

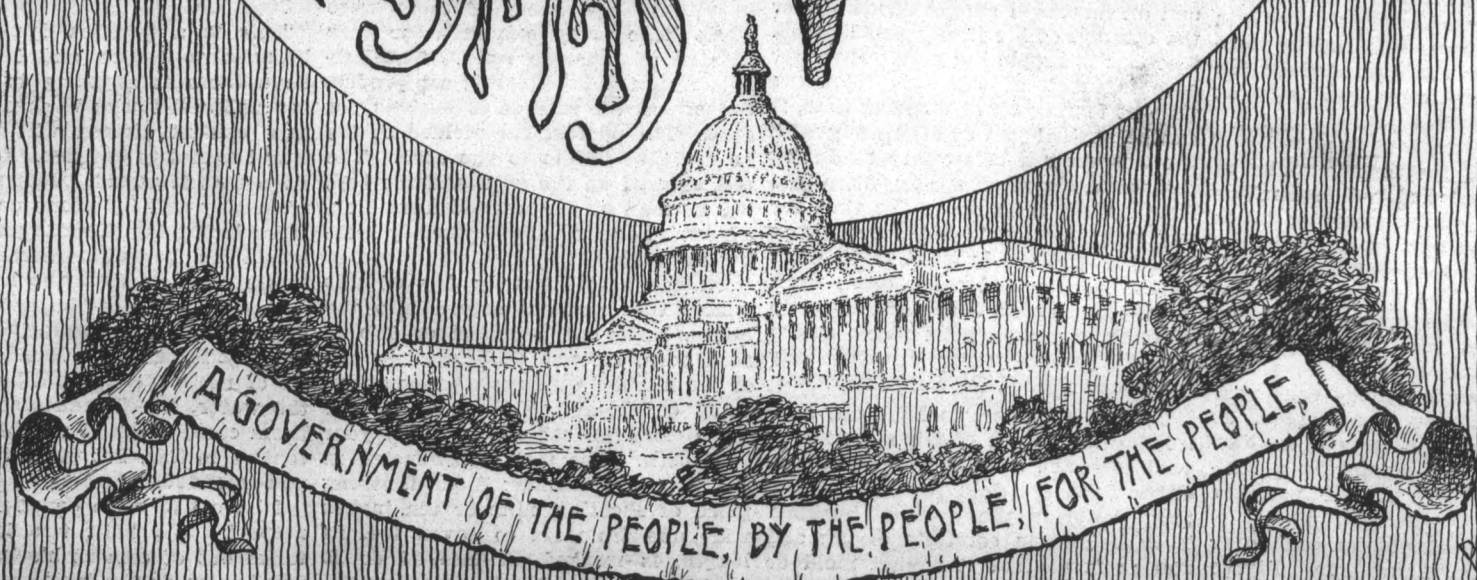
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**'NOTHER TRANSIT O' VENUS,
VISIBLE MOST CLEARLY IN THE UNITED STATES.**



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SATURDAY DEC. 19, 1914.

Winter Work on the Farm.

NOW that the days have begun to shorten and the nights overlap in order to fill the space of time made vacant by the shortness of the days, the farmer begins to settle back and prepare to rest from his long hard summer's work. And the mercury in the thermometers seems to want a rest and it, too, settles down nearer the bottom of the tube, as if it had put in a hard season's work and wanted a time to recuperate. If the past season has been a successful one, and we truly hope that it has, there is a great deal of satisfaction to the farmer to feel that he has earned a rest and is about to get one.

If the crops have all been bumper ones and the granary and the cellar are filled to their capacity, then there is a contented feeling which every farmer should enjoy. But winter is the time when the profits are eaten and burned up and winter is the time when most farmers sit by the stove and wait for the next season and watch their hard-earned profits go. However, there are a few jobs which should be done in the winter, if they are done at all, because you are too busy to do them in the summer.

Plans for Next Year.

All of the general planning for the coming season should be done in the cold months of the year. Make a general map of the farm and figure out just what you intend to do with each field the next year; what crops you will grow in each, how you will work certain fields, how much fertilizer you will use, and all of the minor details which you should carefully work out. Suppose you intend to sow some alfalfa this next season and you are not sure just how to go to work to prepare your seed bed and lime your soil, inoculate the seed, etc. The dull time of the year is the time to find out all this information. Study up the subject, talk with people who have raised alfalfa, and learn where they have made mistakes, and profit by them.

Maybe you are intending to go into the dairy business, or to raise pure-blooded stock, then you had better study up the question while you have time. Look up some of the performances of the various breeds and individuals in these breeds so that you will be posted and will not have to take another's word for it. And, of course, if you have a dairy herd then you will want to buy a silo, so inform yourself on this question. A well informed man is the one who knows what he wants and why he wants it, and then he gets it.

Perhaps you have been unfortunate enough to have made a failure on some certain crop or field, while your neighbor was successful with the same crop. Try to find out just why you failed and he succeeded; satisfy yourself whether it was the seed or the soil or your methods that were at fault.

The Farm Inventory.

The winter is the time to make an inventory and to find out just where you stand. If an inventory is taken each year, then you know just how much you have made or lost during the past year. You find out whether you are over-stocked or under-stocked, in other words, you have something tangible to work on. Business men all over take an inventory each year at the close of the busy season, so why should not the farmer do likewise. The farmer should be a business man and he should use his methods.

The accounts should be gone over and checked and figured up. Figure where you have made useless expenditures, that you may do away with the expenses which do not bring in returns. Go over the milk records of the individual cows and find out the ones that are paying for their board

and lodging and a profit besides. Pick out the "star boarders" and make arrangements to dispose of them as soon as possible. Go over the feeding accounts and figure out whether you have fed too much or too little. These are the things that make the farmer money if they are attended to, and lose him money if he neglects them. Figure out the cost of the fertilizer which you used last year, and see if it paid you.

The Farm Equipment.

The cold stormy days are the days to make a list of the things which you will have to buy the next year. Find out how much fertilizer you will need. Then start to get prices on them from various firms so that you will know where you can buy advantageously. Perhaps you can buy a carload of feed and fertilizer and thus save the middleman's profit, by buying wholesale. Or if you can not use a whole carload, perhaps you can get one of your neighbors to go in with you and thereby get a carload for the two of you. Plan to buy your next year's supply in a lump, thereby making a big bill of it instead of a lot of smaller ones. In this manner you can get the benefit of a better price.

The slack time is the time to make the repairs that you have to make. Some of the machinery needs new parts, so why not get them and put them on so that the implements will be ready to use when you need them. It takes so long to get repairs and if they were ordered in the winter you would not be inconvenienced by the delay as you are sure to be later in the season. Many dollars are lost in the busy season by the lack of repairs and part of this could be saved if it was attended to at the proper time. If you are fortunate enough to have a workshop, the time to make eveners and whiffletrees and neckyokes is before you absolutely need them. Forks need handles, and shovels also, so fix them up for the time when you are actually in want. The harness can be overhauled and cleaned and repaired so that it, too, will be ready to use

and will not have to be wired up part of the summer because you are too busy to fix it.

Next Year's Seed.

Look up some good seed for next year if you haven't any saved from your own crops. And then be sure and test the seed so that you will know it will grow at the proper time. Poor seed is the cause of more failures than most people think. No matter how good the soil and how well prepared, if the seed is not fertile and strong the crop cannot be good. Get some seed that is adapted to your soil and climate so that it will grow on your land.

Thus I have tried to give a few of the things which I think of utmost importance to every farmer, and which he can do without any great amount of effort. It is the small things which we are apt to overlook that go to make up the large things. It is my opinion that most farmers do not plan enough for their own and their farm's best welfare. Some men work so hard themselves that they do not realize that the men whom they hire are shirking, and these are the men who try to make up by hard work and main strength the thinking and planning they should do.

Planning and working go together. Working without a plan is nearly as bad a fault as planning and never working. Some work and never plan, while others plan but never get right down to work. These are the two extremes, but the man who can work out a happy medium is the man who is going to make a success of his work. How often you hear it said of someone, "there is a lucky man," and the people who say that do not know that the object of their remark perhaps is working his head and planning his work so that it goes off smoothly and brings the results and the profits.

Many men are making good returns for time spent in the winter planning their next year's work. In other businesses men are paid good salaries just to oversee and plan the work, and surely their planning must be worth what they are paid, and more, or they could not command the price which they do for it.

Genesee Co.

L. S. BRUMM.

Testing Seed Corn With the "Rag-Baby"

THE approach of cold weather, with its sleet and cold and wind, means idleness for many farmers. Not uncommon is the man, after winter closes in, who can feed his stock, close up the barn warm and snug, and retire to the house to read, think or snore. The use of a portion of this time with a "Rag-Baby" corn tester will mean more ensilage for his cows, more corn for his swine, more roughage to feed or bed his horses, and an increased supply of money for the comfort of his family and himself. The test is simple but sure. If proper care is taken of the corn from the time of testing up to planting time, it can be applied just as accurately with the temperature below zero as during the warm days of spring when the farmer "just can't spare the time for any seed testing." No troublesome boxes of dirt are brought in to litter up the kitchen and cause extra work for the housewife. Just a narrow strip of cloth, a pencil, pins, paper and a basin of warm water are the only equipment needed for a safe test.

Countless farmers in Michigan realize the advantages of fall selection of seed corn and are choosing fine ears, either from the field just before cutting or during the work of husking. They believe in carefully drying and storing it so that it cannot mold or freeze. It has been their experience that when they have depended upon buying from a more careful neighbor, all that can be procured is that too poor for his own use. Here and there farmers are testing their seed corn,

too. They cannot help seeing the wide differences in yield produced through the use of some simple tester, with absolutely no extra charge to make against the crop.

Perry G. Holden, the world's leading corn expert, once selected forty ears of seed corn, each ear exactly alike as near as he could estimate, from an Iowa farmer's supply. Kernels were germinated from each ear. One ear was dead. Others were strong in vitality and some of them were weak. The seeds from each ear were planted in separate rows. The kernels from the high-testing ear produced corn at the rate of 92 bushels per acre. The poorest ear yielded at the rate of 24 bushels to the acre. The test showed up the good and the bad, but no man on earth could have picked out the poor ears by merely looking at them.

On the first blizzard day of this winter that you are driven into the house, bring out a bushel or two of seed corn, move a table over to one of the kitchen windows where you can work comfortably and start one, or more "Rag-Babies" to testing your seed corn. The test is conducted in the following manner: A good, strong piece of sheeting, nine or ten inches wide and from six to seven feet in length, is marked off into 15 or 20 squares by drawing lines crosswise. Each square is then numbered from one to 15, or whatever number of divisions there may be. The cloth is then thoroughly dampened and spread out on the table or floor. The seed

corn is laid out beside it, one ear for each square. Each ear can be numbered to correspond with its square by pinning small labels into the end of the cobs. With a sharp knife remove six kernels of corn from ear No. 1, taking them from different places on the ear, and place them on the cloth in division No. 1. Do likewise with No. 2 and so on. When all of the squares are filled, carefully roll up the cloth and corn, trying not to displace any of the kernels. A rubber band or string is placed around it tight enough to hold the kernels in place.

The bundle should then be placed in a pail of warm, but not hot, water, and allowed to soak for three or four hours. I have had a pail full of seven or eight "Babies" at one time, having prepared several strips of cloth and thereby testing a bushel or two of corn at a time. At the end of the set time the water is drained off and the pail wrapped carefully in newspapers. The pail must be kept in a room where the temperature is warm all of the time for if the corn is allowed to freeze the test will not be accurate. After two days, more warm water is poured on and left for 15 or 20 minutes, drained off and the pail recovered again. By the end of the seventh or eighth day the sprouts should be long enough for examination. Care must be taken during all of this time that they are not allowed to get too cold. If one kernel out of any square has not sprouted or the sprouts are weak or moldy, the corresponding ear is unsafe and should not be used. As a general thing this "Rag-Baby" test sorts out two or three ears from every dozen and prevents just that amount of seed from being planted in carefully prepared soil to produce nothing in return.

After the testing is complete the good ears must be carefully taken care of until spring. They must not be allowed to freeze, get wet or have a strong heat near them. A satisfactory way of handling the corn is to shell it, tie it up in a bag and hang this up in a dry, warm place where rats or mice cannot reach it.

Do this now. Any of these cold days are all right when the warmth of the house will feel mighty good. You know that when the warm days of next spring catch you there will be no time for "Rag-Babies" or any other kind of a test. The sooner it is done the better, for it will mean a larger income and better crops for the year of 1915!

Montcalm Co. A. M. BERRIDGE.

WATER FROM NEW CEMENT CISTERN.

Having just built a new cement cistern to water my stock from, I would like to know if it will hurt the cows to drink such water. Some farmers told us it was not good for cows to drink the water from fresh cement.

Kent Co.

H. A. K.

This is a question I never heard brought up before, and I do not believe there is anything in it. I can see no reason why the water from a new cement cistern will be in any way harmful to the cow. I cannot believe that it would. Cement is made from clay and limestone or marl, and there is nothing in these products that would be harmful. Sometimes the waste products from the iron furnace is used as one of the ingredients of cement, but here, again, there is nothing that is harmful. Besides, very little of the cement would be soluble in the water, and I cannot see that any harm could come. I should pay no attention to this, but water the cows as you intended.

I have had some experience in this respect. We built two large water tanks out of cement blocks and plastered them on the inside with cement. These tanks were 30 feet long, four feet wide and three feet deep. Our cattle and horses drank from this from the first, and no injury to them was ever noticed. COLON C. LILLIE.

State Potato Meeting.

IMEDIATELY after the State Horticultural Society annual meeting adjourned, the Michigan State Potato Association went into session in the same hall. Its first meeting, which was held Thursday evening, December 3, started with a good crowd and plenty of interest in the talks. This being the fact, is an indication that this association which is not quite a year old, is a good healthy youngster and is sure to make itself heard in the rural affairs of the state.

In his annual address, President A. L. Hopkins, generally reviewed the potato situation of the state and the purposes of the society. He urged that local associations be formed to work in harmony with the state association so that the objects of the association would be more quickly accomplished. Potato production is one of Michigan's most important agricultural industries, this state having been the leader in this crop for many years, and it is due time that the production and handling of this crop become organized and systematized.

The Objects of the Society.

In his report Secretary C. W. Waid also spoke of the purposes of the society, but in more detail. Among the plans the society had in mind were the standardization of varieties so that each variety would not be known by half a dozen or more names; also to organize the growers of each community so that they will decide on one or two varieties and grow them exclusively. Seed selection with reference to the improvement of the type and also to control disease, is also one of the prominent features of the society's work.

Wisconsin's Experience.

Prof. J. W. Milward, of Madison, Wis., who is secretary of the Wisconsin Potato Growers' Association, told of the work of their association in that state. This association which is two years old, has been very successful in accomplishing work similar to that planned by the Michigan association. They are working under more favorable conditions than our state society, as they have an appropriation from the state, and the Horticultural Department of the Experiment Station had already started the work which they are now undertaking. In their work with reference to varieties, this association found that among 50 variety names there were only five varieties, each variety going under several names. Rural New Yorker and Green Mountain were considered the best varieties for the state. It has been Wisconsin's experience that seed inspection has been very valuable because it caused the growers to look into their own conditions and be more careful in selecting seed. As in Michigan, the county experts and local associations co-operate with the state association, and it was found that the local associations never got down to brass tacks until the state association was organized. The state association also intends to issue uniform premium lists for the fairs, and to co-operate with dealers in the improvement of potato market conditions.

Possibilities of Organized Effort.

In his usual pleasing and forceful manner, Dr. Eben Mumford, of East Lansing, spoke of the possibilities of organized effort in Michigan. He said that organization is in the air, and that in a state where there are 167,000 potato growers as there are in Michigan, a potato growers' organization ought to become powerful and beneficial. He said that potatoes were fifth in importance of the crops grown in the state, and that 85 per cent of the farms grew them. The crop of forty-four million bushels in this state was grown in thirty countries, and one-fourth of their value was lost by diseases. In 1840 there were no

diseases; now there are twenty. Organization was necessary to keep these diseases in check, and also to assist in modern marketing methods. He found that graded potatoes brought five to ten cents above the market price, which would add a million dollars to the value of the crop of the country. He said that we, in this country, did not appreciate the value of the potato, stating that in Germany it was used in the dry state, for making starch and alcohol, and as a stock food, the fresh consumption in that country being only a small portion of the crop.

Variety Tests.

The first number on the program for the Friday morning session was the report of the research committee. Mr. H. J. Smith, of Alpena, spoke on "Varieties." He stated that each community should select the commercial variety which was best adapted to its local conditions. He also mentioned that it was very necessary to have potatoes ripe when dug, stating that the ripeness was worth five cents a bushel. In variety tests he had carried out, he found that the late Petoskey was the best variety for his section of the state, having averaged ten bushels per acre more than the Rural New Yorker. He was not satisfied yet as to the disease resistance of this variety, and hoped in the future to get some data on this matter.

Mr. C. B. Cook, of Allegan, reported on "The Use of Fertilizers." He spoke on the value of tests carried on by a large number of farmers because it brought into consideration the personal attitude of the farmer and soil differences. Fertilizers were generally used in a sort of hit and miss way, and before the farmer could get full value out of them he would have to consider the type of soil, the past treatment of the farm, seasonal variation, varieties and the condition of the seed. Mr. Cook found humus very important and commercial fertilizer as very valuable in the solution of the fertilizing problem. Barnyard manure would not solve the problem, as it did not contain all the elements for proper fertilization. He said in general, light soils needed potash the most, and the soils of a clayey nature were mostly in need of phosphorus. All soils but muck were in need of nitrogen as well as humus. It was found that light soils will only hold one-third of their weight of moisture, while humus will hold ten times its weight of it. Prof. Henry G. Bell, of Chicago, also spoke on fertilizers, giving very valuable suggestions with reference to the use of commercial fertilizers on which he is an authority. He said that it wasn't fair to ask commercial fertilizers to take the place of other things, and that humus, cultivation and other modern methods were just as necessary when they were used as at other times. He spoke of the importance of the application of commercial fertilizer, and said that improper application often resulted in getting poor results. In most all cases he found drilling the fertilizer in gave best results.

Spraying for Blight.

Hon. Jason Woodman, of Kalamazoo, gave a concise but very practical report on spraying. Mr. Woodman has had considerable experience along this line, and the information he gave was of great value. He said that it did not pay the poor grower to spray, as he would not get enough increase in yield to pay for the extra trouble, but one who followed all the modern methods of potato culture would find that potato spraying usually paid, although in some seasons when the late blight was not very prevalent it did not pay. He stated that early blight was the most destructive, but could not be controlled by spraying, and that to

control late blight thoroughness in spraying was most essential.

Mr. L. V. Crandall, of Port Huron, gave a report on "Grading." He said that this subject touched on marketing which was a very important subject. He found that graded potatoes brought ten to fifteen cents more in Port Huron than the ungraded ones. He spoke of the work that the wide-awake St. Clair county organization was doing, and of the interest the growers were taking in this new work. One of the features of this association's work was the inspection of the fields and the spudding out of potatoes not true to type.

The Round Table Discussion.

The round-table discussion, under the leadership of J. H. Skinner, of Grand Rapids, brought out some very valuable information. Mr. Robinson, of Saginaw, stated that the consumer wanted the potato which was of a good size, flat and white. He said that the potato growers were fortunate in the fact that the highest type of potato was almost the most productive and profitable. Mr. Blandford, of Newaygo county, gave a very interesting report on fertilizer experiments he had carried on during the past summer. He had generally found fertilizers profitable, and in one case he found that potatoes in the check plot had 50 per cent which were too small to be marketed, while in the fertilized plot, 90 per cent were marketable. Mr. Woodman again spoke on spraying, stating that no crop less than two hundred bushels per acre could be profitably sprayed. He found that the average increase of nine years of spraying was \$10 per acre. He said that it was essential to spray the first time when the tops were five to six inches high, and that the first three sprays should be put on a week apart. Mr. Crandall gave another short talk on organization, telling of the buying and selling of good seed from Wisconsin that the organization undertook. This seed was sold to the farmers at cost plus transportation, and the demand was double the supply.

Growing High-priced Potatoes.

The Friday afternoon session opened with a talk by E. M. Pierce, of Kalamazoo, on "Growing High-priced Potatoes." Mr. Pierce was a believer in cowpeas and commercial fertilizer for fertilizing purposes. After telling of his various methods of potato growing—which were all modern—Mr. Pierce told of his method of marketing. This consisted of selling direct to the consumer. From early in July to late in October, Mr. Pierce covers regularly twice a week certain routes in Kalamazoo. By selling to the consumer a high quality graded potato, he has been able to keep customers for his potatoes at fancy prices. This year he sold his winter potatoes at 60 cents a bushel when potatoes were selling at 30 cents on the market. The extra cost of this method of marketing was not over five cents a bushel.

"How we secure a high average yield of potatoes," was told by Mr. Woodman when he spoke of the methods they used on his farm in Paw Paw, stating that he used potatoes in a rotation. This rotation was so arranged that potatoes were grown on the same ground only one year in eleven. Mr. Woodman was formerly an advocate of formalin for soaking seed potatoes, but since he has become acquainted with some of the newer diseases he has used corrosive sublimate. He uses small whole potatoes for planting, and will hereafter cut off the stem end of each potato in order to control the wilt and other diseases. He uses about 27 bushels of seed per acre, and gets yields of 380 bushels per acre.

Potato Diseases.

Dr. Orton, potato specialist of the U. S. Department of Agriculture, gave an illustrated talk on potato diseases. This talk was very instructive and forcibly brought to the mind of the

ordinary grower the seriousness of some of the new potato diseases. One can hardly realize that the common spud could be affected with diseases having such high-sounding names.

Friday evening was given over to the annual banquet. Besides enjoying the feast and the witty and instructive talks by Dr. Orton and Prof. Bell.

Saturday morning the election of officers was held, and resulted as follows: A. L. Hopkins, of Bear Lake, president; C. W. Waid, East Lansing, secretary; Ernst A. Bessey, East Lansing, treasurer; F. J. Stoffard, of Elmira, and Jason Woodman, Kalamazoo, as members of the executive board.

After the usual business was dispensed with, Prof. H. J. Eustace gave a talk on "Pointers on Potato Culture," in which he gave many practical hints on the culture of this popular farm crop. Prof. Ernst A. Bessey spoke on "The Importance of Seed Potato Inspection," in which he brought out the relation of seed inspection to the control of disease. This annual program was concluded by a round-table discussion on "Marketing the Potato Crop," which brought out many interesting points. It was apparent that the marketing problem is the most interesting to the members of the association, and the participation of some of the potato dealers in the discussion added considerable interest.

That this first annual meeting of the Potato Growers' Association was a success, goes without saying. The intense interest in the program and the large number in attendance was a credit to the association and made one realize that it will play an important part in the development of the potato growing industry.

ERADICATING SPARROWS.

How can I best kill the sparrows around my premises?

Calhoun Co.

F. H.

The method of eradicating sparrows advised by Dr. Barrows, of the Michigan Agricultural College in his book, "Michigan Bird Life," is as follows:

"During midwinter when the sparrows have congregated in the towns and cities and when heavy snow has covered most of the available food, and they are pinched more or less for supplies, they should be baited for several successive days to some stable yard or enclosed area where they will gather in immense numbers if not needlessly alarmed. When several hundreds have thus been lured to feed regularly, and the amount of food which they will consume completely has been determined, a similar amount of the same food, previously soaked with strychnine and carefully dried, is fed to them at the usual time. Ordinarily, the whole of this poisoned grain will be eaten, and four-fifths of the sparrows will die within a few moments and within a few yards of the feeding place. The remainder will flutter a little further away, but within a few hours, every sparrow which ate at this place is likely to die. No danger whatever is to be apprehended to cats, dogs, pigs or other animals which might eat the poisoned sparrows, and if any poisoned grain is left uneaten, it can readily be swept up for use at another time or can be destroyed by burning if desired. There is far less cruelty in killing sparrows in this way than by ordinary shooting or trapping, since experiment with caged sparrows shows that strychnine is very quickly effective and that the sparrows die from it with practically no pain at all. It is important that the poisoning should be done only during the winter season when all native birds are absent, and in case poultry or pigeons are attracted by the baiting, they may be excluded by the use of coops made of laths, through the spaces of which the sparrows can pass freely, while the pigeons will be kept out."

Introduction to a Study of Apple Varieties

The Second of the Special series of articles by John W. Fisher, relating his findings in making a survey of Michigan Apple Industry.

THE prospective orchardist is confronted with a problem when he approaches the task of selecting the varieties of apples for his orchard. He burns the midnight oil poring over nursery catalogs, only to retire more bewildered than when he started, for hundreds of varieties are listed and pictured, with each and every one described in glowing terms. The search is further complicated by the loose use of synonyms in the catalogs, for the same variety may appear under several different names in the various pamphlets. If all nurseries would adopt the nomenclature of varieties as approved by the American Pomological Society, the task would be much simplified. And finally, if the nurseries would try to aid the fruit grower in the selection of varieties, by confining the descriptions to accurate data the service they would render the fruit industry would be of untold value.

The grower then turns to the experiment station bulletins for guidance, but again he is more or less confused, because the average bulletin, dealing with the selection of varieties, will usually list anywhere from twenty to thirty as suitable for planting. The orchardist needs only five or ten kinds if he is intending to plant a commercial orchard, and again he is perplexed as to which to choose, for in all probability the greater proportion of those named are well suited to his conditions.

Each Grower Has His Favorite Variety.

As a last resort he asks his neighbors for their opinions and advice. But here again he is apt to be misinformed, for every fruit grower has his favorite variety, although his choice may be caused by abnormal conditions which are peculiar to his location. In preparing the questions for this survey the writer reviewed the reports of the Michigan State Horticultural Society for twenty years, in an endeavor to learn the problems in which the Michigan growers were most interested. One of the facts which impressed itself upon him was the frequency with which the discussions turned to the matter of varieties, and how many men vigorously defended unheard-of varieties. This point is well brought out by a statement made by Mr. O. K. White, field horticulturist of the Michigan Agricultural College, to the effect that a man has written to him year after year to find out where he can secure three carloads of Kiefer pears, as he has found a special market for that variety. This man can never be convinced that the Kiefer is not generally considered to be a good market pear; but the mere fact that he has found a special market for this variety does not mean that a sufficient demand exists to warrant the general planting of the Kiefer.

Things to Consider in Selecting Varieties.

The prospective orchardist is now at the end of his resources and is still unable to choose from the many varieties obtainable. But he has confined his attention to those best suited to his needs as viewed from the growing standpoint alone. The choice of varieties as determined by market likes and dislikes has been a practically unexplored field until recent years, but should be given just as much weight as growing considerations, and may aid in narrowing the lists.

In the next few articles the choice of varieties as viewed from both angles will be discussed, based upon the answers obtained from both market men and the growers in this survey, but the remainder of this article will be devoted to a general discussion of

factors which must be taken into consideration in this matter.

First comes the question as to how many varieties should be chosen. Probably the prime determinant is the location of the proposed orchard. If it is intended as a commercial proposition and the fruit must be barreled and shipped, it is wise to confine the plantings to some five or ten standard varieties, so as to have a sufficient supply to enable the shipment of straight cars of one variety, facilitate the grading and sizing operations, and act as a magnet for buyers. No large buyer can afford to trifle with an orchard composed of thirty or forty varieties, with not a sufficient amount of any one kind to make up a carload.

Considering the Local Market.

However, if the orchard is to be located near a large city, such as Detroit, other considerations will enter in. If the fruit is to be hauled directly to the city by motor truck or wagon, it will be better to have a number of varieties which will mature in succession, thus affording a continuous supply for the pickers and wagons. Secondly, an assorted load must be carried to secure the best results in this direct marketing, because the grocers or housewives will probably desire both cooking and dessert apples. Thirdly, a succession of varieties greatly simplifies the labor problem, for the work of picking and packing is not concentrated in a few days but is spread over the entire season, and fewer men are given more continuous labor. This is one point which must be considered in the limiting of the number of varieties to be planted in a commercial proposition, for the fruit grower situated at some distance from the market is even more troubled by labor problems than the man nearer town. The problem may be solved to a certain extent by the planting of other fruits which will occupy the help during the dull periods. This is nevertheless an all-important point which is too many times entirely overlooked by planters.

The Market Value of Varieties.

The writer does not wish to unduly emphasize market considerations in the choice of varieties, to the neglect of other factors, for it is not always true that the apple which brings the highest price on the market will produce the greatest net returns. The cost of production varies greatly for the different apples and this must be taken into account. This is one of the excuses for the continued existence of the Ben Davis, and, as one man recently remarked, "If you are shipping to the city where the people don't know the Ben Davis from the Spy, it may pay to raise Ben Davis." However, in this particular case, this is doubtful advice, because of the ultimate injury to the reputation of the grower with the trade. But as Mr. T. A. Farrand, of Eaton Rapids, remarked, "Don't plant any more Ben Davis in Michigan; but if you have Ben Davis trees in good condition on your farm, do not cut them down. The Ben Davis will always be the market apple of the south."

It also must be remembered that an apple which brings a high price on the market may be a shy producer, may be exceptionally susceptible to injuries, diseases, pests or frosts, or may have poor keeping qualities. All these points must be taken into consideration before a final choice is made.

Quality Pays.

The first impulse is to select early bearing varieties, under the impression that just so many years of production will be gained. But an orchard should be looked at in the light of a permanent investment, as to what

will pay best in the long run. An apple, such as the Spy, may take from ten to fifteen years to come into bearing, but when it does begin to bear, the increased returns which the high quality fruit will bring may more than repay all the years of non-production and a handsome interest on the accumulated investment. The writer has long held rather pronounced views on this matter, and so when this survey was made, availed himself of the opportunity to ascertain the feeling of the market men in regard to the investment features of a Northern Spy orchard. Their answers will form the basis of an article which will appear in this series in the near future.

Another problem which confronts the planter is the relative value of color and quality in a market apple. This question has been thoroughly treated in the survey and the material is too extensive to be treated in this article. It may be stated briefly, however, that the question of quality must not be entirely subordinate to color, which at the present time, is unquestionably the prime market consideration. For with the increased knowledge brought to the consumer through the extensive advertising which the apple is receiving at the present time, the consumer is gradually undergoing the transformation into a connoisseur. When the transformation is completed, color will not be accepted as a substitute for quality, for the consumer of fancy apples will know varieties, and will buy quality rather than appearance.

Considering Soil Requirements of Varieties.

The adaptation of the orchard land is a prime factor, for varieties of apples are particular in their soil requirements. This subject has not been given the attention which it deserves, and the information available at the present time merely accentuates the necessity of future work along this line by the experiment stations. An apple tree will grow upon almost any soil supplied with sufficient plant food and of such a texture as to allow

proper drainage. But this should not be sufficient for the commercial orchardist. He wants to know what variety will do best on his particular type of soil, for he knows that the factors of ripening, color, keeping qualities, etc., are all influenced by the soil conditions.

In conclusion the writer will say that in this survey the attempt has been made, not to name all the good varieties, but to choose from five to ten varieties which are known to us to be good, and which the commercial planter, under average orchard conditions, will not make any mistake in planting. There are several varieties which have been marked leaders in both the answers of the growers and the commission men, namely: Northern Spy, Baldwin, Rhode Island Greening, Oldenburg (commonly called the Duchess), Red Canada (or Steele Red), and Tompkins King; with the possible addition of the four varieties Wealthy, Maiden Blush, Yellow Transparent and the Russets (Golden and Roxbury). The naming of varieties as here employed may arouse dissensions, especially the use of the term Red Canada, but the writer has used the official nomenclature as approved by the American Pomological Society, and will use these names through the entire series.

To Consider the Standard Varieties in Detail.

The attempt will be made throughout the discussion to consider these varieties more in detail than any others, both from the growing and marketing standpoint, inasmuch as these varieties seem to be so much in favor with both growers and market men. The attempt will be made in this series to determine the varieties which no grower, under normal conditions, can make a mistake in planting in a large commercial orchard. The writer believes that the above named apples form such a list, and anyone who reads the following articles in this series carefully, cannot fail to be impressed by the overwhelming sentiment in favor of these varieties.

Horticultural Society Meeting.

(Continued from last week.)

The Tuesday evening session was opened by Mrs. Henry Hulst, ex-president of the Michigan Teachers' Association. She spoke on "Community Planting and Parks," and made a plea for country-side planting. She said that it was a mistake to cut all the brush from the roadside and that our rural districts were fast becoming unattractive, due to this practice. While president of the Teachers' Association Mrs. Hulst carried on a tree planting campaign, which resulted in ten times more trees being planted last year than ever before. She said that the cities were giving more attention to this matter, and as a result were becoming more beautiful than the country. She stated that there were millions of acres in the state of no value except for forestry purposes, and she hoped that they would be developed in that way and that everything would be done to preserve the timber standing at present. Much of this waste land which has been turned back to the state should be made into natural public parks.

H. J. Eustace, the popular professor of horticulture at M. A. C., showed some very interesting slides of Michigan fruit scenes; these he accompanied by practical hints and suggestions. Prof. Eustace realizes the value of conveying information by the picture method, which often gives a more lasting impression than talking would.

The students' speaking contest, which was held Wednesday morning, was as usual, very interesting and chuck full of information. Twelve students participated in this contest, the first prize going to D. A. Stroh, of

Washington, D. C., who talked on "Two Common Scales and their Control." T. W. Cochrane, of Elk Lake, Pa., who had for a subject, "Michigan's Need for an Apple Packing Law," won the second premium, and Kris P. Bemis, of East Lansing, who spoke on "Raising Bartlett Pears in the Pacific Northwest," won the third premium. These students' contests are annual features of the State Horticultural Society's program, and have become one of the most valuable features of it, because of the valuable information given out in the talks. It is a feature which is mutually beneficial to both the society and the students, and the society always feels repaid for the premiums it offers, on account of the information gained.

The Business Meeting.

The annual business meeting followed the contest. The secretary and treasurer's report showed that the society is in very good condition, but due to the various changes in its management, it needs the hearty support of every fruit grower in the state. The society is doing a worthy work, and every fruit grower in the state should feel it his duty to become a member. There were various changes made in the constitution and by-laws to suit present conditions. These laws were written years ago and some features greatly needed the changes made. The election of officers resulted as follows: C. A. Pratt, Benton Harbor, president; R. A. Smythe, also of Benton Harbor, secretary; Henry Smith, Grand Rapids, treasurer; Luther Hall, Ionia, and Thomas Gunson, East Lansing, members of the executive committee for three years, and C.

A. Bingham, Birmingham, as a member of the committee to fill the vacancy caused by the election of Mr. Pratt to the presidency. The fine condition of the records of the society, and the business-like management the society has received in the past year is a great credit to Secretary Smythe, and all members were greatly pleased when he was elected to office again.

The Wednesday afternoon session of the annual meeting of the State Horticultural Society was opened by a talk by Mr. Allis on "The Value of Cold Storage on the Farm." Mr. Allis has a cold storage house very similar to those of the commercial kind, which has a capacity of 15,000 barrels; the system of storage he started with was the calcium chloride method, but he found this impractical for a storage house of the capacity of his, as it took too much labor to crush and prepare the ice. He is now using the ammonia system not under pressure and finds it very satisfactory. His storage house is on the railroad, which makes it convenient for him to ship and also carry on commercial storage business. He has found that storage pays, this year, the stored fruit bringing 75 cents a barrel over the price offered by the buyers at the beginning of harvesting.

New Horticultural Experiments.

"New Points in Horticulture," was given in a very interesting manner by Prof. H. J. Eustace. He spoke of the differences between trees of the same variety under the same conditions, and told of the results of an investigation along this line at the L. E. Hall orchard at Ionia. Prof. Eustace's general conclusion was that the cions used in grafting transmitted the peculiarities of the tree from which they were taken. He also spoke of a new method of fertilizing and invigorating fruit trees. This method was the spraying of nitrate of soda on the foliage. It was found that this had a very invigorating effect on the foliage and if sprayed before the blossom buds opened, would cause earlier blossoming and general invigoration of the fruit buds. He also spoke of the dust method of spraying as compared with the liquid method. Generally this method has not been successful or practical, but in New York an application of four parts of sulphur and one part of arsenate of lead proved effective but was too expensive for practical use. For greenhouse purposes, however, it was of some value.

