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Co-operation That Co-operates.

CO-OPERATIVE farmers' associations are commercial manifestations of what we call the Brotherhood of Man. In the early times man was, to a great extent, sufficient unto himself. His household made its own clothes and raised and prepared its own food. He fortified himself to an extent against the outer world. But now, in the age of specialization, our industries as well as individuals are dependent upon each other, and our interests have become less individual and more collective, and therefore co-operation has become necessary. As the population increases the individual becomes less noticeable. Therefore the farmer, in order to make himself heard by the outer world, must do so collectively or by co-operation.

Other lines of business have developed the spirit of co-operation quicker than farming because they, from the standpoint of necessity, realized the value of it. Farmers have been slow in accepting the co-operative idea because its necessity has not been brought forcibly to them. However, as the handling of their products has become more complex, the value of co-operation has become more apparent, and at present there are quite a few successful co-operative organizations.

As the co-operative spirit has just started in rural affairs, but will in time become almost general, there will be many lessons gained, through experience, and as numerous new organizations will be formed the experiences of the successful ones cannot help but be of value. For this reason information regarding the South Haven Fruit Exchange is given.

The fruit growers in the vicinity of South Haven did considerable talking about co-operation before they got down to business. It was annually a prominent subject on the programs of the Pomological Society, the oldest fruit society in the state, for more than a generation. This talk was not wasted, however, as it served to gradually arouse interest and study in the subject.

In the winter of 1912-13 some of the most prominent and level-headed fruit growers organized the association. Its organizers being practical business men as well as farmers, had no "get-rich-quick" dreams regarding the organization but were sensible enough to organize it along conservative lines, going at it just as they would any business organization.

We can do no better than to quote from the

excellent talk on the work of the association by George H. Myhan at the recent State Horticultural meeting regarding its form of organization and methods of doing business.

"Our association is known as the South Haven Fruit Exchange. It was organized with a capital stock of \$5,000 and the term of existence of this corporation is fixed at 30 years. Each member holds one share at \$100 and no member can own more than one share. The organization is con-

weight and varieties of each load. The fruit is then graded and sorted under the personal supervision of the manager and packed ready for shipment. We make but two grades of apples, "A" and "B." Each package is stamped with just what the package contains as to quality and variety."

After the fruit is sorted the grower is credited with the amount of each grade his fruit sorted to. Final payment on the fruit is not made until the end of the season, but the grower

buying in not less than carload lots, paying cash therefor, securing goods at the lowest possible cost and selling to the members of the exchange in quantities to suit, at an increase of five per cent over cost. We have made a saving of at least 20 per cent through co-operative buying. Packages are bought in quantities that admit of a liberal reduction in price.

"We gave employment to as high as 70 men and women during the season, women packing peaches, fancy apples and pears. Frequently 7,000 to 8,000 crates of fruit are handled during the rush time.

"The sales of the association for the first year were about \$30,000. This, our second year, we have handled 255 carloads of fruit, with sales of about \$110,000.

"Our first year's business made such a good showing, paying 12 per cent on capital stock, besides disposing of our fruit so satisfactorily, and the demand for membership was so persistent that the association deemed it advisable to increase the membership to 100 members and the capital stock to \$10,000."

As Mr. Myhan states, the association has been a great success, one beyond the expectations of its organizers. That it will be permanent is indicated in the fact that it made good in two seasons which presented the extremes in the marketing of fruit. The season of 1913 the fruit crop was small and good prices were easily obtained by all. In 1914 it was hard to sell fruit and the association was almost taxed to its limit in the amount of fruit it had to handle, but even so, it got above the market prices for most of its products.

The first year the association was fortunate in hiring for a manager a man who had made a success and reputation as a fruit buyer in South Haven. His efficiency has been one of the main facts in the success of the association. It also rented his packing house, but that season being so successful they bought it of him at the end of the year and have made additions and improvements so as to double its capacity. The manager was also fortunate in getting his position, as it is now hard for buyers to do anything in the way of buying fruit there.

Besides being busy with the handling of all kinds of farm materials, the association also runs a beanery during the winter months. At one time this winter it had \$7,000 worth of beans on (Continued on p. 128).



