton, for the association had gathered statistics and made an accurate estimate of the cost of growing and delivering one ton of tomatoes under an average condition in this locality. It was found that the farmers could not afford to grow tomatoes at the present time for so small a price as they had been receiving.

Bids were secured from different manufacturers of pulp for catsup and after some negotiation one company offered a price of \$8.00 per ton and agreed to contract with members of the association only, this offer was approved by the members of the association at a meeting held for this purpose, and now contracts are being made with members of the association at \$8.00 per ton.

It is needless to say that the growers

are enthused over their organization for they realize that without it this increase from \$6.00 to \$8.00 per ton would not have been secured for they had striven for the past three years to secure an increase, but to no avail. Through organizing they have gotten a substantial increase in less than six months.

Wayne Co. G. C. RAVILER.

A CONSIDERATION OF THE APPLE CROP.

Reflection over the too many frequent failures of the apple crop in certain sections of the country and the general decadence in the total crop, notwithstanding a constantly increasing acreage of orchards, disclosed a serious situation, well worthy of the most earnest attention of all wishing to maintain an industry producing the king of fruits. It is well known that our largest annual crop was in 1896

on leaves. These instances might be continued indefinitely, but the general situation can be merely hinted at with the hope that teachings will be more generally disseminated and investigated.

There are a countless number of points pressing for consideration. For instance, in the year producing 47,000,000 barrels of apples, a half crop, gave us twice as large a total as the year producing one-fourth of a crop, to which many apple growers had been accustomed. As a consequence, they did not know how to handle the half crop. They claimed they could not secure coopeage stock, in some instances they could not get pickers, and strongly alleged that there was a trust which monopolized cold storage houses and freight cars, thus barring them from all available markets. While, perhaps, some of their fears were groundless, there should be some way to provide for such emergencies and thus prevent the large products of some orchards going as food for worms and hogs when such fruit should go as blessings all over the land.

Experienced apple growers with large orchards do not hesitate to say that after the number one's have been disposed of the bulk of the money as profits for the orchard comes from the remainder of the crop when converted into the many useful and serviceable by-products.

Illinois. JAMES HANDLY.

VALUE OF TOP-GRAFTING.

Instead of experimenting with a large planting of a new variety of tree fruit, top-graft a few trees. You will be able to determine the merit of the variety in shorter time and at less expense. If it proves to be a favorite then you can plant extensively.

It is not unusual to see a fairly good crop on a three-year-old top-graft.

Varieties which, on their own roots are weak, unthrifty or disease-inviting, make excellent crops when top-grafted on strong-growing trunks. The Northern Spy is an example of an apple tree practically immune from the attacks of the woolly aphis. It is sometimes planted and worked over to other varieties.

Grafting is one of the most interesting things on the farm and it is absurdly simple. A little desultory practice will soon produce expertness. What could be more fascinating for the boy than to teach him the rudiments and then let him work over some old apple tree with a different variety on each limb—a dozen kinds on a tree—sour, sweet, early, late, big and little, crabs, even pears can be grafted on apple tree tops. Peach grafts will grow on apricot and plums on peach trees and vice versa. Of course, it don't pay to work over poor, weak roots. The source of energy—the root system—should be vigorous.

The writer had a row of "Smith's Cider." The trees were vigorous growers, but the apples rotted badly. I top-grafted them to "York Imperial" and in four years when in leaf the row was hardly distinguishable in point of size from the adjoining rows.

Top-grafted trees tend to grow upright but this can be overcome by pruning.

Top-grafts do better on small stubs than on large ones. Three inches is about the maximum diameter. The big limbs below can be sawed off without injury.

Some trees are naturally bad bearers, though true to name. Top-graft them with scions from the most productive tree in the orchard and you will soon do more than even.

G. E. M.



An illustration from a photograph taken upon the farm of John Larsen. It shows that sweet corn of size and quality can be grown in Newaygo county. Counties which boast of being superior corn localities would have difficulty in eclipsing this showing.

THE GREATEST

results in cases of weak digestion are obtained from **SCOTT'S EMULSION** because when ordinary foods do not digest, it provides the needed nourishment in highly concentrated form.

Scott's Emulsion

is so easily digested that its strength is rapidly absorbed by the youngest babe or most delicate adult.

SCOTT'S EMULSION is the food that strengthens the race. ALL DRUGGISTS

Shell Corn
120 Bu. Per Hour

THE WATTS POWER CYLINDER SHELLER AND FEED GRINDER

works like the giant shellers—fast, and clean, handles corn in all conditions, all sized ears, including pop corn. Any kind of farm power. Own your own sheller and shell when you please. You never can wear a Watts Sheller out. Can furnish with or without grinder. Saves miller's tolls. Shipping on Trial. Write today for circular giving low price.

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Do Less Work — Make More Money

We have just completed a nicely illustrated book that shows how to lighten every day barn work—how to reduce cost of caring for stock—how to make profits bigger.

This 48 page book tells how to keep the barn cleaner with less work; how to eliminate the disagreeable part of your chores; how to save the valuable fertilizer; and gives other information. We will send this book free. Illustrates daily use of the James Litter, Feed and Milk Can Carriers. If you want to learn about James Sanitary Cow Stalls, Stanchions, Bull Pens and Calf Pens ask also for Catalog No. 8.

KENT MFG. CO., 303 Cane St., Fort Atkinson, Wis.

HUNDREDS OF CARLOADS OF Fruit and Ornamental Trees,
Evergreens, Shrubs, Hardy Roses, etc. 1,200 acres, 50 in Hardy Roses, none better grown. 44 greenhouses of Palms, Ferns, Ficus, Everblooming Roses, Geraniums, and other things too numerous to mention. Mail size postpaid, safe arrival and satisfaction guaranteed. Immense stock of **SUPERB CANNAS**, the queen of bedding plants. Acres of Paeonias and other Perennials. 50 choice collections cheap in Seeds, Plants, Roses, etc. For Fruit and Ornamental Trees ask for Catalog No. 1, 112 pages; for Seeds, Everblooming Roses, Cannas, Geraniums, Greenhouse and Bedding Plants in general, Catalog No. 2, 168 pages. Both FREE. Direct deal will insure you the best at first cost. Try it. 57 years. (16)

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#3 Horse Blankets

Stand the hardest wear. Strongest brown tent canvas, warm lined. Lockstitch sewed, web bound. Two wide girths attached. Guarantee tag on each Old Honesty. Ask your dealer or write us. Booklet free.

BEMIS BLANKET COMPANY
20 Bemis Bldg., Omaha, Neb.

SAW YOUR WOOD

RUNS EASY No Backache weighs only 41 lbs. SAWS DOWN TREES EASILY CARRIED

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The Winters Farm Pedigree Oats

The best seed oats on the market. Yield 77 bushels one year, 76 bu. each year for 5 years.

We have tested most of the leading varieties of oats in America, Canada and England.

\$1.25 per bu. Bags free.

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Smithboro, Tioga Co., N. Y.