Mr. W. W. Farnsworth, the prominent Ohio fruit grower, gave a very instructive talk on peach growing. The conditions were different in Ohio from those in Michigan. He said that light soil was not as necessary for peach growing here. His orchard was surrounded by swamps, which he thought was beneficial in the matter of frost protection. He urged that growers do not crowd their trees, stating that he set his Elbertas 25 feet apart. He did not believe in interplanting, and only cropped his newly set orchard one or two years. While the immediate returns from the orchard under this method were not as great, he was sure that the additional profits in the future would make this method advisable. He advocated vigorous and early growth, and said that no matter how large the growth was, if it was stopped early enough in the season to harden up, it would not be subject to winter-killing. He advocated low headed trees and the open head method of pruning. Peach spraying, he said, was still experimental, the safest and most efficient spray to use being the self-boiled lime-sulphur.

The Woman's Session.

At the woman's session, which was held immediately after the Wednesday afternoon session, Mrs. Ralph Ballard, of Niles, spoke on "A Woman's Life on the Farm." She urged the use of all methods which would make the household work easier, and said that

the investment in household conveniences was profitable.

"How I Run the Farm," was the subject on which Mrs. C. B. Cook, of Owosso, spoke. Mrs. Cook has had considerable experience in the active management of farm work, and said that with the assistance of a little good natured jollying of the men, she got along very well.

The annual banquet was, as usual, the festive occasion of the annual meeting. After satisfying the inner man, the banqueters enjoyed mental food and entertainment through the numerous toasts given. The general trend of the toasts was historical, and the newer members of the society gained interesting information with reference to some of the pioneers in society work. The Kalamazoo Normal School Glee Club added greatly to the entertainment with selections during and after the banquet. The college yells of the Normal School and M. A. C. made the prevailing spirit one of youth.

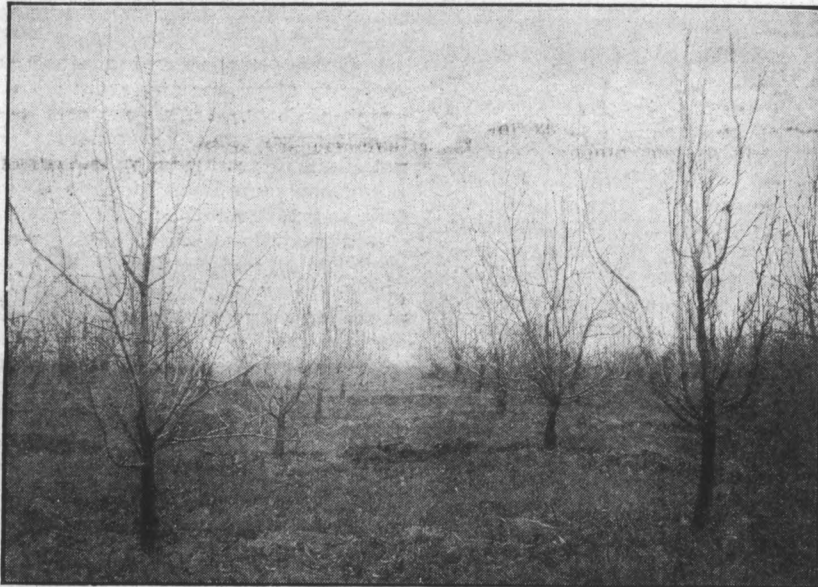
Farnsworth on Marketing.

Mr. Farnsworth opened the Thursday morning session with a very interesting talk on "Marketing." He told of their method of selling direct to the retailer, and of the various ways he had in keeping the relations between himself and his customers satisfactory. Every year he gave an outing and dinner to the grocers of

tical suggestions. He suggested that the fruit grower test every barrel of lime-sulphur and dilute accordingly, as there was considerable variation in the mixture. He found powdered arsenate of lead as efficient as the paste, and stated that it required only half the amount. For the control of the cherry fruit fly and apple maggot, the addition of one-half gallon of molasses or glucose to a barrel of spray was very effective in attracting the insects. He found that it was not necessary to spray all of the trees in the orchard, as the insects would be attracted to those sprayed with this mixture. He urged strongly the proper control of the blight, and said that in spring when it was usually the worst, it was often necessary to cut it out two or three times a week.

Mr. Hale Tennant, secretary of the Grape Growers' Association, spoke on "The Marketing of Grapes." He said that the Michigan grape growers were sadly in need of co-operation, and that while they grew one-half of the country's crop, they got only one-third of its total value on account of loose marketing methods. While 75 per cent of the grapes of the country were sold through organizations, the remaining 25 per cent controlled the market by setting prices. The shoe-string broker was the one who demoralized the grape market.

The program was closed by C. W.



A Sod Mulch Pear Orchard in Van Buren County which has Been Producing Profitable Results.

Toledo, which is his market, in order that they might become better acquainted with him, and also see growing the fruit they were selling. Mr. Farnsworth grows a succession of varieties, as he finds it necessary to keep that kind of trade. He packed his fruit honestly in attractive packages, and in each package put a slip guaranteeing the fruit.

Prof. R. H. Pettit gave interesting information on some of the new insects troubling the fruit; among them were the red bug and the grape leaf hopper. The red bug made its appearance last spring, and in some places caused considerable damage. It works by puncturing the leaf or fruit, and sucking the sap. It causes very knobby irregular fruit. It can be controlled by spraying with a nicotine solution when the blossom buds first show pink. The only method of controlling the grape leaf hopper was to burn all the rubbish around the vineyard. Mr. Pettit found the scale parasites of no value, saying that the seven species found in this state had no apparent effect on the scale. Where the scale is very bad, he recommended two sprayings in spring instead of one in fall and another in spring. For the control of the army worm and cutworm he found the following formula very valuable: Twenty pounds of bran crushed, three oranges, one pound of Paris green, and one-half gallon of molasses or glucose.

Mr. O. K. White gave a talk on "Spraying," which was full of prac-

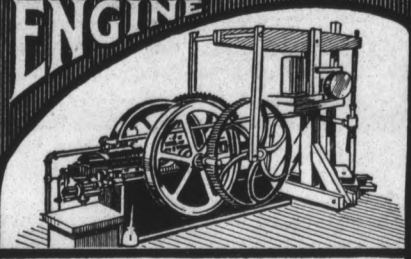
tical suggestions. He suggested that the fruit grower test every barrel of lime-sulphur and dilute accordingly, as there was considerable variation in the mixture. He found powdered arsenate of lead as efficient as the paste, and stated that it required only half the amount. For the control of the cherry fruit fly and apple maggot, the addition of one-half gallon of molasses or glucose to a barrel of spray was very effective in attracting the insects. He found that it was not necessary to spray all of the trees in the orchard, as the insects would be attracted to those sprayed with this mixture. He urged strongly the proper control of the blight, and said that in spring when it was usually the worst, it was often necessary to cut it out two or three times a week.

A NORTHERN NUT FARM.

The south has its pecan farms; California has its walnut farms, and the New England, Middle Atlantic and North Central states can soon have their shagbark farms, black walnut farms, and filbert farms. In more favored locations, there may also be northern pecan and hardy English walnut farms. We now know how to graft and bud all these trees and it merely needs the finding of the best parent trees. The pecans are already in hand, and there are some very promising English walnuts on the list. We already have one very fine black walnut, and a good shagbark or two. I know of one shagbark tree that has produced \$10 worth at current prices.

If you have a promising black walnut, shagbark, or hazel, send samples of the nuts and an account of its bearing record to Dr. W. C. Deming, Georgetown, Conn. He is secretary of the Northern Nut Growers' Association, an organization that is trying to gather the information to give the north a nut industry. They are offering \$5.00 prizes for best black walnut, hickory, and filbert. Ask your neighbors about it and help America to discover herself.

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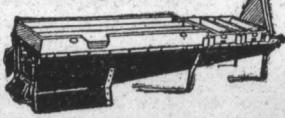
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Training the Colts.

By PROF. JESSEE BEERY, OF OHIO.

COLT training, on the average farm, does not occupy a very prominent place in the list of duties to be performed. It is too often a rainy day job, left for the boys to do, or turned over to incompetent hired help.

Colt training is of too much importance to allow it to take a subordinate place in the work about the farm. There is scarcely a day passes without a horse being used in some way. Working or driving, a horse may make things very unpleasant for his owner, day after day, year in and year out, by some habit it may have.

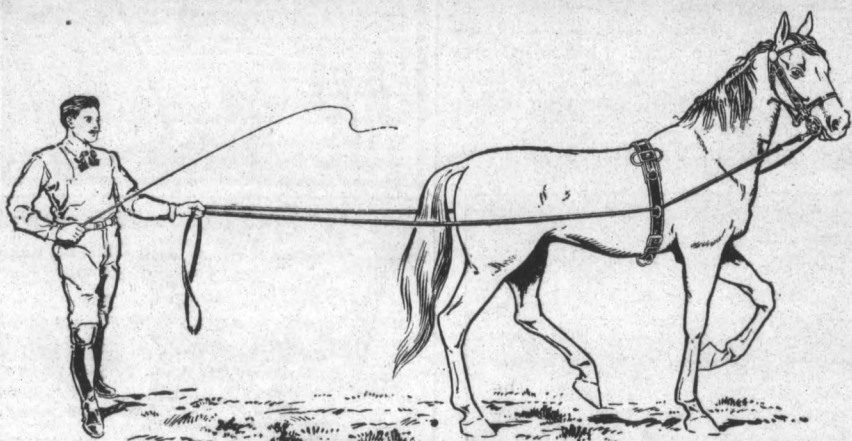
When one hitches a horse to a new buggy, or to a piece of new machinery, the cost of either of which may often exceed \$100, the risk of losing that buggy or piece of machinery depends, to a large extent, upon the reliability of the horse. It would surprise many farmers and teamsters if

attention to any one thing for any length of time; that of a mature colt for not longer than a half hour at most.

Attention depends upon interest and a colt has but very few points of interest. If a man wishes to keep the attention of a colt and get results he, too, must put his attention to the work and keep his mind working with that of the colt.

In attempting to train a colt when too young, one is likely to take up too much time, lose its attention, and allow it to pick up habits that are undesirable. If a lesson is continued, after a colt's attention is lost, it becomes an annoyance to the colt and may cause it to retaliate by kicking or biting or doing something that lays the foundation of a bad habit.

Taking everything into consideration, there is little gained, and much may be lost, by attempting to train a



The Colt Ready for His Lesson.

they kept an accurate account of the amount spent every year for repairs or breaks caused by horses.

The Cause of Most Bad Habits.

It is not an extravagant statement to say that nine-tenths of all the accidents and trouble caused by bad horses, can be traced to improper colt training. Most of the bad habits, that develop later in a horse, are the result of either the lack of colt training, or the wrong kind of training.

Since the unpleasantness of many years' work, the possible loss of many dollars' worth of machinery and even the safety of human lives, depends so largely upon proper colt training, it ought to have a more important place in the order of work than a rainy day job. There ought to be someone more responsible to look after it than a reckless bunch of boys, or an indifferent farm hand.

The Proper Age to Begin Training.

There are many things to consider, when one speaks of training a colt, and I consider nothing of greater importance than the proper age at which to begin the work.

It seems foolish to me to tinker along two or three years in training a colt, beginning the training when the colt is too young, when it can be more easily and better taught in a few hours after the colt reaches the correct age.

The tissue of a young colt's brain is too soft to retain a lesson any length of time and, therefore, the lesson must be repeated. The probabilities are that the lesson will not be repeated just exactly as first given and more or less confusion results. It may be that several different people will have a hand in the training, when it extends over so much time, and this always results in confusion to the colt.

One good impression, fixed upon the brain of the colt, from 18 months to three years old, stays for the remainder of its life.

Undivided Attention Necessary.

No effective training can be done without the colt's undivided attention. A colt, under 18 months, cannot fix its

colt before it shows the form and qualities of a mature horse.

Let Your Colts Run Loose.

There may be occasions where it will be necessary to train a colt to do a few things at an early age, for instance, to stand tied or to lead with a strap. If it is absolutely necessary, of course, there is nothing else to do. For myself, I would prefer that the colt run loose rather than get the habit of chewing straps, slipping halters or develop other habits.

When he is old enough for actual use, 15 minutes is long enough to teach him to stand tied so that never after will he pull on a strap. Another 30 minutes, or less, will teach him to lead obediently without the prancing, crowding and other pranks that the early-broke colt usually indulges in.

How to Reach a Colt's Brain.

The first thing necessary in colt training is to establish a line, or lines, of communication between man's brain and that of the colt in order that there may be a mutual understanding. There are three lines of communication in common use: the bit, the whip and the voice. Sometimes only one, sometimes two, and often all three are used.

A "green" colt doesn't know the meaning of the words, "get up." When a colt is struck directly on the back of his hips he naturally moves forward. The stroke of the whip is usually preceded with the words "get up." The colt soon associates these words with the stroke of the whip and obeys by the word alone.

Teaching a Colt to Turn.

It is easy to arouse stubbornness and often causes a tough mouth by pulling too hard in teaching a colt to turn. The idea is more easily conveyed if, when the first pull on the right line is made, a tap of the whip on the side of the right hip follows almost at the same moment.

The tap of the whip causes the colt to step over with the hind legs and the slight pull on the lines turns the head a little and you have him turned without resistance. About the second

or third time the colt, feeling the pressure of the bit, will anticipate the tap of the whip and step around without being touched. Now he has an idea of the meaning of the bit pressure. He understands you and is in a good humor—the only possible condition in which he is teachable.

Proper Use of the Whip.

The whip, being one of the means of communication, should always be used to convey distinct ideas. It should never be simply an object of fear. Whenever you see a horse dodge and try to get away, when a whip is brought toward him, rest assured that the whip, as a medium of communication of ideas, has very limited value to that horse.

The Power of the Human Voice.

The power of the human voice to convey ideas to a horse is almost unlimited. It can be sharp, rasping and irritating or it can be calm and soothing. One can almost tell by the driver's voice what kind of a team he has.

Most people do not use their voices enough around their colts and horses. Many a misunderstanding could be avoided by its proper use. Sometimes it must be soothing, sometimes a tone of authority must be used, and always it must be under control. When the voice is used right all the ideas, conveyed by the whip or bit, can be expressed by it alone.

With these three mediums, the bit, the whip and voice, it is not a difficult thing to convey man's wishes to the brain of the colt.

I cannot emphasize too much the necessity of proper and thorough colt training. If you train your colt right, it will stand tests that others would not stand after several years' driving. It means something to have a colt that is trustworthy.

The Seventh of 52 Special Articles to be published in consecutive issues of the Michigan Farmer. Another article by the same author on another phase of colt training will appear in a future issue.

A CHEAP WINTER FEED.

Many farmers in Michigan will find it necessary to winter their horses upon some other roughage than hay. In many parts of the state there has been a shortage of hay for two or three years and the present high prices place it out of the question as a feed for idle horses. Many cannot even supply their cows with it. Stockmen who raise sorghum find that this feed with shredded or chopped corn

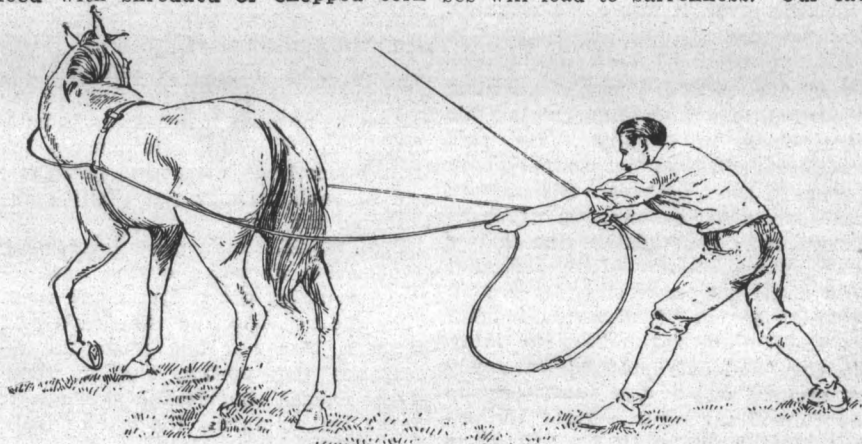
the other added 45 pounds of good hard flesh. After four weeks on this diet they were led onto the scales a second time. The first had added 95 pounds and the mate had improved to the extent of 102 pounds.

During the experiment both horses shed their hair but after six weeks on this feed their new coats were glossy and healthy looking. At the end of the trial period the first horse weighed 1,075 pounds and the other 1,086 pounds. They were no longer weak or ill, and were immediately placed and employed profitably by a business firm.

Before purchasing any molasses for our own stock, over a year ago, I asked one of the liverymen in a neighboring city if he had ever fed molasses to his horses and what he thought of its feeding value. He seemed very enthusiastic in his reply, for he had been feeding it for some time. He asserted that molasses was the cheapest feed to keep his horses fat and in good trim of any that he had ever used. His method was to pour about one pint of clear molasses upon the oats at each feed, after the roughage had been eaten. The horses relished it very much. Molasses seems to supply just the element of nourishment that the horse needs, especially when the other feed is not of the best. It helps to keep the appetite from lagging and places the body in shape to enjoy the best of health.

During all of last winter we used the regular stock molasses upon the roughage fed to both cows and horses. It was very satisfactory and we consider it an economical feed. We shall use it in the same way again this year. The horses, after the steady work had been completed, received each day one feed each of sorghum, shredded corn-stalks and oat straw, with a little corn for grain. We fed the molasses only once each day, at noon, when it was sprinkled upon the straw. Two quarts, dissolved in about six quarts of luke-warm water is all that the seven horses got each day, but the effects of it could readily be seen in their good condition. The straw was made quite palatable for the horses would eat it readily and in large quantities.

Care must be used when feeding molasses to cows and heifers not to give them too much, as there is a belief, founded no doubt, on the truth, that in time the free feeding of molasses will lead to barrenness. Our cat-



Teaching the Turn to the Right.

fodder, oat and wheat straw, with the were fed the molasses more as an appetizer with their straw than as a separate feed.

Farmers who have no hay to feed will surely find this a profitable supplement to their ration. It can be fed to advantage up to two quarts apiece each day to horses, preferably on oats or with the straw. With such large quantities it would be a good plan to chop the straw up and mix the two thoroughly together. During cold weather the molasses barrel must be kept in a warm place or the molasses dissolved in hot water for it will become very thick. It is so inexpensive that anyone can give it a trial and I am confident that it will become a valuable help in their winter feeding.

Montcalm Co. A. M. BERRIDGE.

PROFIT IN WINTER PIGS.

Can a farmer afford to feed and care for a brood sow a whole year for one litter of pigs? It has been our experience that the brood sow must be run to her full capacity, like a piece of machinery, in order to be profitable. If two litters are raised each year, one of them must be grown when there is little if any green food, and when the general conditions are such that the pigs must be handled with some degree of skill in order to get any profit from them.

The fall pig has some decided advantages over that farrowed in the spring. If the sow is bred in May, which is perhaps as good a time as any, she can be put on pasture during the entire period of gestation. An abundance of grass and other succulent food that is both nourishing and cooling to the system of the dam is just what is needed for the proper development of the embryo hog, and in the pasture there is no lack of that exercise so necessary to the well-being of both during this critical period. For these reasons, fall litters are almost invariably more even, stronger and better developed in every way, than those farrowed in the spring. Observing breeders cannot fail to notice this.

When the pigs are farrowed in Aug-

time when the farmer's pocketbook is quite empty, there being little if anything that he can turn into cash at this season.

Illinois.

A. B.

FEEDERS' PROBLEMS.

Forage Crops for Hogs.

How do hogs do on rape, alfalfa and sorghum, say equal area of each? Providing the season is favorable for all these crops could not five acres of each of these crops grow and feed 150 hogs? That is, 15 acres in all.

Monroe Co.

H. R.

Of the crops mentioned, alfalfa is undoubtedly the best forage crop for hogs, with rape a fairly close second. In order to secure the best results with the use of these forage crops, however, a moderate grain ration must be fed in connection with them. Sorghum would not, in the writer's opinion, be as profitable to grow for hogs as corn which could be hogged down in the fall when the hogs were ready to finish for market, thus making a cheap method of harvesting same.

In pasturing hogs on alfalfa, no other forage crop is needed during the summer, but it should not be so heavily stocked that it will not make a fair growth to be cut for hay. Then the hogs should be taken out and turned in again when the alfalfa has made a good start. By dividing a field, the

bran and corn meal mixed equal parts to give the cow a total grain ration of one pound of grain to three or four pounds of milk produced. The cow giving rich milk requires more food in proportion.

For the fattening cattle you are safe to feed more cottonseed meal. In fact, for cattle, feed cottonseed meal alone for the grain ration if you wish, and it is undoubtedly the cheapest source of protein you can purchase. Begin with two pounds of cottonseed meal and increase to four to six pounds. This, with all the roughage they want, should make them thrive.

QUARANTINE MODIFICATIONS.

The Secretary of Agriculture has issued amendment six to B. A. I., order 230 as effective December 7, which modifies foot-and-mouth quarantine restrictions affecting the following areas: All counties in Michigan, excepting Montcalm, Ottawa, Ionia, Clinton, Shiawassee, Genesee, Lapeer, St. Clair, Macomb, Oakland, Livingston, Ingham, Eaton, Barry, Allegan, Van Buren, Kalamazoo, Calhoun, Jackson, Washtenaw, Wayne, Monroe, Lenawee, Hillsdale, Branch, St. Joseph, Cass and Berrien. Also those portions of the New York Central Stock Yards, East Buffalo, New York, and Belt Road Stock Yards, Indianapolis, Indiana, specially cleaned, disinfected and reserved for live stock from outside of the quarantined area.

This amendment permits the interstate movement of live stock into territory above described and shipments therefrom for immediate slaughter to places where federal meat inspection is maintained, also removes the restrictions from shipments of dressed carcasses, hides, hay and straw from the territory above described.

The amendment further provides for the inter-state shipment of live stock on Bureau Inspection and certification (said certificate must be attached to way bill) for immediate slaughter to places where federal inspection is maintained, from the counties of Montcalm, Ottawa, Ionia, Clinton, Shiawassee, Genesee, Lapeer, St. Clair, Macomb, Oakland, Livingston, Ingham, Eaton, Barry, Allegan, Van Buren, Kalamazoo, Calhoun, Jackson, Washtenaw, Wayne, Monroe, Lenawee, Hillsdale, Branch, St. Joseph, Cass and Berrien.

The State Live Stock Sanitary Commission also permits the movement of live stock for immediate slaughter to points within the state where federal inspection is maintained, from the following named townships in the following counties now under quarantine: Township of Day, Montcalm county; townships of Mt. Morris and Argentine, Genesee county; townships of Almont and Bruce, Lapeer county; townships of Van Buren and Sumpter, Wayne county; townships of Summerfield, London and Whitford, in Monroe county; townships of Deerfield, Blissfield, Palmyra, Ogden and Riga, Lenawee county; townships of Quincy, Bronson and Butler, Branch county; townships of Benton and Walton, Eaton county; township of Liberty, Jackson county. The bordering townships to the townships in the above named counties are released from quarantine subject to federal quarantine restrictions as above enumerated.

Stock cars going to butchers and packers, loaded with stock from townships herein held in quarantine, must be cleaned and disinfected before again being loaded or sent out, and all cars received loaded with stock must be cleaned and disinfected unless they already bear evidence of having been cleaned and disinfected since November 5, 1914.—Michigan Live Stock Sanitary Commission.

A Welcome Visitor.

"The Farmer is a welcome visitor here. I wonder how any Michigan tiller of the soil can get along without it."—Arthur Hamlin, Elm Hall, Mich.



Good Winter Quarters for the Late Fall Pigs.

ust or September, there is no chilling to death by cold rains or snow. The sows are quite certain to do well, even if they are neglected by their owners, which is very often the case on account of corn-cutting or seeding of the wheat. During the suckling period there is generally plenty of young fall-grown grass, waste vegetables and other succulent food, which promote an ample milk flow, and the shoats go into winter quarters strong, vigorous and thrifty.

The most critical time for winter pigs is after they have been weaned. However, if the hog-house is warm and dry, no fears need necessarily be entertained. A mash made of bran or middlings, or both, makes as good feed at this time as any. At this season there is plenty of leisure time so that the best possible treatment can be given. Of course, as the severe weather advances, they should have food to keep up the animal heat and corn is the best for this.

Winter pigs are usually ready for market in March or April, when they should weigh from 175 to 200 pounds. The market is seldom if ever overstocked at this time, and the price is therefore better than in the fall when the spring pigs are sold. Our experience has been that the difference in price is often sufficient to more than balance the difference in cost of growing. Another point that is very valuable is that the money comes at a

hogs can be alternated between the two lots.

It would be impractical to grow enough forage on 15 acres to feed 150 hogs. It is far better to under-stock rather than to over-stock the forage crop with hogs. The average number of hogs which can be profitably pastured on an acre of different crops in experiment station trials has been found to vary from 12 to 30, according to the crop used and the age of the pigs.

A Grain Ration for Cows and Fattening Cattle.

What grain ration do I need to feed to cows that are fresh this fall, and fattening cattle that weigh about 1100 lbs., to make a balanced ration? Have ensilage that would husk 100 bushels of ears to the acre, in good shape, also timothy hay, cornstalks and oat straw.

Livingston Co.

F. H.

The foodstuffs in the roughage part of your ration all have a wide nutritive ratio, that is, they contain carbohydrates or heat and energy nutrients in excess of the protein or flesh building nutrients. Therefore you should provide for this by using concentrated foodstuffs that have a narrow nutritive ratio, that is, those that have protein in excess of the carbohydrates, like cottonseed meal, wheat bran, oil meal, gluten feed, etc. I would suggest for a grain ration, cottonseed meal, wheat bran and corn meal. For the cows I would feed two pounds of cottonseed meal per day and enough

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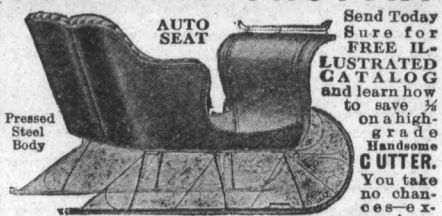
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A Young Calf and its Care.

MOST of us have to live some time before we can appreciate the worth of "a good start." When we were boys, we were not as careful about the way in which we began an important piece of work as we learned to be later in life. We have all heard that "a thing well begun is half done," but I fear that few of us learn, even in later life, to rightly value the initial steps in any undertaking.

It is probable that the interest in dairying was never so great as at the present time. There are few people now who milk cows, who are not anxious to improve their herds. They realize that no matter how well their cows are paying them, there is opportunity for improvement. The hope of every good dairyman is in the calves for which he is breeding to the best sires obtainable, and for which more than one who reads this, is looking anxiously this fall.

The Foundation of a Good Herd.

We may choose good cows for the mothers of our future herd, we may breed them to great sires, but if the young calves are not properly cared for, our success will be limited, to say the least.

Every cow is a product of inheritance and environment. The better she is bred, the more may we reasonably spend of time and labor, to make her surroundings what they should be, from the day she is dropped until the end of her life. The calf from a "scrub bull" might claim extra care upon the ground that therein lay the only chance of proving its right to live in this progressive age, but surely the up-to-date breeder will have much stronger reasons for giving to his calves the best of care and the ration that will best develop them into profitable animals later on.

A large number of the cows in dairy districts are under size. The feeder of young animals for beef, readily realizes the value of rapid growth, but the man who is growing calves for a future dairy, is far too apt to think that "Any cow will give milk" and underestimate the greater value of a large and robust specimen of the particular breed he has chosen.

We do not expect the dairy calf to grow into the type of a beef animal, we do not expect the Jersey or Guernsey calf to ever resemble either in size or form, the animals of larger breeds designed for beef purposes, but we do desire large and healthy animals of the breed we happen to be keeping.

Keep the Calves Growing.

We are perfectly sure that the dairymen of Michigan are annually losing a great deal of money because their cows are under size. Not that these small cows may not pay a profit, but the profit is smaller than it would have been if they had been so fed and cared for when they were calves as to have grown them into fine large specimens of their breed.

The writer has grown some of these small cows himself, and so comes in for a share of the advice he is giving away in this number of the Michigan Farmer.

Perhaps we might grow a larger heifer upon whole milk, but it's doubtful if the animal would be larger after two or three years, and the added expense would be so great as to discourage such a practice at the outset. However, the calf should be given whole milk for a time, and my practice is to let the calf do the milking for the first three days and occasionally longer.

Generally speaking, I have gotten the calf onto skim-milk by the time it was two weeks old, making the change gradually. This seems to be a common practice, but I have come to feel that there is a better way. This winter I shall give the calves two

pounds of whole milk each day until they are six weeks old. This is Jersey milk; were it thinner, I should put in a little more.

The Cost of Feeding Whole Milk.

What will it cost? Well let us see—two pounds of milk each day for 30 days longer than I have been in the habit of feeding it, will equal 60 lbs.—probably three pounds of butterfat. This will be worth a little more than a dollar. It is not wise to hesitate long about putting an extra dollar into the ration of a well-bred calf.

Nature's food for the young calf is whole milk, and there is nothing like it. It is not necessary, though, that it should contain five per cent of fat. The Holstein calf will grow as fast and keep just as healthy upon very thin milk, as upon that which is much richer, but nature demands some fat for the calf, and there is none so good as that secreted in the milk.

There is often a tendency to feed too much milk after it has passed through the separator. We are apt to reason that it is cheap, and so give the calves more than they can take care of.

Eight or ten pounds per day is sufficient for a calf four weeks old, and double that amount will do nicely for a three months old calf. There is a great difference, however, in the amount of milk that can be safely fed, depending upon the individuality of the calf.

The grain should all be fed dry. The less solid feed fed in the milk, the less trouble we shall be likely to have, and the better will be the digestion of the young animal.

Feeding Hay and Grain.

Get the calves to eating hay just as soon as they will eat it. Give them all they will eat of it, none to waste, but all they will eat.

Prepared calf feeds are not generally injurious and some of the are very good, but they are expensive, and are not necessary. However good they may be, they can never make up for a lack of care, or for bad methods in feeding.

There are several kinds of grain that can be fed to a calf with good results. Wheat middlings are all right, corn meal is good, ground wheat will give excellent satisfaction, and ground oats are equally good. The calf may also be fed whole grains—oats or corn, and will make good gains on these.

I know a man who always feeds his calves corn in the ear. He begins with a few kernels of shelled corn, and after the little calves have come to like it, he gives them small pieces of ears. By and by he gives them the whole ears in larger quantities, and has no trouble in the way of bad digestion.

Cottonseed meal should never be given to a calf, but aside from that I would feed calves almost any grain that they like. A little ground flaxseed with the other feed is good. Blood meal in very small quantities is sometimes of use, and as we have said, prepared feeds are found to give good results now and then, but if our calves are kept in clean quarters, fed from clean pails, not allowed to suck each other after eating, fed their grain dry, and given their milk straight, and not in too great quantities, we shall have little need for any of these expensive and widely advertised feeds.

Learn by Observation.

The successful feeder must be ever on the watch. He must study his business. He must use his head all the time in his work. He must watch the animals he is feeding, and learn to know what he sees while watching.

One thing more, and I will close this article. We often stop feeding our calves too soon. It is quite common practice to turn the fall calves out to pasture too soon in the spring. The change from a ration of hay,

ensilage, dry grain and milk, to one of succulent grass alone, is too abrupt. The change from a warm barn to an open pasture, and often to chilling winds and protracted rains is sure to put the calves out of condition and retards their growth. The grain should be continued after they are turned out, and if they can be brought back to the barn nights for a time until they are accustomed to their new surroundings it will be much better for them.

This sort of treatment will insure normal development, and that will mean larger and better animals later on. If we want to get the most out of our progressive methods in breeding, we must take care of the calves after we get them. We can never look for the best results from the progeny of the most prepotent sire, unless we give his daughters a chance to develop in the best sense of the word.

I have written this because I feel and am sure that many readers of the Michigan Farmer, who have been led to adopt modern ideas and methods of breeding, are still losing out, because they are not giving the young animals proper care, and I am taking my full share of the advice contained in this article.

Oceana Co.

W. F. TAYLOR.

AMOUNT OF COTTONSEED MEAL TO FEED.

In the November 14 issue of the Michigan Farmer, that Mr. Lillie says he feeds a cow no more than two pounds a day of the three highly concentrated feeds and that ground oats makes up the balance of the ration. I thought in former years he recommended four pounds of cottonseed meal. It seems to me now that I am overdoing it, with the highly concentrated feeds. I'll tell you what I am feeding my new milch cows and wish you would compound an economical ration to suit my case. For roughage I feed about 40 lbs. of good silage, with some corn in it, a day, in two feeds, morning and night. At noon a bundle of fodder, corn with corn nubbins on it. Grain ration, 4 lbs. of oil meal, 4 lbs. of cottonseed meal, 4 lbs. of bran a day on silage. Cows average 3.54 test milk.

Ottawa Co.

D. H. B.

I don't remember ever recommending as much as four pounds of cottonseed meal per day for cows. If I ever have, it was a mistake and not according to my best judgment. I never intended to recommend over two pounds per day, and always recommend feeding this product by itself so one will know just what amount he is feeding. It is some trouble to mix cottonseed meal with bran or corn meal and get an even distribution through the whole mixture, hence one is liable to feed more cottonseed meal at one time than at another.

My opinion is that D. H. B. is feeding more protein than is necessary, but his roughage is lacking in protein. We have alfalfa hay to feed twice a day, and silage twice a day, which enables us to feed a little different grain ration than D. H. B. with nothing only the corn plant for roughage. If he had alfalfa or clover hay to feed, I am sure he could cut out the oil meal or the cottonseed meal, (one of them), entirely and reduce the others one-half, that is, to only two pounds, and get as good results as he is getting now. At least we do it, and I believe his cows would be better off next spring for the ration of less high protein concentrates. Even with his roughage I think he should cut off at least one-half of his oil meal and cottonseed meal, making only two pounds each per day, and perhaps increase the bran a pound or two, and he would get equal or better results, four pounds of cottonseed meal. Four pounds of oil meal and four pounds of bran makes a lot of protein over three pounds of protein in the grain ration alone. This is more than feeding standards call for. Experiments show that 2.5 lbs. of protein per 1,000 lbs. live weight is amply sufficient. I am sure this is an extravagant ration.

Practical Science.

DYE STUFFS.

BY FLOYD W. ROBISON.

(Continued from last week).

Dyes are naturally substances of a variety of colors but something more than a coloring substance is necessary for it to be a dye. In addition to being colored and of high staining properties, it must have a further property of affixing itself to the wool or cotton, or silk, fabric in such a manner that it becomes insoluble and hence will not readily wash out. Some dyes naturally have this property of affixing themselves to fabrics, particularly woolen fabrics, and this method is taken advantage of in the laboratory to distinguish dye stuffs of a certain character. Certain coal tar dyes, while completely soluble without residue in water, when placed in contact with wool affix themselves to the wool and become insoluble so that subsequent washing or treatment with water will not again dissolve the color. Some dyes will do this only when treated with what is known as a mordant. Picric acid, for example, a yellow coal tar dye, is soluble in water, and if a piece of wool or silk be soaked in a water solution of picric acid, the wool fibre and the silk will take up the yellow dye and will not give it up again when treated with water. In other words, picric acid on wool and silk is known as a "fast" dye. Now, however, if a piece of cotton fabric be immersed in the watery solution of picric acid the fabric does not become permanently colored. The picric acid will dissolve again when the cotton fabric is treated with water.