Peaches, Fancy Apples and Pears Are Sorted and Packed by Hand.

trolled by a board of directors, from which they elect officers, president, vice-president, secretary and treasurer. The board meets with the manager once each week during the shipping season. All members deliver their fruit in crates at the central packing house in South Haven, which is located on the Michigan Central Railroad. The grower receives a carbon copy of the number of crates,

can draw on this account as he desires and according to the amount of fruit he has delivered. The cost of packing and five per cent for selling is deducted from the gross receipts of the fruit. The total cost of packing is determined at the end of the season and is then divided pro rata.

"The exchange also buys all the spray materials, fertilizers, bran, tile and other articles used on the farm,



A General View of South Haven Fruit Exchange Packing House, Showing Fruit Ready for Shipment.

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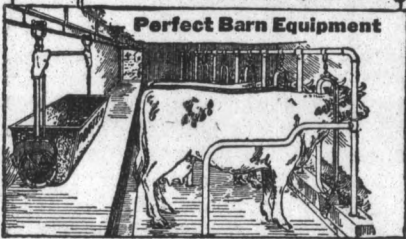
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Improving Muck Land.

We have some muck land recently drained by a large county drain over two miles in length, 16 to 20 feet wide at the top, four feet wide at the bottom and from five to 12 feet deep. This drain was dug by a dredge at a cost of less than \$5 per rod and put this land in good shape to cultivate. The muck is from one to three feet in depth, underlaid with blue clay. As there was once an old drain through it, the land had all been cleared and was little if any harder to break up than any old sod.

I tried corn on a piece of about four acres, but as we had a hard frost in this section on June 19, when my corn was about six inches high, it was killed, so do not know how it would have come out, but it had made a very rapid and rank growth up to the time it was killed.

As it was then too late to plant anything else except potatoes or buckwheat, I planted part of it to potatoes, which averaged 150 bushels per acre, and the balance to buckwheat, which went 35 bushels per acre.

I also tried onions and cabbage and found that by sowing 400 pounds of fertilizer to the acre I could raise 600 bushels of onions and cabbage as large as half a bushel measure. I find the muck needs lime, potash and phosphate, but it has all the humus and nitrogen that it needs, as it is practically all vegetable matter.

Experiments with Muck and Marl on Upland.

In regard to the use of the muck and marl that was thrown out of the ditch I find that it will pay big profits to haul it on the upland. I did not have time to haul much of it last spring, but what I did haul paid well for the time expended. Where I put it on bean ground I could see a difference in the color and the growth of the vines from the start and when they podded they filled better and were affected by the blight less than where I did not put any.

On the potato ground I plowed under a clover sod that was in blossom and then rolled it and put on the muck and marl at the rate of 120 loads to the acre by drawing on a wagon, about a yard to a load. I then dragged it in thoroughly with a spring-tooth harrow.

The Cost of Application.

In regard to the cost of hauling, the distance handled, of course, makes a difference. I used two wagons and one team and hauled 80 rods and by using one man to pitch it and using six-inch plank on the wagon and dropping one plank in a place and stringing out that way with the strings about five feet apart, I could keep him busy. As a man can haul about 30 loads a day this way, two men and team being counted worth about \$5 per day, the cost is \$20 per acre.

In regard to the benefits derived from it, it increased the yield of potatoes 27 bushels per acre, and I do not think that I derived the benefit from it this year that I will in the next few years.

I heard a man in this neighborhood say that he could see benefits to his crops for 20 years after putting muck on a field of his. I am so well satisfied this year with what I tried that I will put it on all of my upland as fast as I have the time.

As the marl consists of 87 per cent lime and the muck is nearly all vegetable matter, there can be no question that it is cheap fertilizer for the man that has it on his own farm or near enough to haul on his land.

Crops for Muck Land.

I have heard it said a great many times that muck land is more liable to frost than other land, but where the muck is level, or nearly so, with the surrounding land as it is in this locality, and is well drained, I think

there is no more danger than on the hard land, unless it is high, rolling land.

I have raised corn and other crops on muck a good many times and this year is the first that I ever lost a crop, and if we had not had the frost at an unusual time this year it would not have hurt it. From my experience and observation I find that muck will grow any and all kinds of crops natural to this climate, unless it be oats and wheat, and if there is lime enough in the soil it will raise them, as the straw breaks over when it begins to fill, instead of tipping out as some have the idea.