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Healthy, acclimated, high grade, true to label fruit trees and plants for Northern States at wholesale prices, direct from nursery to planter. Send for catalogue.

CELERY CITY NURSERIES, DESK E, KALAMAZOO, MICH.

FORTIETH ANNUAL MEETING OF MICHIGAN HORTICULTURAL SOCIETY.

That Michigan horticulture is taking rank as one of the most important interests of our state is evidenced by the large and enthusiastic Fortieth Annual Meeting of the State Horticultural Society at Benton Harbor, Dec. 6-7-8. The large auditorium of the Bell Opera House, in which the meetings were held, was filled, even to the balcony, from the time set for calling to order on the first day to the close of the program late in the afternoon of the third day. Much credit is due to President Smyth, Secretary Bassett, and the officers of the Berrien County Society for planning this excellent program and perfecting arrangements for so successfully carrying out the same. All sessions were started on time and no topics held over for succeeding sessions, thus giving time for a full presentation of all subjects and for ample discussion. Every number on the program was a live topic, handled by a live speaker who was an authority on the subject, and instead of conventional papers nearly every topic was handled in an informal manner and seemed to be the overflowing of the best things in the speakers' wealth of experience. If the overflow was insufficient to quench the thirst of all present for knowledge to meet individual requirements, an additional supply was drawn out through pointed questions and discussions. These brisk and pointed discussions which followed the presentation of each topic proved to be a most interesting and instructive feature of the meeting.

In addition to the many good things to be heard there were beautiful and instructive things to be seen. Three tables laden with select specimens from the best apple orchards of the state extended the entire length of the long stage, with tables at the ends and an instructive exhibit of apples at the back collected by the Horticultural Department of the Michigan Agricultural College to show the difference in the results of bordeaux and lime-sulphur sprays. Festoons of evergreen and flowers were draped from the curtains and wings of the stage and arranged artistically about the tables, which, supplemented with vases of cut flowers made a very pretty sight.

In another building were exhibits of hand and power sprayers, spray chemicals, nursery stock, and other things of interest to the grower.

Results from Spraying During the Past Season.

Tuesday morning's session was opened promptly by President R. A. Smyth, of Benton Harbor, who, after the audience had joined in singing the national hymn, called upon Supt. F. A. Wilken, of the South Haven Experiment Station, for the result of their spraying experiences during the season.

Mr. Wilken stated that in their experiments commercial lime-sulphur, 1 gallon to 40 of water, used as a summer spray for apples and pears caused very little russetting of the fruit, and controlled the scab perfectly, even on Flemish Beauty pears. Used 1 to 50 on plums and peaches it controlled the rot fungus without injury to the foliage. Results with coddling moth were not as good, as the brood was later than usual, though 2 lbs. of arsenate of lead to 50 gallons gave fair results. The arsenate should be applied to the spray just before using as there is some deterioration through chemical action on standing. Mr. Wilkin did not consider the hydrometer a fair test of the strength of solutions, as the weight varies with the amount of sediment and for other causes. Mr. Dow considered that the hydrometer reading of the clear solution was reliable. Mr. Wilkin could not advise the lime sulphur for the mildew and black rot of the grape. He advised the following formula for the home-made wash: 15 lbs. sulphur, 8 lbs. lime, 50 gal. water. For summer spraying use one-fifth strength of the above winter wash. The strong home-made stock solution should contain twice as much sulphur as lime.

Pear Culture.

Mr. Farrand, of Eaton Rapids, followed with a talk on "Pear Culture." Mr. Farrand prefers a rather heavy soil and such varieties as the Bartlett, Bosc, Anjou, Clapp's Favorite, and Duchess. Bartlett is the standard. Would not plant Kieffer. Culture is the same as that of the apple orchard, though more pains should be taken to avoid producing an overgrowth of sappy wood and thus favor blight. On this account many prefer commercial fertilizers to stable manure, and seed down the orchard if it is making too

rapid growth. Cutting out some distance below the infection is the only remedy known for the blight.

In the discussion the question of blight was discussed at length. Mr. Fritz who has 4,000 trees which produce three to five barrels per tree and net \$150 per acre per year, cuts out blight twice a week, cutting 18 inches below the infection. He has a clay soil, cultivates until July without plowing then sows cover crops or lets weeds grow. He prunes lightly, and sprays three times with lime sulphur, once before the blossoming period and twice after. Several growers agreed that the danger from blight was most serious while the trees were growing rapidly before they reached bearing age. Mr. Farrand's observations led him to believe that the blight entered the tree through the blossoms, being carried by bees. Mr. Dow advised dipping shears in lime sulphur solution after making cuts, and painting the cut with the solution. Another grower had good results from using kerosene in the same way, believing that this kept the bees from working on the sap and thus carrying the blight to or from the tree. Mr. Farnsworth and Mr. Welch had had little blight since using lime sulphur as a spray and believed that there must be some virtue in it. Mr. Chatfield reported some injury to Bartlett and Kieffer foliage by using lime sulphur 1 to 40, while Mr. Ewald had no damage in using as strong as 1 to 30 in summer. Wilkin advised agitating the barrel well before drawing off the solution. The question as to whether Bartletts could be profitably grafted upon Kieffer stock was much discussed, the consensus of opinion being that it made a weak, bungling union and was not advisable, though Mr. Wilde claimed that this union was strong enough to hold up the fruit. Prof. Eustace reported that New York growers considered Kieffer a poor stock either for grafting or budding. Opinions differed as to the advisability of using pear fillers in apple orchards. Hale and Sherwood practiced it, Farnsworth advised quick maturing apples instead, and Woodward no fillers at all.

Prof. Eustace opened the afternoon session with a talk on the subject

More Money for the Apple Crop.

Three methods of disposing of the crop were considered. 1. Lumping off the crop either on the trees or the seller to do the packing. This lets the grower out of some work and worry, but the shrewd practiced buyer is likely to get the best of him on the estimate and get part of the profit which should go to the grower. 2. At a price per barrel to be agreed upon, for orchard run packing stock or for certain grades as agreed. This may or may not include all varieties. The grower may pick and pack stock or not, as agreed. This is usually a better method than the other, though it has its faults. In this case it is better for the buyer to take all of the packing stock at the same price per barrel, rather than to make a different price on the different grades if the buyer is to do the packing. 3. Consigning to commission men. This requires more time and help and sometimes delay in getting the returns, and the results are variable and often unsatisfactory. Prof. Eustace believed the middleman a necessity, but thinks there are more than needed, and that more cold storage houses should be built and growers be prepared to hold and market their fruit more at their leisure.

Prof. Eustace then gave a few instances of growers in all parts of the state who had realized more than average prices for their apples because they had good fruit and had studied the marketing problem so as to dispose of it to the best advantage. Some of these illustrations follow:

In 1909 Mr. Power, near Detroit, sold his Steele's Red at \$1.25 per bushel, put on car, and crates returned.