It is evident, therefore, that wool and silk have some relationship to picric acid which cotton does not have. Evidently the yellow picric acid dye becomes insoluble when brought into contact with wool and will not redissolve. The problem, therefore, in dyeing cotton with picric acid is to produce an analogous condition as in the dyeing of wool, that is, in some way make the picric acid dye insoluble when brought into contact with the cotton. This is accomplished through the use of a mordant.

One of the best examples of this use is with the dye known as alizarin. If a piece of cotton fabric be dropped into a watery solution of alizarin (another coal tar color) the cotton fabric will become colored yellow, but this yellow color will wash out again when treated with water. Suppose, now, this cotton fabric has been previously treated with a mordant material such as aluminum, which has been taken up by the fibre, is insoluble and cannot be washed out. Now, then, if this cotton fibre containing aluminum is dipped into a watery solution of alizarin, which is yellow, the alizarin combines with the aluminum and forms an insoluble compound which in this instance will be red, and thus affixes itself permanently to the cotton fabric. Various other salts, such as iron, chromium, tin salts are employed as mordants.

Coal Tar Dyes are Used in Food Products Also.

In determining the kind of coloring matter used in a silk cloth of exceptional quality some time ago, we found that it contained nearly eight per cent of its weight of tin used as a mordant to fix the color in the fabric. This is merely one of the ways in which fabrics are colored with coal tar dyes. These coal tar dyes are used in the artificial coloring of many food materials. Oleomargarine is an illustration of a class of food products extensively colored with aniline, or coal tar coloring matter. It is an enormous industry and from a scientific

viewpoint is a distinct triumph. All honor, therefore, to German industry and skill in placing this industry on the important footing which it now has. As in the case of the embargo on potash salts, however, much difficulty has been experienced in securing adequate quantities of these products at the present time, due to the European war, and unquestionably this will have the effect of stimulating the production of these different materials in this and other countries, so that German supremacy in these lines may be in a measure threatened and at least questioned when the war period is over.

England Proposes to Compete with Germany in Dye Manufacture.

In the last issue of the Oil, Paint & Drug Reporter, November 30, 1914, an important announcement is made in this respect, looking forward to the stimulation of the development of the dye stuff industry in England. This is nothing less than the direct fostering of the development of dyes from coal tar by the British government. It is expected and hoped, particularly in British circles, that the participation of the government in this matter means ultimately the complete independence of England from Germany in the production of all classes of synthetic dye stuffs and in perfumes and medicinal products which are at the same time synthetically produced from coal tar. This includes not only dye stuffs but carbolic acid and its products, synthetic oil of wintergreen, many drug products, etc.

If American manufacturers will read the lesson of the present conflict aright, industries of this nature will become more plentiful in this country and in case of emergencies of a similar nature, which we hope may never again arise, but which undoubtedly will for some time be among the frightful possibilities, the dreadful commercial interruptions to business will not be so generally apparent.

FOOD VALUE OF WHEY.

I notice the cheese factory advertisement says, "whey free." The cheese factory runs the patrons' whey through a separator and takes the fat out and the patron gets the residue. What feeding value has the whey by the time the patron gets it? Is there enough food in the whey to make that an inducement to sell milk to the cheese factory? A. H.

Whey certainly has a food value well worth saving. Its chemical food analysis compared with skim milk, is as follows:

Skim-milk, 2.9 per cent protein; 5.2 per cent carbohydrates; 0.3 per cent fat. Whey, 0.8 per cent protein; 4.7 per cent carbohydrates; 0.3 per cent fat.

It will be seen that whey is not as valuable as skim-milk, but that it has a very appreciable value, nevertheless. However, whey has a wider nutritive ratio than skim-milk, that of whey being 1:67, while that of skim-milk is 1:2. This fact must be taken into consideration in feeding whey if one gets its full food value. Oil meal, gluten feed, etc., foods rich in protein should be fed with whey, while corn meal, barley meal, flaxseed meal, etc., should be fed with skim-milk. In this way one can balance the ration and get the full food value of such products, while if they are fed alone, satisfactory results cannot be obtained.

You can raise good calves or pigs on whey if you will feed oil meal and gluten meal with it, but if fed alone it does not contain the food nutrients in proper proportion, hence does not give satisfactory results. It is safe to say that whey is worth half as much as skim-milk for feed.

Healthy Cows Are Profitable

The health and contentment of your dairy cows has a very decided bearing on the quantity and quality of the milk production. Poor milkers are not backward by accident; there is nearly always a reason to be found in the cow's physical condition. Cows are like human beings—they get run down and need medical treatment to restore sluggish organs to proper working condition.

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8 times more ground grip

That's why this tractor has more power at the drawbar.

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Reg. U.S. Pat. Off.

That's why it doesn't slip—doesn't mire—doesn't pack the soil.

Cheap to maintain; horse power guaranteed; 2,000 in use. Get our Catalog E F 152 and learn about this tractor that's "different".

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BOWSER FEED MILLS

Crush ear corn (with or without shucks) and grind all kinds of small grain.

Handy to operate—lightest running. 10 sizes: 2 to 25 h. p., capacity 6 to 200 bushels. Conical shape Grinders. Different from all others. Also make Sweep Grinders.

Write for Catalog and folder about the value of different feeds and manures.
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Wood Mills are Best. Engines are Simple
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JOHN W. MERCKEL & CO.,
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Poultry Secrets—Make Good Income.

Valuable, 100-page poultry data book—just off the press—tells beginner how to avoid costly errors—experience of successful breeders—how they started, grew, etc. Free to you. Simplifies poultry-keeping—gives explicit instructions how to make money with hens, show birds—how to get 100 percent hatches. Invaluable for Beginners, Farmers and Fanciers. Book contains pictures of 30 poultry houses—tells best way to market fowl, describes America's largest line of guaranteed incubators, brooders, hovers, etc.

ROBERT ESSEX INCUBATOR CO.
7-A Henry St., Buffalo, N.Y. 87-G Barclay St., N.Y. City

Mail Crest strain of prize-winners. I. R. Ducks, white eggs, \$1.25 each. R. C. Rhode Island Red cock's \$2.50 up. Coy G. Brum, Nashville, Mich.

Duck Raising on a Large Scale.

FIFTEEN thousand ducks on one farm in Alma, Michigan, was the amazing, quacking spectacle I witnessed when I stopped over at the little central Michigan town to visit the duck farm I had heard spoken of by every farmer in central Michigan whenever poultry came up for discussion. An annual output of 36,000 a year is the record for Swift & Co.'s farm at Alma, and Superintendent George Mason says it is only in its infancy.

Raising ducks is a profession new to the farmers of Michigan and most of the United States. Only on Long Island do they raise them extensively and on the great farms at this place there are sometimes as many as 100,000 ducks at one time.

But it is a new industry in Michigan and one that will bear watching by

ducks are housed to produce the eggs necessary to keep the incubators filled with eggs.

The battery of incubators kept in another house on the farm has a capacity of 11,000 eggs at one time. As soon as the little ducklings are hatched they are placed by themselves in little pens and fed on the choicest of fare until they pass the danger period. The death rate is remarkably low as a result of the care with which they are handled. Clean food, clean houses, and proper regulation of the heat during cold weather is the secret of carrying the downy duckling through the first two weeks of its life. After that they are placed with other birds of their own age in sheltered houses, with plenty of pen space to fatten.

These are called fattening sheds, the largest of which is 560 feet long,

reduced the business end of the farm to a science, because the present farm is only an experiment and all available data is valuable.

Four tons of feed are eaten every day by the ducklings on this farm, and they look it when their time comes at the age of eleven months.

One of the most peculiar things about this farm is the utter absence of water for the ducks to paddle in. They are given enough to drink but never swim but once, and that is the day before they die.

Swim Only Once.

On this happy occasion they are driven into the death chamber, which is equipped with a copious concrete tank full of water. The ducks are allowed to paddle at will on the last day of their life in the cool waters of the artificial pond. This is not an act of kindness on the part of the superintendent, because it is figured that the business of paddling reduces the weight of the duck. It is done simply to let them bathe and clean themselves off to save the executioner the trouble of performing this task on the morrow.

They are killed rapidly and quietly at the rate of 700 a day. The heads are left on, and the ducklings are placed in the refrigerators to await shipment.

"Our experiment with this farm here in Alma has been very successful," said Mr. Mason, "and I believe the day will come when ducks will be so much in demand that we will have farms in many states."

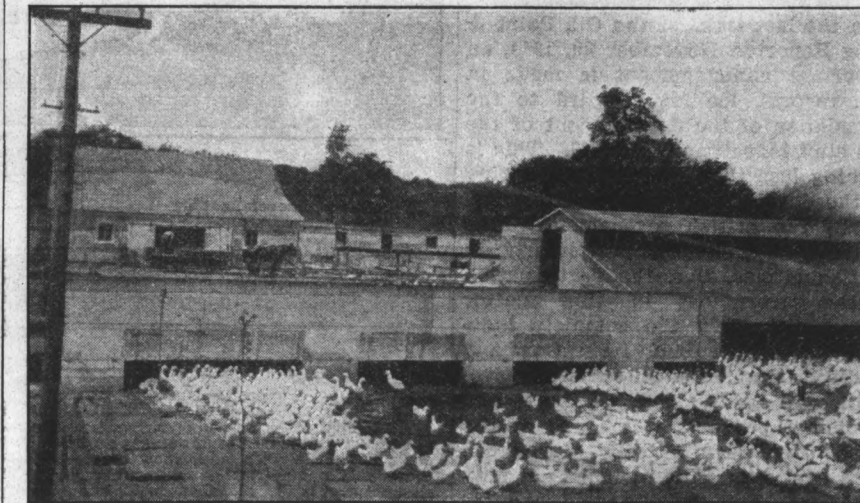
George Mason is a young man about 35 years of age, and a native of Waterford, N. Y. From his early childhood back on the farm, he has been interested in ducks. After he finished high school he worked for a time on the big farms of Long Island, and later took a course in poultry husbandry at Cornell University. He is enthusiastic on the duck subject, and although a busy man, is always ready to discuss the duck problem with those who are interested in raising them.

Kent Co.

J. F. BOLGER.

GETTING TURKEYS READY FOR THE MARKET.

It is quite an art to grow turkeys and round them up for market so that they will bring in a fancy price. I have begun to realize this fact more recently, than ever before, and we



The Swimming Pool and the Feed Room.

farmers interested in poultry raising. "Nobody knows," said Mr. Mason, "the money that can be made in the proper raising of ducks. Hitherto poultry men have confined their efforts to raising chickens. The marketable value of a hen's egg is probably responsible for the popularity of the chicken, but if they only knew it they could make more money raising ducks."

Duck Raising in its Infancy.

"Duck raising is not yet even in its infancy. It were more correct to say that it is in an embryonic stage, but once the people of this country learn of the possibilities of duck raising the chicken will fall into the discard and their attention will be devoted more and more to the raising of ducks."

The duck farm at Alma is only an experiment of the Chicago packing house. The rapidly dwindling supply of game fowls for the high-priced hotels and ocean liners has made the duckling a necessity, and with characteristic foresight the packers are beginning to figure on a way to supply the demand with profit to themselves.

They have hit upon the duckling, and ship thousands of these every year to the New York markets, where they are distributed to other metropolises and sent aboard the ocean liners to be served as game.

The average age of the duckling at the time it is killed is eleven months. In this brief space of time, according to Mr. Mason, it is possible to raise a duckling to the weight of five pounds of "the sweetest meat you ever tasted," to use his own words.

Duck Raising on a Scientific Basis.

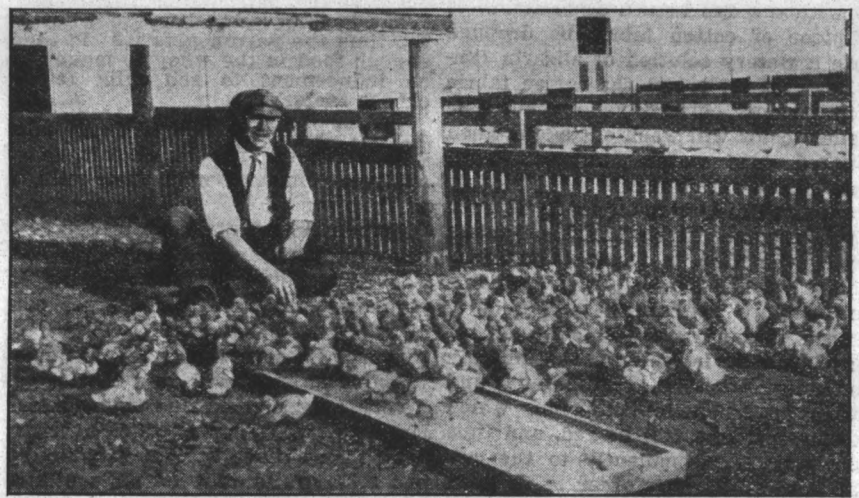
But great care and diligence must be exercised, and the business must be undertaken seriously or the enterprise may be doomed to failure. The big farm at Alma is a model of its kind. All the latest devices and all the latest scientific information regarding the raising of fowls are put into practice at the Alma duck farm. It employs 30 men.

It covers sixteen acres comfortably. At one end, set apart from the fattening sheds, is the breeders' house, where selected drakes and choice

and the choice fare of the duckling's early days is continued but with more abundance. The ducklings are given practically all they want to eat of the following appetizing menu: Corn meal 50 per cent; flour, 25 per cent; beef scrap, 20 per cent, and bran, five per cent. The feed is all mixed with rich buttermilk, a by-product of a creamery that adjoins the farm, and at the end of eleven weeks the ducks weigh on an average of five pounds each and are ready for market. They receive from 16 to 20 cents a pound for them, according to the season.

A Food Mixer.

A food-mixing machine of the latest pattern, operated by electricity, and



A Bunch of Young Ducks.

fed in such a manner that the food of the ducklings is never touched by human hand, acts like a great concrete mixer and thoroughly mixes the different food elements on the daily bill of fare. The buttermilk is piped to the machine from the creamery, and the finished product is poured into wagons much after the fashion of the concrete mixer aforementioned.

Mr. Mason keeps an accurate account of every duckling from the day it is hatched until the day of its execution. He can tell you if you want to know, just what it cost to feed each duck any day in the year. He has

have been raising turkeys for years.

Many turkey growers have not mastered the art. I see thousands of turkeys come to our markets entirely too "green," that is, "soft," and anything but plump and fat, like they should be for market purposes. I have learned in years of experience that to begin finishing turkeys for the market we must begin with parent stock as we cannot grow prime market turkeys from late immature stock. It is our custom to retain only the very earliest birds, yearlings and two-year-old hens for breeding. Birds of this kind produce youngsters that are strong and

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postoffice.

DETROIT, DEC. 19, 1914.

A FEW LEADING ARTICLES OF THE WEEK.

Winter Work on the Farm.—Enumerating a few important considerations in the planning of the farm work542

Testing Seed Corn with the Rag-Baby.—A practical method of testing the seed during severe winter weather542

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Christmas Symbols.—An interesting review of Christmas history, symbols and customs.....559

From the Milk Dealer's Viewpoint.—Enumerating some of the problems which confront the city distributor of this important farm product562

Christmas, 1914.

EMPHASIZED with the spice of a humorous touch, our cover design presents a timely lesson, upon which the American people may well ponder.

The artist mind naturally reverted to that imperial company of the ancient gods upon Mt. Olympus, after whose coquette goddess of beauty, the planet Venus was named, when, a few weeks ago, the intelligent world, in varying degrees, shared the deep interest of the astronomers in the little planet's periodical transit across the face of the sun.

In quite natural artistic sequence also, is the imagination of the lumbering obesity of the jolly old Santa Claus, with his heavily loaded bag of Christmas Cheer, in comic imitation of the dainty Venus as he follows her across the "spot-light" of public interest.

Throughout her history, war and suffering and sorrow have repeatedly been the unhappy portion of king-ruled Europe: but never before for centuries has her cup of woe seemed so full as now when the christian world is upon the threshold of the gentle, kindly spirit of the Christmas season and the sweet message of

"Peace on Earth, Good Will to Men" should come with potency to its great heart.

Though in sadness and with broadest sympathy, we realize the calamity befallen our sister nations, we may well have a deep and quiet joy in the fact that our own "government of the people, by the people, for the people," is "at peace within its borders and with all nations," and far removed from the Armageddon of so many of the subjects of the "rulers by divine right."

To deliberately wish that opportunity come to us even if through the calamity of another people, would be as unrighteous as it would be cold-blooded and cruel; but war increases rather than lessens the world's needs and the increased burden of production that necessarily falls upon us as the greatest agricultural nation at peace, should be welcomed and bravely met, as equally a duty to the world and to ourselves.

Truth cannot come to the human mind more forcibly than through the lesson of contrasted pictures.

When this wretched, senseless European conflict is over and the unhappy peoples involved have but to contemplate its boundless legacy of sorrow, suffering, of destruction, and long-lived bitterness, a potential human loss that centuries cannot restore—and without one compensating gain, except it be in the death of militarism; perhaps nothing would more clearly and vividly display to their comprehension, the intrinsic worth of popular government and the sweetness of the conditions of peace, than to have frequently come under their vision the legend, "Made in America."

CURRENT COMMENT.

The History of the Epidemic. The last chapter in the history of the recent outbreak of foot-

and-mouth disease will, it is hoped, be closed with the payment of claims for animals destroyed and the official release of the quarantine necessary to the stamping out of the disease. Recent reports are to the effect that payment for the cattle by both state and federal authorities will be made at an early date and the quarantine will be lifted as rapidly as reasonable precautions will permit. It is possible, however, that an appendix may be added to the history of this outbreak by a congressional investigation as proposed in resolutions recently introduced in Congress.

It is easy to criticize a public official for sins of omission as well as commission. Oft-times such criticisms appear just in the light of ultimate knowledge regarding the situation, when in reality they may be more severe than is warranted by the circumstances during their period of development. There is, however, undoubtedly occasion for regret and probably criticism in the fact that this outbreak became so general before remedial measures were applied.

While we have refrained from and sought to discourage criticism along this line until after the campaign of eradication had been successfully completed, we have attempted to ascertain and catalogue the facts connected with the outbreak from the time when it was first reported by a local veterinarian at Niles, Mich., during the latter days of August, to the time when definite action in the matter was taken by the federal authorities about the middle of October.

To the layman these facts seem to indicate a lamentable degree of inactivity on the part of the federal bureau, which was notified during the first days of September by the State Veterinarian of the suspected presence of the disease and after collecting and making laboratory examinations of material from diseased cattle, diagnosed the condition as due to my-

cotic stomatitis instead of foot-and-mouth disease. In the meantime the infection spread to other herds whose owners sought state aid in diagnosing the disease, with the result that during the last of September the disease was reproduced by inoculation, and the attention of the federal authorities was again directed to this fact and to the increased prevalence of the disease during the first week in October. The following week an expert from the Department visited the scene of the outbreak and finally diagnosed the difficulty as foot-and-mouth disease, and active measures were at once taken to establish a local quarantine. But during the weeks in which the disease had been prevalent, shipments of stock were made to Chicago and re-shipments were made to Michigan and other sections of the country from the Chicago yards. Many of these shipments, which continued during the balance of October, established new centers, thus making the final eradication of the disease more difficult and costly.

While, as above noted, these facts make it appear to the layman that the serious nature of this outbreak was not recognized by Department officials as promptly as should have been the case, yet the similarity of this disease to other less infectious diseases with similar symptoms and the rare occurrence of the disease in this country are extenuating circumstances which should be given full weight. Undoubtedly should other suspicious cases occur while this outbreak is fresh in the memory of officials and laymen alike, quarantine regulations will precede rather than follow the diagnosis of the difficulty. This appears to have been the gravest error in the handling of this outbreak which, however, was compensated for in some degree by the vigor with which the campaign of eradication was pushed to successful completion after it was once begun.

FACTS WORTH NOTING.

In giving our old subscribers an opportunity to renew for more than one year at a low price we are not changing the regular price of the Michigan Farmer from \$1.25 to \$1.00 for three years, or from \$2.00 to \$1.50 for five years. We are just making a bargain price for the present, and may be compelled to go back to the old prices for subscriptions running for more than one year. Should the war continue and the price of paper and ink advance as expected, we may be compelled to advance the price still further. But it is certain that we can not under any circumstances make the price lower than our present offer of 50 cents for one year, \$1.00 for three years or \$1.50 for five years. Nor could we make the quality better at any price, since we are doing our very best to make the Michigan Farmer of maximum value to every reader. There are countless good reasons why every farmer in Michigan should take the only trade paper published especially for him, and the bargain price now being made should prove an incentive for every present reader whose subscription is about to expire to renew at once. If your subscription expires on January 1, 1915, your date tab will read 1Jan5 or 1Jan15, following your name. Watch the date tab on your paper and renew at once to avoid missing copies.

LEGAL QUESTIONS ANSWERED.

For the accommodation of our subscribers, we have arranged with Mr. Allan Campbell, a competent attorney, to answer legal inquiries for our subscribers. For this service a fee of 25 cents for each question will be charged to insure that only questions of importance will be asked. This will bring a personal letter of advice from the attorney, to whom the questions

are referred. Address Legal Department, Michigan Farmer, Detroit, Mich.

HAPPENINGS OF THE WEEK.

Foreign.

The European War.—The struggle goes on regardless of winter weather. The peculiar position of the forces, especially in the east, no doubt makes necessary the continuation of active operations by both armies. Neither the Russians nor the Germans are situated so they can "mark time" without sacrificing advantages already gained and opportunities for further strengthening of positions. The Germans have pounded the Russian center hard, forcing the latter's front back behind Lodz and near Warsaw in Russian Poland. But while this has been going on the Russians have strengthened both ends and threaten to outflank the Teutons, particularly in the vicinity of Cracow in western Galicia has the flanking movement caused anxiety to the Kaiser's generals. Both sides contend that the position is growing more favorable. The Servians have had a successful week against the Austrians. In the west the Allied forces have taken the offensive at points in northeastern France and also repulsed the Germans at Ypres. The line, however, seems to remain about as a week ago with the movement of troops confined to small detachments. At Aspach, Alsace, the Germans made a desperate effort to dislodge the French but failed, according to announcement from Paris. On the sea the British squadron, assisted by Japanese boats, succeeded in locating and destroying the German fleet that a fortnight ago defeated the British off the coast of Chile, and that has been operating in the southern seas for some time. This victory gives the English navy complete control of the seas save the Baltic and portions of the North Sea.

The Dutch steamer Bogor went ashore at Leixves, Portugal, last week and it is believed that 25 lives were lost.

Provisional President Gutierrez, of Mexico, has taken cognizance of the situation at Naco, Sonora, which is just across the boundary line between Mexico and United States, and ordered the cessation of hostilities at that point. Here fighting between rebels and federals had resulted in stray bullets coming across the boundary and injuring and killing persons on the American side. The matter was referred to Washington and thence to the provisional government at Mexico City.

Emperor William of Germany is convalescing and some dispatches indicate that he expects to go back to the front soon.

National.

Continuous disregard for the shipping rules governing in the waters adjacent to the approaches of the Panama Canal, by ships of warring nations has resulted in a request by Governor Goethels that gunboats be sent to enforce these rules.

For the first time in its history the post office department will show a surplus for the fiscal year of 1914. The parcel post and postal savings bank are credited with much of the surplus profits. In a statement by Postmaster General Burleson the public ownership of wire lines is urged.

Sereno E. Payne, for more than 30 years a member of the national House of Representatives died in Washington last week and funeral services were held in the chamber of the House Sunday.

A movement has been started in Congress looking toward the prohibition of exports of war supplies to belligerent nations.

The opening of the New York stock market last Saturday and the liberal manner in which stocks were purchased indicate a generally improved condition in financial circles of this country.

Up-to-the-Minute Spray Calendar.

"Consider this comparison—600-lb. barrel against 100-lb. drum." This comparison was made to show the difference in the freight charges on ordinary commercial lime and sulphur spraying material and Niagara Soluble Sulphur Compound in the advertisement of the Niagara Sprayer Co., which appeared on page 27 of the Michigan Farmer of December 5. A typographical error made the comparison appear to be between a 60-lb. barrel and a 100-lb. drum, although the pictorial comparison was striking and the weight of barrel was given as 600 lbs. under the cut. Write the Niagara Sprayer Co., 44 Main street, Middleport, N. Y., for a scientific bulletin describing actual field experiments with Niagara Soluble Sulphur compounds, and testimonials giving experiences of practical fruit growers who use this powdered spraying material. In writing also ask for their "Up-to-the-Minute" spray calendar, mentioning the Michigan Farmer.

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

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

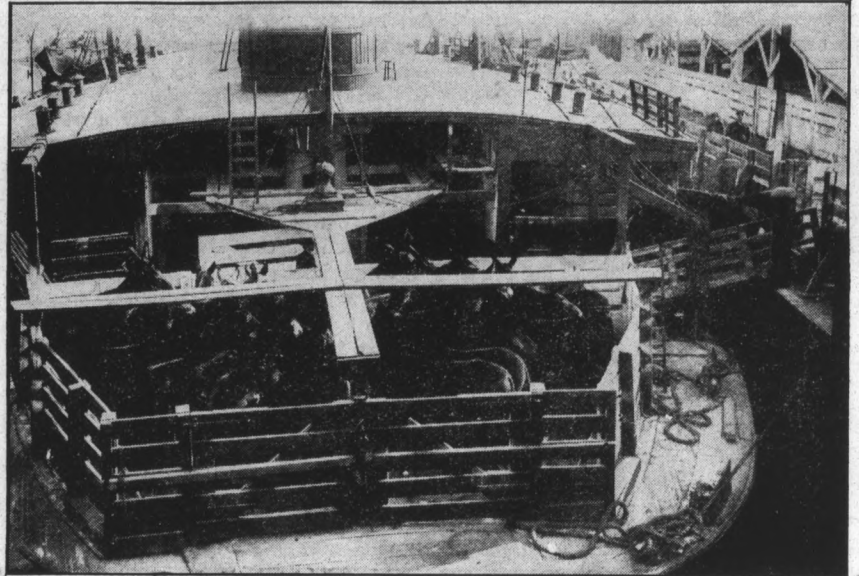
The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

WORLD EVENTS IN PICTURES.



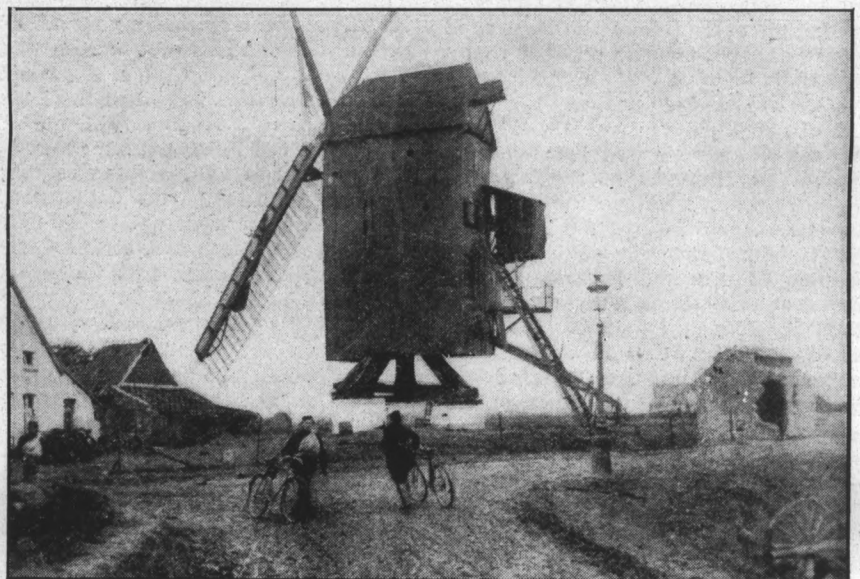
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Belgian and British Cavalrymen Wintering in the Trenches.



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American Horses and Mules Being Loaded for Warring Nations.



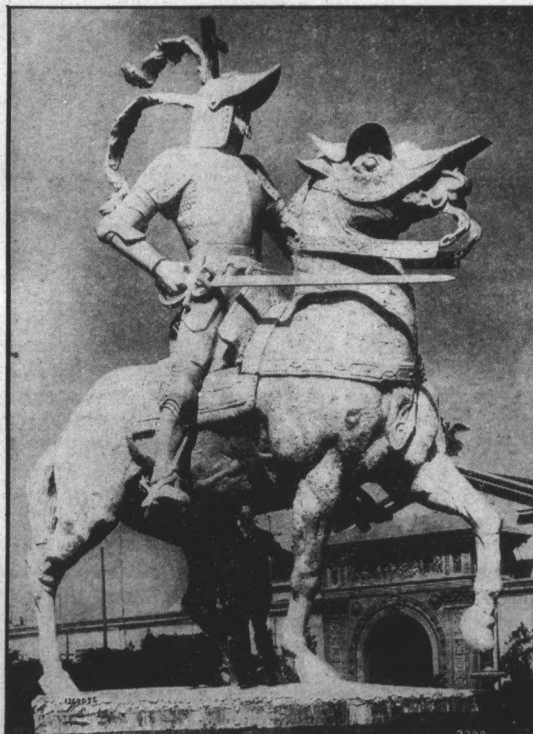
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German Marines Returning to Camp with Cattle from Northern France.



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Windmill Used by German Sharpshooters now in Hands of British.



Prince of Wales on way to the Front.



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Masterpiece of American Sculptor.



German Soldiers Share Meal with Belgian Waifs.

No. 2908's Christmas Eve Run—By Edgar White

EMERGING from a brilliantly-lighted store full of belated Yuletide shoppers, a short, stout man, with a great bundle under his left arm, pulled down his peaked cap with his right hand, rolled up his overcoat collar and trudged through the snow into a darkened by-street on down to the railroad yards flanking the river. While there was hardly sufficient light through those sombre streets to guide a cat, the short man seemed to make his way easily enough.

When the man with the bundle reached the far end of the station and was about to pass out into the yards he was accosted by a muffled up figure carrying a lantern.

"You got to take on four cars of horses tonight, Dan," he said; "rush order for the French by express."

"How's 55?" queried the short man, with anxiety.

"An hour to the bad, you'll have to hustle. The army agent's here with the stock, and he's some nervous."

On the viaduct, outlined against the uncanny glow from the lights on the bluff, was what looked like some great monster of the fabled mountains. It was No. 2908, growing sullenly with the might of her immense boiler, 396,400 pounds of iron and steel and fuel.

Dan Cadogan, the engineer, holding tight to his big bundle walked nimbly along the ties of the viaduct, and climbed on his engine. He gently laid his bundle in his seat box, and placed his overcoat in a rack overhead. Jerry McGee, the fireman, nodded a greeting and the two men busied themselves about the engine; oiling, screwing up bolts, examining valves, and doing the many things the men of a fast engine trust to no one but themselves.

A switch-engine pushed the four cars of cavalry horses up the viaduct. The couplings were made, and the air tried. Only in case of the greatest urgency is stock shipped on a trunk line passenger train. But the men who bought them were willing to pay, because in the sombre drama being played across the seas those four carloads of horses might mean the turning of the tide in a great battle.

The snow fell steadily, looking like jewels in the rays of the electric headlight.

Presently the enginemen who were scanning the river front observed a meteor-like glow coming out of the bluffs far up the river, and Jerry remarked:

"She's coming."

Then he seized the chain, swung open the furnace door and ladled in great scoopsful of coal.

No. 55, ten coaches long, roared into the station, the panting engine was uncoupled, and the relief machine was slowly backed down to its place. The load was heavier by four long stock cars filled with horses destined for the war.

The conductor and another man walked briskly forward. The engineman was standing on the platform of the gangway.

"Dan," said the conductor; "this is Colonel Lamartine—he has charge of these horses." The man he presented was slender and dark-eyed. He wore a mustache and just the suggestion of a goatee.

"It's one matter of life and death, Monsiuer," declared the officer, with some excitement, "to make ze connections. Ze army is needing them—these horses."

"We'll go some," replied the engineer calmly.

"Thank you, sir," returned the officer; "I feel you will do ze best you can."

The conductor handed the clearance order, and the short man ascended the iron steps to his position.

A tiny whistle cried shrilly through the cab. Dan opened the cylinder

cocks and grasped the long, slender lever. No. 2908, without a quiver, without the slipping of a wheel, started so smoothly that it was like gliding over a polished floor.

The cavalry horses were on their way to the war.

A great cloud of steam blotted out the world ahead as No. 2908 swung on the bridge crossing the river. The girders of the great structure rattled as the long train glided on in an easy, swinging motion. The ark lights from the city they were leaving behind shown like stars from the high bluffs.

The bridge cleared, the engineman let her out "a few notches," and Jerry, the big brown-armed fireman, tossed more dark food into the glare of the white-hot cavern below. The steam gauge stood at 200, now and then flickering up a few points, the movement being announced by an ear-splitting volley from the safety valve.

Along the rock ballast from the river's border, the lighted cars behind writhed and twisted about the curves like some panoramic display to interest a multitude.

The road then straightened and led across the North River bottoms on a high fill. On either side was a wilderness, flat, snow-covered, like the steppes of Siberia.

"Red block ahead!"

Off went the steam, and the engineman's gloved hand fingered the tiny brass lever controlling the air. The stoppage of the train sent the safety valve shrieking again and a white cloud burst over the great cylinder battery, shutting out the world in a volume of mist.

A Milwaukee train, a long streak of light in the dark, swept across the track directly ahead. When it passed the engineman of 55 touched the long slender lever. But the light ahead still showed red in the falling snow.

"See if there's another man coming along, Jerry," directed the engineman.

The fireman climbed out to the left-hand gangway steps and strained his eyes into the darkness until he saw a "firefly" off in the gloom.

"Yes, sir," replied the stoker; "he'll be here in a minute."

In the engine cab the whole system of operation is sunk into the personality of the man at the throttle. You seldom hear the word "train" used.

While they waited for the "man" in the distance to come in, Dan's keen eyes detected a dark form climb up the fill and on the "blind baggage."

"Jerry," he said, "there is a tramp on the blind; make him come in here and he can spell you a bit; you know we got two bad hills to climb tonight."

The tramp, glad to find a warm place, promptly accepted the proffered hospitality and at Jerry's direction began pulling down the coal. Then he was allowed to sit on the fireman's box until needed.

"White light!"

The "firefly" had run in and clanged harshly across the pathway in front of No. 55.

"Seven minutes more!" muttered the engineman, with serious concern. It was piling greater odds against the run.

Out of the North River bottoms and through rock cuts and curves the flyer struggled up grade. No. 2908 was carrying through its tubes to the great Howitzer-like cylinders ahead every ounce of steam the gauge registered. But the curves and the grade and the fourteen heavy cars behind were tremendous drags against the high endeavor of the big machine.

Spouting viciously from the short stack ahead were two long oblique columns of fire, piercing the snow in different directions. Jerry, just finishing with another meal for the engine, staggered over to the tramp and bawled: "We getting ready to go now, hold on to something."

The crest of the long grade is reached, and with a sort of satisfied snort No. 2908 settled down to its work. Men of wealth have spent streams of gold in searching for thrills of a less strenuous character than came to the layman in the cab that night.

He began to realize that something was happening when the side of the cab smashed against his head like a blow from a prize fighter. Out ahead he could see just an acre of white light and a fiery eruption from the sawed-off stack.

Underneath the trailer glowed with red embers dropping from the furnace to the road-bed.

Across the deck, curled up like a Turk, sat Dan. In front of his eyes were a pair of fierce-looking goggles. Never once did his eyes leave the rails ahead, nor his hand the lever.

The engine was now measuring up to the full warranty of the makers. Every valve and cock was sputtering with pent-up pressure.

The din of escaping steam and the hammering of the rails were so terrific that the slowly delivered strokes of the automatic bell, which the rules of the road required while the engine was in motion, sounded like far-away funeral chimes.

On through the dark night, throwing miles upon miles behind, No. 2908 sped like a thing of life. It had the right of way over everything on the road. As it clanged through the various towns other trains were on the side track awaiting its passage.