I believe the time is coming, and at no distant date, when our muck lands in this country will command as high or higher prices than the best of uplands, and that the farmer who has a little muck patch or a whole farm of it, will have a larger bank account than can be made only on the clay lands, as the man that has the muck land has land more easily worked and not so hard on his tools or horses.

Genesee Co. W. S. BURNETT.

PHYSICAL IMPROVEMENT OF THE SOIL.

There are farms and farms, which have been farmed year after year without addition of sufficient organic matter and plant food to keep them in good physical condition. In other words, they are run down. Nothing is at its best when it is poor physically and this is as true of soils as it is of the human organism.

Why Commercial Fertilizer Sometimes Fails.

With the land in decreasing fertility, the farmer applies commercial fertilizer. But yields, after one brief upward impulse, continue to decrease. This is the point where the enemy of the commercial fertilizer springs up and points to this one instance where the use of fertilizer failed to increase the yielding properties of the soil.

However, this is slight excuse to the man who has probed more deeply into the subject. He knows that the necessary plant food is in the ground and has been there for ages. The fault lies in the bad physical condition of the soil. In the first place, organic matter has not been applied to the ground, thus opening the way to the second reason. The necessary humus has not been formed which, in turn, creates the good tilth and granular structure of the soil. This is what the wornout soil needed, a physical regeneration. Now, with the plant food present, the soil will soon show the remarkable bearing qualities which so long had lain dormant.

Value of Granulation.

The healthy soil is the soil with a crumbly, granular structure. Compare road dust and granulated field dirt. The former is made up of incoherent soil particles, while the latter is made up of particles massed and crumbly. In clay and silt soils, the property of granulation is particularly valuable because of the tendency of these soils to bake, but being well granulated, they can be kept in excellent tilth.

Sometimes nitrogen is lacking and the soil crust becomes fine, as in the case of the corn field, which if not plowed after a rain, the leaves of the corn yellow. This very fine soil has acted as a mulch and prevented aeration of the soil. This condition may be caused by poor drainage as well.

Granulation is effectively controlled by five main factors; frost, moisture, drainage, rotation and organic matter content. One can readily see how each factor would affect the soil. Moisture alternately wets and dries the soil, while frost alternately freezes and thaws. Handling the soil in a wet or puddled condition hinders granulation in reverse to proper drainage, which removes the source of the action of puddling. The growing of grasses and legumes always tends to

revert the soil to the virgin condition.

The Problem of Organic Matter.

The first aim of every American farmer should be to see that his soil is plentifully supplied with organic matter. The annual waste, as burning strawstacks, the burning over of wheat fields and clearing the entire acreage of all the crops, is indeed fruitful of poverty and soil destruction unless the organic matter is restored in some way.

The latter may be accomplished by the addition to the soil of farm manure, green manuring crops, as rye, vetch, cowpeas, soy beans, alfalfa, rape, etc., and leguminous crops. The latter, of course, serve as both nitrogen gatherers and as a source of organic matter.

The partially decayed organic matter aids in keeping the granules together and thus makes the model tilth and the proper physical condition of the soil.

Indiana.

L. E. NEUFER.

POTATO AND CORN SHOWS.

An all-day potato meeting was held at Buckley, January 8, under the auspices of the Wexford County Farm Bureau, with an attendance of about 200 farmers living in that section. Stimulating talks were made by Dr. Eben Mumford, of East Lansing, C. W. Waid, secretary of the State Potato Association, and John C. Ketcham, of Hastings, master of the State Grange. C. W. Waid judged the exhibits and the leading prize winner was E. E. Champion. A fine dinner was served at noon by the ladies.

The second annual exhibit of the Genesee county boys' and girls' corn club was held at Flint, January 9, with 36 entries from Gaines, Atlas, Genesee, Forest, Fenton, Mt. Morris, Davison, Richfield, Flushing, Burton, Thetford and Clayton townships. The judges were E. C. Lindeman, of the M. A. C., Mark Piper, of Mt. Morris township, and Ivan Parsons, of Grand Blanc township. The corn show was of excellent quality and the judges found it difficult to choose the winners. Robert Rieman, of Atlas, won first prize for the largest yield, having grown 1,735 pounds on an eighth of an acre. Other first prize winners were: Best ear, Ralph Middleton; best 10 ears of yellow dent, Ralph Middleton; best 10 ears of white cap dent, Ralph Rossman; best 10 ears of white dent, Arnold Gregory. The Cummings school of Atlas secured the largest number of points and won the American flag. Prices were awarded by W. J. Hinkley, of Flushing, president of the club.