Mr. Smith, of Grand Rapids, received \$2.00 per bushel for Jonathans this season from private customers in Grand Rapids, while Mr. Crane, of Fennville, realized but \$3.25 per barrel for Jonathans that were just as good but were sold through a Chicago commission firm. It is probable that Mr. Crane's apples retailed as high or higher than Mr. Smith's.

David Woodward, near Clinton, has worked up a private trade in boxed apples, and this season received the following prices: \$2.50 for fancy, \$2.00 for No. 1, and \$1.00 for balance.

Mr. C. W. Wilde, who stores his crop in crates in cold storage has sold at \$2.00 per bushel for the last two years without the crate.

(Continued next week.)

Calhoun Co. S. B. HARTMAN.

Fruit Growers!

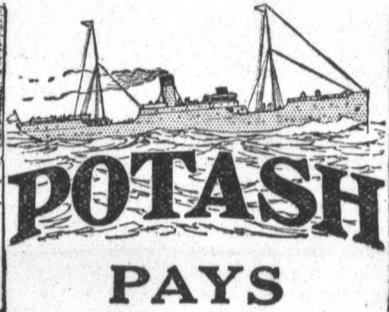
Bowker's Lime-Sulphur is absolutely pure

No salt or caustic being added, every drop is effective against the San Jose and other scales, destroying mosses, fungi, etc., and thoroughly cleaning up the trees without injury.

Write for special prices, stating number of trees to be sprayed.

BOWKER INSECTICIDE COMPANY, 43 Chatham St., Boston, Mass.

Manufacturers of Arsenate of Lead; also Bowker's "PYROX" the one Best All Around Spring and Summer Spray for fruits and vegetables.



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Those who want to insure arrival in time, place their orders as early as October to permit shipment before the German rivers are frozen. Late orders are subject to more risks and delays.

Arrange for your dealer to place his order now so as to be sure of a supply. If he does not handle it write us for prices direct from the mines to you.

Do not forget that the longer you have used phosphate the greater is the present potash need and profit.

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Fertilized

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to maintain the fertility of your soil while it is producing revenue than it is to reclaim it after it is exhausted.

CAPITOL BRAND FERTILIZER

will keep your soil rich and productive. When drilled 200 to 400 lbs. to the acre it will increase the yield of corn from 40 bushels to 80 or 100 bushels per acre. The ears will be fuller, and the grain better developed.

Write for Free Memorandum-Calendar Book. Contains valuable information on the scientific growing of grains, vegetables, etc., etc.

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You can buy fertile farms with timber, fruit and water for \$10.00 per acre and up. Annual rainfall 45 inches. Splendid country for fruit growing, dairying, stock raising and general farming. Fine climate, abundant water, convenient Eastern markets, excellent schools, good neighbors. Write for our illustrated Quarterly, maps, Homeowner's Excursion rates and other information. They tell WHY Virginia land is so low in price.

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\$10 AND UP PER ACRE NOW BUT PRICE RAPIDLY ADVANCING

GRANGE

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

THE DECEMBER PROGRAMS.

Suggestions for Second Meeting.

- Song, "The Christmas Welcome," page 104, Song Knapsack.
- Roll-call, responded to by each one naming one noteworthy happening of 1910.
- Recitation.
- Feeding of Animals, III.—Cattle Foods: 1. Forage. 2. Straw, roots and grains. 3. Silage. 4. Commercial feeding stuffs. 5. Milk, meat meal, etc.
- Reading, "Is a cow or a chemist the better judge of cattle foods?"
- Question box.
- "Once in Royal David's City," recited by a child or sung by chorus.
- Christmas recitations, dialogues or tableaux.

THIS WEEK'S STATE MEETING.

The indications at this writing are that the delegates assembling at Traverse City for the 38th annual session of Michigan State Grange will outnumber those of any previous meeting of the kind in the state. The attendance of Patrons not delegates also will be very large, as the interest in some of the complex problems which confront this year's delegates is very keen. The figures recently issued by Secretary of Agriculture Wilson, as the result of careful and exhaustive investigations by the Department, showing that the producer receives scarcely more than 50 cents of each dollar paid by the ultimate consumer, have forced the conclusion that a practical, workable system of co-operative selling is an absolute necessity to the farmer, and this matter is sure to receive most serious consideration. The feeling seems to be general among the delegates that this year the Grange should more closely adhere to the policy of concentrating its efforts, in the direction of securing legislation, upon not more than two or three measures. The parcels post and federal aid for highway building and improvement are the two measures which seem most likely to be given precedence under this plan. Proportional representation in the National Grange will also, no doubt, receive the attention due such an important matter and the Grange will probably reiterate its demand for this desirable change. The action taken on each and all of these vital questions will be fully covered in the complete report of the meeting which will be given in future issues of this paper.

CO-OPERATION.

Applied to organizations, this term "co-operation" which we so often use, frequently comes to have a limited meaning. Broadly speaking, to co-operate signifies to work together; but very often when a "co-operative organization" or "co-operative movement" is spoken of, only financial co-operation is thought of, that is, buying and selling in a kind of partnership. This places a restriction upon a word which admits of a much more generous interpretation.

Suppose the original intent of the organization was to promote financial profits. Despite this possibility, in most cases, larger and more desirable objects still will result as they must result whenever men and women work together for a worthy cause. Co-operation for money profit, if entered into upon a basis of obtaining justice for all, demands that the co-operators shall respect one another's rights and privileges. There soon develops a recognition of dependence upon one another. Respect for differences of opinion follow and the value of uniting forces on broader grounds than heretofore is soon appreciated. Even when the incentive to combine efforts is an entirely selfish motive, this very means may grow into a conviction that the co-operation of mind with mind is something of more value than that of muscle with muscle, or dollar with dollar; and that ballot co-operating with other ballots will achieve more than the loudest shoutings of one voice alone.

After working together with others for a common purpose it becomes apparent that to "co-operate" may mean buying and selling together, working together in the hayfield or in a lodge room, in a home or in a community; it may mean mingling together for recreation, or even for thinking together. It means that when women get up a sumptuous Grange feast, they "co-operate" in doing so quite as much and as surely as do their husbands when they buy a car of coal or sell stock

together. In any and all of these lines of co-operation people feel the strength of union, of harmony, of effort, and the strong bond that comes with service in common. "Separate from others, our lives run to waste, but we were made to combine with others and to find scope for our powers in administering to their well-being."

"Not from one metal alone the perfectest mirror is shapen,
Not from one color is built the rainbow's aerial bridge;
Instruments blending together yield the divinest of music,
Out of myriads of flowers sweetest of honey is drawn."

JENNIE BUELL.

THE 44th ANNUAL MEETING OF THE NATIONAL GRANGE.

National Treasurer McDowell reported that the receipts during the year, including the balance October 1, 1909, of \$7,079.72, were \$56,737.79, and that the amount paid out during the year was \$35,494.39. The total resources of the National Grange are now as follows: Balance with the Farmers' Loan and Trust Co., \$21,243.40; deposits in savings banks, \$10,309.87; railway and other bonds, \$45,668.71; loans on real estate, \$40,248.99; unexpended Grange extension, \$994.86; unexpended deputy fee fund, \$360; total, \$118,825.83.