At lonely way-side stations operators could be seen with their faces against the window panes watching the flyer go by. They knew its engineman was making the run of his life to recover sixty minutes that had been lost by the "man" on the other division, and it was interesting, even to a railroad operator, who saw hundreds of trains crash by every day, to see how the man in the cab of No. 55 was doing the job of work he had on hand that snowy night.

Despite the snow and the tremendous handicap of its unusual load, No. 2908 might have retrieved that hour lost by the engineer on the first run, but for the stop signal at Twin Rock, a town near a small but deep and dangerous stream.

"Bridge over Devil's Creek is shaky," said the operator; "section gang's out there now watching. The stream's up and coming down like a torrent."

Standing on the platform the conductor, the engineman and Colonel Lamartine, discussed the situation. The bridge was a long wooden trestle, one of the last on the division since the big engines had been put into service. Not having yet heard from division headquarters, the operator had, on the principle of safety first, stopped the train so as to let the crew know what was ahead.

"What do you say, Dan?" asked the conductor.

"We'll go ahead," replied the engineman.

"Oui!" agreed Colonel Lamartine. "Zat's ze talk."

The long trestle swayed so perceptibly when the heavy train crept slowly on to it that the section men, fearing a crash, moved away. The dark waters swirled threateningly against the none too solid piers, and once or twice there was a loud snapping as though the fragile structure was going to give way.

It seemed a long, long while before the train cleared the bridge, and as the tail lights of the last sleeper passed over the section men gave a shout of relief.

Five minutes later 55 was again roaring along over high fills, twisting around curves and darting through deep cuts.

"He's bound to get those horses

through in time for you," smiled the conductor as he stood in the aisle of the swaying car, near where Colonel Lamartine sat. "That was a desperate chance he took back there."

"He is one brave man," declared the French officer, his eyes shining. "A soldier of France—he ought to be."

On sped No. 2908, its keen eye piercing through the snow; its six great drive wheels roaring like the onward sweep of mighty cavalry; every nerve strained to the breaking point.

There was just the slightest hint of dawn in the eastern sky as the glow far down the line betokened the division, where the gallant old engine would rest from its labors.

The station signal was short like a snap, and the long train glided in under the sheds. Dan grabbed his bundle and overcoat, and jumped down to the platform, where Colonel Lamartine, the grateful one, rushed up to grasp his hand.

"My good engineer friend!" he exclaimed. "You shall not be forgotten for this night's good work. The cross of ze Legion—France will—"

"That's all right, Colonel," said the engineer; "glad to serve you. Excuse me now—I'm in a bit of a hurry."

Dan pushed through the crowds until he got to the far end of the depot where the hacks were. He went up to one, where an old negro was huskily shouting:

"Step dis way, people, for de Brooklyn' house! Git right in. Everybody—"

"Here, Mose," said the engineer handing the negro a dollar; "I want you to drive those skeletons of yours faster than they ever went before. Get a move on!"

"Whar to, Mars Dan?" asked the surprised negro.

"Home! Quit talking and get busy!"

Mose understood. He climbed on the seat above as quick as his rheumatically limbs would allow him, and soon that ancient oil-lighted vehicle known as the hotel bus was bumping over the streets as though the Old Nick himself were chasing it. Mose gathered the idea that somebody at Dan's house was sick, and he plied the whip in a way that scared the life out of his sorry-looking plugs. But they got to their destination, and Dan jumped out and ran to the side door, where he tapped gently.

A healthy young woman came, her eyes lighting up like stars, greeted her husband. It was now fairly light, and the church bells over in town were chiming for Christmas.

"Has she woke up yet?" asked Dan anxiously.

"Still sound asleep," smiled Mrs. Dan, as she took the big bundle.

"Thank goodness! The fellow on the other end was late and I was afraid—"

The young wife unrolled the bundle and almost cried out with delight as she beheld the magnificent doll. Then they put it in a little carriage near a Christmas tree Mrs. Dan had decked during the evening and tiptoed into a side-room where a tiny brown-haired girl smiled in her sleep.

"And that Frenchman thought I was doing it for his old horses," murmured the engineer.

"LAND O' NOD STORIES."

What are they? Short stories of action and life that will go directly to the heart of every boy and girl who reads them. They are written by Howard T. Knapp, "the Children's Friend." The first will appear next week, and every succeeding issue will be featured by one. Inquisitive Billy and wise little Tinker appear and reappear. They are certainly genuine friends and young readers as well as old ones, will soon become thoroughly acquainted with them through our Magazine Department.

SANTA CLAUS AND LITTLE BILLEE.

By JOHN KENDRICK BANGS.

HE was only a little bit of a chap, and so, when for the first time in his life he came into close contact with the endless current of human things, it was as hard for him to "stay put" as for some wayward little atom of flotsam and jetsam to keep from tossing about in the surging tides of the sea.

His mother had left him there in the big toy-shop, with instructions not to move until she came back, while she went off to do some mysterious errand. She thought, no doubt, that with so many beautiful things on every side to delight his eye and hold his attention, strict obedience to her commands would not be hard. But, alas! the good lady reckoned not upon the magnetic power of attraction of all those lovely objects in detail. She saw them only as a mass of wonders which, in all probability, would so dazzle his vision as to leave him incapable of movement; but Little Billee was not so indifferent as all that.

When a phonograph at the other end of the shop began to rattle off melodious tunes and funny jokes, in spite of the instructions he had received, off he pattered as fast as his little legs would carry him to investigate. After that, forgetful of everything else, finding himself caught in the constantly moving stream of Christmas shoppers, he was borne along in the resistless current until he found himself at last out upon the street—alone, free, and independent.

It was great fun at first. By and by, however, the afternoon waned; the sun, as if anxious to hurry along the dawn of Christmas Day, sank early to bed; and the electric lights along the darkening highway began to pop out here and there, like so many merry stars come down to earth to celebrate the gladder time of all the year. Little Billee began to grow tired; and then he thought of his mama, and tried to find the shop where he had promised to remain quiet until her return. Up and down the street he wandered until his little legs grew weary; but there was no sign of the shop, nor of the beloved face he was seeking.

Once again, and yet once again after that, did the little fellow traverse that crowded highway, his tears getting harder and harder to keep back, and then—joy of joys—whom should he see walking slowly along the sidewalk but Santa Claus himself! The saint was strangely decorated with two queer-looking boards, with big red letters on them, hung over his back and chest; but there was still that same kindly, gray-bearded face, the red cloak with the fur trimmings, and the same dear old cap that the children's friend had always worn in the pictures of his that Little Billee had seen.

With a glad cry of happiness, Little Billee ran to meet the old fellow, and put his hand gently into that of the saint. He thought it very strange that Santa Claus's hand should be so red and cold and rough, and so chapped; but he was not in any mood to be critical. He had been face to face with a very disagreeable situation. Then, when things had seemed blackest to him, everything had come right again; and he was too glad to take more than passing notice of anything strange and odd.

Santa Claus, of course, would recognize him at once, and would know just how to take him back to his mama at home—wherever that might be. Little Billee had never thought to inquire just where home was. All he knew was that it was a big gray stone house on a long street somewhere, with a tall iron railing in front of it, not far from the park.

"Howdidoo, Mr. Santa Claus?" said Little Billee, as the other's hand unconsciously tightened over his own.

"Why, howdidoo, kiddie?" replied the old fellow, glancing down at his new-found friend, with surprise gleaming from his deep-set eyes. "Where did you drop from?"

"Oh, I'm out!" said Little Billee bravely. "My mama left me a little while ago while she went off about something, and I guess I got losted."

"Very likely," returned the old saint with a smile. "Little two-by-four fellers are apt to get losted when they start in on their own hook, specially days like these, with such crowds hustlin' around."

"But it's all right now," suggested Little Billee hopefully. "I'm found again, ain't I?"

"Oh, yes, indeedy, you're found all right, kiddie!" Santa Claus agreed.

"And pretty soon you'll take me home again, won't you?" said the child.

"Surest thing you know!" answered Santa Claus, looking down upon the

many, kiddie. Fact is, you're all right—way up among the good boys; though once or twice last summer, you know—"

"Yes, I know," said Little Billee meekly, "but I didn't mean to be naughty."

"That's just what I said to the bookkeeper," said Santa Claus, "and so we gave you a gray mark—half white and half black—that doesn't count either way, for or against you."

"Thank you, sir," said Little Billee, much comforted.

"Don't mention it; you are very welcome, kiddie," said Santa Claus giving the youngster's hand a gentle squeeze.

"Why do you call me kiddie when you know my name is Little Billee?" asked the boy.

"Oh, that's what I call all good boys," explained Santa Claus. "You see, we divide them up into two kinds—the good boys and the naughty boys

them," said Little Billee, much impressed by the simplicity of this arrangement. "We have a glass board on the front of our ortymobile to keep the wind off Henry—he's our shuffler but papa wears a fur coat, and sometimes he says the wind goes right through that. He'll be glad to know about these boards."

"I shouldn't wonder," smiled Santa Claus. "They aren't very becoming, but they are mighty useful. You might save up your pennies and give your papa a pair like 'em for his next Christmas."

Santa Claus laughed as he spoke, but there was a catch in his voice which Little Billee was too young to notice.

"You've got letters printed there," said the boy peering around in front of his companion. "What do they spell? You know I haven't learned to read yet."

"And why should you know how to read at your age?" said Santa Claus. "You're not more than—"

"Five last month," said Little Billee proudly. It was such a great age!

"My, as old as that?" cried Santa Claus. "Well, you are growing fast! Why, it don't seem more than yesterday that you was a pink-cheeked baby, and here you are big enough to be out alone! That's more than my little boy is able to do."

Santa Claus shivered slightly, and Little Billee was surprised to see a tear glistening in his eye.

"Why, have you got a little boy?" he asked.

"Yes, Little Billee," said the saint. "A poor white-faced little chap, about a year older than you, who—well, never mind, kiddie—he's a kiddie, too—let's talk about something else, or I'll have icicles in my eyes."

"You didn't tell me what those letters on the boards spell," said Little Billee.

"Merry Christmas to Everybody!" said Santa Claus. "I have the words printed there so that everybody can see them; and if I miss wishing anybody a merry Christmas he'll know I meant it just the same."

"You're awful kind, aren't you?" said Little Billee, squeezing his friend's hand affectionately. "It must make you very happy to be able to be so kind to everybody."

Santa Claus made no reply to this remark, beyond giving a very deep sigh, which Little Billee chose to believe was evidence of a great inward content. They walked on now in silence, for Little Billee was beginning to feel almost too tired to talk, and Santa Claus seemed to be thinking of something else. Finally, however, the little fellow spoke.

"I guess I'd like to go home now, Mr. Santa Claus," he said. "I'm tired, and I'm afraid my mama will be wondering where I've gone to."

"That's so, my little man," said Santa Claus, stopping short in his walk up and down the block. "Your mother will be worried, for a fact; and your father, too—I know how I'd feel if my little boy got losted and hadn't come home at dinner-time. I don't believe you know where you live, though—now, honest! Come! Fess up, Billee, you don't know where you live, do you?"

"Why, yes I do," said Little Billee. "It's in the big gray stone house with the iron fence in front of it, near the park."

"Oh, that's easy enough!" laughed Santa Claus nervously. "Anybody could say he lived in a gray stone house with a fence around it, near the park; but you don't know what street it's on, nor the number, either. I'll bet fourteen wooden giraffes against a monker on a stick!"

"No, I don't," said Little Billee (Continued on page 558).



"Howdidoo, Mr. Santa Claus."

bright but tired little face with a comforting smile. "What might your address be?"

"My what?" asked Little Billee.

"Your address," repeated Santa Claus. "Where do you live?"

The answer was a ringing peal of childish laughter.

"As if you didn't know that!" cried Little Billee, giggling.

"Ha, ha!" laughed Santa Claus. "Can't fool you, can I? It would be funny if, after keeping an eye on you all these years since you was a babby, I didn't know where you lived, eh?"

"Awful funny," agreed Little Billee. "But tell me, Mr. Santa Claus, what sort of a boy do you think I have been?" he added with a shade of anxiety in his voice.

"Pretty good—pretty good," Santa Claus answered, turning in his steps and walking back again along the path he had just traveled—which Little Billee thought was rather a strange thing to do. "You've got more white marks than black ones—a good many more—a hundred and fifty times as

—and the good boys we call kiddies, and the naughty boys we call caddies, and there you are."

Just then Little Billee noticed for the first time the square boards that Santa Claus was wearing.

"What are you wearing those boards for, Mr. Santa Claus?" he asked.

If the lad had looked closely enough he would have seen a very unhappy look come into the old man's face, but there was nothing of it in his answer.

"Oh, those are my new-fangled back-and-chest protectors, my lad," he replied. "Sometimes we have bitter winds blowing at Christmas, and I have to be ready for them. It wouldn't do for Santa Claus to come down with the sneezes at Christmas time, you know—no, siree! This board in front keeps the wind off my chest, and the one behind keeps me from getting rheumatism in my back. They are a great protection against the weather."

"I'll have to tell my papa about

Winston of the Prairie

BY HAROLD BINDLOSS.

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Synopsis of Previous Chapters.

Farmer Winston, a bankrupt homesteader, accepts a proposal to simulate Lance Courthorne, an adventurer. Courthorne and his pals struggle with the police, kill Trooper Shannon, who leaves evidence pointing to Winston as the murderer, and smuggle through some illegal distillery products. To Silverdale, a settlement founded by Colonel Barrington, Maud Barrington, his niece and ward, has just returned from Montreal. The Colonel is worried over a fall in wheat prices, and also over the coming of Lance Courthorne, Miss Barrington's cousin, to Silverdale to claim a share of his father's estate. Maud Barrington learns more of her cousin's unsavory past. Winston, in the meantime, pushes on to Montana, is held for Courthorne by an officer, who discloses to him the belief that Winston is the murderer of Shannon. Mail for Courthorne is opened by Winston. Complying with instructions in the letter, he meets and confers with a lawyer respecting Courthorne's inheritance at Silverdale, visits the colony. Some of his actions fail to tally with Courthorne's reputation. He wins the good will of Dane, the Colonel's adviser. The real Courthorne, supposed to have been drowned during the smuggling, now reappears in Montana, meets Ailly Blake, whose life he had blighted and who is now engaged to one Potter, rancher. Winston, returning from Winnipeg, finds Miss Barrington at one MacDonald's, and in an attempt to reach Silverdale they are caught in a blizzard. The night is spent at a lonely building and the following day they reach home through the heroic efforts of Winston. Miss Barrington promises Winston to sow her land to wheat the following spring. He in due season, begins planting operations in spite of the Colonel's adverse criticism. Miss Barrington commends Winston for his successful efforts to break the gambling habits of Ferris, a young Englishman.

CHAPTER XIII.—(Concluded).

Winston laughed, but made no answer, and their companion said nothing at all. Either the night wind had a drowsy effect on him, or he was moodily resentful, for it was not until Winston pulled up before the homestead whose lands he farmed indifferently under Barrington's supervision, that he opened his mouth.

"You have got off very cheaply tonight, and if you're wise you'll let that kind of thing alone in future," said Winston quietly.

The lad stepped down from the wagon and then stood still. "I resent advice from you as much as I do your—uncalled for insolence an hour or two ago," he said. "To lie low until honest men got used to him would be considerably more becoming to a man like you."

"Well," said Winston, stung into forgetfulness, "I'm not going to offend in that fashion again, and you can go to the devil in the way that most pleases you. In fact, I only pulled you out of the pit tonight because a lady, who apparently takes a quite unwarranted interest in you, asked me to."

Ferris stared up at him, and his face showed up almost livid through the luminous night.

"She asked you to!" he said. "By the Lord, I'll make you sorry for this."

Winston said nothing, but shook the reins, and when the wagon lurched forward Dane looked at him.

"I didn't know that before," he said.

"Well," said Winston dryly, "if I hadn't lost my temper with the lad, you wouldn't have known now."

Dane smiled. "You miss the point of it. Our engaging friend made himself the laughing stock of the colony by favoring Maud Barrington with his attentions when he came out. In fact, I fancy the lady in desperation had to turn her uncle loose on him before he could be made to understand that they were not appreciated. I'd keep my eyes on him, Courthorne, for the little beast has shown himself abominably vindictive occasionally, though I have a notion he's scarcely to be held accountable. It's a case of too pure a strain and consanguinity. Two branches of the family—marriage between land and money, you see."

"It will be my heel if he gets in my way," said Winston grimly.

It was late when they reached his homestead, where Dane was to stay the night, and when they went in a youthful figure in uniform rose up in the big log-walled hall. For a moment Winston's heart almost stood still, and then holding himself in hand by a strenuous effort, he moved forward and stood where the light of a lamp did not shine quite fully upon him. He knew that uniform, and he had also seen the lad who wore it, once or

twice before, at an outpost six hundred miles away across the prairie. He knew the risk he took was great, but it was evident to him that if his identity escaped detection at first sight, use would do the rest, and while he had worn a short-pointed beard on the western prairie, he was cleanly shaven now.

The lad stood quite still a moment staring at him, and Winston returning his gaze steadily felt his pulses throb. "Well, trooper, what has brought you here?" he said.

"Homestead visitation, sir," said the lad, who had a pleasant English voice. "Mr. Courthorne, I presume—accept my regrets if I stared at you—but for a moment you reminded me of a man I knew. They've changed us round lately, and I'm from the Alberta squadron just sent into this district. It was late when I rode in, and your people were kind enough to put me up."

Winston laughed. "I have been taken for another man before. Would you like anything to drink, or a smoke before you turn in, trooper?"

"No, sir," said the lad. "If you'll sign my docket to show I've been here, I'll get some sleep. I've sixty miles to ride tomorrow."

Winston did as he was asked, and the trooper withdrew, while when they sat down to a last cigar it seemed to Dane that his companion's face was graver than usual.

"Did you notice the lad's astonishment when you came in?" he asked. "He looked very much as if he had seen a ghost."

Winston laughed. "I believe he fancied he had. There was a man in the district he came from who some folks considered resembled me. In reality, I was by no means like him, and he's dead now."

"Likenesses are curious things, and it's stranger still how folks alter," said Dane. "Now, they've a photograph at Barrington's of you as a boy, and while there is a resemblance in the face, nobody with any discernment would have fancied that lad would grow into a man like you. Still, that's of no great moment, and I want to know just how you spotted the gambler. I had a tolerably expensive tuition in most games of chance in my callow days, and haven't forgotten completely what I was taught then, but though I watched the game, I saw nothing that led me to suspect crooked play."

Winston laughed. "I watched his face, and what I saw there decided me to try a bluff, but it was not until he turned the table over I knew I was right."

"Well," said Dane dryly, "you don't need your nerves toned up. With only a suspicion to go upon, it was a tolerably risky game. Still, of course, you had advantages."

"I have played a more risky one, but I don't know that I have cause to be very grateful for anything I acquired in the past," said Winston with a curious smile.

Dane stood up and flung his cigar away. "It's time I was asleep," he said. "Still, since our talk has turned in this direction, I want to tell you that, as you have doubtless seen, there is something about you that puzzles me occasionally. I don't ask your confidence until you are ready to give it to me—but if ever you want anybody to stand behind you in a difficulty, you'll find me rather more than willing."

He went out, and Winston sat still, very grave in face, for at least another hour.

CHAPTER XIV.

A Fair Advocate.

Thanks to the fashion in which the hotel keeper managed the affair, the gambler left the settlement without personal injury, but very little richer than when he entered it. The rest of those who were present at his meeting with Winston were also not desirous that their friends should know that they had been victimized, and because Dane was discreet, news of what had happened might never have reached Silverdale had not one of the younger men ridden in to the railroad a few days later. Odd scraps of conversation overheard led him to suspect that something unusual had taken place, but as nobody seemed to be willing to supply details, he returned to Silverdale with his curiosity unsatisfied. As it happened, he was shortly afterwards present at a gathering of his neighbors at MacDonald's farm and came across Ferris there.

"I heard fragments of a curious story at the settlement," he said. "There was trouble of some kind in which a professional gambler figured last Saturday night, and though nobody seemed to want to talk about it, I surmised that somebody from Silverdale was concerned in it."

He had perhaps spoken a trifle more loudly than he had intended, and there were a good many of the Silverdale farmers with a few of their wives and daughters whose attention was not wholly confined to the efforts of Mrs. MacDonald at the piano in the long room just then. In any case a voice broke through the silence that followed the final chords.

"Ferris could tell us if he liked. He was there that night."

Ferris, who had cause for doing so, looked uncomfortable, and endeavored to sign to the first speaker that it was not desirable to pursue the topic.

"I have been in tolerably often of late. Had things to attend to," he said.

The other man was, however, possessed by a mischievous spirit or did not understand him. "You may just as well tell us now as later, because you never kept a secret in your life," he said.

In the meantime, several of the others had gathered about them, and Mrs. MacDonald, who had joined the group, smiled as she said, "There is evidently something interesting going on. Mayn't I know, Gordon?"

"Of course," said the man who had visited the settlement. "You shall know as much as I do, though that is little, and if it excites your curiosity, you can ask Ferris for the rest. He is only anxious to enhance the value of his story by being mysterious. Well, there was a more or less dramatic happening of the kind our friends in the old country unwarrantably fancy is typical of the west, in the saloon of the settlement not long ago. Cards, pistols, a professional gambler, and the unmasking of foul play, don't you know. Somebody from Silverdale played the leading role."

"How interesting!" said a young English girl. "Now, I used to fancy something of that kind happened here every day before I came out to the

prairie. Please tell us, Mr. Ferris! One would like to find there is just a trace of reality in our picturesque fancies of debonair desperadoes and big-hatted cavaliers."

There was a curious expression in Ferris's face, but as he glanced around at the rest, who were regarding him expectantly, he did not observe that Maud Barrington and her aunt had just come in and stood close behind him.

"Can't you see there's no getting out of it, Ferris?" said somebody.

"Well," said the lad in desperation, "I can only admit that Gordon is right. There was foul play and a pistol drawn, but I'm sorry that I can't add anything further. In fact, it wouldn't be quite fair of me."

"But the man from Silverdale?" asked Mrs. MacDonald.

"I'm afraid," said Ferris, with the air of one shielding a friend, "I can't tell you anything about him."

"I know Mr. Courthorne drove in that night," said the young English girl, who was not endowed with very much discretion.

"Courthorne," said one of the bystanders, and there was a momentary silence that was very expressive. "Was he concerned in what took place, Ferris?"

"Yes," said the lad with apparent reluctance. "Mrs. MacDonald, you will remember that they dragged it out of me, but I will tell you nothing more whatever."

"It seems to me you have told us quite sufficient and perhaps a trifle too much," said somebody.

There was a curious silence. All of those present were more or less acquainted with Courthorne's past history, and the suggestion of foul play coupled with the mention of a professional gambler had been significant. Ferris, while committing himself in no way, had certainly said sufficient. Then there was a sudden turning of heads as a young woman moved quietly into the midst of the group. She was ominously calm, but she stood very straight, and there was a little hard glitter in her eyes, which reminded one or two of the men who noticed it of those of Colonel Barrington. The fingers of one hand were also closed at her side.

"I overheard you telling a story, Ferris, but you have a bad memory and left rather too much out," she said.

"They compelled me to tell them what I did, Miss Barrington," said the lad, who winced beneath her gaze. "Now there is really nothing to be gained by going any further into the affair. Shall I play something for you Mrs. MacDonald?"

He turned as he spoke and would have edged away, but that one of the men at a glance from the girl laid a hand on his shoulder.

"Don't be in a hurry, Ferris. I fancy Miss Barrington has something more to tell you," he said dryly.

The girl thanked him with a gesture. "I want you to supply the most important part," she said, and the lad, saying nothing, changed color under the glance she cast upon him. "You do not seem willing. Then perhaps I had better do it for you. There were two men from Silverdale directly concerned in the affair, and one of them at no slight risk to himself did a very generous thing. That one was Mr. Courthorne. Did you see him lay a single stake upon a card, or do anything that led you to suppose he was there for the purpose of gambling that evening?"

"No," said the lad, seeing she knew the truth, and his hoarse voice was scarcely audible.

"Then," said Maud Barrington, "I want you to tell us what you did see him do."

Ferris said nothing, and though the girl laughed a little as she glanced at the wondering group, her voice was icily disdainful.

"Well," she said, "I will tell you. You saw him question a professional gambler's play to save a man who had no claim on him, from ruin, and, with only one comrade to back him, drive the swindler, who had a pistol, from the field. He had, you admit, no interest of any kind in the game."

Ferris had grown crimson again, and the veins on his forehead showed swollen high. "No," he said almost abjectly.

Maud Barrington turned from him to her hostess as she answered, "That will suffice, in the meanwhile, until I can decide whether it is desirable to make known the rest of the tale. I brought the new song Evelyn wanted, Mrs. Macdonald, and I will play it for her, if she would care to try it."

She moved away with the elder lady, and left the rest astonished to wonder what had become of Ferris, who was seen no more that evening, while presently Winston came in.

His face was a trifle weary, for he had toiled since the sun rose above the rim of the prairie and when the arduous day was over and those who worked for him were glad to rest their aching limbs, had driven two leagues to Macdonald's. Why he had done so, he was not willing to admit, but he glanced around the long room anxiously as he came in, and his eyes brightened as they rested on Maud Barrington. They were, however, observant eyes, and he noticed that there was a trifle more color than usual in the girl's pale-tinted face, and

signs of suppressed curiosity about some of the rest. When he had greeted his hostess he turned to one of the men.

"It seems to me you are either trying not to see something, Gordon, or to forget it as soon as you can."

Gordon laughed a little. "You are not often mistaken, Courthorne. That is precisely what we are doing. I presume you haven't heard what occurred here an hour ago?"

"No!" said Winston. "I'm not very curious if it does not concern me." Gordon looked at him steadily. "I fancy it does. You see that young fool Ferris was suggesting that you had been mixed up in something not very creditable at the settlement lately. As it happened, Maud Barrington overheard him and made him retreat before the company. She did it effectively, and if it had been anyone else, the scene would have been almost theatrical. Still, you know nothing seems out of place when it comes from the Colonel's niece. Nor if you had heard her would you have wanted a better advocate."

For a moment the bronze deepened in Winston's forehead, and there was a gleam in his eyes, but though it passed as rapidly as it came, Gordon had seen it and smiled when the farmer moved away.

"That's a probability I never counted on," he thought. "Still, I fancy if it came about, it would suit everybody but the Colonel."

(Continued next week.)

Old Games to Enliven Holiday Evenings.

It is sometimes a difficult matter to provide entertainment for the holiday guests. This is often so in the country. As the guests often remain several days, there is the question of providing something for each evening. The days may be filled with sleigh riding, skating, hunting or any other of the pleasures the holiday season affords, but the evenings are long and provision must be made for them.

Acting of a simple character may interest the children, or charades, music and recitations will fill up an evening. After these have all been exhausted, some of the old games, simple but always charming, may be indulged. The charm of these lies in the fact that all may take part.

One of the best of these is the circle of mystery. One of the players whispers to his right hand neighbor a word of a certain part of speech. Thus A whispers to B an article, B to C a noun, C to D an adverb, D to E a preposition, E to F a conjunction, F to G a pronoun, G to H a verb, and H to I an interjection. The words are all collected after each member of the circle has added a word in the order named and of the part of speech required. From these words each one is required to construct a sentence, the object being to make them as absurd as possible.

A joke which may be worked by one who is "wise," to the amusement of the company and the confusion of the victim, is done by placing several objects on the floor, such as a book, a footstool, a folded newspaper and other small articles. Then bring in the victim, show him the objects and tell him he is to be blindfolded and asked to do certain things with them. While he is in another room being prepared, remove the objects, then lead him in and tell him to jump over each of the articles just shown him. His efforts to do so will prove highly entertaining to the guests and he will probably be somewhat disconcerted when he finds the joke is on him.

The bird-catcher is a noisy game but it will entertain a company for a whole evening. Have the players arranged in a circle, with the hands of each placed on their knees, all except one, who acts as the bird-catcher. Each one is given a name, which may

be that of any bird except the owl. The catcher then tells a story about birds and each time one is mentioned which represents the name given a player, that player must imitate the cry of the bird as best he can. When the owl is mentioned all the players must put their hands behind their chairs and keep them there until some other bird is mentioned. When the catcher says "all the birds," each one must give his respective cry. The player failing to respond to his name or to put his hands behind his chair as indicated must take his place as the bird-catcher.

There is nothing better than the old game of "Questions" for a quiet evening. This will appeal to the staid and quiet guests. Two sets of plain cards are numbered, one set being a duplicate of the other. One set is shuffled and dealt out to the company and the other laid face down on the table. Then each player in turn draws a card and shows the number, asking a personal question of the person having that number. Questions and answers are expected to be given quickly. The fun comes in in the saucy questions and answers given, also in the fact that the player asking the question does not know who will answer.

Here is a mystifier which will afford considerable amusement to wind up an evening. Ask one of the ladies of the party to write on a piece of paper the names of the three gentlemen she whom she most admires, and then to burn the paper, handing you the ashes. Rub these on the back of your hand and the name of the lady's future husband will appear written thereon. To accomplish this seemingly impossible thing, select some name previously and write it with milk on the back of your hand, drying it before the fire until the writing entirely disappears. Should the name you select prove to be different from anyone she has written, you can assure her that your prophecy is correct.

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(All).

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Sing it loud and clear,
Sing a song of Christmas,
Best of all the year.

(First child, holding branch of evergreen).

I am the hemlock
Drest in dark green,
I make the best Christmas tree
That ever was seen.

(Second child, holding branch of holly).

I am the holly
In bright green and red
Blooming at Christmas
When flowers are dead.

(Third child, holding a large peanut).
I am a peanut
Drest in light yellow
Some people think me
A hard-shelled old fellow.

(Fourth child, holding large stick of candy).

I am the candy stick
Striped red and white,
Children all like me,
I'm soon "out of sight."

(Fifth child, holding popcorn ball or string).

I am the popcorn
My dress is like snow,
I find good friends
Wherever I go.

(Sixth child, holding a big black stocking).

I'm a big stocking
In neat dress of black
That Santa Claus fills
When he comes with his pack.

(All).

We are the children
Who are waiting tonight
To look at their stockings
As soon as it's light.

A NOVEL CHRISTMAS TREE.

BY W. B. STODDARD.

Occasionally, if only for a change, one would like a substitute for the conventional Christmas tree of spruce or hemlock. Especially is this true when there are no small children—who, more conservative than their elders, will brook no change in what, to their small minds, is connected inseparably with the day. For those, then, who desire a charming novelty, a plum tree in full blossom is suggested. Such a one, exhibited in the windows of a Broadway store recently, evoked exclamations of delight from all.

A stockily built bare branch, set up-right in a tub covered with green crepe paper, was converted into a thing of beauty by being covered with hundreds of small artificial plum blossoms. These can be purchased at a small cost from any dealer in artificial flowers, or manufactured for almost nothing from paper. From the top-most boughs two life-like monkeys—the latest successor to the Teddy bear in childish favor—disported themselves. Owing to the more horizontal branches of the deciduous tree, gifts may be more readily be placed on them, particularly scarfs, veils, and various articles of dress accessories. Little swings can be attached to the lower branches in which are seated dolls, Teddy bears, or monkeys. Owing to the clusters of blossoms with which the tree is covered no other decorations are necessary. Of course, any other flower could be selected—apple, peach or cherry, but owing to the plum blossoms being white it blends and harmonizes more readily with gifts of various hues that would that of any tinted flower.

SANTA CLAUS AND LITTLE BILLEE.

(Continued from page 555).

frankly; "but I know the number of our ortymobile. It's—'N. Y.'"

"Fine!" laughed Santa Claus. "If you really were lost, it would be a great help to know that; but not being lost, as you ain't, why, of course, we can get along without it. It's queer you don't know your last name, though."

"I do, too, know my last name!"

blurted Little Billee. "It's Billee. That's the last one they gave me, anyhow."

Santa Claus reflected for a moment, eyeing the child anxiously.

"I don't believe you even know your papa's name," he said.

"Yes, I do," said Little Billee, indignantly. "His name is Mr. Harrison."

"Well, you are a smart little chap," cried Santa Claus gleefully. "You got it right the very first time, didn't you? I really didn't think you knew. But I don't believe you know where your papa keeps his bake-shop, where he makes all those nice cakes and cookies you eat."

Billee began to laugh.

"You can't fool me, Mr. Santa Claus," he said. "I know my papa don't keep a bake-shop just as well as you do. My papa owns a bank."

"Splendid! Made of tin, I suppose, with a nice little hole at the top to drop pennies into?" said Santa Claus.

"No, it ain't either!" retorted Little Billee. "It's made of stone, and has more than a million windows in it. I went down there with my mama to papa's office the other day, so I guess I ought to know."

"Well, I should say so," said Santa Claus. "Nobody better. By the way, Billee, what does your mama call your papa? 'Billee,' like you?" he added.

"Oh, no, indeed," returned Little Billee. "She calls him 'papa,' except once in a while when he's going away, and then she says, 'Good-by, Tom.'"

"Fine again!" said Santa Claus, blowing upon his fingers, for, now that the sun had completely disappeared over in the west, it was getting very cold. "Thomas Harrison, banker," he muttered to himself. "What, with the telephone-book and the city directory, I guess we can find our way home with Little Billee."

"Do you think we can go now, Mr. Santa Claus?" asked Little Billee, for the cold was beginning to cut through his little coat, and the sandman had started to scatter the sleepy-seeds all around.

"Yes, sirree!" returned Santa Claus promptly. "Right away off now instantly at once! I'm afraid I can't get my reindeer here in time to take us up to the house, but we can go in the cars—hum! I don't know whether we can or not, come to think of it. Ah, do you happen to have ten cents in your pocket?" Santa Claus added with an embarrassed air. "You see, I've left my pocketbook in the sleigh with my toy-pack; and besides, mine is only toy-money, and they won't take that on the cars."

"I got twenty-fi' cents," said Little Billee proudly, as he dug his way down into his pocket and brought the shining silver piece to light. "You can have it if you want it."

"Thank you," said Santa Claus, taking the proffered coin. "We'll start home right away; only come in here first while I telephone to Santa-ville, telling the folks where I am."

He led the little fellow into a public telephone station, where he eagerly scanned the names in the book. At last it was found—"Thomas Harrison, 7654 Plaza." And then, in the seclusion of the telephone-booth, Santa Claus sent the gladdest of all Christmas messages over the wire to two distracted parents:

"I have found your boy wandering in the street. He is safe, and I will bring him home right away."

Fifteen minutes later there might have been seen the strange spectacle of a foot-sore Santa Claus leading a sleepy little boy up Fifth Avenue to a cross-street, which shall be nameless. The boy vainly endeavored to persuade his companion to "come in and meet mama."

"No, Billee," the old man replied sadly, "I must hurry back. You see, kiddie, this is my busy day. Besides, I never go into a house except through

the chimney. I wouldn't know how to behave, going in at a front door."

But it was not to be as Santa Claus willed, for Little Billee's papa, and his mama, and his brothers and sisters, and the butler and the housemaids, and two or three policemen, were waiting at the front door when they arrived.

"Aha!" said one of the police, seizing Santa Claus roughly by the arm. "We've landed you, all right! Where have you been with this boy?"

"You let him alone!" cried Little Billee, with more courage than he had ever expected to show in the presence of a policeman. "He's a friend of mine."

"That's right, officer," said Little Billee's father; "let him alone—I haven't entered any complaint against this man."

"But you want to look out for these fellers, Mr. Harrison," returned the officer. "First thing you know they'll be makin' a trade of this sort of thing."

"I'm no grafter!" retorted Santa Claus indignantly. "I found the little chap wandering along the street, and as soon as I was able to locate where he lived I brought him home. That's all there is to it."

"He knew where I lived all along," laughed Little Billee, "only he pretended he didn't, just to see if I knew."