The Washtenaw county contest for boys and girls was held at Ann Arbor, January 8, with 40 exhibitors and \$122 in prize money offered by the business men of the city through the civic association. J. Robert Duncan, of Vicksburg, member of the executive committee of the Michigan Experiment Association, was judge and praised the exhibits very highly. First, second and third prize winners in the two classes were respectively as follows: Younger class, Miss Gladys Bunton, Ypsilanti; Donald Stimson, Saline; Edward Smith, Saline. Older class, Lester Swaninger, Ypsilanti; Harold Polsdorfer, Milan; Carl Lambarth, Saline. These six exhibits will be entered later in the state contest.

Kent Co.

ALMOND GRIFFEN.

With wool selling high, sheep and lambs pelts bringing record prices, and a scarcity of sheep and lambs in feeding districts generally outside of Colorado and Wisconsin, sheepmen have every reason to be optimistic regarding the future of that industry. Of course, the quarantine maintained because of the prevalence of foot and mouth-disease acts as an obstacle to trade in more ways than one, and it has greatly lowered the shipment of feeders to feeding districts, thereby vastly cutting down the number of lambs in process of fattening for the market.

FARM NOTES.

Wheat Smut.

My wheat last year was one-third smut. I would like to know if the straw fed to horses and used for bedding, and the manure used on wheat as a top-dressing this winter would be injurious to the wheat? Would there be any danger of having smutty wheat next harvest? I sowed clean wheat and treated it for smut with formaldehyde.

Huron Co.

W. R.

According to the best authorities the chances are slight for healthy kernels of clean wheat being infected with smut spores by being sown on ground containing such spores. The accepted theory of the life history of the smut fungus is that the smut spores attached to the infected kernels of wheat which are sown, germinate at the same time as the wheat, and the filaments of the fungus penetrate the tissues of the wheat plant before the first leaf makes its appearance above ground. From this time on both plants grow together, the one within the other, throughout the period of growth. Due to its peculiar habit of growth the fungus seems to die as it passes upward through the plant, leaving few traces of its existence in its path until in the matured plant smut seems to be found almost entirely in the matured spores appearing in the heads of the grain. It has been determined that smut will successfully pass the winter, even upon the open ground, in this latitude, and that germs two years old have not lost their power of producing smut in the crop.

From this theory of the life history of the disease, it is apparent that no infection of the crop would be caused by top-dressing the wheat with manure made from the smut-infested straw, since if the fungus is present in a form to injure the crop, the plants are already infested with it.

Applying Ground Limestone in Winter.

I have ten acres plowed for oats. I am going to put on about 30 tons of ground limestone, which costs me \$1.25 per ton besides the hauling. Can I afford to put this lime in under cover and distribute on the land in the spring, or would it be as well to put in the field now and spread it in the spring? I have a piece of five acres on which I raised soy beans last year. Will the soy beans inoculate for alfalfa?

Wayne Co.

W. H.

If the spreading of this ground limestone is to be postponed until spring, it will be an economy to store same in a dry place until it is applied to the land. The writer has found it more satisfactory to have the limestone shipped at about the time the application is contemplated as it is a heavy product, and the saving of one handling is quite an item.