The Grange extension fund for the year as appropriated by the National Grange at the November, 1909, session was \$9,600. In all, \$11,267.54 was expended in extension work. This includes \$2,969.93 paid for National Grange Official Organs sent to charter members. The amount paid for organization efforts was distributed as follows: South Dakota, \$1,187.95; Minnesota, \$1,038.88; Iowa, \$803.28; Maryland, \$666.30; Missouri, \$503.45; Washington, \$348.43; Colorado, \$325; Michigan, \$315.85; Kentucky, \$310.10; Idaho, \$292.45; Vermont, \$213.14; Illinois, \$170.42; Ohio, \$115.84; Wisconsin, \$109.50; Indiana, \$78.20; Kansas, \$61.93.

The amounts paid to the National Grange by the various Grange states are

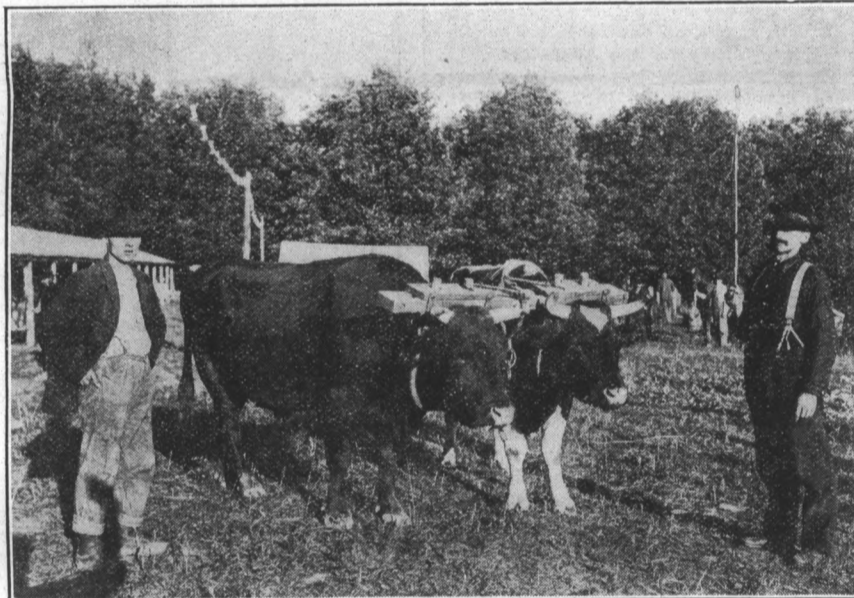
the funds be placed in the hands of the masters of Washington, Oregon, Idaho and California State Granges; that \$800 be appropriated for extension work in Virginia, to be under the direction of the masters of Pennsylvania, West Virginia and Maryland State Granges; and that \$5,000 be allowed for other extension work under supervision of the National Grange executive committee." This proposition was defeated.

A request for the publication of an itemized statement of all Grange extension work for the past five years was also voted down, along with 19 other questions asked of the National Grange administration in a memorial signed by representatives of the executive committees of the five State Granges of Michigan, Pennsylvania, Maine, Washington and Oregon. It was disapproved on the ground that the books of the National Grange would show the disposition of the moneys. Those supporting the question contended that the Grange membership in general can not have access to the books, and so long as the wisdom of the expenditure of some of the extension funds has been questioned because of the seeming disparity between expenditures and results in some instances, the membership at large wants the items and is entitled to them.

Owing to dissatisfaction with the management of the National Grange Organ it was decided to discontinue its publication at the close of the present year at which time the contract with its present publishers expires.

A resolution from Pennsylvania State Grange asked that, in State Granges having more than 500 delegates, nominating discussions of the qualifications of candidates for State Grange offices be permitted. A ruling was made by the National Grange a few years ago prohibiting anything except presentation of the candidates' names. This resolution was disapproved by the by-laws committee, and defeated.

Resolutions asking for change in the basis of representation of the National Grange came respectively from Pennsyl-



A "Pioneer Reminder" Feature of the Successful Grange Fair held at Kingsley, Grand Traverse County, During the Past Season.

as follows: New York, \$4,468.11; Maine, \$4,137.60; Michigan, \$2,204.22; New Hampshire, \$1,782.01; Pennsylvania, \$1,744.62; Ohio, \$1,506.83; Massachusetts, \$1,038.44; Vermont, \$856.10; New Jersey, \$806.41; Washington, \$479.69; Oregon, \$398.67; Kansas, \$369.26; Connecticut, \$334.81; Delaware, \$148.07; Maryland, \$131.07; Rhode Island, \$116.02; Colorado, \$106.22; Illinois, \$104.70; California, \$99.52; West Virginia, \$88.14; Missouri, \$68.10; Indiana, \$60.33; Kentucky, \$53.01; Iowa, \$40.55; Texas, \$28.52; Idaho, \$24.58; Wisconsin, \$24.24; Minnesota, \$16.60; South Dakota, \$13.05; Tennessee, \$2.18.

As the State Granges pay five cents on each member annually to the National Grange, the above amounts readily show the membership in each state. The \$1,187.95 spent on organization effort in Minnesota the past year, and the \$1,038.88 spent for the same purpose in South Dakota do not seem to have had much result in membership growth in those states. This disparity between the expenditures in these two states in particular and the apparent result has occasioned considerable dissatisfaction, so the following resolution from Pennsylvania was presented by State Master Creasy: "That \$4,000 be appropriated for Grange extension work in the states of the Northwest, and that the disposition of

vania and Washington. One advocated a delegate for every 10,000 members in a state, the other asked for increased voting power for the delegates as now constituted (state master and wife) to provide one extra vote for each 1,000 members. These were both defeated.

Action by the Grange deprecated the misleading statements made by the National Department of Agriculture as to the enormous wealth of farmers when farmers on an average get only 35 cents on a dollar of the price paid by consumers for their produce; recommended tariff treatment fair to agriculture, a rural parcels post, no division of inheritances until proper payment of taxes on them has been made, taxing autos 25 cents annually per horsepower, favored better educational and social facilities for farmers to the end that tenant farming be discouraged, and the extension of agricultural educational facilities as fast as possible.

Washington, Ohio and South Dakota invited the National Grange for next year. The vote went: Ohio, 30; Washington, 18; South Dakota, 3. The meeting will be held at Columbus.

Please get your subscription orders in early and thus avoid the rush and possibility of error.

Intense Suffering

From Dypepsia and Stomach Trouble.

Instantly Relieved and Permanently Cured by Stuart's Dyspepsia Tablets.

A New Discovery, but Not a Patent Medicine.

Dr. Redwell relates an interesting account of what he considers a remarkable cure of acute stomach trouble and chronic dyspepsia by the use of the new discovery, Stuart's Dyspepsia Tablets.