"You see, sir," said the officer, "it won't do him any harm to let him cool his heels—"

"It is far better that he should warm them, officer," said Mr. Harrison kindly. "And he can do that here. Come in, my man," he added, turning to Santa Claus with a grateful smile. "Just for a minute anyhow. Mrs. Harrison will wish to thank you for bringing our boy back to us. We have had a terrible afternoon."

"That's all right, sir," said Santa Claus modestly. "It wasn't anything, sir. I didn't really find him—it was him as found me, sir. He took me for the real thing, I guess."

Nevertheless, Santa Claus, led by Little Billee's persistent father, went into the house. Now that the boy could see him in the full glare of many electric lights, his furs did not seem the most gorgeous things in the world. When the flapping front of his red jacket flew open the child was surprised to see how ragged was the thin gray coat it covered; and as for the good old saint's comfortable stomach—strange to say, it was not!

"I—I wish you all a merry Christmas," faltered Santa Claus; "but I really must be going, sir—"

"Nonsense!" cried Mr. Harrison. "Not until you have got rid of this chill, and—"

"I can't stay, sir," said Santa. "I'll lose my job if I do."

"Well, what if you do? I'll give you a better one," said the banker.

"I can't—I can't!" faltered the man. "I—I've got a Little Billee of my own at home waitin' for me, sir. If I hadn't," he added fiercely, "do you suppose I'd be doin' this?" He pointed at the painted boards and shuddered. "It's him as has kept me from—the river!" he muttered hoarsely; and then this dispenser of happiness to so many millions of people all the world over sank into a chair, and, covering his face with his hands, wept like a child.

"I guess Santa Claus is tired, papa," said Little Billee, snuggling up closely to the old fellow and taking hold of his hand sympathetically. "He's been walkin' a lot today."

"Yes, my son," said Mr. Harrison gravely. "These are very busy times for Santa Claus, and I guess that, as he still has a hard night ahead of him, James had better ring up Henry and tell him to bring the car around right away, so that we may take him back—to his little boy. We'll have to lend him a fur coat to keep the wind off, too, for it is a bitter night."

"Oh," said Little Billee. "I haven't told you about these boards he wears. He has 'em to keep the wind off, and they're fine, papa!" Little Billee pointed to the two sign-boards which Santa Claus had leaned against the wall. "He says he uses 'em on cold nights," the lad went on. "They have writing on 'em, too. Do you know what it says?"

"Yes," said Mr. Harrison, glancing at the boards. "It says 'If You Want a Good Christmas Dinner for a Quarter, Go to Smithers's Cafe.'"

Little Billee roared with laughter. "Papa's trying to fool me, just as you did when you pretended not to know where I lived, Santa Claus," he said, looking up into the old fellow's face, his own countenance brimming over with mirth. "You mustn't think he can't read, though," the lad added hastily. "He's only joking."

"Oh, no, indeed, I shouldn't have

thought that!" replied Santa Claus, smiling through his tears.

"I've been joking, have I?" said Little Billee's papa. "Well, then Mr. Billiam, suppose you inform me."

"Merry Christmas to Everybody," said Little Billee proudly. "I couldn't read it myself, but he told me what it said. He has it printed there so that if he misses saying it to anybody they'll know he means it just the same."

"By Jove, Mr. Santa Claus," cried Little Billee's papa, grasping the old man warmly by the hand, "I owe you ten million apologies! I haven't believed in you for many a long year; but now, sir, I take it all back. You do exist, and, by the great horn spoon, you are the real thing!"

Little Billee had the satisfaction of acting as host to Santa Claus at a good, luscious dinner, which Santa Claus must have enjoyed very much, because, when explaining why he was so hungry, it came out that the poor old chap had been so busy all day that he had not had time to get any lunch—no, not even one of those good dinners at Smithers's cafe, to which Little Billee's father had jokingly referred. And after dinner Henry came with the automobile, and bidding everybody good-night, Santa Claus and Little Billee's papa went out of the house together.

Christmas morning dawned, and Little Billee awoke from wonderful dreams of rich gifts, and of extraordinary adventures with his new-found friend, to find the reality quite as splendid as the dream things. Later, what was his delight when a small boy, not much older than himself—a pale, thin, but playful little fellow—arrived at the house to spend the day with him, bringing with him a letter from Santa Claus himself! This was what the letter said:

"Dear Little Billee:

"You must not tell anybody except your papa and your mama, but the little boy who brings you this letter is my little boy, and I am going to let you have him for a playfellow for Christmas Day. Treat him kindly for his papa's sake, and if you think his papa is worth loving tell him so. Do not forget me, Little Billee. I shall see you often in the future, but I doubt if you will see me. I am not going to return to Twenty-third street again, but shall continue my work in the Land of Yule, in the Palace of Good-Will, whose beautiful windows look out upon the homes of all good children."

"Good-by, Little Billee, and the happiest of happy Christmases to you and all of yours. Affectionately,

"Santa Claus."

When Little Billee's mama read this to him that Christmas morning a stray little tear ran down her cheek and fell upon Little Billee's hand.

"Why, what are you crying for, mama?" he asked.

"With happiness, my dear little son," his mother answered. "I was afraid yesterday that I might have lost my little boy forever, but now—"

"You have an extra one thrown in for Christmas, haven't you?" said Little Billee, taking his new playmate by the hand. The visitor smiled back at him with a smile so sweet that anybody might have guessed that he was the son of Santa Claus.

As for the latter, Little Billee has not seen him again, but down at his father's bank there is a new messenger, named John, who has a voice so like Santa Claus's voice that whenever Little Billee goes down there in the motor to ride home at night with his papa, he runs into the bank and has a long talk with him, just for the pleasure of pretending that it is Santa Claus he is talking to. Indeed, the voice is so like that once a sudden and strange idea flashed across Little Billee's mind.

"Have you ever been on Twenty-third street, John?" he asked.

"Twenty-third street?" replied the messenger scratching his head as if very much puzzled. "What's that?"

"Why, it's a street," said Little Billee rather vaguely.

"Well, to tell you the truth, Billee," said John, "I've heard tell of Twenty-third street, and they say it is a very beautiful and interesting spot. But, you know, I don't get much chance to travel. I've been too busy all my life to go abroad."

"Abroad!" roared Little Billee, grinning at John's utterly absurd mistake. "Why, Twenty-third street ain't abroad! It's up-town—near—oh, near—Twenty-second street."

"Really?" returned John, evidently tremendously surprised. "Well, well, well! Who'd have thought that? Well, if that's the case, some time when I get a week off I'll have to go and spend my vacation there!"

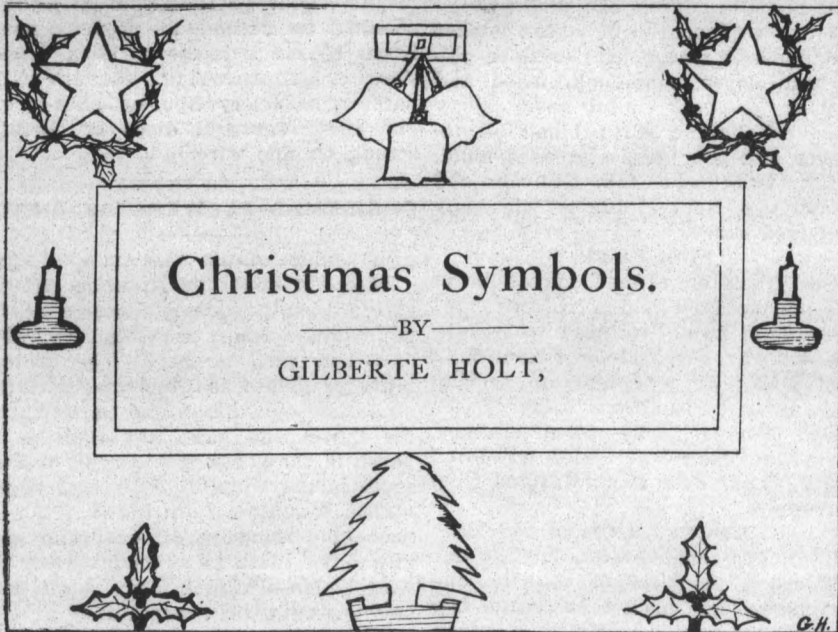
From which Little Billee concluded that his suspicion that John might be Santa Claus in disguise was entirely without foundation in fact.

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Woman and Her Needs

At Home and Elsewhere



CHRISTMAS in its outer manifestation belong essentially to children and the child-hearted. To be joyous, unrestrainedly so, is recognized as the prerogative of childhood, and so every land upon the globe joins hands in making glad the children at Xmas time.

To the little people the preparations and decorations which lend delightful glamour to this season of the year, all focus upon the visit of Santa Claus and the Xmas tree. In the eyes of childhood, be it of years or spirit, the tinsel splendors of the Xmas tree, the Yule-tide greens, the feasting and merry-makings, are all accepted at their face value.

But each and every ornament upon the tree, as well as all the Xmas customs have a far richer, deeper significance than is caught in a cursory survey. Even Santa Claus, the jovial saint of childhood, the giver of material gifts, is but a symbol of the giver of all good. Like other symbols, this one has been dwarfed and distorted by time, until it is hard to trace its meaning, but myths and legends of various nations make it possible to do so.

Yuletide ceremonials are of such ancient date that the nearest approach to stating the time and place of their beginning is to use the fairy-tale formula and say "a long, long, long time ago they began in the land that lies back of beyond."

The 2000 years which have elapsed since the birth of the Christ, have been filled with music, art and literature which have been so dominated by the Christ thought of gentleness and good will that most people are prone to think that Xmas, with all its mystery and symbolism began at His birth; but the Xmas time festival was old, when the Nazarene came to renew it and add fresh meaning to its celebration. The annual Yuletide festival which was held at the winter solstice (the time when the sun turned and began what was termed his return journey), has been celebrated for so many ages that its inauguration is lost in the myths and folk-lore of antiquity.

The word "Yule" is from the old Scandian word meaning "wheel." In this connection it is thought to have reference to the turning or wheeling of the chariot of the Sun God, Baldur, the Beautiful. The Sun

God having passed through the various signs of the Zodiac, about the third week in the month, now called December, turned toward spring, the dawning of new life. Ancient people, like those of modern times, welcomed a new start, a fresh beginning. At the same season, about December 19 to 22, that the northern races were worshipping Baldur, in the southern part of the then known world, there was being held the Roman Saturnalia in honor of the god Saturn, the father of all gods.

The holly was dedicated to Saturn and is an emblem of goodwill. All the Roman shops were made beautiful with it and other seasonable greens, much in the same manner in which they are used today. Other nations also employed evergreens at this season, they being regarded as prophetic of the return of life in vegetation.

Long ago, the same as now, when the heart rejoices, it called to other hearts to share its joy, and overflowed in a spirit of universal fellowship. In olden times the ancients exchanged gifts as tokens of affection at this season, even as we do now.

The early Christians in Rome added the secular to the religious observance of Xmas, to outdo the Greeks and Romans in their pagan celebration. But back even behind these ceremonials was a still earlier religious observance which belonged to this season. In this early worship the tree played an important part. Among every people of antiquity forest worship was universal. As James Lane Allen says, "At the dawn of history began the adoration of the tree. Every race was tethered to some ancestral tree." In some countries of the old world today we still find traces of this early faith, as in some parts of Germany, Switzerland, Russia and Roumania and northern Italy whenever a child is born a tree is planted for it as its guardian in nature. Thus protected the parents who have planted the tree, feel that the spirit of nature within the tree will guide and guard the child if he will appeal to this guidance for help.

The forest dweller was naturally a tree worshiper. Did it not reach nearer to heaven than aught else of which he knew? So he held it sacred and offered it gifts and homage. His god dwelt in the tree and it thus became a shrine.

The oak was the tree most widely revered. To the Druids, the oak or the god within it, was the Supreme Giver; the mistletoe growing from the oak branches and drawing its sustenance from them, typified man and thus symbolized the idea of man's dependence upon God. The tree was not only the shrine wherein God dwelt but also an altar before which man worshipped. Therefore it was but natural that he should bring and hang upon the tree his gifts, his free-will offerings and his sacrifices to his god. At first these gifts were made through the pure love of giving, an out-pouring of gratitude; then they became propitiatory offerings, later still sacrifices for atonement, and finally men hung gifts upon the trees, scarce knowing why they did so.

The oak was the Yuletide tree until the eighth century, when Winfred and Prince Gregor of Germany substituted the fir-tree. Tradition tells that previous to this time the oak had been an evergreen, but now its leaves had withered and fallen. The Druid priests believed that Thor, the god of the oak, was thus showing his displeasure and that nothing less than the sacrifice of a human being would turn aside the god's wrath. They believed that human blood spilled at the roots of the tree would bring new life to it. Thus appeased Thor would renew the oak leaves without their falling. Winfred, filled with a more gentle doctrine (learned from the teachings of the Nazarene), through his eloquence was enabled to prevent the sacrifice and make the substitution of the fir-tree.

As Germany gave us the real Xmas tree, from this land also came the good St. Nicholas, sometimes identified with Kris Kringle, Legend, however, has it that St. Nicholas was a real personage who through a large compassion for neglected children became after his death a regularly canonized saint, while Kriss Kringle is merely a symbol with varying attributes, colored by the locality in which he happens to appear.

Each nation has its individual characteristics and colors its Xmas celebration with a national tint. Each country has a Xmas Saint who visits the children and brings them gifts. Sometimes this saint is a mere myth, like Kris Kringle, again a benevolent person whose life history is so enshrouded in mystery that it is difficult to disentangle fact from fiction.

In many lands, as in America, he comes with the jingle of bell and the pawing of tiny reindeer hoofs, pops down the chimney and fills the waiting stockings.

In Belgium, however, he rides a pony and the children there place their wooden shoes upon the window sill filled with oats and hay for the refreshment of the welcome visitor's steed.

Generally this jolly personage is of masculine gender, but in Russia and in some parts of Italy, notably Rome, the Xmas spirit is feminine.

In Russia it is Babuska seeking the Christ Child with a basket of toys on her arm, who brings presents to the small subjects of the Czar. The story runs that the three wise men from the East in following the star came to Babuska's cottage and invited her to accompany them, but she said it was too cold and late for so old a woman as she to leave her comfortable fire-side and urged the men to partake of

her humble hospitality until morning. But they declined, saying they must hasten to bear their gifts to the child whom they were seeking. It seems that Babuska rather questioned the appropriateness of their gifts for a baby and said she would start in the morning with a basket of things a child would wish. But unfortunately she forgot to inquire the direction and when morning came she could not find the star. So each Xmas Eve she takes her basket and renews the search, going wherever a child lives and inquiring if it be the Christ Child; but when she is told he is not there, she leaves a gift in His name and continues her never-ending quest.

In Italy it is Befana who brings Xmas presents to the little Italians in a pack on her back.

All the Xmas saints are surrounded with mystery only to be seen and known through inner vision, save in America. Here commercialism has over-ridden sentimental considerations and we are forced to let our children receive the rude shock of having a delightful mystery made into a commonplace. Santa Claus in the role of an animated advertisement walks our streets and promises gifts which never materialize. No wonder the American child questions the reality of the good saint, when he does not keep his word, and worse still, duplicates himself many times throughout our business district.

The whole wide world keeps Xmas with feasting and merry-makings. In staid old England the fun is most boisterous. From earliest times this season was the occasion for eating and drinking. Such quantities of food as the early Britons could consume! It is almost beyond belief. Their was-sail cup has been celebrated so long in song and story as to need but mention.

In the southern part of our own country the punchbowl, twined with ground pine and mistletoe, is a time-honored institution. Probably this is but a modification of the cup of good cheer brought from England by the early settlers along the James River.

As the children of today are pleased with the symbols of life, so also, were the children of the race. But as the race grew older it developed an appreciation for more than mere externals, and looked behind the symbol to find that for which it stood.

The Xmas tree of modern times as it stands laden with all its array of tinsel and seeming tawdry finery, is in reality the open scroll upon which each ornament tells a story of a belief and a people who had faith in it. The tree itself we must remember, is the altar of the god of our forest-dwelling forebears, and high at the top we find the star.

This emblem, the star, is commonly supposed to belong exclusively to the Christian era and to be used as a prototype of the one which guided the magi to Bethlehem. But ancient Chaldean records 4,000 or 5,000 years before the birth of Christ, tell of the appearance periodically of a "wonderously fair bright star, the emblem of peace, goodness and purity." Back in the very beginning of things the forest man had looked up to the heavens and beheld the silent stars keeping watch above their sacred trees and thus the two became indissolubly associated. When man began to make

(Continued on page 561).

Christmas, 1914.

ALMOST two thousand years ago, Christmas was ushered in by angels singing, "Peace on earth, good will to men." Two thousand years has man spent in struggling upward towards the ideal thus proclaimed, and some in the past decade have believed that universal peace was here to stay. But Christmas, 1914, promises to find us farther from the ideal than ever before. Half the civilized world is at war, and the Christmas peace song has given place to the thunder of cannon.

Christmas, 1914, will be remembered by most of us, not as a day of merriment and jollity, but as the Christmas when hearts the whole world round were saddened either by actual war with its attendants, sickness, poverty and death, or by the knowledge that on the other side of the world our brothers' lives and homes were being sacrificed, not for right, but for greed.

In America's country homes peace and plenty are the rule. There is more than the usual reason for rejoicing this Christmas, if we look not beyond our own doors. Nature smiled on America this year, and abundant crops has been the rule.

But while the farmers of the country have a plenty, things have not been going so well with their next-door neighbors of the town. So near has Europe been brought to us by steamships and cables that there can be no upheaval over there which is not felt immediately in our business world. In town and city everyone you meet has a story to tell of how the war 3,000 miles away has hurt business here. Wholesale clothing houses cannot dispose of their output because thousands of men and women have not the money to buy new suits and thousands more are thriftily deciding to make old garments do, and keep their money against a possible lay-off. Everyone, from merchant to laborer, has felt the iron hand of war.

To be sure, the stores are stocked up with Christmas goods and toys, but you see few buying a thing unless it is something of necessity. Small boys are raving over engines and small girls over dolls, but father and mother are not growing enthusiastic. Instead, they are pondering on what may happen after New Years, and keeping a tight clutch on their purse strings while in the toy department.

Even the well-to-do, who are not bothered about tomorrow's money problem, are not giving recklessly. Instead of planning on expensive gifts for people who do not need them, they are sending food and clothes to the impoverished Belgians, old linen, medicated cotton and medical supplies to hospitals, woolen mittens, socks and underclothes to the soldiers at the front, and coal and blankets to the poor at home. Many an American woman has decided that her old mink furs will do very well for another winter, and the money she was going to persuade her husband to spend for a pointed fox set will be spent instead on someone who is in want.

Christmas, 1914, promises to be a day of mourning for many, but the American people are resolved to lighten that mourning for as many as their money and forethought can reach. In the cities, you have only to step outside your doors to find someone who needs you. In the country the search would carry you farther.

If you can not find anyone who needs you in your neighborhood, help your brother in the city. In case it is the suffering European soldier you wish to help, write the consul of the country you wish to aid, be it Belgium, Germany, England or France, and send the letter to your nearest large city. He will tell you what his people need most and where and how to send your offering.

Christmas, 1914, will be a peculiar

day, but for most of us it will be a peculiarly happy one. Instead of the dissatisfied feeling of a day selfishly spent in receiving, and in overeating, we will have the consciousness of having done our small part to relieve the universal suffering. DEBORAH.

THE YULETIDE FEAST.

BY MRS. JEFF. DAVIS.

As Christmas approaches, the housewife begins to think of the best way to fittingly celebrate this day of all the year. Whatever are the plans made let them be simple rather than elaborate, if in the latter one goes beyond strength and purse. Let us not forget that the first requisite in Christmas planning should be to keep the spirit in our hearts, bearing in mind that it is more blessed to give than to receive.

In serving the Christmas dinner simply and well, one need not adhere strictly to the old-time foods that have made their appearance on the American board since the time of the Pilgrim fathers, but let the innovations be simple elegance rather than elaborateness.

The table should have a simple decoration, and red is the best color for the holidays. An effective centerpiece is secured by filling a chopping bowl with choice fruit and using holly, or other evergreen to wreath it. If no other fruit but red apples are to be had, these make an attractive centerpiece when heaped into a pretty basket or dish. A wreath of holly, or any evergreen vine can finish the base.

Most families adhere to the time-honored turkey as the principal meat dish, and this can not be improved upon. When other meat is required besides the bird, a baked ham will go nicely. Or an oyster pie or a chicken pie can replace this if preferred. One vegetable besides the potato is sufficient. Cranberries or some sort of jelly must be served with the meat course, and apples in some form.

Plum pudding is the standard dessert for Christmas, but many prefer American spice puddings.

A wise housewife will not serve ice cream, if this is on her menu, at the close of dinner, but will serve it later in the day with the Christmas cake. After eating a hearty dinner ending with a pudding or other dessert, very few people can ever enjoy the cream and cake, no matter how delicious these may be, but later in the day full justice can be done to them. A loaf cake iced with plain white icing, and bearing the word "Christmas" done in red icing is very appropriate and attractive.

As much preparation as possible of the dinner should be done before the festive day. The pudding can be cooked several days in advance and re-steamed. The ice cream can be cooked two days before and frozen the next day, for by keeping it packed in ice and salt it will be all the better for this long ripening.

The following menus are appended merely as a guide to the young housewife. They need not be carried out in their entirety, but such dishes as appeal to the individual taste may be selected from each.

Oyster Milk Stew	Crackers
Roast Turkey	Cranberry Jelly
Candied Yams	Escalloped Onions
Apple Salad	Cheese Straws
Spice Pudding	Sterling Sauce
Coffee	Fruit Nuts

Cream of Tomato Soup.	
Toasted Crackers	
Pickles Olives Celery	
Salted Pecans	
Roast Goose	Potato Stuffing
Apple Sauce	
Duchess Potatoes	
Cream of Lima Beans	
White Fruit Pudding	Egg Sauce
Ice Cream	Christmas Cake
Coffee	

Cream of Pea Soup	Croutons
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Celery	Pickles	Salted Almonds
Roast Turkey	Baked Ham	
Currant Jelly	Apple Sauce	
Mashed Potatoes	Squash	
Fruit Salad	Cheese Straws	
Christmas Fruit Pudding		
Sterling Sauce		

Ice Cream	Coffee	Fruit Cake
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Christmas Recipes. Spice Pudding.

Melt one-half cupful of butter and add to it one cupful each of New Orleans molasses and sweet milk; now beat in three cupfuls of flour in which sift two teaspoonfuls of baking powder and one-half teaspoonful each of pulverized cloves, cinnamon, mace and nutmeg, one-half cupful sour cherry juice or currant jelly; blend all together and pour into a greased mold, filling two-thirds full. Cover and steam two hours. Serve with any preferred sauce.

Fruit Salad.

Cut fresh or canned pineapple in one-quarter inch slices, remove hard centers, if fresh, sprinkle with powdered sugar, set aside one hour in a cool place; drain, spread on serving dish, arranged in alternate layers with sliced bananas, and sliced oranges, sprinkling each layer with powdered sugar. Pour over syrup drained from pineapple.

Vanilla Ice Cream.

Two cups scalded milk, one egg, one tablespoon flour, pinch of salt, one cup sugar, one quart thin cream, two tablespoons vanilla. Mix flour, sugar, and salt, add egg slightly beaten, and milk gradually; cook over hot water for 20 minutes, stirring constantly at first; should custard have curdled appearance, it will disappear in freezing. When cool add cream and flavoring; strain and freeze.

Sterling Sauce.

Cream one-half cup of butter, gradually add one cup of sifted brown sugar, and cream until light; add three tablespoons of thick cream; when ready to serve heat in double boiler; add brandy or vanilla to taste, and beat until light and foamy.

Boiled Ham.

Select one well rounded but not too fat. Wash thoroughly in tepid water and scrub and scrape clean. Soak over night in tepid water to which enough New Orleans molasses has been added to give a decided flavor. In the morning cover the ham with clear, cold water, bring slowly to the boiling point, then simmer from eight to ten hours, according to the size of the ham. If one be possessed of a fireless cooker so much the better, for then the ham needs no looking after whatever. When done let the ham stand in the liquor in which it was cooked, until quite cold. Take out, skin, trim neatly, glaze with currant jelly softened by heating, and stand 30 minutes in a steady oven.

Baked Goose.

Select a young goose, draw it, and wipe carefully inside and out. Boil three good-sized potatoes; when done mash them, add to them an equal quantity of soft breadcrumbs, half a can of mushrooms chopped fine, a teaspoonful of onion juice, a saltspoonful of celery seed, or a half cupful of chopped celery, and a rounding teaspoonful of salt; mix, stuff into the goose, sew up the vent, put the goose in shape, stand it in a baking pan and pour in the bottom of the pan a pint of strained tomatoes; add a teaspoonful of salt and a tablespoonful of chopped onion. Bake in a quick oven until the goose is thoroughly browned. Cool the oven, and bake slowly for one hour and a half, basting frequently. When done there should be sufficient sauce in the bottom of the pan to measure half a pint, which strain into a gravy-boat.

Roast Turkey.

Two or three days after the turkey has been hung, wipe it on the outside with a damp cloth, and carefully wipe the inside. Rub the entire surface

with salt, and spread breast, legs and wings with one-third cup of butter, rubbed until creamy and mixed with one-fourth cup of flour, after turkey has been stuffed and trussed. Dredge bottom of pan with flour. Place in a hot oven, and when flour on turkey begins to brown, reduce heat, and baste every 15 minutes until turkey is cooked, which will require about three hours for a ten-pound turkey. For basting use one-half cup butter melted in one-half cup boiling water and after this is used baste with fat in pan. Pour water in pan during the cooking as needed to prevent flour from burning. Remove string and skewers before serving. Garnish with parsley, or celery tips, or curled celery and rings and discs of carrots strung on fine wire.

CHRISTMAS FLOWERS AS GIFTS.

BY ADDIE FARRAR.

When in doubt as to what gift to give a friend, why not choose a growing plant, a fragrant reminder of the affection you bear her? The desirability of plants as Christmas gifts is no longer questioned and particularly for those who have a garden or a porch in the summer and a big living-room in the winter. Individual taste, with a few hints from the florist, will make the selection an easy one and nowadays there is a good variety of winter plants to pick from, plants pre-eminent in their acceptability at the Yuletide.

Christmas plants must be chosen wisely, and for friends who have a limited space one must choose with regard to the flowers that will grow under the existing circumstances. In a greenhouse the heat, light and humidity can be regulated, in the average living-room it cannot. Therefore, it is foolish to buy perishable varieties that will hardly live a week.

Of course, the most popular of all plants today, for Christmas, is the Poinsetta, sometimes called the Christmas rose. Its native home is along the northern borders of Mexico and it was first brought to this country by Dr. Joel Robert Poinsett, ambassador to Mexico in 1825, and later its brilliant scarlet blossoms attracted the attention of florists, who soon began to grow it exclusively for the Christmas trade, its beauty soon making it popular. In greenhouses the poinsetta is easy of cultivation and its bright blossoms, which, correctly speaking, are not blossoms, but clusters of leaves, remain in bloom for many weeks. The plants grow in good sandy soil and need a warm atmosphere, but unless one watches constantly and takes much care of the plant it does not thrive any too well in the hot, dry atmosphere of steam-heated living-rooms. The blooms cease in February and the plant should then be dried off and turned upside down and placed in a warm place to wait until summer planting time.

Charming red berried plants that keep their color all the year around, and therefore make pretty gifts, are the new Jerusalem cherry and the ardisia crenulata, and a plant a foot high can be had for 50 and 75 cents. The former can be grown into a large and showy plant and well repays cultivation.

The ardisia is a beautiful plant, grown for the holiday trade, and is not common. It takes several years to bring it to suitable size as it is a slow grower. The foliage resembles our mountain laurel, but the arrangement of the leaves is much more beautiful. The well grown plant resembles a small tree and when it is a foot or a foot and a half high, it bears red berries in clusters, in shape and size like holly berries. These berries remain hanging on the tree for a long time. The plant is pleasing for decoration, either for the center of the table or for a corner of the living-room. Then there is the aucuba japonica,

whose red and yellow foliage and crimson berries are highly decorative in the hall, living-room or library.

For one that is not expensive and can be grown in the window garden all winter, and later in the yard, there is the cyclamen with its rose, purple, red or white blossoms and rich foliage. A small plant in bloom may be had for 50 cents, and others for \$1.50.

Other profuse bloomers through the winter are the Lorraine begonia, with their delicate pink flowers almost smothered in the graceful bushiness. These plants are especially adapted to window boxes and living-rooms, and by proper care and repotting in the spring may be made to blossom for several years. They cost from 50 cents to \$1.50 a pot.

For 50 cents one may get a pretty fancy fern dish filled with tender young ferns, just the thing for the dining-room table. Large ones sell from 75 cents up to \$5.00. Then there is a pretty combination of double red geraniums and pteris ferns, planted in low flower pots the shape and size of the ordinary fernery. The geraniums are in the center, the ferns set around them.

While the genista is a good Christmas plant, with its yellow flowers, still the bloom does not last long. Still, it is so beautiful, even in its fleeting loveliness that it makes a welcome gift. A medium-sized one can be had for 50 cents; others at \$1.00 and \$2.00.

Rubber trees make good presents and the suburban housewife, with her big living-room and big summer porch likes them because of their decorative effect in summer, as well as the brightness they give the house in winter. Rubber trees begin at 75 cents each and climb in price. Two dollars will buy a fair-sized one. Another pretty plant is the dwarf Japanese tree, which resembles a small Christmas tree and is charming in the hall in winter and on the porch in the summer.

Dwarf pot hydrangeas and hyacinths, along with the spirala japonica lily, formerly Easter plants, now may be had at up-to-date florists at the Christmas time.

If you purchase an azalea which is a hardy plant and pays well for its care, get one that has more buds than opened flowers on it as the blooms are rather short-lived, although profuse. A good one ought to be bought for \$1.00.

The beautiful dwarf bush, the baby Rambler, is popular, with its bright crimson flowers, and will bloom from Christmas to Christmas by keeping it in a sunny window during the winter, and in summer planting it in the ground. A two-year-old plant ought to be had for 75 cents and one that is a perpetual flame of blossom costs only \$2.00.

Very cheerful in midwinter are the evergreens in pots, which are set in the hall or in the formal parts of the house. These plants are effective when well-shaped ones are chosen, and are hardy. They must be kept damp but never wet, and can be kept out of doors all winter on the porch, as a bit of decoration on either side of the hall door.

For foliage plants, the dacaenas, with their variegated leaves of rich green and creamy white, the pandanus veitchi, with its long graceful, drooping leaves of white, edged with green, or the sandere with its yellow marking, are all good. The araucaria or Norfolk pines, and the corton, good for gifts, range in price from 50 cents up to almost as many dollars.

Be careful that your plants are well covered when delivering them, and do not water them just before going out into the cold, as they are then inclined to freeze. It is well to remember, when receiving Christmas plants, to place them immediately in a moderately warm place and water them.

MEASURE THE BABY CAREFULLY.

In filling in the entry blank for our prize baby contest, which appeared in the issue of December 5, care should be taken to put down the exact measurements. Some of the entries received show carelessness in this regard, the baby's circumference in one instance being given as seven inches. All questions on the blank should be answered as fully and accurately as possible as the information is important to the most efficient use of the score card. The gratifying number of entries already received is good evidence that Michigan Farmers readers are justly proud of their babies. Any reader having a baby eligible to entry in this contest should fill out the blank published in the issue of December 5 and mail same to the Baby Contest Editor, by January 1, 1915.

CHRISTMAS SYMBOLS.

(Continued from page 559).

crude ornaments, the star was among the first fashioned and hung upon the altar-tree.

The placing of candles upon trees, the shrines of gods, goes back to the fire-worshippers of Persia. At one time a fire or light burned perpetually at the foot of the sacred oak.

Germany has another legend which accounts for the placing of candles upon the Xmas tree. When Winfred had substituted the fir tree for the oak, it was carried amid great rejoicing to a near-by baronial castle. Its snow-covered branches twinkled very brightly in the lights of the great hall until the warmth melted the snow, then the lady of the castle bethought her of placing lighted candles upon the tree branches to restore their vanished radiance.

The bell was used by the Priests of Bacchus in the worship of the vine, this was but a branch of forest worship.

The drum goes back to the time of Confucius. In Bhuddist sculpture boys are represented as beating drums in worship of the sacred tree.

The cornucopia, the primitive drinking cup, made from the ram's horn, was used to hold the libations to the God Bacchus, when they besought him for a plentiful yield from the vine.

The colored fruits, flowers and nuts are of greatest antiquity. Before man had become skilled enough in handicraft to fashion gifts, he used those nature so freely bestowed, bringing the first fruits of tree and vine as free-will offerings. The gold and silver tinsel which add so much to the splendor of the modern Xmas tree, are but symbols of the real gold and silver chains which ancient men once hung upon their trees.

These many gifts were brought before the altar and presented with mingled feelings. In the beginning, each offering was but a separate note in the mute cry in the heart of the giver. One a plea for mercy, one a petition for redemption, others the glad pean of thankful praise to the Giver of all.

These almost inaudible whispers which began at the dawn of time have risen slowly to articulate song. All these individual notes have become merged in one mighty chorus which has at last broken forth in the splendid anthems in which today the whole world joins in singing, "Glory to God in the Highest, On earth Peace and Good Will to Men."



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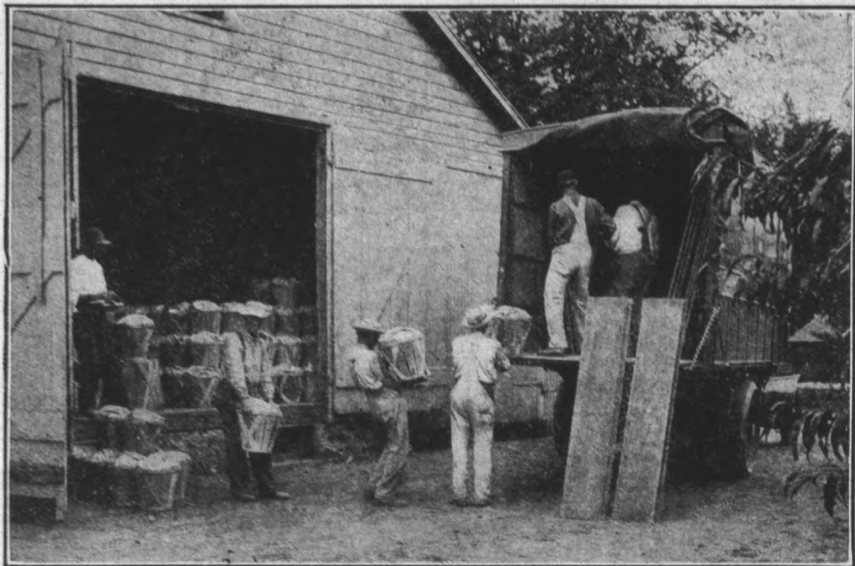
Farm Commerce.

From the Milk Dealer's Viewpoint.

THE city milk dealer has been censured, blamed and looked upon with an evil eye. Many producers thoroughly believe the city man is exacting too large a portion of the retail price to pay for the collection and distribution of milk.

Since problems are usually solved easier and with greater satisfaction when both sides are well understood by all concerned, it would seem a duty to give here the defense of the city dealer. What obligations are imposed upon him, what expenses must he meet, what conditions are to be overcome in getting this most important and most easily contaminated of

expense of rigid dairy inspection demanded by most cities, shrinkage due to evaporation, and the perishability of the milk. Then, also, there comes in this connection the charge which must be made for cold storage facilities on the farm and in transit. A great factor which influences the prices paid is surplus milk produced in the summer over that of the fall and winter. Producers do not appreciate the fact that the city can absorb only about so much milk and so the dealers, in order to avoid having a lot of perishable milk on hand, cut the price, which lowers the offerings and makes the dealer's risk less.



The Auto Truck is Proving itself Indispensable to the Farmer who takes his Products Directly to the City Market.

all our foods safely to the consumer?