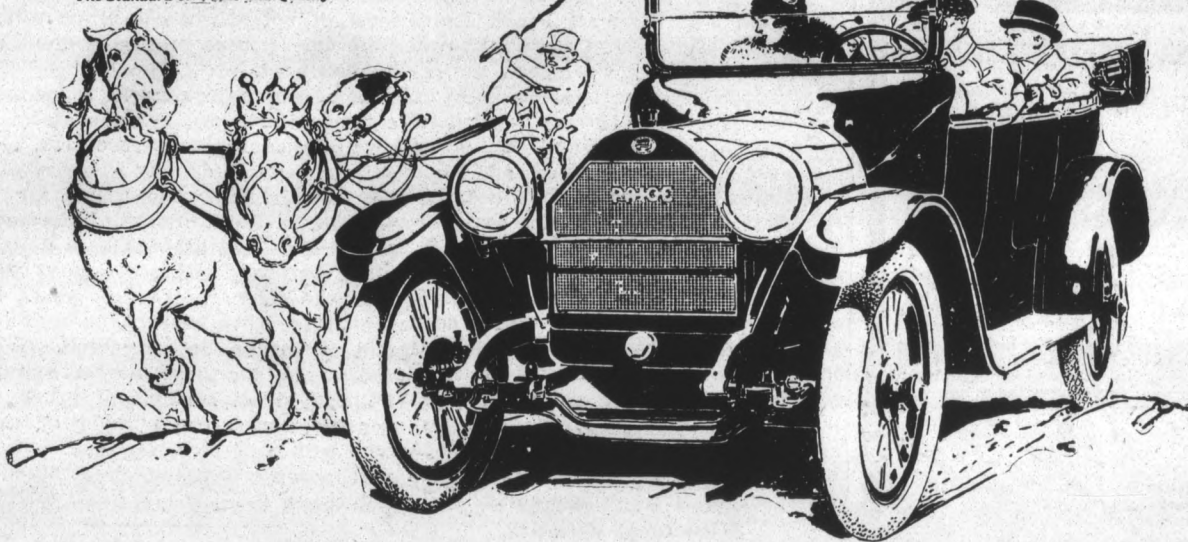
In applying ground limestone the writer uses a lime distributor made for the purpose, hauling the limestone direct from the car to the field and applying it at once. Our method is to use two wagons in hauling, a man hauling a load into the field, taking the other wagon and going for another load while a man in the field distributes the limestone. We have same shipped in bulk and haul in tight wagon boxes, which reduces the cost of handling to the minimum. It is generally more satisfactory to apply the ground limestone just before the soil is to be fitted for the spring crop, but there is no reason why it cannot be as satisfactorily hauled during the winter season and spread as it is hauled. Last year we covered one field in this way in the winter when there was some snow on the ground and more blowing. It would, however, in the writer's opinion, be better economy to spread the limestone when drawn, whether the work is done now or in the spring.

Inoculation of Alfalfa.

Soy beans will not provide the bacteria for which the alfalfa plant is host. If inoculation is necessary, it would be better to use soil from a successful alfalfa plant or pure culture, as may be more convenient.

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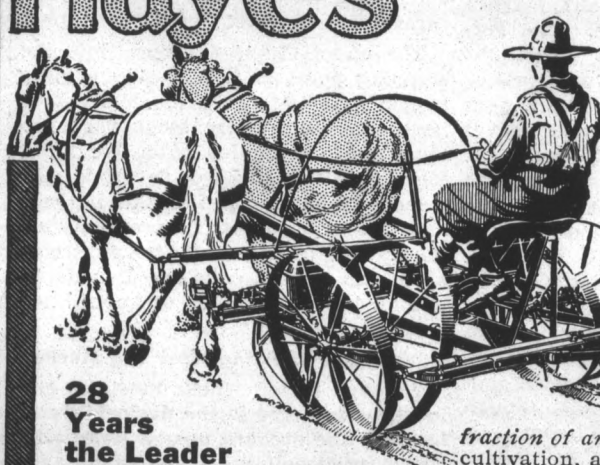
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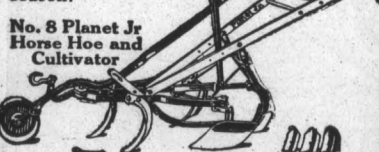
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Originators of "Trees at Half Agents' Price."

"Strawberry Plants That Grow"

All the best June and Fall-bearing varieties. Also best Raspberry, Blackberry, Currant and Grape Plants: Asparagus and Rhubarb Roots in assortment. Our 1915 Catalog tells how you can get plants of our Wonderful New Seedling Strawberry, "Collins" absolutely FREE. Write for it.

C. E. Whitten's Nurseries, Box 14, Bridgman, Mich.

Everbearing Strawberry Varieties.

AFTER becoming interested in everbearing strawberries I began looking them up and trying them out, and from all I can learn there are only six of the well known kinds that can be considered desirable. Three of these bear so little in the fall that they should be fruited both spring and fall, and the other three set too heavy for spring berries. All everbearers bear some the season they are set, but should have the blossoms picked until well rooted. Iowa, Productive and Superb should be picked back the next spring only once or twice and then let them bear as they will. Americus, Francis and Progressive should be picked back the first season until well rooted and then let bear till they freeze up. The next season they should be picked back until the first of August, then they will bear until freezing weather.