He says: "The patient was a man who had suffered, to my knowledge, for years with dyspepsia. Everything he ate seemed to sour and create gases in the stomach. He had pains like rheumatism in the back, shoulder blades and limbs, fullness and distress after eating, poor appetite and loss of flesh; the heart became affected, causing palpitation and sleeplessness at night.

"I gave him powerful nerve tonics and blood remedies, but to no purpose. As an experiment I finally bought a 50-cent package of Stuart's Dyspepsia Tablets at a drug store and gave them to him. Almost immediate relief was given and after he had used four boxes he was to all appearances fully cured.

"There was no more acidity or sour, watery risings, no bloating after meals, the appetite was vigorous and he has gained between 10 and 12 pounds in weight of solid, healthy flesh.

"Although Stuart's Dyspepsia Tablets are advertised and sold in drug stores, yet I consider them a most valuable addition to any physician's line of remedies, as they are perfectly harmless and can be given to children or invalids or in any condition of the stomach with perfect safety, being harmless and containing nothing but fruit and vegetable essences, pure pepsin and Golden Seal.

"Without any question they are the safest, most effective cure for indigestion, biliousness, constipation and all derangements of the stomach, however slight or severe."

LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer, or any kind of skin with hair or fur on. We make them soft, light, odorless, wind, moth and water proof, and make them into coats (for men or women) robes, rugs or gloves when so ordered.

Your fur goods will cost you less than to buy them, and be worth more. Send three or more cow or horse hides in one shipment from anywhere east of Denver and we pay the freight both ways.

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Taxidermy Book FREE. We teach you by mail to stuff and mount all kinds of Birds, Animals, Game Heads. Also to tan skins and make rugs. Decorate your home with your beautiful trophies, or command big income selling specimens and mounting for others. Easily, quickly learned in spare time by men and women. Success guaranteed. Write today for our free book "How to Mount Birds and Animals" absolutely free. N.W. SCHOOL OF TAXIDERM, 3639 Elwood Bldg., Omaha, Neb.

PATENTS: For facts about Prize and Reward offers and Inventions that will bring from \$5000 to Ten Million Dollars, and for books of Intense Interest to Inventors, send 8c. postage to Pubs. Patent Sense, Dept. 89, Barrister Bldg., Washington, D. C.

FARMERS' CLUBS

Associational Motto.—

The skillful hand, with cultured mind, is the farmer's most valuable asset.

Associational Sentiment.—

The farmer, he garners from the soil the primal wealth of nations.

THE ASSOCIATIONAL MEETING.

The eighteenth annual meeting of the Michigan State Association of Farmers' Clubs was held in Representative Hall, of the Capitol building at Lansing, on Tuesday and Wednesday, December 6-7, instead of in the Senate Chamber as in previous years and as announced for this year. It was fortunate that the change to the other end of the building was made, as the larger hall occupied by the House of Representatives during the legislative sessions was none too spacious to accommodate the delegates assembled for the meeting, and the old quarters would have been uncomfortably crowded. Not only were the 100 chairs on the floor of the house occupied, but the seats about the sides of the room were well filled at all of the sessions of the convention up to the closing session of the last evening, when some of the delegates found it necessary for them to leave. It was, however, conceded by everybody that the attendance was larger than for any similar meeting in the history of the organization, and the interest in the deliberations of the convention was tense throughout the sessions.

The Opening Session.

The session on Tuesday morning was devoted entirely to the routine work preparatory for the main business of the convention, such as the payment of dues, the presentation of credentials, the appointment of committees and the presentation of resolutions, which were referred to the several committees appointed by the chair in accordance with their subject matter. The standing committees of the convention as appointed by President B. A. Holden, were as follows:

Committee on National Affairs: Messrs. Patrick Hanked, of Jackson Co.; A. L. Chandler, of Shiawassee Co.; T. B. Halliday, of Jackson Co., and C. B. Cook, of Shiawassee Co.

Committee on State Affairs: Col. L. H. Ives, of Ingham Co.; E. C. Hallock, of Lapeer Co.; Geo. Friederich, of Jackson Co.; I. R. Waterbury, of Oakland Co., and D. Monroe, of St. Clair Co.

Committee on Temperance: Rev. L. Severence, of Jackson Co.; R. J. Bullen, of Eaton Co.; Carl Bullock, of Lapeer Co.; Mrs. Fred Strong, of Lenawee Co., and L. F. Gibson, of Clinton Co.

Committee on Honorary Membership: All ex-presidents of the State Association, with J. T. Daniells, of Clinton Co., as chairman.

Committee on Credentials: Herbert Smith, of Washtenaw Co.; Theo. Moore, of Oakland Co.; C. P. Johnson, of Lapeer Co.; Mrs. J. F. Kohn, of Ionia Co., and Mrs. B. B. Curtis, of Saginaw Co.

Committee to Receive and Formulate Resolutions: A. R. Palmer, of Jackson Co.; Judge J. W. Edgar, of Livingston Co.; H. W. Nichols, of Livingston Co.; F. C. Oppenlander, of Ionia Co., and W. E. Roberts, of Jackson Co.

Tuesday Afternoon Session.

This session was carried out in accordance with the program, with the exception of the omission of the address of welcome by the mayor of the city and the response on behalf of the club, which was deferred until the evening session. The addresses of the afternoon were given by Ex-President C. B. Cook, who talked on "Alfalfa," and Prof. W. H. French, of M. A. C., whose address was on the subject of "Agricultural Education." Space will not permit the giving of a comprehensive report of these talks in this issue. For the present we must be content to say that both were forceful and to the point, and both held an important message for the delegates to carry back to their home clubs for the betterment of the agriculture of the entire state from these local centers. In some future issue we shall give a synopsis of each of these talks, which were replete with practical ideas born of a full experience and a wide observation along the lines of the talks given.

Tuesday Evening Session.

In this session a few transpositions were necessary in the program, but this

in no way detracted from the interest manifested in or the entertainment afforded by the program. The session was opened by an address of welcome by Mayor Bennett, of Lansing, in which the delegates were welcomed to and given the freedom of the city in a few well chosen words. The response in behalf of the association was made by A. L. Chandler, of the Maple River Club, and ex-president of the State Association, whose remarks were most fitting to the occasion. The entertainment features of this session consisted of musical numbers by C. P. Johnson, of the Hadley and Elba Club, and Mrs. Garry Sanders, of the Ingham Co. Club, and a reading by Mrs. W. H. Marks, of the Starrville Club. Then followed the president's address by Associational President B. A. Holden. President Holden held the attention of the delegates throughout his address, which showed that he has been a deep student of the welfare of the organization during the year in which he has been at its head. He made a number of recommendations, some of which were carried out in the work of, and resolutions adopted by, the convention at a later session, and some of which will be taken up at once by the executive committee in the planning of the work for the coming year. We regret that space will not permit us to give both the president's address and the result of the deliberations of the convention in this issue, for which reason we will be obliged to defer the publication of President Holden's excellent thoughts as expressed in his annual message to the delegates from the local Clubs assembled in convention, until a future issue.