At a recent gathering in Chicago the general subject of milk marketing was under discussion. Hon. Chas. J. Brand, Chief of the Division of Markets, Department of Agriculture, presided over the session, while Mr. Chas. Whiting, a milk dealer of Boston, Mass., presented the dealer's side of the theme. Among the points made are the following:

The producing world is startled by the announcement that of the consumer's price, the milk dealer receives 58 per cent. This seems to be an altogether exorbitant price but when we take into account those risks which the dealer takes and the different processes through which he must put this milk, this spread in prices is not so exorbitant; and under our present conditions of federal supervision and drastic laws enforcing sanitary measures, there is little likelihood of the price being cut to the consumer by any other means of distribution. The analysis of the operations which are required in order to deliver the milk at the door of the consumer are divided into the following three heads: Producing and delivering to the city; handling in the city plant, and delivery and bill collection. A careful investigation as to what makes price in these commodities will reveal the fact that the price cannot be very materially lessened.

Production and Delivery.

On account of the price of feeds, labor and stock, one cannot see in the future any reduction in the cost of production. It requires a large amount of capital to go into dairying. Then the other item, that of delivering the milk to the city dealer, in view of the small earnings of the railroads at present, and in view of the fact that they are suing for an increase in freight rates, we cannot hope in any material reduction along carrier lines. Then, added to these expenses, there is the

Farmers should get acquainted with the fact that the most economical production of market milk and the best prices are obtained when the bulk of the offering is obtained during the fall and winter. Fall-freshening cows are most profitable in the long run.

Handling and Bottling.

In the handling and bottling, there is incurred greater expense than would at first be supposed. The producer when he condemns the milk dealer does not take into account the many operations through which the milk must go in order that it may be put on the market. In the city, the trains must be met and the milk carted to the plant and here it must go through clarifying, bottling and capping processes. These all take time, fairly high-class labor, and where units of machinery must be bought, there is an added expense to figure on. Added to this, the item of furnishing bottles is no small matter in itself. Of course, we have paper bottles on the market, but the cost has thus far prohibited their general use, due to the price which must be finally asked of the consumer in order to pay for these bottles. Then added to this, the milk is a perishable product and must be refrigerated and in most large cities pasteurized—not mentioning the fact that some consignments are received in such poor condition that they must be disposed of at half price. There must also be taken into account the losses due to sloppage and evaporation and the cost of machinery and the other essentials which go with pasteurization where that is demanded by city ordinances.

Delivery and Bill Collection.

A by no means unimportant part of the labors which must be charged up against this 58 per cent of the consumer's price which the dealer gets is the work of delivering and bill collecting. The work of delivering is laborious and requires early hours in

the morning. It requires in addition to a man of brawn, a peculiar combination for the milkman must be salesman, solicitor and collector. Each of these labors is a distinct type in itself and as a consequence, a fairly good price must be paid for men who do this work. Added to this is the cost of horses, delivery wagons and accessories. It has been found so far, that horses are more economical when it comes to delivering milk than are the power trucks. Then there is always a certain amount of loss, due to bad bills which cannot be collected. This is true in any business. Any dealer, not matter what kind of commodity he is dealing in, figures on a certain amount of loss due to bad bills and the milk business is no exception in this regard.

Other Considerations.

Added to the foregoing main points, there are other points which must not be lost sight of when arguing for a more efficient basis of milk distribution. We must take into account that all of these milk dealers are under federal supervision and also that the states and cities also impose other restrictions peculiar to themselves. At present the dealer studies the question to make the work efficient, for efficiency in the different operations is what makes for profits and these are small enough under fairly efficient methods.

In addition, a great amount of capital is required in the city plant and this cannot be turned over many times. The cost of delivery depends upon the amount of milk delivered and also upon the wages which must be paid for help. If a man delivers a large amount of milk in a small area, the cost of delivery is lessened. Under our present system of delivery, there is much duplication on the routes. This gives a greater choice of milk dealers to the consumer. Dr. Williams, of Rochester, has figured out that the cost of milk could be reduced one cent per quart if milk delivery systems were adopted which would cut out duplication of routes, but at present this does not seem possible.

In view of the federal laws regarding proper sanitation and testing and that a large amount of capital is invested in milk machinery, co-operative marketing by farmer organizations should be well studied before attempted. Under present systems, it would seem to be uneconomical and scarcely feasible.—M.

GRAND TRAVERSE GROWERS ORGANIZE.

Fruit growers of the Grand Traverse region, desperately sick of "by-guess and by-golly" methods, met in Traverse City recently, and took first steps toward forming a co-operative marketing association. L. F. Titus is chairman of the temporary organi-

zation and Willis Lindsey is secretary. On motion of Wm. G. Tompkins, of the Upper Peninsula, a committee on organization was named, composed of representative men in different sections, as follows: Rev. A. Bentall, Northport; C. W. Loeffler, Solon; W. L. Thomas, Traverse City; John N. Courtneade, Garfield; H. Wilce, Empire; W. W. Gordon, Acme; E. O. Ladd and Peter Swanson, Peninsula.

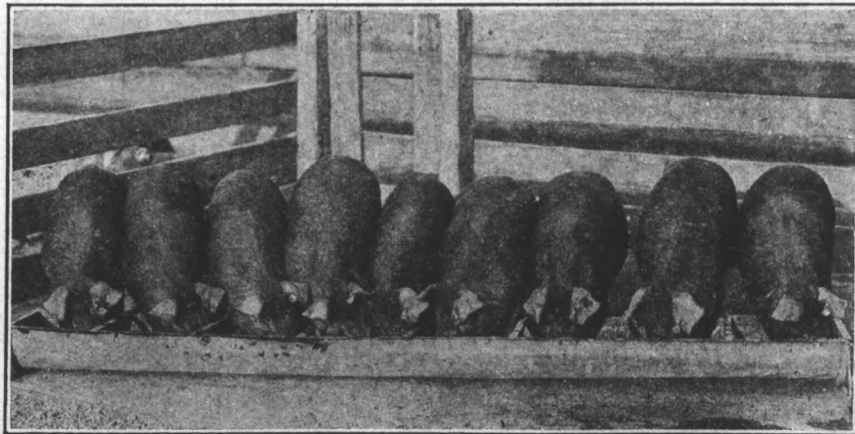
F. Kern, of the Peninsula Fruit Association, of Bayfield, Wis., was the guest of the Michigan growers, and he went into details regarding the Bayfield organization. Speaking of its success he said: "We have just marketed our fourth crop. At the outset four years ago we had a little over \$200 in the treasury and over \$600 in debts. Now we have our own buildings and the stock is worth \$1.56. The first great advantage of organization is standardization of output. This means that any buyer knows just what he is getting and it logically follows that he will not quibble over prices. But the great advantage is in distribution. Under the old plan an individual grower brings his perishable stuff to market and begs for a buyer or sells to a commission man at what the middleman says is the top price. Under the co-operative system outside markets are found by specialists and the grower's stuff is sold weeks ahead. This is accomplished without piling up stuff in Chicago or some other common dumping ground, with prices shot to pieces."

The Grand Traverse Association started off with 36 members and this number is bound to grow and to include all leading growers. Mr. Bentall, chairman of the committee on organization, has been through the mill and is a most valuable man. He organized the Northport Fruit Growers' Association, and managed the same through times of vicissitude and hard knocks. He knows how vitally important it is to have an organization with iron clad rules, if you please, binding the members together.

The new association will be incorporated, with shares at \$10 each. A constitution and by-laws are being prepared for adoption. The fruit growers of that section are intelligent and are alive and awake to the needs of this new time. The Grand Traverse region is a recognized cherry-producing center, but is famous for other fruits as well. Good markets are seen to outweigh good crops in importance and the Traverse City meeting doubtless will develop into one of the strongest co-operative bodies of fruit growers in Michigan.

Kent Co. ALMOND GRIFFEN.

Learn to be pleased with everything, with wealth so far as it makes us beneficial to others; with poverty, for not having much to care for; and with obscurity, for being unenvied.—Plutarch.



A curious situation has developed in the distribution of meat products. Largely by reason of the foot-and-mouth disease quarantine, prices to farmers have been considerably reduced, while retail prices to consumers are scarcely altered at all. Not being privileged to the books of the packers and retailers, we do not know who is taking the additional margin, perhaps it is being divided. Occasionally a farmer is found who suffers nothing from the change. He has a half-dozen families in the city who accept his shipments of dressed meat. During cold weather he butchers a hog, or sheep, or beef, every two weeks or so, cuts the carcass and ships it to his city customers. They pay transportation charges and remit to him a price that gives a substantial margin over the ruling live stock quotations.

A CORNER ON BEANS.

In my article on the marketing of beans, published in The Farmer of December 5, it was noted that there had been an approximate loss of one million dollars to the farmers by lack of adequate marketing facilities. The enclosed clipping, (a despatch from Cleveland alleging that a Cleveland operator has cornered the bean market), accounts for one-fourth of that figure. The information also is of importance since it answers the question asked by those who think supply and demand fix prices, at least to the producer.

There is also a bit of information in the fact that one man can legally raise the price of beans while (without legal reason) fear is expressed that if the farmers were to unite and fix the price of their product they would be violating the anti-trust law.

Shiawassee Co. J. N. McBRIDE.

FREE MILK TESTING SERVICE.

We have arranged to have samples of skim-milk, whole milk and cream from our subscribers tested free. If you wish to know whether your creamery is giving you proper returns have a sample of the cream tested to compare with the report of the creamery. Possibly your cream separator is not working as it should. Send us a sample of the skim-milk and let the test tell you whether the machine is leaving too much butter-fat in or not. You may have some cows in your herd that are not paying for their keep. You can determine this by having the milk from each cow tested, from which you can accurately determine the value of the milk each gives. We established the free milk testing service to meet the above needs. It is for every subscriber to take advantage of.

Follow these directions: Thoroughly mix the sample of milk to be tested, by pouring three times from one can or bucket to another and back again. Next take a sample, fill a 4-ounce, wide-mouthed bottle, enclose the bottle in a mailing tube and send by parcel post to the Michigan Farmer Laboratories, 674 Woodward Ave., Detroit. The sample will be tested promptly, and returns made directly from the laboratory.

In case you do not have a bottle and mailing tube, we can furnish the same, postpaid for 10 cents. In ordering bottle and mailing tube, address The Michigan Farmer, Detroit, but in sending the samples be sure to address them to Michigan Farmer Laboratories, 674 Woodward Avenue, Detroit, as indicated above.

MICHIGAN CROP REPORT.

Wheat.—The condition of wheat as compared with an average per cent is 94 in the state, 92 in the southern counties, 95 in the central counties, 96 in the northern counties and 97 in the upper peninsula. One year ago the per cent was 98 in the state, central and northern counties, 94 in the southern counties and 102 in the upper peninsula.

The total number of bushels of wheat marketed by farmers in November at 85 flouring mills is 179,766 and at 93 elevators and to grain dealers 192,367 or a total of 372,133 bushels. Of this amount 253,494 bushels were marketed in the southern four tiers of counties, 108,521 in the central counties and 10,118 in the northern counties and upper peninsula. The estimated total number of bushels of wheat marketed in the four months August-November, is 5,500,000. Thirty-five mills, elevators and grain dealers report no wheat marketed in November.

Rye.—The condition of rye as compared with an average per cent is 95 in the state, 94 in the southern counties, 96 in the central counties and 97 in the northern counties and upper peninsula. One year ago the per cent was 96 in the state and central counties, 95 in the southern counties, 97 in the northern counties and 101 in the upper peninsula.

Fall Pasture.—The condition of fall pasture as compared with an average per cent is 92 in the state, 90 in the

southern counties, 93 in the central counties, 94 in the northern counties and 98 in the upper peninsula.

Live Stock.—The condition of live stock throughout the state is 97 for horses, cattle, sheep and swine.

Crop and Market Notes.

Michigan.

Monroe Co., Dec. 7.—Potato yield is fair this year, 35@40c per bushel. We need a buyer and shipper here at Maybee, all surplus hauled to Monroe. Tomatoes grown for factory paid the farmers well this year, bringing from \$100@125 per acre. Wheat, while sown late, looks fine; yield from 15 to 35 bushels per acre. Corn about all husked, yielding from 80 to 120 baskets per acre, not much sold but is being fed to cattle and hogs. Hogs about all in farmers' hands yet on account of the strict quarantine, some being dressed for Toledo and Detroit markets at 9c. Eggs 32c; butter 26@30; hay \$10@12; oats 47c; farmers busy plowing for oats.

Hillsdale Co., Dec. 2.—Nearly all the corn crop has been taken care of, with the exception of some fields yet to be shredded. Many farmers are taking advantage of the open weather to do fall plowing. Many fat hogs are in the hands of farmers, shipments having been delayed by the live stock quarantine. Both the foot-and-mouth disease and hog cholera have appeared of late, in Hillsdale county, but their ravages have not been great. Live poultry which was also held up by the quarantine, is now being shipped in considerable quantities. Fewer western sheep and cattle than usual, will be fed this winter, owing to the fact that the live stock quarantine was put in force before some of the farmers had procured animals for feeding. Wheat and rye looking good. Beans \$2; wheat \$1.05; rye 97c; oats 44c; cloverseed \$8; butter 28c; eggs 33c; chickens 10c; ducks 10c; turkeys 15c; hogs \$4@6; calves \$7; potatoes 25@30c per bushel.

Arenac Co., Dec. 3.—Potatoes yielded from 75 to 250 bushels per acre; beans about 15 bushels; corn 30 to 125. Wheat and rye look fine. Lots of rough feed in farmers' hands and many are buying up stock to utilize it, cattle being mostly fed. Wheat 95c; oats 46c; beans \$2.25; corn on ear 35c; butter 35c; potatoes 25c.

Berrien Co., Dec. 7.—Wheat crop is looking good, considering lateness of sowing. Corn is a light crop, though the late season helped to mature it; many who have not silos are shredding corn, and a great many silos were put up this year. Apples were a good crop but did not keep well, some rotting on the trees, on account of warm weather at time of picking. Horses and cattle are looking well. Hogs \$6.25, but cannot ship out of the state. Wheat \$1.07; butter 30c; eggs 29c per dozen.

Branch Co., Dec. 5.—Quite a little corn yet to husk. Potatoes average about 125 bushels per acre; beans about seven bushels; corn lightest in a number of years. Wheat and rye looking well. Not as much grain as usual in farmers' hands. Owing to the quarantine farmers are having to feed stock longer than was expected, and those not having feeders are unable to get them. Some potatoes being shipped at 27c; wheat \$1.08; corn 60c; oats 44c; butter 30c; eggs 32c.

Livingston Co., Dec. 5.—Weather has been mild for the time of year, and the ground is not frozen. Farmers plowing and getting their work well along for spring. Stock of all kinds doing well. Sheep are still being pastured, which will be quite a saving in feed. Hog cholera is getting quite a start in the county and farmers are doing everything possible to prevent its spread. Beans at \$2.30 and rye at \$1 are being marketed quite freely.

Sanilac Co., Dec. 8.—Farmers are still plowing, and never was fall work so completely done. Wheat and rye are going into winter in fine condition. Live stock of all kinds have gained a little in price and some being shipped, but those having silos are holding and feeding. Auction sales are numerous and farms changing hands, but the price of land has decreased about 25 per cent. The good roads movement is being pushed, and each year finds several miles of state reward road being built. Potato market is rather dull at 25c; wheat \$1.03; oats 44c; barley \$1.15 per cwt; beans \$2.25 per bushel; hay \$12.

Shiawassee Co., Dec. 7.—Corn about out of field and husked. A large amount of fall plowing being done. Potatoes yielded 120 to 200 crates per acre. Wheat and rye in splendid condition. Farmers well supplied with feed of all kinds. Lamb feeders are purchasing native lambs for feeding purposes. Some hay being sold, but large quantities being held. Roads in excellent condition, and farmers are

well pleased with the state reward roads. Not much grain moving; some wheat going to market at \$1.06 per bushel. Eggs scarce and high. New seeding withstanding winter in good shape. Clover hulling under way, and yielding from one to three bushels per acre.

Emmet Co., Nov. 26.—Snow sufficient for sleighing; staying for a week, now going. Stock is generally healthy, with good supply of feed on hand. The crop of potatoes was good, but buyers only offered around 20c and many went into cellars and pits. Beans were fair to good as to care and culture given the crop, and are quoted at \$2.10.

New York.

Columbia Co., Dec. 7.—Potatoes were above the average of past years, and sell around 50c per bushel. Beans were a fair crop, and white marrows bring 3.75 per bushel. Corn yield is above average, bringing 75c per bushel. Rye did not make much growth owing to drouth. No wheat grown here. Very little farm produce except hay and straw being sold. Not much stock for sale except a few hogs. Butter 35c; eggs 55c.

Pennsylvania.

Lancaster Co., Dec. 8.—Yield of potatoes very much above the average. Beans are good; corn good crop in quality and quantity. Meadows, new seeding and wheat not very good, owing to dry weather. No stock being bought on account of strict quarantine throughout the country for foot-and-mouth disease, therefore fewer fed than usual. A good supply of corn fodder in farmers' hands. Surplus wheat has mostly been sold on account of the moth. Eggs 40c; butter 35c; apples 60 per bushel; dressed pork 10c; calves 8c; steers 8c; tobacco brings 10c per pound.

Ohio.

Clermont Co., Dec. 8.—Some potatoes hardly doubled the seed planted, while others produced a fair yield. Corn on bottom land averaged 75 bushels, and on hill ground considerably less. Wheat and rye are in good condition. Most farmers have enough feed for winter, but some having a large number of cattle and hogs are buying feed. Small surplus of grain for sale. The quarantine has brought prices down, and farmers are awaiting a raise in prices. Hogs \$6.50; cattle \$6.50; butter 26c; eggs 37c; young chickens 11c; corn 75c per bushel.

Dafke Co., Dec. 8.—Corn husking is about done; about an average yield and quality fair. Wheat looks good, and meadows fine. Live stock has begun to move since quarantine was taken off. There are several cases of hog cholera. Farmers have plenty of rough feed. Corn 55c; oats 50c; wheat \$1.04 per bushel; eggs 35c; chickens 10c; hogs \$6.50.

Greene Co., Dec. 8.—Potatoes and corn both improved in the latter part of the season, and returned fair to good yield, potatoes yielding around 150 bushels; corn 20 to 80 bushels. The fly injured early sown wheat, but later sown looks good. Plenty of wheat still in farmers' hands and some wheat will be held; corn is going to market slowly at 55c a bushel. This county is in quarantine, but no cases of foot-and-mouth disease. Hog cholera caused thousands of dollars loss, the worst ever known. Wheat \$1.10; hogs \$5@6.

Holmes Co., Dec. 7.—Weather wet, but not cold and no snow. Potatoes are yielding well. Corn all in crib, with an average yield. The acreage of wheat is normal, and looks fine. Farmers have plenty of feed on hand. The quarantine being on, there is plenty of stock in farmers' hands, intended for the earlier market, which is causing prices to be lower than usual. Potatoes 50c; wheat \$1.06; corn 65c.

Shelby Co., Dec. 5.—Cold weather with rain the last few days. Corn husking all done, and is a fairly good crop. Potatoes a poor crop. Wheat is badly hurt by the fly. There is plenty of feed for home use, some corn and oats for sale, but very little surplus hay. Hogs are about the only stock fed for present market, and the price is unsatisfactory on account of foot-and-mouth disease. Some corn sold at 75c per cwt; oats 45c; wheat \$1.05; cloverseed \$7@8; butter-fat 29c; eggs 32c; poultry 9c; turkeys 15c per pound.

Wayne Co., Dec. 7.—Corn is about all in the crib, with a yield of 100 baskets per acre. Wheat looking fairly good. Farmers have a good supply of rough feed. Hogs plentiful, cattle not so many being fed. Potatoes are being shipped at 35c per bushel; hogs \$8, dressed; butter 33c; eggs 36c; chickens, live 11c.

Indiana.

Noble Co., Dec. 5.—Nearly all corn and fodder has been cared for, surplus stock marketed, and farmers generally are ready for winter. Wheat fields look good, late sowing being benefited by the late fall. Farmers are well supplied with feed, but will have but

(Continued on page 564).



Volume—Quality

VOLUME is our watchword—QUALITY our motto. Quality—Galloway engine quality—has made our tremendous volume possible. Skilled workmanship, best materials bought in large quantities, simplicity and perfection in design, and supremacy in power are why I call this new 6 h. p. (horse power) Galloway's MASTERPIECE.

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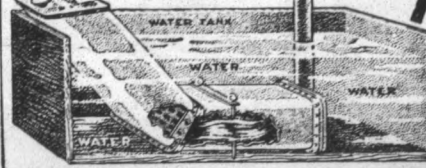
Double ball type governor; Hercules cylinder head, extra large cooling surfaces around cylinder and cylinder head; larger water pump, that ever, easily drained, frost proof, a low speed, heavy duty, heavy weight, big bore and long stroke engine; elevated main bearing grease cups, heavy cast bracket supporting gas tank, cast iron guards over crank shaft, special designed Economy Carburetor (easy to start in cold weather), improved piston lubrication and gear driven built-in magneto (extra) but one wire from magneto to igniter.

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THE Nelson Tank Heater cuts fuel cost in half and heats water in half the time required by any other heater! Absolutely no heat wasted as entire heating surface is under water. Burns coal, wood, straw, corn cobs, rubbish—anything that will burn in a furnace. Ashes removed in a few seconds without disturbing heater. Ask your dealer—or have us send you a Nelson Tank Heater on two weeks free trial at our risk.

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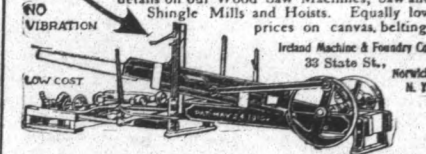


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STRAIGHT LINE Has no equal in convenience, simplicity and long life. It's light, compact, strong, well-built and warranted. Saws whole log in short length without leaving lever. No turning for last cut. 7 advantages. Write for free printed matter. Also details on our Wood Saw Machines, Saw and Shingle Mills and Hoists. Equally low prices on canvas, belting.



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Use time of drive to mill to save toll by grinding feed at home with the Star Sweep Feed Grinders. For one horse or two. Capacity, material and workmanship guaranteed. Extra hardened burrs. Will grind all grains, including ear corn. Send postcard for catalog. Star Mfg. Co., 11 Depot St., New Lexington, Ohio.

The "Berlin Quart"



The White Basket

That secures highest prices for your fruit. Write for 1915 catalog showing our complete line and secure your baskets and crates at WINTER DISCOUNTS.

The Berlin Fruit Box Co. Berlin Heights, Ohio.

WANTED:—Northern Grown Seed Beans as free from Blight and Anthracnose as possible, good yielders, early maturity and uniformity desired. Send samples and quote prices and full particulars. Producers Elevator Co., Sandusky, Mich.

Markets.

GRAINS AND SEEDS.

December 15, 1914.

Wheat.—The bulls had the advantage in the market the past week and prices have gone up. While there has been a slight falling off in the amount of wheat leaving the farms, the main reason for the advance was the heavy demand from foreign countries. Italy is drawing heavily for wheat from Argentina and the firm and higher prices prevailing by reason of this outlet has caused anxiety in England, so much so, that quotations at Liverpool were put up to attract cargoes thither. American farmers and holders are profiting by the situation. Although the visible supply shows an increase amounting to nearly four million bushels, some of this showing is due to the adjustment of stocks by lake shippers and carriers and actually should have no influence upon dealing. Foreigners are buying freely and this is keeping the surplus down in spite of the liberal selling by farmers due to the attractive prices offered. A year ago the price for No. 2 red wheat was 99½¢ per bushel. Quotations for the past week are:

	No. 2	No. 1	May
Wednesday	1.15½	1.12½	1.23
Thursday	1.15½	1.12½	1.23
Friday	1.15½	1.12½	1.23½
Saturday	1.17½	1.14½	1.24½
Monday	1.18	1.15	1.24½
Tuesday			

Chicago, (Dec. 14).—No. 2 red wheat \$1.18½@1.19 per bushel; May \$1.21½.

Corn.—Corn has advanced in firmness with wheat. The cold weather has slackened the deliveries by farmers, while it has opened up a demand from feeders and tended to stimulate the movement of the grain generally. The local market was quiet, with buyers more numerous than sellers on Tuesday. A year ago the price for No. 3 corn was 68½¢ per bushel. Quotations for the week are:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	63½	64½
Thursday	63½	64½
Friday	64	65
Saturday	64	65
Monday	64½	65½
Tuesday	64½	65½

Chicago, (Dec. 14).—No. 2 yellow corn, new 63½¢@64½¢; Dec., 63¢; May 69¼¢ per bushel.

Oats.—This grain continues in good demand but prices seem to depend more upon the conditions of wheat and corn trading than upon the oat supply and demand situation. Stocks seem to be limited. The visible supply shows a slight increase. One year ago the price paid for standard oats was 43¼¢ per bushel. Last week's quotations were:

	No. 3
	Standard.
Wednesday	50½
Thursday	50½
Friday	50½
Saturday	50½
Monday	50½
Tuesday	50½

Chicago, (Dec. 15).—Standard oats 49½¢@50¢; No. 3 white 48½¢@49½¢; Dec., 47½¢; May 51½¢ per bushel.

Rye.—Millers continue to take rye freely and have held the price steady at \$1.10 by reason of their urgent need. The quotations have been advancing for over a month past.

Beans.—Local values have advanced 10¢ and the deal appears to be increasing in strength with many reports of foreign demand and buying. Detroit quotations are: Immediate and November shipment \$2.45; December \$2.55. Chicago reports a steady tone and prices. Pea beans, hand-picked, choice, are quoted at \$2.65@2.75; common at \$2.40@2.55; red kidneys, choice, at \$3.25@3.50.

Clover Seed.—Dealing in samples is active, with prices off a dime since last week. Prime spot and December \$9.10; March \$9.30; prime alsike sells at \$9.

Toledo.—Prime cash and December \$9.17½; March \$9.37½; prime alsike \$9.15.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$6.20; second \$5.80; straight \$5.25; spring patent \$6.50; rye flour \$5.80 per bbl.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$25; standard middlings \$25; fine middlings \$32; coarse corn meal \$28; corn and oat chop \$25 per ton.

Hay.—Quotations are steady. Car-

lots on track at Detroit are: New, No. 1 timothy \$16@16.50; standard \$15@15.50; No. 2, \$15@15.50.

Chicago.—Liberal offerings and a fair demand prevent price advances. Choice timothy \$16.50@17; No. 1, \$15@15.50; No. 2, \$12.50@13.50.

Straw.—Steady. Rye \$7.50@8; oat straw \$7@7.50; wheat straw \$7@7.50 a ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Market continues firm at last week's prices. Extra creamery 32c; firsts 29c; dairy 21c; packing stock 20c per lb.

Chicago.—Trade is light and supply ample. Fancy goods hold firm but there is too much poor stock arriving. Prices unchanged. Extra creamery 32c; extra firsts 30@31c; firsts 27@28½c; seconds 24@26c; packing stock 20½@20¾c.

Elgin.—Market dull and slow, only high-grade stock selling well. Quotations the same as last week, which was 32c.

Poultry.—Holiday activity is causing firmness in market. Prices are slightly higher. Springs 12@12½c; hens 8@12c; ducks 14½@15c; geese 12@13c; turkeys 18@18½c.

Chicago.—Not much change in the market. Fowls and springs slightly lower, while other poultry advanced some. Quotations on live are: Fowls, good, 9@11c; spring chickens 11½c; ducks 13@13½c; guinea hens, per dozen \$3.50; turkeys 16c; geese 10@12c.

Eggs.—Market firm with prices 3c higher than last week. Fresh stock sells at 33c per dozen; current receipts 29½c.

Chicago.—Market especially firm for strictly fresh stock because supply is limited. Dealers are using storage eggs in preference to the ordinary firsts. Prices higher. Miscellaneous lots, cases included, 23@34c; ordinary firsts 28@30; firsts 34@35c per dozen.

FRUITS AND VEGETABLES.

Apples.—Trade is good and market steady. Cold weather has eliminated farmers' bulk stock. Prices unchanged. Baldwins \$2.25@2.50 per bbl; Greenings \$2.75@3; Spy \$3; Steele Red \$3.50; No. 2, 40@50c per bushel.

Chicago.—Good quality of common storage and fresh arrivals are steady. Cooler stock sells well and brings a premium price of 25@50c per bbl. Baldwins \$1.75@2.25; Kings \$2.50@2.75; Wagons \$2.25@2.50; Jonathans \$3.50@4; Greenings \$2.50@2.75; Northern Spy \$2.25@2.50. Western box apples are selling for 75¢@2.25 per box.

Potatoes.—Market steady with no change in prices. Carlots 35@38c per bu; in bulk 40c per bu. in sacks; at Chicago the market is steady at last week's prices. Michigan white, in bulk, are quoted at 35@42c per bu; at Greenville, Mich., 25@27c in bulk.

WOOL.

Transactions in fleece wools are small in number and size. Prices are maintained on a firm basis and supplies are being rapidly depleted. The past week has been quiet with manufacturers buying the kinds and quantities they need for filling orders in sight. They would rather pay higher prices later on than to lay in extra supplies now. Boston quotations are: Michigan ½-blood combing unwashed, 27@28c; ¾-blood do., 28@29c; ¼-blood do., 26@27c; do. unwashed clothing fine, 23@24c ½, ¾, ¼-blood do., 26@27c.

GRAND RAPIDS.

The potato market continues draggy the only gleam of hope to growers this week being weather conditions, which may raise prices a few cents. Buyers have been thinking for weeks that the bottom was reached, and they think so now. The week opens with prices around 22c. Growers have large quantities of potatoes in storage, but the stock on hand of the dealers is very small. The potato crop was big this year. Beans are doing decidedly better than potatoes, due to crop damage and to war conditions. The price to farmers now is firm at \$2.25, and many growers are holding for \$2.50 or better. The poultry market is firm, with dealers paying up to 10c for chicken, live weight; 12@14c for ducks; 11@12c for geese and 16@18c for turkeys.

DETROIT EASTERN MARKET.

The cold wave kept both farmers and buyers away from the market on Tuesday morning and but little business was transacted. Apples of inferior quality were selling at 75@90c; parsnips 45c; cabbage 40c; celery 20c per bunch; pork \$10 per cwt; loose hay steady with values reaching to \$20, average sales being \$18@19 per ton. No potatoes were in sight.

THE LIVE STOCK MARKETS.

Buffalo.

December 14, 1914.

(Special Report of Dunning & Stevens, New York Central Stock Yards, Buffalo, N. Y.)

Receipts here today as follows: Cattle 100 cars; hogs 90 d. d.; sheep and lambs 50 d. d.; calves 800 head.

With only 100 cars of cattle on our market here today, with the exception of a few handy weight loads of cattle of good quality, that sold early to the butchers at barely steady last week's prices, all other grades were from 15@25c per cwt. lower, and the bidding on the best heavy cattle, of which there are eight or 10 loads yet unsold, quality considered, is from 40 to 50c per cwt. below last week. There are some of the best cattle here today, Canadians, that have been seen here in the last 60 days, and any bids that were offered for them were not entertained, as it was such a great decline from the prices of last week's offerings.

We had a lighter supply of hogs here today than was looked for, but with liberal runs all over the west and rather slim outlet, that is, the outside demand, for all but pig stuff, market was slightly lower than the close of Saturday. Mixed grades of hogs sold at \$7.25@7.30; a few handy weight yorkers at \$7.40, and pig weights up to \$7.50. Roughs \$6.30@6.40; stags \$5.50@6. The market was fairly active and close was strong with a good clearance and outlook fairly good for the balance of the week.

The market was active today on lambs and sheep, with prices 10c higher on lambs than the close of last week; choice handy lambs selling at \$9@9.10; top Michigan lambs from quarantined counties \$8.60. We look for steady prices last of week.

We quote: Lambs \$9@9.10; cull to fair \$6@8.75; yearlings \$6@7.50; bucks \$4@4.50; handy ewes \$5.50@5.75; heavy do \$5@5.25; wethers \$6@6.25; cull sheep \$3.50@4.50; veals, choice to extra \$10@10.50; fair to good \$8.50@9.50; heavy calves \$6@8.

Chicago.

December 14, 1914.

Cattle. Hogs. Sheep.
Receipts today. 42,000 50,000 38,000
Same day 1913. 34,575 55,340 51,235
Last week. 50,088 200,801 104,976
Same wk 1913. 64,821 221,174 152,964

Hogs marketed last week averaged 227 lbs., comparing with 221 lbs. a week ago, 214 lbs. a fortnight ago and 215 lbs. a year ago.

This is a severely cold Monday, and while the live stock receipts are extremely large, cars are unloaded so slowly that at a rather late hour no cattle worth mentioning had been sold. Traders were predicting a decline of 25c or more, or a fall of 50c from the high time last week, on Wednesday. Hogs started off at firm values, selling at \$6.60@7.15, while pigs were salable at \$5.25@7. The recent good shipping demand is shown by the fact that last week close to 43,000 hogs were shipped from here, comparing with 38,627 a year ago. Bids for sheep and lambs were considerably lower, but trade was late in getting started. Prime lambs sold to shippers up to \$8.60.

Cattle were in much better general demand last week, and prices were headed upward, with sales advanced 25@50c above prices at the previous week's low level. The average quality of the offerings was greatly improved, with a fine showing of holiday beefs, many of which were prepared with a view of exhibiting and competing for prizes in the International Live Stock Exposition, which was abandoned because of the quarantines all over the country. Of course, it would not be fair to assume that the advance was anything like what the best sales would indicate, no steers having been sold during the previous week above \$10.80, but there were no such cattle offered then as the Christmas steers sold last week at \$11@13. Choice steers have been selling at \$10.25@11.25, good steers at \$9.50 and upward, medium class steers at \$8.50@9.45 and inferior to middling light-weight steers at \$5.75@8.45, the last named including a good representation of warmed-up cattle. Handy little yearlings were especially popular, and the principal part of the holiday cattle were of this class, few of them averaging as much as 1,500 lbs. Butchering cows and heifers failed to develop such firmness as was seen for steers of good quality, sales ranging at \$5@8.75, with sales of canners and cutters at \$3.50@4.95, while bulls brought \$4.50@7.40. Calves suffered further big breaks in prices under larger offerings, with sales at \$4.50@9 for coarse heavy to prime light vealers. The existing quarantine of a large part of the live stock received made an irregular market, as stock in the quarantined division of the stock yards was not allowed to be shipped from here, thus eliminating real competition between buyers. Nor could live stock be shipped from here to

points where there is no federal inspection. Steer prices were some lower Friday, and female cattle had a bad late break.

Hogs recovered much of their recent decline in prices that resulted from the enormous receipts of the previous week, and sales were made far higher than the low day of that week, when \$7.05 was the top price. Later there was a sharp break in values, due to larger receipts and lighter shipping orders putting buyers in control. Recent receipts have been heavier in weight than previously, the average weight being 221 lbs., or seven pounds heavier than a week earlier. Fresh pork continues to have a large sale, being much cheaper than other meats, and there is a fair trade in cash lots of cured hog meats, although consumption would be much greater if prices were lowered in the retail meat markets in accordance with the large decline that has taken place in wholesale prices. On the first day of the month stocks of provisions in the five principal western packing cities aggregated 138,807,000 lbs., comparing with 131,667,870 lbs. a month earlier and with 137,667,000 lbs. a year earlier. Stocks of lard amounted to about 31,000 tierces, comparing with 41,000 tierces a month earlier and with 90,000 tierces a year ago. After hogs had boomed to a point where the best brought \$7.75 there were bad breaks that left prices on Saturday at \$6.65@7.15, with prime light and medium weights selling highest, while pigs brought \$5.50@6.75.