Some Good Varieties.

I found the Productive to be a large plant which bears a large berry, but it will not bear alone. Only about one-half or less of the plants bore at all. The berries are of only fair quality and the vine is not a large plant maker. The Superb makes a good plant but only one-half of the plant bore last summer, those bearing made but few new plants, while the ones that did not bear made a good supply of plants. The berries are large, well shaped and of good flavor.

The Iowa I have not tried, but I learn on good authority that it requires a clay soil and does not bear as large berries as the two named. Both of the others are at home on a variety of soils.

I did not try the Francis as it seems to be suited only to sandy soil and the highest culture. My soil is mostly clay and I cannot keep the plantation clean as easily as one on a soil of a more workable nature.

The Americus is said to require a clay soil and to be very hardy. I found the vines to be of medium size but they are not very good plant makers. They were covered with bloom and berries. The berries were medium sized, with that peculiar wild flavor that is regarded by many as the very highest quality. They bear until freezing weather under ordinary good care and favorable season. No doubt it will make plenty of plants for one's own use, and more is a nuisance to the berry grower. An intensive grower of everbearing strawberries regards this as the best kind of the everbearers for the average berry grower.

A Productive Variety.

The Progressive were set very early and proved wonderful plant makers and were quite productive. The berries were inclined to be small but good in flavor. Both size and quality would have been better had I kept most of the runners cut off. But I wanted all of the plants I could get and so let them grow. The plants are small but appear hardy and at home on a variety of soils. It is an especially good kind to sell plants from. A prominent fruit grower says that this kind will produce more plants and more berries than any other that he is acquainted with, and he advises those who cannot make a success of the others to try this kind, though he thinks it a poor keeping and poor quality berry. This may be due to the large use of nitrogen in his fertilizers, as western men do not complain of its quality and I like the flavor better than I do either the Superb or Productive. The latter is too tart to suit me but for marketing and shipping purposes it is very good. It is at home on a variety of soils and bears until frost.

Intensive Care Necessary.

All kinds of everbearers require extra rich soil, intensive cultivation and extra expense in picking, all of which

are at present well paid for in most markets. When they become more common the prices will drop and most, if not all, of the profit will be gone unless more profitable kinds can be produced.

At present prices are high and many common kinds are being sold by unscrupulous men for everbearers. Buy only of reliable dealers and expect to pay a fair price for them, for the present, at least. Some of the newer kinds are listed as high as a dollar a plant but may not prove any better than the older kinds, if as good. For the present everbearers, as a novelty and for profit, do very well. While the market for these must necessarily be limited on account of other, seasonable fruits, the number of those who will grow them for their own use will increase to a very great extent.

Isabella Co.

F. G. SMITH.

SELECTING THE ORCHARD SITE.

The grower having selected the section of the state best suited to his desires, he must take into consideration factors which go to make up a good orchard site.

The influence of Lake Michigan is a factor which the grower can well afford to consider seriously, inasmuch as it forms one of the natural advantages of Michigan as an orchard state. Its protective feature is especially valuable in the growing of peaches, as inland peaches become a speculative proposition of more or less uncertainty. Of course, apples are not as tender as peaches, and therefore this matter is not so vital with this fruit. However, this must be considered by the orchardist who is thinking of planting peaches as fillers or as a complement to the apple orchard. Many men claim that the humidity of the air in the districts adjoining the lake tends to hasten the growth of diseases, but it is certain that the advantages of frost protection more than offset any possible danger along this line.

Distance from Shipping Point.

Statistics as gathered in this survey show the average distance of the orchards from their shipping point in Michigan to be 3.11 miles, illustrating the necessity of the orchard to be within easy hauling distance of the nearest railroad station. With wagons as the only available means of hauling from the farm to the station, it is doubtful whether the orchard can profitably be located over five miles from the loading point. The automobile truck increases this radius to about 25 miles and permits the more careful handling of fruit in hauling.

The effect of the distance from the shipping point is felt also in hauling supplies to the orchard. Many men have said that where stock yard manure must be hauled over five miles for use in the orchard, the time consumed in hauling will make the manure too expensive to be profitably applied. Too often merely the first cost of the manure is considered in determining the advisability of buying manure.