"The Farmer's Wife's Share," was the subject of an excellent paper delivered by Mrs. Alfred Allen, of the Ingham County Club, which will be published in a future issue, as the thoughts expressed were particularly wholesome and instructive.

Hon. H. C. Smith, of Adrian, was scheduled for a talk on "Our State Institutions and the Farmer's Interest in Them," but as Mr. Smith could not be present, President Holden arranged with President J. L. Snyder, of M. A. C., to address the Association in his stead. President Snyder gave a most interesting, entertaining and instructive address on the agricultural problems of the day. He showed the important place which America has taken in the agriculture of the world by stating that our farmers constitute about five per cent of the population of the world, and that our agricultural lands constitute about six per cent of the area of the world, yet our farmers produce 43 per cent of the grain consumed in the world. Other comparisons were made and other lessons drawn which will be summarized in a later issue for the benefit of those who were not present to hear this address, which emphasized the importance of the inauguration of better methods of farming all along the line.

Wednesday Morning Session.

The first feature of the session on Wednesday morning was the Conference of Local Club Workers, which is always of interest to all the delegates and affords them an opportunity to learn all about the conduct of other local clubs in different sections of the state, and especially the special features of club work which have been made to add to the interest of the meetings. One problem which some of the clubs had found difficulty in solving was to interest the young people of the community in the work of the club. Others had been successful in this important department of successful club work. This conference lasted for an hour and a half, a large proportion of the delegates giving brief talks, which will be reported more in detail in some future issue, to the end that the members of the local clubs throughout the state may know something of what the other clubs are doing and how they are doing it. For the present we can but say that this feature of the convention was most interesting, as is always the case.

Next in order of business came the reports of the committees and the transaction of the routine business of the meeting, followed by the election of officers for the ensuing year. While the report of the committee on State Affairs did not come until the afternoon session, and while in the future deliberations of the convention, other resolutions were presented to the body of delegates and passed without referring them to the standing committees, we will for the sake of convenience give them together in this report. The resolutions thus reported and passed for this reason appeared to overlap somewhat, but this may be taken as indicating the earnestness of the mem-

bers along certain lines. They were as follows:

National Affairs.

Resolved, that we affirm our position as to the nomination of U. S. Senators by direct vote of the people.

Resolved, that we favor a better kind of national bank currency, and a better system of banking laws, in order that the public may be protected against stock gamblers who control our currency and produce unnecessary panics.

Resolved, that we favor a fair and equitable revision of the Payne-Aldrich tariff law, to be ascertained and recommended to congress by a non-partisan tariff commission to be appointed by the President of the United States.

Resolved, that we favor a fair and equitable reciprocity treaty with Canada.

Resolved, that we favor more and better laws for the conservation of our national resources, and particularly those relating to water powers and coal lands.

Resolved, that we favor such amendments to the interstate commerce laws as will permit the commission to make favorable terms to shippers which do not amount to discrimination against others; and also one to prohibit the shipping of intoxicating liquors into the territory where their sale is prohibited by law.

Resolved, that we favor the strengthening of all anti-trust laws, in order that unlawful restraint of trade may be effectually prohibited.

Whereas, we have good reason to believe that the express companies have dominated and controlled congress and persistently defeated all efforts towards having a system of parcels post that would in a measure relieve the public from such company's greed and extortion; Therefore Resolved, that this association urge upon every congressman and senator to work for and vote for this reform demanded by the people, and for so doing we pledge them our earnest support, regardless of any political affiliations and regardless of the political destiny of those politicians who have seen fit to serve those special interests at the expense of their electorate.

Whereas, we believe that the immense expenditure of money to build the Panama canal will be of no value unless such canal zone be policed against the unstable, marauding factions of the Central American States, Therefore it is the sense of this Association, that the United States should fortify and protect such canal property.

Whereas, congress appropriates millions of dollars annually for the improvement of the waterways of this country, and whereas, the waterways are in better condition for transportation than the highways for the hauling of our products to market, and we pay our full share of this money for the improvement of the waterways, Therefore Resolved, by the Michigan State Association of Farmers' Clubs that we earnestly demand of congress a like sum for the improvement of the highways, and that a copy of this preamble and resolution be sent to our congressmen and U. S. senators and they be requested to use all means in their power to procure such appropriation.

Realizing that a rural parcels post would be of very little benefit, and believing that an attempt to make it only rural is a subterfuge of the express companies to delay or defeat the measure, therefore we respectfully request our representatives and senators to use every reasonable effort to secure at least as good a parcels post system as is now in use by any foreign country.

Resolved, that we favor national legislation that will prevent the shipment of intoxicating liquors into prohibition territory.

Resolved, that in view of the unjust demands and the limitations of the several express companies, the public interest requires the establishment of a parcels post, this Association hereby renews its most earnest request for the establishment of said parcels post.

State Affairs.

Resolved, that we favor legislation by which the license of automobiles be increased and that the receipts be applied to the improvement of our public highways.

Resolved, that we again place this association on record as favoring an amendment to the state constitution granting to woman the elective franchise.

Resolved, that we favor the extension of the closed season for quail for a period of ten years.

Resolved, that we regard the present road law as a great improvement over the old law of former years.

Resolved, that we favor the repeal of so much of the law requiring a license for hawkers and peddlers as may be construed as applying to traveling grocermen or grocers selling goods from wagons in the country.

Resolved, that it affords this Association pleasure to refer to the grand work being done by our agricultural college, an institution which stands as the pioneer institution of its kind, the leader of them all. We would call attention to the fact that the college has no audience hall large enough to accommodate all of the students at once and we hope that the ways and means may present themselves so that this crying need may be supplied at an early day.

Resolved, that we recognize the great work done by the Dairy and Food Department, and ask for liberal appropriations for a continuance of its effective operation.

Resolved, that the law making criminal the producers of milk below three per cent butter-fat and 12 per cent ash is unjust and unfair, unless it is farther shown that said producer has some knowledge or information of such deficiency and violation of law.

Whereas, the Agricultural College, through its present efficient faculty, has very deservedly become a great institution of learning and as such has become closely allied to the farmers' interests, and whereas, we have always received from it and its teachers the most cordial aid and co-operation, Therefore Resolved, that we hereby express our appreciation of such helpful aid and assistance, and extend a vote of thanks to the teachers and Board of Agriculture.

Temperance.

Whereas, true progress and permanent prosperity results only from the intelligent use of faculties and opportunities, and Whereas, the use of intoxicating liquors tends to deaden the sensibilities, destroy ambition and militate against worthy living, thereby doing most serious harm to him who thus indulges and in many instances brings sorrow and suffering to innocent and defenseless women and children, these, with other ills, being the inevitable result of the liquor traffic, therefore be it Resolved, by the Michigan State Association of Farmers' Clubs, that we will co-operate with every organization and effort having for its purpose the destruction of the American saloon and the upbuilding of the cause of temperance.

Resolved, that we can not too strongly express our disapproval of the management which, after advertising that no intoxicating liquors would be sold on the State Fair grounds, allowed a saloon to run, and we demand that we have a "dry" fair, not only in promise but in fact. Be It Further Resolved, that we appreciate the work of the Michigan Farmer in exposing the treachery of the management of the fair.