Sheep and lambs sell very high at all times, even after sharp reductions are made in prices. Because of the extreme irregularity of the supplies, there being alternately small and liberal offerings, prices undergo extraordinarily wide fluctuations, and sheepmen sending in stock can never tell what luck they will have when their flocks reach the market. The lifting of the quarantine over a large part of the surrounding country brought in quite a number of lambs and sheep from Iowa and Wisconsin, and in too many instances owners shipped flocks that were poorly fattened, whereas there should be an unwillingness to do this in view of the great shortage in feeding districts generally. Heavy lambs are discriminated against and go at quite a discount. At the week's close prices stood as follows: Lambs \$6.25@8.75; yearlings \$6.25@7.75; wethers \$4.50@6.50; ewes \$3.75@5.65; bucks and stags \$3.50@4.25. The week's receipts were very much less than a week earlier and far below those of a year ago. Prices for sheep have not weakened materially, but lambs have sold off sharply, top the previous week being \$9.50. Packers claim they have lost big money on lambs purchased a week earlier.

Horses adapted for army use continue in large demand for shipment to France, Belgium and England at unchanged prices, mounts going at \$100@135 each and artillery horses at \$150@175. Wagons and expressers are having a fair sale around \$160@210, and there is a small trade in drafters at \$215@285, few being offered or wanted. Horses selling over \$200 are few, and drivers sell usually at \$100@200, inferior horses selling down to \$60@75.

CROP AND MARKET NOTES.

(Continued from page 563).

little surplus of corn. A great many hogs have been shipped recently upon the opening of the markets. The hog market has declined about \$3 per cwt. during the past month owing to foot-and-mouth disease and restricted markets. Hogs \$5.50; fat cattle \$6.50@7; sheep \$3.50@4; lambs \$6; calves \$7; wheat \$1.06; oats 45c; corn 70c per cwt; eggs 35c; butter 30c; chickens 9c; turkeys 12@14c.

Wayne Co., Dec. 3.—Weather fine but very dry, and many wells are going dry. Fall favorable for harvesting the corn, which is yielding 30 to 50 bushels per acre. An unusually large amount of fodder has been shredded on account of a short hay crop. All stock is doing well. This county has not been struck by the foot and mouth disease. Wheat and young clover are in good shape. Farmers are about through with fall work and some are plowing for spring crops.

Kansas.

Smith Co., Dec. 4.—Weather is fine, but we need rain. Potatoes were about half a crop and are selling for 80c per bushel. Corn is yielding from 10 to 40 bushels per acre. Live stock is in good condition, and there is plenty of feed for winter. Corn is worth 55c; wheat 96c; eggs 23c; butter 25c; apples \$1@1.25 per bushel.

HOLSTEIN BREEDERS MEET.

The Central Michigan Holstein Breeders' Association will hold their sixth annual meeting at the Chamber of Commerce rooms, Lansing, on Saturday, December 19, 1914.

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.

The State Live Stock Sanitary Commission on December 16 raised the quarantine on all townships in Michigan, but since this order was issued the ban has again been placed on a few townships in Saginaw county and they are now quarantined again. Live stock from all other parts of Michigan may now be unloaded in the Detroit Stock Yards, providing, of course, that the cars bear placards showing that they have been cleaned and disinfected since November 5. This refers only to live stock originating in the state of Michigan for Detroit, and that the federal quarantine against interstate shipments is still on. Also that no live stock from Detroit stock yards can go out except to packers and butchers in Detroit. Live stock killed direct to packing plants must be sent there and not unloaded in stock yards. There will be no market at these yards Friday next, Christmas Day. Anything arriving will be cared for, but the scales will be closed and no business will be done.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

December 17, 1914.

Cattle.

Receipts 728. Market steady with Wednesday; canners, bulls and Christmas cattle same as last week; all other grades 10@15c lower.

Best heavy steers \$8@8.50; best handy weight butcher steers \$7@7.50; mixed steers and heifers \$6@6.50; handy light butchers \$5.75@6.25; light butchers \$5.50@6; best cows \$5.75@6.25; butcher cows \$5.25@6; common cows \$4.25@5; canners \$3@4; best heavy bulls \$6@6.50; bologna bulls \$5.50@5.75.

Spicer & R. sold Rattkowsky 3 cows av 1063 at \$5.50, 2 do av 910 at \$4.25; to Breitenbeck 20 butchers av 1057 at \$6.75.

Roe Com. Co. sold Rattkowsky 1 cow wgh 1090 at \$5, 5 do av 850 at \$5.50, 2 heifers av 675 at \$5, 4 cows av 1150 at \$5.50, 2 do av 1040 at \$4.50, 3 do av 1000 at \$5.50; to Kamman B. Co. 4 steers av 1050 at \$7.50, 13 butchers av 750 at \$7; to Rattkowsky 2 cows av 900 at \$5.50; to Sullivan P. Co. 20 steers av 938 at \$8.35, 21 do av 979 at \$8.35; to Kamman B. Co. 4 do av 1060 at \$7.50, 13 butchers av 820 at \$6.50; to Mason B. Co. 4 cows av 770 at \$5.50; to Sullivan P. Co. 6 canners av 908 at \$4, 4 steers av 935 at \$7, 3 canners av 803 at \$3.25, 4 do av 905 at \$3.60; to Kull 14 steers av 1140 at \$8.50, 1 do wgh 1320 at \$8; to Thompson Bros. 3 bulls av 1663 at \$6.40, 2 cows av 575 at \$3.75; to Sullivan P. Co. 7 cows av 943 at \$4, 4 do av 955 at \$4, 2 butchers av 795 at \$6; to Thompson Bros. 13 do av 773 at \$6.50; to Goose 1 bull wgh 1040 at \$5.25; to Applebaum 1 cow wgh 960 at \$5, 2 do av 1180 at \$6.

Haley & M. sold Bresnahan 3 heifers av 660 at \$6, 4 do av 702 at \$6.10; to Wohler 2 steers av 1065 at \$7.25, 1 do wgh 780 at \$6; to Feldman 2 cows av 1115 at \$5.15; to Sullivan P. Co. 2 do av 855 at \$3.50, 2 do av 1015 at \$4; to Shaparo 2 butchers av 505 at \$5.75, 11 cows av 1045 at \$5.25; to Hoffend 7 butchers av 620 at \$5.25; to Rattkowsky 2 cows av 1040 at \$4.85, 2 do av 1030 at \$5.75, 4 do av 1050 at \$5.05; to Resnick 1 bull wgh 1650 at \$6.20, 1 cow wgh 810 at \$3.60; to Parker, W. & Co. 4 cows av 820 at \$4; to Rattkowsky 7 do av 1170 at \$5.75, 2 do av 1080 at \$5; to Mason B. Co. 2 steers av 955 at \$7.25; to Thompson Bros. 3 butchers av 690 at \$5, 15 do av 880 at \$6; to Ratner 1 cow wgh 1060 at \$4.75, 1 do wgh 1170 at \$6.25; to Feldman 2 do av 1070 at \$5.50, 1 do wgh 1190 at \$5; to Applebaum 2 heifers av 625 at \$5.75; to Resnick 2 cows av 1020 at \$5.

One Christmas steer wgh 1240 lbs. was sold to Thompson Bros. at \$10.

Veal Calves.

Receipts 524. Market steady. Best \$9@9.50; others \$8@8.50.

Bishop, B. & H. sold Thompson Bros. 2 av 130 at \$7, 6 av 170 at \$9.50; to Mich. B. Co. 11 av 185 at \$8.50; to Sullivan P. Co. 2 av 170 at \$9, 6 av 165 at \$9; to Newton B. Co. 13 av 160 at \$9, 2 av 180 at \$9.50, 4 av 155 at \$8, 1 wgh 160 at \$8; to Hammond, S. & Co. 12 av 180 at \$8.50, 12 av 150 at \$8; to Rattkowsky 7 av 160 at \$8.50; to Applebaum 3 av 145 at \$9.50; to Rattkowsky 9 av 165 at \$9.50; to Goose 4 av 180 at \$9, 1 wgh 140 at \$9.50.

Sheep and Lambs.

Receipts 5,567. Market steady with Wednesday; 25@50c higher than last week. Best lambs \$8@8.25; fair do. \$7.50@7.75; light to common lambs, \$6.50@7; fair to good sheep \$4.25@4.75; culls and common \$3@4.

Spicer & R. sold Parker, W. & Co. 17 lambs av 75 at \$8; to Sullivan P. Co. 32 do av 55 at \$6.50, 13 do av 40 at \$4.50.

Roe Com. Co. sold Barlage 21 lambs av 65 at \$7.50, 34 do av 90 at \$7, 31 sheep av 120 at \$4.25; to Sullivan P. Co. 44 do av 85 at \$3.75, 82 lambs av 75 at \$7.50; to Newton B. Co. 112 lambs av 75 at \$7.85, 10 sheep av 100 at \$4.

85 Christmas lambs av. 86 lbs. were sold to Mich. B. Co. at \$8.60.

Hogs.

Receipts 11,581. Market steady; \$7.10 at the yards.

Bishop, B. & H. sold Hammond, S. & Co. 3150 av 200 at \$7.10.

Roe Com. Co. sold Sullivan P. Co. 480 av 190 at \$7.

Haley & M. sold Parker, W. & Co. 750 av 200 at \$7.10.

Spicer & R. sold same 465 av 200 at \$7.10.

The near approaches to foot-and-mouth disease in Peoria, Illinois, has spurred owners of distillery-fed cattle at that point to hurry them on the market, and cattle receipts in Chicago have included a liberal representation of these beeves. They were consigned direct to a leading packing concern.

John McHugh, president of the First National Bank of Sioux City, Iowa, which is the recognized trade center of northwestern Iowa, South Dakota, northeastern Nebraska and southwestern Minnesota, sums up the farming situation briefly as follows: "Collections are reported to be improving, and altogether there is a very noticeable improvement in the general feeling. It is estimated that fully 80 per cent of the corn, which is the principal crop, is husked, and it is found that the quality of the corn is much better than last year. While the value in the aggregate of our crops is higher than a year ago, the price of corn is about four cents a bushel under a year ago. Wheat is 19 cents higher and oats 10 cents higher. There are fully 25 per cent more hogs in this section than at this time a year ago, and while the price is slightly under that of a year ago, it is expected that the marketing will assume liberal proportions from this time on."

The recent rush upon the part of stock feeders to market their hogs indicates a lack of faith in the future hog market, as the receipts in Chicago and other western markets have been averaging much lighter in weight than only a few weeks ago. In the Chicago market unloading cars of hogs under quarantine supervision was slow work at best, and prices have fluctuated wildly at times. While the future course of the hog market cannot be foretold, it would seem that rushing light-weight hogs from healthy districts to market at such a time is not wise, and the older feeders, it is observed, are holding back their pigs and underweights. Of course, existing quarantines are a serious disturbance to the hog market, as well as to the other live stock markets, and it is hoped by all that the foot-and-mouth disease will be checked and stamped out before much longer.

A RAZOR SNAP.

A new lot of Imported German Razors at 45 cents while the supply lasts, is now offered by the Michigan Farmer.

The razors are made of the best German steel, five-eighth inch blade, and black handle. We will not say just what these razors ordinarily retail at, as prices on razors vary with each dealer, but we have seen razors no better sold at \$1.25 and \$1.50.

Every man who shaves ought to have at least three razors as it is a proven fact that giving a razor a rest is beneficial to it, and here is your opportunity to get a supply at very little cost.

So, only while our present supply lasts the price is 45 cents each, postpaid, or a half-dozen at \$2.00, postpaid.

A Strop Bargain, Too.

We also have a quantity of Zig-Zag All-in-One razor strops that dealers sold at 60c each. These strops are made of finest horsehide leather and one side is treated with All-in-One solution which makes it possible to put a hair-splitting edge on the dull-est razor. It combines the strop and hone in one.

The special prize on the strop alone, while the supply lasts, will be 25 cents, postpaid, but if ordered together with one of the above razors the price of both will be only 65 cents postpaid, or \$1.00 with the Michigan Farmer one year; \$1.50 for three years and \$2.00 for five years.

This would make a nice Christmas present, worth double the cost.

LIVE STOCK NEWS.

Stockmen throughout the country who have been fattening cattle, hogs and sheep for the International Live Stock Exposition, were greatly disappointed when the foot-and-mouth disease broke out and rendered it necessary to abandon giving the great stock show this year. All hope of selling much stock at high prices was at an end, to say nothing of winning prizes.

Abnormal conditions affecting live stock interests throughout a large part of the country have caused enormous losses to owners and to a great extent stopped marketing of cattle, hogs and sheep at Chicago and other leading packing centers. Quarantines have been maintained at many places, and even where it is possible to ship matured stock to market, many owners prefer to wait until normal conditions are restored before making shipments. Generally, the foot-and-mouth disease appears to be under control, and it is believed that before long all restrictions on the movement of live stock will be wholly removed.

Thomas Tipton has returned from an extensive trip through the west, and reports that the corn crop of South Dakota is generally good, some yields having averaged from 20 to 40 bushels to the acre, and the crop is exceptionally good in quality. In Nebraska and western Iowa, the dry weather has blighted the growth of the corn crop to some extent, he says, and there are not a great many cattle on feed, as farmers who have not yet invested in feeder stock are inclined to be skeptical, owing to the foot-and-mouth disease.

John H. Weaver, of Iroquois county, Illinois, marketed in Chicago recently 12 carloads of choice yearling wethers that averaged about 88 lbs. at \$7.60 per 100 lbs. They were purchased by Mr. Weaver in Chicago late last September at a cost of \$6.25, averaging at that time 68 lbs. They made gains of 20 lbs. each during a period of 50 days' feeding.

Michigan Horse Breeders' ANNUAL SHOW and SALE EAST LANSING, JANUARY 13-15, 1915

Auction Sale in Stock Judging Pavilion Agricultural Building, Jan. 15, 9 a.m.

From 25 to 30 head of pure bred horses will be sold, consisting largely of Percherons, from weanling colts to six year old stallions and mares. Also a few Belgians and Clydesdales and several high grade draft colts.

For full particulars write

R. S. HUDSON, Sec., East Lansing, Mich.

Farms and Farm Lands For Sale

Good Farms Around Lansing, and East Lansing J. D. TOWAR, East Lansing, Michigan.

MICHIGAN FARMING LANDS

Near Saginaw and Bay City, in Gladwin and Midland Counties. Low prices. Easy terms. Clear title. Write for maps and particulars. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, (W. S.), Michigan.

FOR SALE—In whole or part, 320 acre southern Michigan farm. Good soil, buildings and fences. Immediate possession. O. S. SCHAEFER, 214 Dewey Ave., Swissvale, Pa.

EXECUTORS SALE. No reasonable offer refused to close up estate. 600 acres land, 200 acres timber, 30 cows, 5 horses, 50 sheep, 10 barns, 3 silos, wagons, harness, plow, 3 houses. Ask for catalog No. 210. Price lowered to \$14,000 for all. Get posted on this great bargain. Hall's Farm Agency, Owego, Tioga Co., New York.

For Sale By Owner—97 Acres in Shiawassee Co., 75 acres, level, productive soil, remainder good pasture land. Buildings, 9-room frame house, one barn 90 foot square, will house 1200 sheep, also large stock and grain barn. Other necessary buildings. Good orchard. This farm is conveniently and pleasantly located making it especially desirable. S. M. HOLT, 108 South Sycamore Street, Lansing, Michigan.

ILLINOIS FARM BARGAINS

FOR SALE OR RENT—200 acre farm near Marion, a city of 10,000 population. Will give the right man a smashing good deal. For Sale—100 acre farm near West Frankfort, Franklin County. Price \$40 per acre—Terms: \$1000 cash; balance very easy. For Sale—60 acre farm near Lena, Stephenson County—Price \$55 per acre—Terms: \$1500 cash, balance easy. FRANK P. CLEVELAND, Owner, Marion, Illinois.

SPECIAL FARM SALE

We have just put on the market several hundred acres of our Farm, Garden and Fruit Lands, in blocks of 20 acres or more, located in the south near the Gulf Coast. Excellent lands for all kinds of Farm and Garden Crops, Fruits and Nuts, such as Oranges, Grape Fruit, Figs, Strawberries, Grapes, Pecans, etc., also fine opportunities for Poultry and Stock Raising. Delightful climate, high altitude, sufficient rainfall, no irrigating; two and three crops can be grown annually; good water, schools, churches and railroad facilities. Make a trip to the Gulf Coast and see the great opportunities for the Farmer, Fruit Raiser or Capitalist. We make special low price in blocks of 20 acres or more for next 60 days, and allow railroad fare of \$1 per acre on all sales to those who inspect our farms. Send for our Book giving full description, location and photographs of our farms.

MILLS FARM CO. (Northern Agency), ROSE HILL, N. Y.

Healthy Cows All The Year Round!

A natural food that strengthens and builds up is far better than any kind of tonic or medicine for animals, as well as for men. Scientists have proved that this new food increases the value of any kind of feed, when mixed with it.

Buckeye Feeding Molasses

helps make more milk, and keeps your cows in good condition. It is also a good fattener for beef cattle.

For Horses—Buckeye Feeding Molasses is relished by horses. It keeps their stomachs in perfect condition, aids digestion and besides saving feed, prevents kidney diseases, colds, etc.

For Sheep—Will keep your flock healthy and well; adds weight and makes finer wool and more of it.

For Hogs—Makes every hog a big hog—no runts. Larger profits in pork.

15 CENTS a gallon f. o. b. Detroit, or 17 cents freight paid to any point in the U. S.

Our Free Trial Offer:

Send this coupon today and get our test proposition.

W. H. EDGAR & SON,

1242 Lafayette Blvd., Detroit, Mich.

W. H. EDGAR & SON,

1242 Lafayette Blvd., Detroit, Mich.

I have.....head of cattle.....

sheep.....hogs and.....horses.

Send me your trial proposition to prove that Buckeye Feeding Molasses will benefit all of them.

Name.....R. F. D.....

P. O.....State.....

MOVE TO MARYLAND
The State for Thrifty Farmers. Delightful, healthy climate. Good Land, Reasonable prices. Close to big markets of large cities of the East. Send for free descriptive booklet & map. STATE BUREAU OF IMMIGRATION, 66 Hoffman Building, Baltimore, Md.

DELAWARE FARMS
Fruit, live stock, alfalfa. Best land near best markets. Address, State Board of Agriculture, Dover, Delaware.

RABBITS TURKEYS DUCKS GEESSE CHICKENS HOGS VEAL, ETC.
Our Present Specialties
Rush consignments forward by express. Prompt sales and quick returns assured by our 26 years in one store. CHAS. W. RUDD & SON, Commission Merchants, Detroit.

HAY Ship your Hay to Pittsburgh and to Daniel McCaffrey Sons Company Pittsburgh, Pa. Ref.—any bank or Mercantile Agency.

Our 20 Years Experience.
Handling Poultry, Calves, Pork, Wild Rabbits, Butter, Eggs and General Produce in this market should be of value to you. Best prices. Honest treatment. NAUMANN COMMISSION CO. Eastern Market, Detroit, Michigan

Griggs, Fuller & Co., Wholesale Commission House, potatoes, poultry and rabbits. Quick returns.

FARMERS—We are paying five to eight cents above highest Official Detroit Market quotation for new laid eggs shipped direct to us by express. Write us for information. It will pay you. American Butter & Cheese Co., 31-33 Griswold St., Detroit, Mich.

CASH PAID For Butter, Eggs, Poultry, Calves, Hogs, Potatoes and Apples. Write us before selling elsewhere. CAMPBELL BROS. CO., 245 Napoleon St., Detroit, Mich.

POTATOES—HAY—More Money if you Consign to THE E. L. RICHMOND CO. Detroit. 21 years in bus. Reference your Banker.

BUY FEED-CAR LOTS Cotton seed—Oil Meal, Hominy, Gluten, etc. Save money. Ask price. J. E. Bartlett Co., Red Mill, Jackson, Mich.

Fine Farm and Fruit Lands
Price \$15 Per Acre for 60 Days

We have just put on the market several hundred acres of our Farm, Garden and Fruit Lands, in blocks of 20 acres or more, located in the south near the Gulf Coast. Excellent lands for all kinds of Farm and Garden Crops, Fruits and Nuts, such as Oranges, Grape Fruit, Figs, Strawberries, Grapes, Pecans, etc., also fine opportunities for Poultry and Stock Raising. Delightful climate, high altitude, sufficient rainfall, no irrigating; two and three crops can be grown annually; good water, schools, churches and railroad facilities. Make a trip to the Gulf Coast and see the great opportunities for the Farmer, Fruit Raiser or Capitalist. We make special low price in blocks of 20 acres or more for next 60 days, and allow railroad fare of \$1 per acre on all sales to those who inspect our farms. Send for our Book giving full description, location and photographs of our farms.

Farmers' Clubs

Address all communications relative to the organization of new Clubs to Mrs. J. S. Brown, Howell, Mich.

THE ASSOCIATIONAL MEETING.

(Continued from last week).

President McBride's Address.

"As civilization increases, we farmers come in contact at more points than ever before. Our interests are along the line of our business relations with the whole modern industrial system. We are partners in the great structure of exchange or commerce, and to a great extent silent partners.

"This condition arises out of the fact that farming originally was simply a manner of living and the farmer figured little in exchanges. A representative of a family reared 60 years ago told me their total cash outlay did not exceed \$15 for the entire family annually. We have expressions now nearly obsolete, describing these conditions, like 'home-made goods,' 'store clothes,' etc. The phrase 'hired man' came into use in the north, as an evidence of luxury for the persons that could afford to have work done and pay for it, and in the south, more particularly to distinguish free labor from slave labor. There are occasional mountaineers who are still of the type of the original farmer. Their own fields supply their personal needs; the women weave, the men tan. These people are independent farmers who do not figure in the economic life of the world.

Regulate Prices.

"The soil products of the United States are the greatest tonnage producers of the railroads. Abundant crops are what crank up the whole industrial machinery. The entire industrial world awaits the impetus of agriculture. Yet when agriculture became basic or fundamental of industry the farmers' products were not inventoried at cost, with profit added. In fact, the producer had little to say about prices, whereas manufactured goods were based on cost of labor and raw material, and transportation had elaborate systems of cost per mile and ton. In the course of time manufacturers sought governmental sanction, in limiting competition by tariff schedules, and further limiting it by stupendous combinations of capital called corporations, and these into trusts.

"Gentlemen's agreements and holding companies, supply and demand, we were told was what regulated farm prices, but manufacturers and railroads, like the boy and the apple core, found there was no such laws.

"Agriculture, while subduing the middle west, and west, building homes and during the first portion of the period, largely without machinery; had on the whole been without effective organization. Father Kelly saw the need of some organization, and the Grange for a time had marvelous growth. Grange stores and co-operative organizations had a wonderful impetus, and then receded almost to the vanishing point. Montgomery Ward was the original Grange supply house, but he soon found the field too limited, and became the great mail order house. This bit of information is of importance because Ward says that a common interest of farmers could not be limited to one organization. The Farmers' Alliance, Farmers' Union, Society of Equity and various other agricultural organizations flourished and failed. The agricultural organizations that succeeded became more fraternal and social and less economic.

Stringent Trade Laws.

"To the student of history of American agriculture, the weakness of

their economic organization will not be so mystifying when it is seen that co-operation was sought, largely as an end, instead of a means to an end.

"In Denmark is the most conspicuous example of co-operation. The production of butter, bacon and eggs co-operatively is really a manufacturing business. Grains are imported and bought co-operatively. If Denmark were a grain exporting country the story of co-operation would be different. It is of interest to know that co-operation in Denmark led up to the most stringent trade laws. In other words, co-operation was not a remedy until statutory enactment in regard to price making was given to the co-operators or individuals.

"The Danish law approved by King Christian X, June 8, 1912, is lengthy, but a part of it reads: 'It is also forbidden to sell or offer for sale goods in original wrappers from producers and jobbers upon which their fixed prices for the retail trade have been indicated, unless the sale is the kind mentioned in section six, or unless the permission of the producer or jobber or other sanction equal thereto has been granted.'

"The minister of commerce and of navigation is authorized to stipulate in conjunction with the chief organizations of Danish commerce, industry and trade that certain articles in the retail sales may be sold or offered for sale only in prescribed units in number, measure and weight or with an indication placed upon the article or its wrapper of number, measure and weight and a statement as to the place of the article's production.

"Without this price-fixing by law the producer and consumer are levied upon for uneconomic service forced upon industry by too many tradesmen.

German Empire.

"The whole world wonders and admires the stupendous resources of the German empire. If we were to crowd the population of the United States east of the Mississippi in about four-fifths of the area of Texas, and had on that area practically doubled every farm product in the last 20 years; in the meantime became also one of the foremost nations in manufacturing and with a peerless military and naval equipment, we may still more wonder and look for the cause.

The German empire is without a parallel in industry, and when shorn of militancy will be even greater. Agriculture in the German empire gets 65 per cent off the consumer, while the United States gets but 25 per cent. In the German empire there are 24 states, and these subdivided into provinces not much larger than our counties. In each county there is an agricultural chamber of commerce; these local chambers select delegates to the national chamber or land werth schoftsfrat. These bodies have a legal standing and can initiate or criticize measures relating to agriculture.

"The German laws recognize the price making features of producers, and enforces price making as well as commodity fee participation. In explanation of the last used term you will doubtless remember the diplomatic episode of the potash syndicate case. Independent potash producers that are not members of the Kali Syndicate contracted potash to the American fertilizer manufacturers at a price below that fixed by the syndicate, and also refused to pay the small fees per bag or kilo of goods sold. All the diplomatic power of the United States was used to enforce this cut rate contract.

"The German government declared that it was against their established policy to allow what is called destructive competition, or price-lowering that works an injury to the general good; and also against public policy to allow a tax or fee to be used by part of an industry to promote trade, and others who refused

to co-operate or finance the propaganda to participate in the benefits of such trade promotion.

"Let me illustrate the weakness of American co-operation as compared to the German potash incident just related. Several years ago, when the bean market was well nigh demoralized, an effort was made to sustain the market by dealers, who arranged to take an hundred cars off the market at a small advance. The smaller elevators, including co-operatives, began crowding their product and even under-quoting the established price, and again lowered the price to the producer.

"The remark is often made 'if farmers only would stand together,' etc. The continental idea is that when the government has approved the plans made for commercial interests that they must stand together. The European or continental view is that the producer is continuously in the industry, and that the sale of some unit of his product does not permit that unit to be used to the detriment of the producer or producers of that particular line.

Bad Economists.

"The American view, as laid down by the courts, is that when the producer has parted with some unit of his produce he has no further interest in this particular unit, even though used to his destruction as its producer. Our judiciary are notoriously bad economists, and the legal profession have lived in the past off the differences of others.

"The great manufacturing industries have asked governmental aid in prevention of destructive competition, and rejected the idea of co-operation in mutual associations; and formed combinations or trusts, and do just what the small co-operator would do, viz., compel unity of action and maintain prices. It would be humorous if not pathetic, to see the sublime faith of those who urge co-operation as a remedy, when railroads, manufacturers and European agriculture has tried it, only to find it inadequate, and have sought or been compelled to have stronger bonds of union to succeed.

"There is a discarded economic fallacy, viz., that supply and demand fix prices. In fact, supply and demand are but different views of the same thing. This senseless saying in regard to supply and demand has often been the expression of mental inertia, which found it easier to repeat the adage than to think. Co-operation as an end has been the little world surrounded by our own horizon. When we take the wider view we find that we must not only co-operate with our class, but with every other line of productive interest. Class co-operation, limited to our own line, fails in realization and must be considered as simply a larger unit for co-operation with other larger units. When this is recognized then we have to invoke governmental action, as in Europe.

"God has given us a wonderful country, and we must learn to use our opportunities, not selfishly, but for all. To co-operate with all under adequate and ethical rules prescribed by law has succeeded, where class co-operation has failed."

Secretary's Report.

Another year has rolled into eternity and again we are assembled in our annual meeting, joyfully greeting the old friends and bidding the new ones a hearty welcome.

The Farmers' Club is not a new institution. Ingham County Club has been in continuous existence nearly 43 years, Columbia 34 years, closely followed by Ceresco, Norvell, Burton, East Arlington, Essex, Grass Lake, Maple River, Lenox and Chesterfield, Saline, and others, all over 25 years old.

These local Clubs while doing excellent work in their respective communities realized the urgent need of

organized united effort and in 1894 a meeting was held in this room for the purpose of affecting a permanent organization. At this meeting 22 Clubs were represented by 35 delegates, who most efficiently laid the foundation of our present State Association, universally regarded as one of the great factors in Michigan's rural development.

In the 20 years there have been 17 associational presidents, 15 of whom are living and several present with us today.

William Ball, the father of Miss Julia Ball, and A. C. Bird have passed to the great beyond.

The Association has always taken a firm stand in favor of temperance and general progress, and as firmly opposed graft and trickery of all kinds. Its motto, "The skillful hand with cultured mind is the farmer's most valuable asset," is well worth the serious consideration of every American citizen.

American farmers are certainly blest with peace and prosperity while their European brothers are suffering the horrors of war and famine, and it seems very fitting for us to celebrate this anniversary in planning a more strenuous campaign in Club extension for future years.

Many requests for copies of constitution and by-laws, and information on organizing local Clubs have been received and we note with pleasure the increasing popularity of Farmers' Clubs as social, co-operative, and educational factors of rural development.

The correspondence of the past year has been specially pleasant as your secretary thoroughly enjoys her "mail order" acquaintances and hopes to continue them as friendly correspondents.

Various requests ranging from tracing lost relatives to "How to organize a cemetery association," have been received and answered to the best of her ability.

The new financial basis, while not oppressive, seems very satisfactory and will probably prove adequate for all associational needs.

Last year we reported 120 Clubs representing 35 counties and gladly add the following 11 organized in 1914:

Wells and Dayton, Tuscola county; West Otisco, Ionia county; Watson Road, Osceola county; Sherman, Isabella county; Pine Lake, Barry county; Lone Tree, Traverse county; Halton, Isabella county; East Nankin, Wayne county; Colfax, Oceana county; Bruce, Macomb county; South Noveva, Tuscola county, making a total of 131 Clubs representing 38 counties. Jackson county leads with ten, closely followed by Shiawassee, Livingston and Oakland, nine each, Calhoun, Clinton and Isabella six each. Ceresco has the largest enrollment to date, 200, and Orleans the highest average attendance, 125. Bruce, East Nankin and West Otisco have already joined the State Association and we trust the others will soon do so.

South Leoni has been absorbed in the Grange. Oxford had a bad relapse and your secretary has failed in all attempts to reach the following Clubs:

Bangor Center and Black River, Van Buren county; Blissfield, Lenawee county; Central, Ionia county; Climax, Kalamazoo county; County Line, Osceola county; Eckford, Calhoun county; Green Oak, Hamburg and Putnam, Livingston county; Liberty, Jackson county; Leima and Vicinity and Western Washtenaw, Washtenaw county; Progressive, Mason county; Riley, Clinton county; Sherman, Newaygo county; Standish, Arenac county; Union of Mussey, St. Clair county; Webster and White Lake, Oakland county; West Haven, Shiawassee county; Wexford Boys' Agricultural Club, Wexford county; Watervliet, Berrien county; Washington, Macomb county.

(Continued next week).

Annual State Grange Meeting

ANOTHER busy and history-making meeting of the State Grange opened Tuesday morning, December 8, at Battle Creek. After going through the formalities of opening in the fifth degree and shortly afterwards closing in that degree and opening in the fourth degree, the Grangers were welcomed to Battle Creek by two members of the Board of Commerce and Mr. Miller, Master of the Calhoun Pomona Grange. This was responded to in a very eloquent manner by N. P. Hull. The session not having opened till 100 a. m., the morning was fully occupied by these addresses.

The Master's Address.

A most pleasing feature of the Tuesday afternoon session was the annual address of the Worthy Master. Mr. Ketcham is well known throughout the state for his oratorical ability, and his forceful manner of presenting practical questions. In an introductory way he said that the committees he would appoint would bring out many of the numerous questions in which the Grange was interested, therefore, he would consider only the more prominent ones. In speaking on the matter of co-operation, he said that this long discussed subject was becoming more popular every day, and that successful examples of co-operative work were becoming more numerous. Of the successful co-operative enterprises in Michigan he mentioned those of Scotts and Vicksburg, organized under the Rochdale plan, the Litchfield co-operative creamery and the Mosherville and Homer co-operative stock shipping associations. Of co-operative work among Granges he mentioned the organization formed by Acme, Camden, Austin and Montgomery Granges in Hillsdale county for the purpose of co-operative buying and selling. The Hiawatha Grange, of Schoolcraft, is also carrying on successful co-operative work.

Good Roads.

In speaking of the good roads question, Mr. Ketcham said it was one of very great economic importance, as the expenditures on road work involve the sum of \$17.39 per capita per year. The United States is much in need of good roads when compared with European countries. The cost of a wagon mile in France is only 10 cents, while in the United States it amounted to 23 cents. The popularity and extensiveness of the rural free delivery alone make it necessary to have good roads in this country. There are approximately 40,000 rural carriers in this country. For the purpose of financing the building of good roads, Mr. Ketcham urged the "pay as you go" plan, as the bonding system often costs as much in interest, as the amount put on building the roads. There is too much spent at present for administrative purposes and not enough of the funds for good work go for actual road improvement. Business roads should be built first, and the roads for pleasure purposes should not be considered at this time. Farmers market roads are more important and of more economic value than those for touring and sight-seeing purposes.

Separating State and County Taxes.

On the subject of taxation the Master spoke of the present tendency of separating the state and county taxes. While to many it seemed folly for the state to collect taxes from the counties and then turn back 93 per cent, it would strike a body blow to the rural schools of many sections of the state to do away with the present system of tax collecting. The saving of time and trouble by separating the taxes would be a small factor when compared to the harm done the rural schools. In many sections it would mean the cutting down of the school year, and in some districts the entire closing of

the schools. Under the present arrangements some of the rural counties get more primary school money than they pay in state taxes. As a matter of illustration, Alcona and Osceola counties were mentioned. In Alcona county the state taxes in 1914 amounted to \$6,920, while the amount of primary money they received was \$14,432; in Osceola county the state tax was \$20,576 and the amount received from the primary fund \$40,207. While such counties may seem to be getting an undue amount of primary funds, they get therefrom means to furnish children of the counties an education that cannot but help being a benefit to the county and the state as a whole.

Advocates the Peace Program.

The question of increased military power is a vital one at present in Washington. Due to the condition of affairs in Europe, many cases of emergency. Mr. Ketcham expressed the sentiments of the Grange when he advocated peace and the development of general welfare instead of militarism. He asked the following question which should be given due consideration by all: "Is it a higher order of patriotism to advocate the building of dreadnaughts costing \$15,000,000 each to hover helplessly near the home shores in terror of submarines and aeroplanes than to urge the equal sum for the building and maintenance of roads?" This is a question of some importance, as three-fifths of the government expense is for army and navy purposes. This amount expended for peaceful purposes would be of great value to the country.

In speaking of the legislative program the Grange advocated, he suggested the obtaining of liberal appropriations for M. A. C., laws passed to make the Smith Lever bill effective for Michigan, the amending and strengthening of a primary law, the guarantee of deposits in banks, regulation for the galvanizing of wire fence and a provision by the Legislature for a market commission for Michigan.

Organization to Solve Rural Problems.

After giving a short but interesting report of the National Grange meeting and saying a few impressive words with reference to the brothers and sisters who have passed beyond, Mr. Ketcham concluded by saying that there was a great development of interest and sympathy for country life by the country in general, that the changes in the laws with reference to elections in the way of direct primaries, initiative and referendum, etc., brought the responsibility of the government closer to the farmer. He urged the conservation of our food supply on account of the great waste which is now going on in Europe. On account of the rapid development of the rural problems, it is through organization only that they can be solved. With all these problems arising and a large amount of work necessary for their solution, there is no doubt but that the day of opportunity for the Grange has come. Master Ketcham closed with the hope that all would go home with admiration for the Grange, and added inspiration and courage for its work.

Tuesday evening the Master appointed the various committees, after which the session was addressed by D. E. McClure, Assistant Secretary of the State Board of Health. He told of the work of the health department, and urged the co-operation of the citizens of the state in the general preservation of public health. A very excellent exemplification of the third degree by the Charlotte ladies' degree team followed this address. The excellent work of these ladies caused much applause and favorable comment from all present. This was fol-

lowed by a very nicely given drill by twelve ladies of the Sturgis Grange. (Continued next week).

THE GRANGE THAT PAYS ITS WAY.

(Continued from last week).

Let us consider for a moment the history of our Order in Michigan. There was a time when we grew very slowly. By and by Brother Horton came along with his system of trade contracts. It came after the Patrons of Industry had failed to make their plan of economical buying work out. It was something new, it worked, and so the Order came to have a new line of interest. A little later, the matter of Grange insurance came up. Do you remember how the Order grew then? I recall getting a letter from Sister Buell at that time in which she said, "We have one new Grange for every day this month."

It was easy to organize Granges then, because in the public mind had come a vision of Grange possibility, and men and women came together to bring it to pass. Then came the struggle for primary reform. Along with that came the efforts of the supervision department for better degree work and more effective Grange work in each line. All these things helped because they were incentives to greater action on the part of the members. We need a revival of Grange interest just now. The past year has been a good one in the Grange field but next year should be better. I repeat, we need a Grange revival, but it must be more than simply the securing of members. It must come from a consciousness of work that needs doing. There must be an awakening of the public mind along distinct lines of public betterment. In other words, the Grange must find just as many great and good things to do as possible, and officers, deputies and members generally must be alive through and through with inspiration along these new and useful lines of Grange effort.

But while we are in search of "something new and better," may we not forget the importance of the common, everyday duties we owe to our Grange if it is to do its part. Let us plan to attend the meetings regularly, let us assist in creating a sentiment for better degree work. Let us help the lecturer to make each meeting so full of good for all that no one will ever feel that the effort is not worth while. Let us strengthen all lines of our work while we keep ever on the lookout for new interests, and our Grange will pay its way.

W. F. TAYLOR.

OFFICERS OF STATE GRANGE FOR 1915.

The following were elected at the annual meeting of the State Grange at Battle Creek, to fill the offices for the ensuing year:

Master, John C. Ketcham, Hastings, re-elected; overseer, C. H. Bramble, Tecumseh; lecturer, Dora H. Stockman, Lansing; steward, T. E. Niles, Mancelona, re-elected; assistant steward, W. H. Lovejoy, Owosso; chaplain, Mrs. O. J. C. Woodman, Paw-Paw, re-elected; treasurer, Frank Coward, Bronson, re-elected; secretary, Jennie Buell, Ann Arbor; gate keeper, Peter Klees, Montcalm county; Pomona, Jennie Black, Charlevoix; Flora, Mrs. C. H. Anderson, L'Anse, re-elected; Ceres, Mrs. Lucy Corliss, Coldwater; lady assistant steward, Mrs. W. H. Lovejoy, Owosso; executive committee, C. S. Bartlett, Pontiac, re-elected, J. B. Horton, Fruit Ridge, re-elected, J. W. Hutchins, Hanover; W. F. Taylor, Shelby, re-elected.

Muskegon was chosen as the place for the next annual meeting. Other cities which invited the Grange for next year were Alpena, Grand Rapids, Jackson and Lansing.

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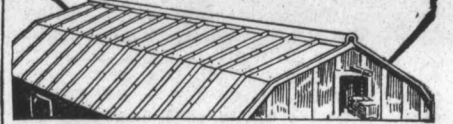
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K. K. Foust, Ashley, Ohio, writes: "Please find draft for spreader received October 5th. Assure you I am more than pleased with same. It has proven all you claim and more. By buying of your company, I saved \$21.50 and got just what I was looking after."

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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 someone else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany letter.

Chronic Sore Eyes.—Our local Vet. has been treating my young mare for sore eyes for some time but she shows little or no improvement and eyes are not clear. S. C. B., Bay Port, Mich.—Dissolve 40 grs. borate soda and 40 grs. boracic acid in 4 ozs. of water and apply to eyes twice a day. Give her 2 drs. Donovan's solution at a dose in feed three times a day.

Sprained Back.—Can you tell me what to do for a cow with weak back? She is only three years old and is due to freshen some time next January. C. & V., East Jordan, Mich.—Apply equal parts turpentine, aqua ammonia and raw linseed oil to back three times a week. Give her ½ oz. ground gentian and 1 oz. ginger in each feed.

Diseased Bone.—We have a three-year-old Holstein cow which was hooked by another cow, injuring jaw bone. This bunch opened and appears to be slow in healing, at times considerable pus comes from it. W. C. S., Allegan, Mich.—There is perhaps a splinter of bone of jaw which should be removed and the rough sharp edges of fractured bone scraped off, then apply one part carbolic acid and 20 parts water to sore twice daily and it will heal.

Hard Milker.—I wish you would tell readers of the Michigan Farmer how I made milking easier in my Holstein cow, simply by gently rubbing end of teat with fine sandpaper a few times. No name or address came with this letter. For the benefit of dairymen who might try it, avoid making end of teat sore or raw, or you may make bad worse.—Ed.

Nasal Catarrh.—Nearly all of my lambs have discharged some mucus from nose and some of them cough, but they eat good. S. A. W., Clarence, Mich.—Mix equal parts of salt, ginger, gentian, cooking soda and charcoal and give each lamb half a teaspoonful at a dose in feed twice daily. Increase their grain ration.

Unthrifty Pigs.—I have 23 fall pigs 12 weeks old that are not doing well: they act ravenous, but do not eat much; bloat after meals, have a hacking cough, are fed one-fourth corn and three-fourths barley meal; also have plenty of salt, charcoal and ashes. H. G., Carson City, Mich.—Give them one part powdered sulphate iron, one part salt, one part ground wormseed, and seven parts ground gentian in feed twice daily; one-fourth teaspoonful is full dose for pig 10 or 12 weeks old, but it may become necessary to give them larger doses to kill bowel parasites and tone up their digestive organs.

Roup.—My chickens have a disease which seems to terminate in loss of vision and I would like to know what can be done for them. H. S., Sigsbee, Mich.—Remove well birds from the sick, kill and burn sick blind ones, wash eyes and nostrils with a lotion made by dissolving 1 dr. boracic acid in ¼ pt. of clean boiled water twice daily. Mix one part salicylate soda, one part hyposulphite soda, two parts powdered sulphate iron, three parts ginger and five parts ground gentian and give each bird 3 grs. at a time three times a day.

Injured Back.—I have a yearling colt that has rather poor control of hind quarters, the result of an injury by one of my other colts. When she was first injured I had to help her up for quite a while, but she has never gotten entirely well; however, she grows well. C. B., Paris, Mich.—Give her ½ dr. ground nux vomica, 20 grs. of potassium iodide at a dose in feed twice a day. Rub back with one part turpentine and three parts camphorated oil every day or two.

Eczema.—Have a colt 18 months old that is dull and lifeless, coat full of dandruff and body covered with white scales. I have examined him closely for lice, he does not itch, but he is not thriving. B. E., Fennville, Mich.—Give 1 dr. hyposulphite of soda, ½ dr. sulphur and 8 drs. of ground gentian at a dose in feed three times a day. Groom him well once or twice a day.

Weakness.—I have a five-year-old mare which was bred the latter part of September; she appears to be in good condition, but coat is rough, hind legs stock and she perspires free-

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 gives the paper's regular subscription price. The second column price is for the Michigan Farmer and the other paper, both for one year. Add 50 cents when the Michigan Farmer is wanted three years, or \$1.00 if the Michigan Farmer is wanted five years. The third column price is for those who are paid ahead on the Michigan Farmer from one to five years and want the other paper only; such orders must be sent to us direct. All combination orders may be given to our agents or sent to us, as is most convenient.

Any number of other papers may be added at third column prices. Write for prices on publications not listed. We can save you money.

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Tribune, Bay City, Mich.		2 00	2 10
Blade, Toledo, Ohio		2 00	2 05
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Produce News, Chicago		1 00	1 05
Cattle, Sheep, Swine, Poultry, etc.			
American Bee Journal, Hamilton, Ill. (w)		1 00	1 50
American Poultry Journal, Chicago, (m)		1 00	1 20
American Poultry Advocate, Syracuse, N. Y. (m)		50	80
American Sheep Breeder, Chicago, (m)		1 00	1 35
American Swineherd, Chicago, (m)		50	75
Breeders' Gazette, Chicago, (w)		1 00	1 45
Poultry Weekly, Boston, Mass.		1 00	1 30
Fruit Belt, Grand Rapids, Mich.		1 00	70
Green's Fruit Grower, Rochester, (m)		50	80
Hoar's Dairyman, Fort Atkinson, Wis.		1 00	1 20
Jersey Bulletin, Indianapolis, Ind. (w)		1 00	1 35
Kimball's Dairy Farmer, Waterloo, Ia. (s-m)		1 00	1 05
National Sportsman, Boston, Mass. (m)		1 00	1 15
Poultry Keeper, Quincy, Ill. (m)		50	80
Poultry Pointers, Grand Rapids, Mich.		50	70
Poultry Success, Springfield, O. (m)		50	75
Reliable Poultry Journal, Quincy, Ill. (m)		50	80
Swine Breeders' Journal, Indianapolis, Ind. (s-m)		50	80
Popular Magazines.			
Everybody's Magazine, N. Y. City, (m)		1 50	1 60
Etude, Philadelphia, Pa. (m)		1 50	1 60
McClure's Magazine, N. Y. City, (m)		1 50	1 60
Musical, Boston, Mass. (m)		1 50	1 50
People's Home Journal, N. Y. City, (m)		50	55
Red Book Magazine, Chicago, Ill. (m)		1 50	1 55
Review of Reviews, N. Y. City, (m)		3 00	3 00
Ladies' or Household.			
Delineator, N. Y. City, (m)		1 50	1 60
Designer, N. Y. City, (m)		75	1 05
Housewife, N. Y. City, (m)		50	80
Ladies World, New York City		1 00	1 15
McCall's Magazine, N. Y. City, (m)		50	75
Mother's Mag., Elgin, Ill. (m)		50	75
Pictorial Review, N. Y. City, (m)		1 00	1 00
Woman's Home Companion, N. Y. City, m		1 50	1 60
Woman's World, Chicago, (m)		35	60
Today, Chicago (m)		50	70
Religious and Juvenile.			
American Boy, Detroit Mich. (m)		1 00	1 00
Boys Magazine, Smithport, Pa.		1 00	75
Little Folks, Salem, Mass. (m)		1 00	20
Young People's Magazine, Ill. (w.)		75	95
Youths Companion, Boston, Mass.		2 00	2 25

NOTE.—If the Michigan Farmer is wanted 3 years add 50 cents to the second column price, or \$1 if wanted five years.

ly when standing in stable. I. L. D., Lake, Mich.—First of all you should ventilate stable by admitting fresh air and providing escape for foul. Also give a teaspoonful of powdered nitrate of potash, a teaspoonful of powdered sulphate iron and a tablespoonful of ground gentian at a dose in feed three times a day. Bear in mind that she should be groomed daily and have some exercise every day.

Nasal Catarrh.—I have a young filly that has an offensive discharge from one nostril but shows no other symptoms of sickness. R. P., Rothbury, Mich.—Give colt half teaspoonful of bicarbonate soda, 5 grs. ground nux vomica and 20 grs. powdered sulphate iron at a dose in feed three times a day.

J. R. E., Prescott, Mich.—Your three chicks stagger on account of being crop-bound or have weak heart. No danger in using them for food, if cooked thoroughly.

Distemper.—I have a ten-year-old mare that had distemper eight weeks ago which seemed to recover and was fairly well until a week ago, then the left side of back commenced to swell; a few days later right side swelled and she appeared to lose her appetite. I also have a calf eight weeks old that has a lump on jaw fast to bone, but calf does not appear to be sick.

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We have arranged here a list of special bargain combinations which will save you considerable on your reading matter. No substitution of other magazines which are the same price can be made. You must take the entire combination just as it is. You can make up your own club from the club list if none of these suit you, or add to any of these others at third column club list prices.

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Michigan Farmer, 3 yrs., wk.....\$1.00	Michigan Farmer, 3 yrs., wk.....\$1.00
The American Boy, mo..... 1.00	Poultry Pointers, mo..... .50
The Ladies' World, mo..... 1.00	Boys' Magazine, mo..... 1.00
	McCall's Magazine, mo..... .50
Regular price\$3.00	Regular price\$3.35
OUR PRICE ONLY \$2.00	OUR PRICE ONLY \$1.75
No. 2	No. 9
Michigan Farmer, 3 yrs., wk.....\$1.00	Michigan Farmer, 3 yrs., wk.....\$1.00
The American Boy, mo..... 1.00	Choice of either:
Woman's World, mo..... .35	The Breeders' Gazette, Ameri-
Poultry Pointers, mo..... .50	can Sheep Breeder, Hoards's
	Dairyman 1.00
Regular price\$2.85	Poultry Success, mo..... .50
OUR PRICE ONLY \$1.75	Boys' Magazine, mo..... 1.00
No. 3	Ladies' World, mo..... 1.00
Michigan Farmer, 3 yrs., wk.....\$1.00	Regular price\$4.50
Kimball's Dairy Farmer, S.-mo.. 1.00	OUR PRICE ONLY \$3.00
The Ladies' World, mo..... 1.00	
Regular price\$3.00	No. 10
OUR PRICE ONLY \$2.00	Michigan Farmer, 3 yrs., wk.....\$1.00
No. 4	To-Day's Magazine50
Michigan Farmer, 3 yrs., wk.....\$1.00	Choice of one May Manton Pat-
Pictorial Review, mo..... 1.00	tern (see this issue).
Boys' Magazine, mo..... 1.00	Poultry Pointers, mo..... .50
Regular price\$3.00	Boys' Magazine, mo..... 1.00
OUR PRICE ONLY \$2.00	Regular price\$3.00
No. 5	OUR PRICE ONLY \$1.50
Michigan Farmer, 3 yrs., wk.....\$1.00	
Youth's Companion, wk..... 2.00	No. 11
McCall's Magazine, mo..... .50	Michigan Farmer, 3 yrs., wk.....\$1.00
Poultry Pointers, mo..... .50	Any Detroit Daily (except the
Regular price\$4.00	News)2.50
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Regular price\$3.00	
OUR PRICE ONLY \$1.90	No. 12
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Woman's World, mo..... .35	Fruit Belt, mo..... .50
Poultry Pointers, mo..... .50	Kimball's Dairy Farmer, S.-mo.. 1.00
Fruit Belt, mo..... .50	Poultry Pointers, mo..... .50
Boys' Magazine, mo..... 1.00	Regular price\$5.00
Regular price\$3.35	OUR PRICE ONLY \$3.50
OUR PRICE ONLY \$1.50	
	No. 13.
	Michigan Farmer, 3 yrs., wk....\$1.00
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	Regular price\$3.50
	OUR PRICE ONLY \$2.15

ATTENTION.—On any one of these combinations you save the price of the Michigan Farmer three years and on some considerably more.

the services of a Vet. to do a little surgical work on her.

Exostosis on Knee.—I have a colt that has a bunch on side of knee caused by a bruise, making the joint slightly stiff. Can the bunch be removed and stiffness relieved? C. J. M., Stanwood, Mich.—Clip hair off the bunch and apply one part iodine and nine parts lard once or twice a day.

Chronic Cough.—In the early part of last summer my six-year-old horse had an attack of distemper; since then he has been troubled with cough. Have been giving him a heave remedy, but it fails to help his cough. H. A. P., Perry, Mich.—Mix 1 oz. guaiacol in 15 ozs. of raw linseed oil and give 1 oz. at a dose three times a day. Feed no clover or dusty, musty, badly cured fodder, and dampen his feed.

Exostosis—Blocked Teat.—I have a cow that has a large hard bunch on outside of shin below hock joint, caused by rubbing leg on cement floor. I also have another cow with blocked quarter of udder, a small hard bunch low down in teat may help to block milk flow and I would like to know what can be done for her. C. G., Vassar, Mich.—Apply one part iodine and seven parts lard to bunch daily. Apply one part tincture iodine and three parts olive oil to blocked teat and quarter three times a week.

J. M. S., Warren, Mich.—Rub back with alcohol and give her 1 dr. potassium iodide at a dose in feed or water three times a day and she will get all right. Your calf had better be used for veal, except head.

Gravel in Foot.—I have a horse that had gravel in his foot which worked through from sole to coronet, now pus comes from two different openings. I am drawing it now with bran poultice and would like to know how long these should be kept up. Every time I change poultice, I apply peroxide hydrogen. E. F. C., Homer, Mich.—It is usually a mistake to poultice suppurating feet. Saturate foot thoroughly in one part bichloride mercury and 500 parts water; or one part carbolic acid and 30 parts water and apply one part iodoform and nine parts boracic acid to suppurating parts once a day, covering foot with oakum and a clean cloth. Remember it is important that the foot be kept clean or it will not get well.

Debility.—I have a ten-year-old mare that had her last foal August 14, 1914, and since then she has poor control of urinary organs. O. McG., Fremont, Mich.—Give her 1 dr. of ground nux vomica and 1 dr. fluid extract buchu at a dose three times a day. It is possible that she met with an injury at time of foaling, if so she may require

PERCHERONS—Important, one of the heaviest horses in state, at head of stud. Brood Mares as good, young stock for sale. CHAS. OSGOOD & SONS, Mendon, Michigan.

BREEDERS' DIRECTORY.

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Bull calves and yearlings ready for service. Sired by Louis of Viewpoint II. Closely related to five Grand Champions—Brother, Sister, Sire, Sire's Brother and Grand sire. (International Grand Champion for three years in succession. Prices \$75 up. Will meet prospective purchasers either at Somerset, Addison or Addison Junction.

You are bound to get good calves from these bulls even with strongly dairy type grade cows.

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HERD FOUNDED IN 1900.

Strains represented consist of Trojan Ericas, Blackbirds and Prides, only, Black Quality Ito, a bull of rare individuality and merit, heads the herd.

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AYRSHIRES—One of the foremost dairy breeds. The most economical milk producers. Calves for sale. White Leghorn cockerels; Duroc Jersey swine. Michigan School for the Deaf, Flint, Michigan.

MILK D. CAMPBELL, CHAS. J. ANGEVINE.

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We have for sale pure bred Bulls at very low prices, whose dams are in the A. R. or soon will be, and whose sires have the following noted animals in their pedigree:—Masher Sequel, Governor of the Chene, Imp. May Rose King, Imp. King of the May, Glenwood Boy of Haddon, Stratford's Glenwood of Pinehurst, Dairy Maid of Pinehurst 910 lbs. fat, Selma of Pinehurst 762 lbs. fat, Daisy 714 lbs. fat, Dolly Bloom 836 lbs. and many other good ones. Write for particulars. Satisfaction guaranteed in every case.

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Gurnseys—Famous May Rose Strain. A select herd. Tub. Tested. Several A. R. O. Cows. J. K. Blatchford, Windermere Farm, Watervliet, Mich.

Registered Guernsey Bulls—Two months to one year old. Best of breeding. Prices right. E. W. RUEHS, CALEDONIA, MICHIGAN.

For Sale, Reg. Guernsey Bulls, Berkshire hogs, sow and gilts bred for spring farrow. Write JOHN EBELS, R. 10, Holland, Michigan.

We have for sale a number of pure Guernsey cows. Weifers and bulls, also Berkshire hogs. VILLAGE FARM, Grass Lake, Michigan.

HEREFORD:—Three bull calves and one two year old. ALLEN BROS., Paw Paw, Michigan.

FOR SALE.



Three Fine Young Bulls—8, 9 and 10 months old, from 12, 20 and 30 pound cows, each one giving over 10,000 lbs. milk a year—prices, \$100, \$125 and \$150. The two oldest nicely marked—the other has black back and sides, with some white. DeKol 2nd, B. B. 3rd, and King of the Pontiac's blood. BIGELOW'S HOLSTEIN FARM, Breedsville, Mich.

FOR SALE

Ready for light service from a 30-lb sire,

HOLSTEIN BULLS

rich in the blood of Hengerveld De Kol, Friend Hengerveld De Kol Butter Boy, and Pontiac Korndyke, three his sons, King of the Pontiacs, and Pontiac Aggie Korndyke. Pedigrees on application. ED. S. LEWIS, Marshall, Mich.

HATCH HERD REGISTERED HOLSTEIN-FRIESIANS

YPSILANTI, MICH., offers **HERD HEADERS** from choice A. R. O. dams and King Pontiac Jewel Korndyke, 50 dams in his pedigree average 31.25 pounds in 7 days. Average per cent of fat of three nearest dams 4.37. Sires in first three generations in his pedigree have 500 A. R. O. daughters. Prices reasonable.

Make your own selection at Ashmoor Farms, Tecumseh, Michigan, R. F. D. No. 2, or address HATCH HERD, YPSILANTI, MICHIGAN.

For Sale Pure Bred

Holstein Heifers and Bulls.

De Kol and Landry Girl Butter Boy strain. LEWIS NELLER, - Lansing, Mich.

High Class HOLSTEINS

My herd is headed by Smithdale Alcartra Pontiac, whose is the famous Alcartra Polkadot. Have few young bulls and females for sale at reasonable prices. Will buy a few heifers about 15 months, not bred. Farm 1/2 mile from court house. SETH B. RUBERT, Howell, Mich.

34.31 lb. 3 1/2-yr.-old sister 22.92 lb. dam, A son of Johanna Korndyke DeKol delivered when 2 mo. old on easy terms. Martin L. McLaulin, Redford, Mich.

Registered Holstein Bull—Good breeding, mostly white, large straight handed fellow. Dam untested. \$50 brings him to your station with all papers, safe arrival guaranteed. Write for particulars and photo. Hobart W. Fay, Mason, Mich.

"Top-Notch" Holsteins.

Extra large fine young bull, 3/4 white, born Oct. 4, 1913. Dam has official record of 29.40 lbs. butter in 7 days, 117.50 lbs. in 30 days. Sire's dam is a 22.64 lb. 4-yr.-old daughter of a 30.59 lb. cow. McPHERSON FARMS CO., Howell, Michigan.

Holstein-Friesian Cattle. Young bulls ready for service out of A. R. O. cows. Satisfaction guaranteed or money refunded. Jones & Lutz, Oak Grove, Mich.

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OFFERS FOR SALE A

YOUNG HOLSTEIN BULL CALF.

Write for particulars. A Few Choice Heifers for sale.

CHASE S. OSBORN, } Owners.
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HOLSTEINS FOR SALE

5 Good Bulls, ready for service.
10 Very Choice Bull Calves.
2 Two-year-old Heifers, bred.
1 Six-year-old grand-daughter of King Segis, due in December.

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A HOLSTEIN BULL CALF by an own brother of a World's Champion and out of an A. R. O. dam. A rare opportunity to get into champion blood lines. HILLCREST FARM, Kalamazoo, Michigan.

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Bulls ready for service, several from Register of Merit Cows. Four bred heifers, good ones. Herd Tuberculin tested. Prices reasonable.

COLON C. LILLIE, Coopersville, Michigan.

A Pure-Bred Jersey

bull counts for more than the dam in grading up. You should be developing some 400-pounds-of-butter cows. The thorough-bred bull is worth all he costs on grade or full-blood Jersey cows. Like begets like. THE AMERICAN JERSEY CATTLE CLUB 324 W. 23d St., New York City.

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Registered Jerseys. Herd headed by Majesty's Wonder No. 90717. Bull calves for sale by Majesty's Wonder and from high producing dams. Also a Grandson of Stoke Pops of Prospect. Born March 1913. Satisfaction guaranteed. Write for prices. Alvin Balden, Capac, Mich.

Jerseys. Bulls ready for service, extra quality sired by Jacob's Fairy Emano. No. 107111, from high producing dams. SMITH & PARKER, Howell, Mich.

For Sale Jerseys—Heifers from Register of Merit of St. Lambert breeding. Also cows with Register of Merit records. Waterman & Waterman, Ann Arbor, Mich.

HOLSTEIN BULLS READY FOR BUSINESS. World record stock \$100 to \$300. LONG BEACH FARMS, Augusta, Kalamazoo Co., Michigan.

Holstein Bull Calf: Born Sept. 11. Splendid individual, well grown, nicely marked. His dam sire's dam has A. R. O. records that average 7 days Butter 24.86 lbs. Milk 557.8 lbs. both as 4-yr-olds. W. B. READER, Howell, Michigan.

Jersey Bulls for Sale from high-producing dams, with testing Asso. records, also on semi-official test. C. B. Wehner, R. 6, Allegan, Mich.

NOW IN SERVICE—A Son of the \$50,000 sire King Segis Pontiac Alcartra, GREGORY & BORDEN, Howell, Michigan.

MAPLE Lane Register of Merit Jersey Herd—Tuberculin tested by U.S. Government. For sale, Register of Merit cows, also bulls, bull calves and heifer calves, having from 3 to 7 Register of Merit dams in their pedigrees. IRVIN FOX, Allegan, Michigan.

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BUTTER BRED JERSEY BULLS CRYSTAL SPRING STOCK FARM, Silver Creek, Allegan County, Michigan.

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SHORTHORN BULLS FOR SALE—Red and Roans. 10,160 lbs. milk and 518 lbs. butter with first calf in one year. Reasonable price. Write, F. W. Johnson, Custer, Mich.

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I AM SOLD OUT of rams but have a few aged, bred, OXFORD-DOWN EWES at farmers' prices. M. F. GANSSLEY, Lennan, Michigan.

Rams and Ewes from the first prize flocks of Cotswolds, Leicesters, Lincoln and Oxford Downs; two years old rams and ewes; yearling rams and lambs, either sex. Some of these are unbeaten this year. Harry T. Crandell, Cass City, Mich.

RAMS—SHROPSHIRE OXFORDS AND HAMPSHIRE. Good strong well woolled fellows ready for business. Shipped to you without the money. Isn't that fair? If so write KOPE KON FARM, Kinderhook, Michigan.

OXFORD Down Ram and Ewe Lambs, and Reg. Berkshire's, either sex. Priced to move quick. CHASE'S STOCK FARM, R. 1, Mariette, Michigan.

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS "The Sheepman of the East." I sell and ship everywhere and pay express charges. Write for club offer and price list. Oxfords, Shropshires and Felled-Delaines. PARSONS, GrandLedge, Mich. R. 1.

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Berkshires—Orders booked for sows to be bred for next spring farrowing. Fall pigs \$8 each now. B. B. REAVEY, Akron, Michigan.

ROYALTON BRED BERKSHIRES—Six weeks old pigs, both sexes, registered stock with papers, at farmers' prices. D. F. VALENTINE, Supt., Temperance, Michigan.

A nothing in Reg. Chester White Swine. 10 weeks old pigs \$10. Holstein Herd Bull cheap. RAY B. PARHAM, Bronson, Michigan.

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HAMPSHIRE Swine—Breeding stock of all age from most popular strains. Write for breeding inspection invited. Floyd Myers, R. 9, Decatur, Ind.

HAMPSHIRE SWINE—Choice young stock for fall breeding, both sexes, prices reasonable. West Wind Farm, Pontiac, Mich. E. F. HAMMOND, Owner. N. A. WISER, Manager.

Two O.I.C. Hogs Weigh 2806 lbs. Why lose profits breeding and feeding scrub hogs? Two of our O. I. C. Hogs weigh 2806 lbs. Will ship you sample pair of these famous hogs on time and give agency to first applicant. We are originators, most extensive breeders and shippers of thoroughbred hogs in the world. All foreign shipments.

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Write—Today—for Free Book, "The Hog from Birth to Sale" THE L. B. SILVER CO. 196 Vickers Bldg., Cleveland, O.

O. I. C.—Bred sows and spring pigs, large and growthy. Pairs and trios, not akin. Write your wants. GLENWOOD STOCK FARM, Zeeland, Mich.

O. I. C. March, April and May pigs; the big, growthy kind that always makes good. LEMUEL NICHOLS, R. F. D. No. 2, Lawrence, Mich.

O. I. C. Swine—Service boars, also gilts of Spring farrow, place your order with me before they are sold. Get my price on pairs and trios of Aug. and Sept. farrow. A. J. GORDEN, R. No. 2, Dorr, Michigan.

O. I. C. and Chester White Swine. We won this year at Ill. State Fair, nine first prizes, four second and five Champions including both Grand Champions; at Wis. we won twelve first prizes, five seconds and all Champions. We have over 700 pigs on hand of every age. All stock is shipped on their own merits. C. O. D. ROLLING VIEW STOCK FARM, R. No. 2, Cass City, Michigan.

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O. I. C.—10 good boars, \$18 to \$25 each. One very choice boar \$30. Registered free. C. J. THOMPSON, Rockford, Michigan.

O. I. C's—STRICTLY BIG TYPE. For 12 yrs. I have been breeding for size and length with quality. Lengthy Prince one of the largest boars the breed ever produced, heads our herd, assisted by White Monarch and Frosts Choice, 2nd prize under six months boar at Mo. Inter State Fair 1914. Stock for sale at all times, prices reasonable. Address, NEWMAN'S STOCK FARM R. No. 1, Mariette, Mich.

O. I. C's—Nothing for sale at present. Satisfaction always guaranteed. A. R. GRAHAM, FLINT, MICHIGAN.

O. I. C.—Spring boars all sold. We have some fine fall pigs ready to ship. JOHN BERNER & SON, Grand Ledge, Michigan.

O. I. C's—I have extra fine lot of last spring boars and a lot of this fall pigs, either sex, not akin, will have a bred sow sale in Jan. 1/2 mile west of depot. OTTO B. SCHULZE, Nashville, Mich.

O. I. C's—Large bone kind. Taking orders for September pigs. Shipped O. O. D. J. W. HOWELL, Elsie, Michigan.

O. I. C. Choice Gilts for Spring Farrow. Not bred, May pigs. Choice serviceable boars the long bodied kind. ALVIN V. HATT, Grass Lake, Mich.

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THIS O.I.C. SOW WEIGHED 932 LBS. AT 23 MONTHS OLD IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." G. S. BENJAMIN, R. No. 10 Portland, Mich.

Duroc Jerseys—15 spring boars and 15 sows; also 60 fall pigs from the principal strains; pairs and trios. B. C. STAHLMAN, Cherry Lawn Farm, Shepherd, Mich.

DUROC JERSEYS—Fall pigs either sex, sows bred for spring farrow and Bronze Tom Turkeys. Bert Sweet, R. No. 1, Hudsonville, Mich.

Duroc Jersey Boars From Prize-Winning Stock. Write, or better still, come.

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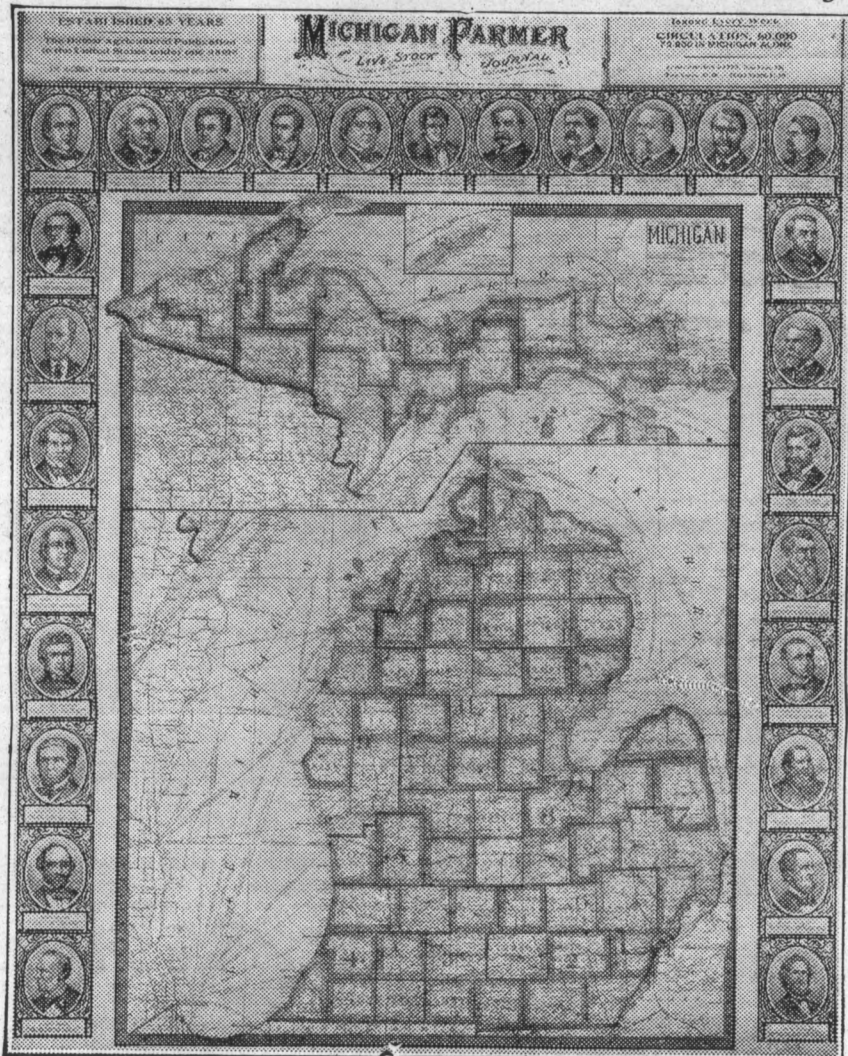
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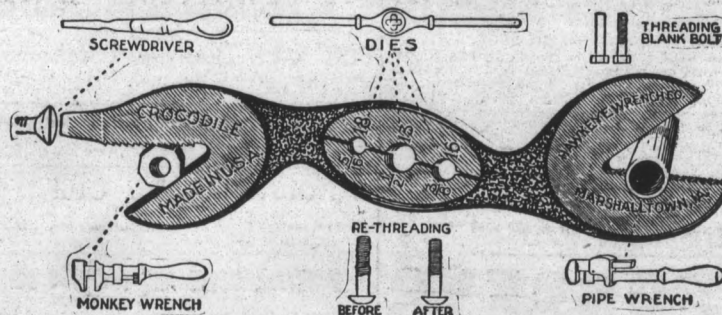
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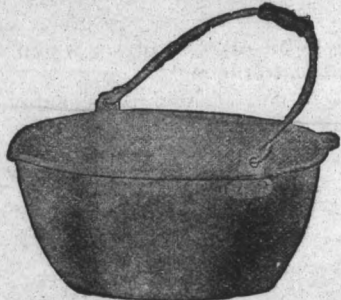
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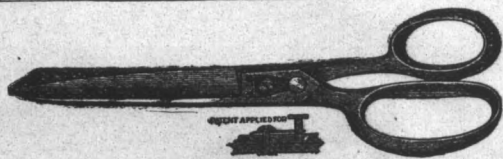
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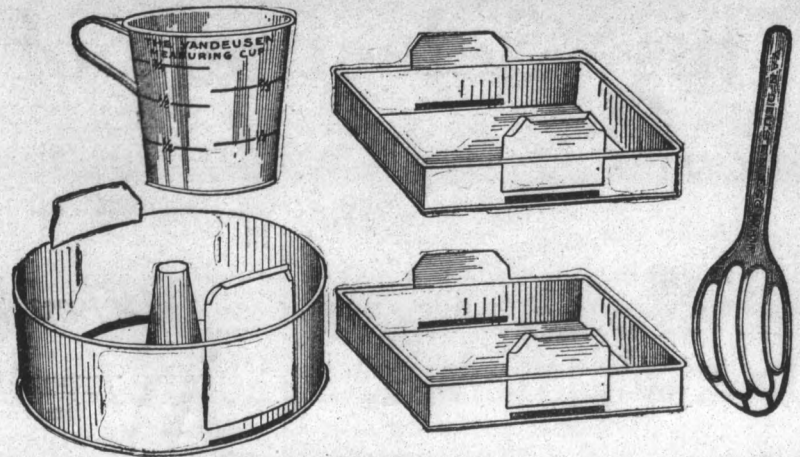
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