Club Extension.

We pledge our efforts along this line and recommend the appointment of a committee in every club, whose duty it shall be to seek communities where a club would be supported and to establish a club in every such community. (Signed by the six directors of the Association).

Honorary Members.

Pursuant to the recommendations of the committee Messrs. T. B. Halliday and Z. W. Carter were made honorary members of the Association.

Election of Officers.

The election of officers resulted in the selection of B. A. Holden as president for another year and Mrs. C. B. Johnson as secretary. Mrs. Lewis Sackett, of the Eckford Club was elected treasurer. C. P. Johnson, of Metamora, and Patrick Hanked, of Munith, were elected directors for a term of three years each to succeed Messrs. E. C. Halleck and T. B. Halliday, whose terms expired with the closing of this fiscal year.

Discuss Fruit Growing.—One of the most interesting meetings of the Farmers' Club was held on Nov. 3 at the pleasant home of Mr. and Mrs. Iva Adams, near Duncan Lake. After one of those bountiful dinners, for which the Club is noted, the meeting was called to order by the president. The regular business disposed of, the subject, "Fencing and fertilizing, fruit and fuel," was taken up. Taking as his part of the subject, "Fencing and Fertilizing," Henry Adams gave a good, practical talk, while Mr. Stutz, leading on "Fruit and Fuel," aroused quite an animated discussion. Mr. Stutz exhibited some specimens of apple tree limbs affected with San Jose scale, also some fruit from affected trees. Considerable interest was shown on the subject of fruit raising, and Mr. C. E. Beeler, of Caledonia, gave a very interesting description of some large apple orchards which he had visited in Washington.

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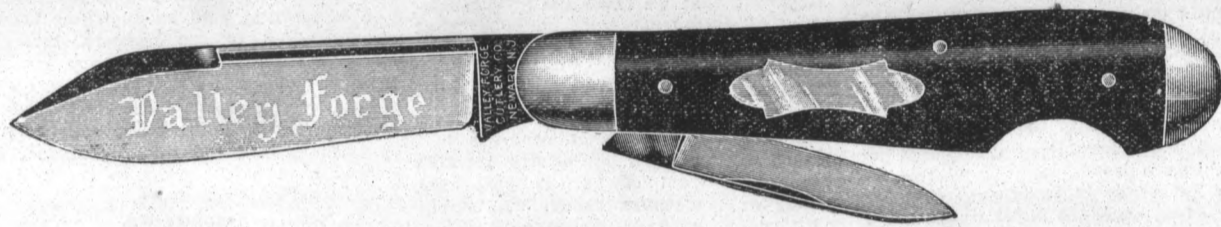
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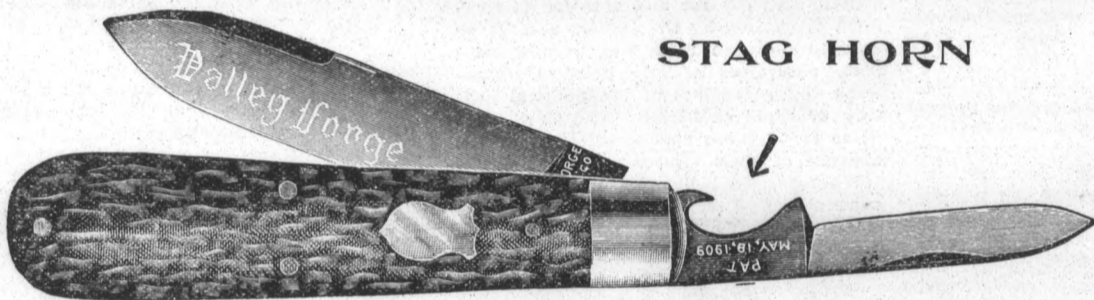
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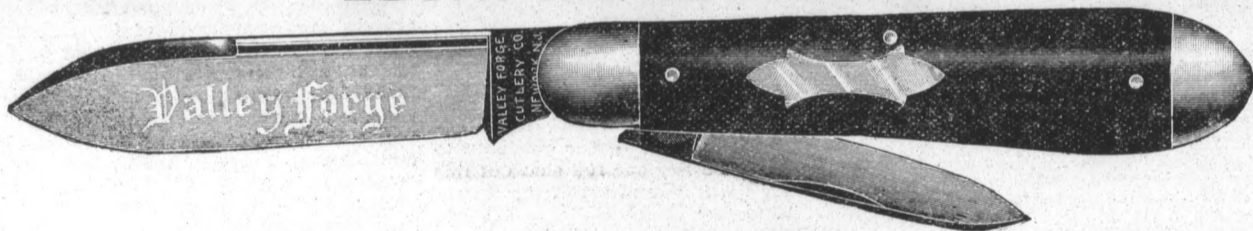
Easy Opener Knife—Two blades, Ebony handle. Note the easy opener feature. Can be opened with gloves on. Mention No. 205.

STAG HORN



Stag Horn Handle Knife. Two blades, the small blade is a special for removing patent corks from bottles. This feature of the blade does not affect its use in other ways. Mention No. 206.

EBONY HANDLE KNIFE



Ebony Handle, same style blades as Easy Opener No. 205, but without easy opener feature. Mention No. 207.

LEATHER PUNCH KNIFE



Ebony handle; two blades, small blade is grooved. Just the thing for punching holes in leather, such as harness, belts, etc. Will make any size hole. Mention No. 208.

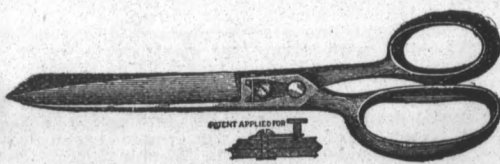
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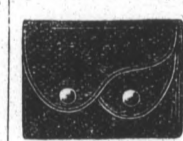
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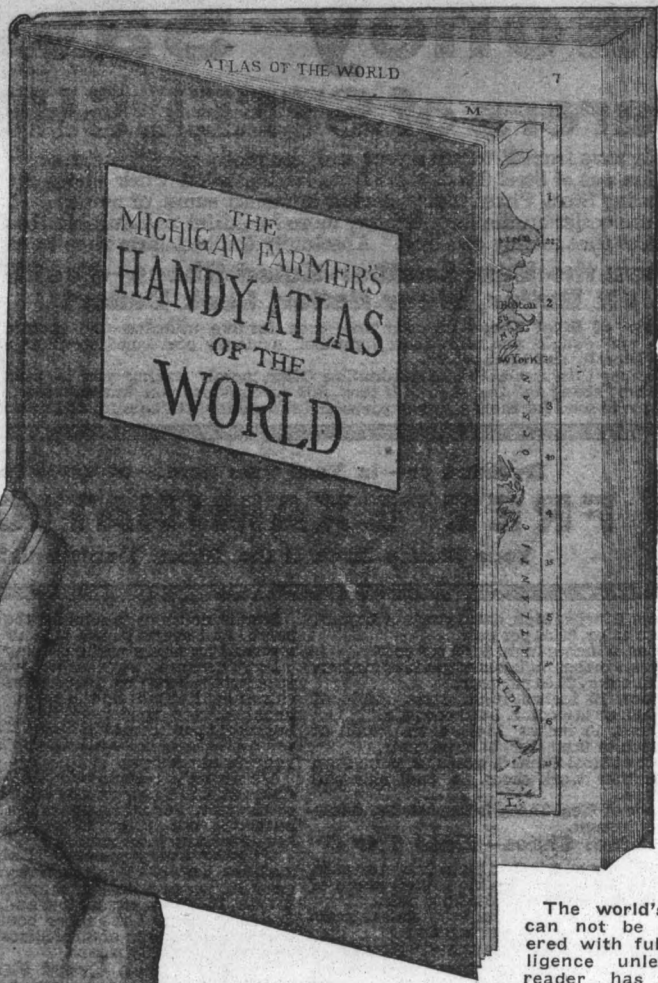
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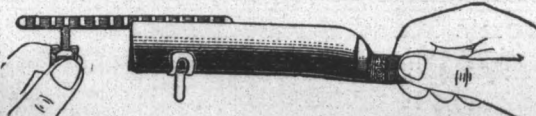
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FREE Write today for book. "The Sole of Steel."



One Pair Outwears 3 to 6 of All-Leather Shoes--Saves \$5 to \$10 a Year

Steel Shoes are the strongest and easiest working shoes made. There is no need of breaking in. Comfortable from the first moment you put them on. Easy to put on or take off. Impossible to get out of shape. We could not afford to make you this special offer if we were not confident that our Steel Shoes are just what you need. You run absolutely no risks, no trouble on your part. All we ask is that you try on a pair of Steel Shoes before you buy any other style of working shoes! You will wonder how you ever did without Steel Shoes this long.

Steel Shoes Explained

Here is the way Steel Shoes are made; the uppers are made of a superior quality of leather, as waterproofas leather can be tanned. This leather is wonderfully soft, flexible and pliable—never gets stiff and hard, no matter how long the shoes are worn in mud, slush or water.

The soles and sides are made out of one piece of special light, thin, springy, rust-resisting Steel.

We have added 100 per cent to the strength of the Steel Soles by corrugating the bottoms.

The Sole of Steel keeps the uppers in shape, prevents them from warping, twisting or cracking. Soles and heels are studded with adjustable Steel Rivets which prevent the bottoms from wearing out. Rivets are easily replaced by hand when partly worn, making the shoes as good as new. Fifty extra rivets cost only 30 cents and should keep the shoes in good repair for at least two years.

The soles are lined with soft, springy, comfortable Hair Cushions, which rest the feet, absorb perspiration and odors and add to ease of walking. Cushions can easily be taken out for cleaning.

No Corns! No Blisters!

No Wet Feet! No Rheumatism!

Steel Shoes are so easy on the feet that they absolutely do away with corns, callouses, soreness, blisters and other foot troubles. They give rest and support to the feet and keep them in perfect condition.

If you wear Steel Shoes you can work all day in mud, and water or snow without having wet or cold feet. Thus you escape colds, rheumatism, neuralgia and the long train of ills that result from cold, wet feet. Steel Shoes pay for themselves again and again by preventing sickness and saving doctor's bills.

Steel Shoes in Sizes 5 to 12

6 inches, 9 inches, 12 inches and 16 inches high Steel Shoes, 6 inches high, \$2.50 per pair. Steel Shoes, 6 inches high, better grade of leather, \$3.00 per pair.

You can positively save from \$5 to \$10 a year and get more good wear, more solid comfort, more health protection out of Steel Shoes than from leather-soled work shoes or rubber boots. Thousands are wearing Steel Shoes today, saving immense sums of money. Every wearer will tell you they are easier on the feet, lighter, more healthful and durable than the best all-leather work shoes that money can buy. Absolutely the best farm shoe in existence.

Better than the Best Leather-Soled Shoes—Feel Better, Fit Better, Wear Better, Look Better!

If you will put a pair of Steel Shoes on your feet—even for five minutes—the shoes will do the rest. They will surprise and delight you with their lightness, neatness and comfort—their astounding durability. They will literally sell themselves.

Hence I am making this special Free Examination Offer, merely asking you to send me the price while you are "sizing up" the shoes. If they fail to convince you immediately, you can simply notify me to send for them at my expense and the money will be refunded at once.

Try them on—In Your Own Home—at our Risk!
FREE EXAMINATION!
Your Money Back if the Shoes Don't Suit!

Steel Shoes, 6 inches high, extra grade of leather, black or tan color, \$3.50 per pair.
Steel Shoes, 9 inches high, \$4.00 per pair.
Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$5.00 per pair.
Steel Shoes, 12 inches high, extra grade of leather, black or tan color, \$6.00 per pair.
Steel Shoes, 16 inches high, extra grade of leather, black or tan color, \$7.00 per pair.

Each pair of Steel Shoes is worth \$2 more than the best leather work shoes. A trial pair will convince you. Every pair of Steel Shoes is inspected and tested before shipment.

Boys' Steel Shoes—Sizes 1 to 5

Boys' Steel Shoes, 6 inches high, \$2.50 per pair.
Boys' Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$3.50 per pair.
Save buying several pairs of boys' shoes a year. One pair of Boys' Steel Shoes will do it.

A Blessing to Farmers' Feet

Steel Shoes are unquestionably the most important discovery for the benefit of farmers in the last 100 years. They enable you to work in comfort, rain or shine, in heat or cold—in the field, barnyard or feed lot—in the swamp in ditch work, among brush, stones or wherever there's work to do. They stand hard knocks! They shed mud! They keep your feet bone dry, rested and free from corns, chafing and blisters!

They save time and money and doctor's bills. The proof is yours for the asking. Don't Wait—Send Now!

See the shoes—then decide!

We don't ask you to buy the shoes! We just want you to slip your feet into a pair of Steel Shoes—to feel and see and know how much lighter, neater, more comfortable they are than any other work shoes in existence.

We offer to send you a pair of Steel Shoes for FREE EXAMINATION—any size or style you may select—on receipt of the price and let the shoes themselves tell you their marvelous story of comfort, lightness, neatness, strength and wonderful economy.

If they don't convince you instantly—DON'T KEEP THEM!

N. M. RUTHSTEIN, Secretary and Treasurer
STEEL SHOE CO., Dept. 57, Racine, Wis.
Canadian Factory—Toronto, Canada. Great Britain Factory—Northampton, England.

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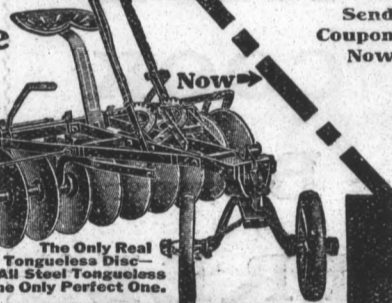
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