Advantages of Being Near Big Market.

Another factor which must be seriously considered is the desirability of locating the orchard near a large city. There are forcibly marked advantages accruing to the orchardists located within hauling distance of some large city. In the first place, a local market is often afforded which will absorb the total crop of an orchard, including culls, at a satisfactory price without the necessity of shipping. One of the prominent growers near Detroit in the fall of 1914 averaged one dollar a bushel for his first-grade winter apples. He had no shipping expenses except those accruing from hauling the crop to the market in his motor

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Made in two styles—Plain and Fertilizer—with shoe or double disc furrow openers, adjustable to plant 16 18 and 20 in. apart in the row, four rows at a time. Spacing bars are furnished with each drill, enabling the user to make the necessary spacing without the use of measuring instruments. These bars hold the furrow openers the exact distance apart, thus making the rows easy to cultivate.

The Superior Feed is especially adapted to beet seed and has wide range of quantity. Agitators furnished with every drill. No "bridging" of seed. Gauge wheels can be used as press wheels if desired. Assure even depth of planting.

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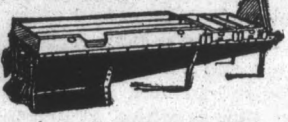
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truck. In years of short crop he had averaged \$1.75 per bushel. His sales were made direct to the grocers on the public market, and he delivered the apples in bushel baskets, thus saving him the cost of packing. He claimed that these were average prices secured by the best growers for the fancy winter apples. Increased gross returns secured by these men should go far towards offsetting any increased land valuation resulting from proximity to the city.

The contour and the site of the orchard are of prime importance, as much of the success in the growth of the trees in the orchard is dependent upon these factors. Rolling land is best for orchard land and 74.2 per cent of the growers answering the survey question covering this point report that their own properties meet this requirement. The necessity of having rolling land is not so much due to the fact that it is undulating in topography, but rather that it affords air and water drainage naturally, with a consequent prevention of killing frosts, which settle in the low lands and of "wet feet" resulting from poor drainage.

The Best Exposure.

On the matter of the exposure of the orchard the results of this survey showed that the orchards were subjected to practically every exposure possible with no apparently evil results occurring in any case. It is clearly evident that no deliberate selection of exposure has been made by these men in planting their orchards, for in the results, we find that 40.1 per

about 10 years old that bear some very fine fruit, but so far the quantity is too small for practical purposes. Perhaps when they get "going" they will do better.

Emmet Co.

H.

The productiveness of any variety is influenced to a great extent by the soil conditions under which the trees grow. The writer knows of an orchard of Jonathans on a sandy loam soil rich enough to produce trees of good size, which started to bear when three years old and has borne since good crops of good-sized fruit. In other places he has seen the same variety not come into bearing until six or seven years of age and the size of the fruit usually being small.

There is a distinct relation between the growth of a tree and its productiveness. If a slow-growing variety such as the Wagener, is grown on soil which will check its growth, it will be small in size and is liable to overbear and be short-lived. However, if put on a richer soil so as to encourage wood growth, it will be of fairly good size and bear moderately. On the other hand, Spies in some instances on rich soils, have made abundant growth and borne but little fruit even up to 20 years of age.

Jonathans are usually earlier bearers than Galdwins but not as early as Wageners. It is not as long lived as the Baldwin, but lives longer than the Wagener. With plants as with animals, those which come to maturity or productiveness early are not as long-lived as those which are slow in coming to maturity.

In consideration of the fact that



An Orchard Site Affording Immunity from Frost is Essential in Making Peach Growing Profitable.

cent have land sloping to the south, which is generally considered to be the most unsuitable in fruit culture, for with the southern slope the buds are apt to open and the blossoms appear before the dangerous spring frosts have passed. It cannot be found that there is any marked effect one way or the other upon the orchards. As one man stated, his orchard sloped in all directions and as far as he was concerned, he could see no difference in the results.

In summarizing this point, it would undoubtedly be wise to select land with a northern or northeasterly slope, if this could be done without a sacrifice of other orchard essentials; but all other essentials should be accorded a preference before the matter of exposure. It must be remembered that these remarks apply to apples only, for exposure is a very essential factor in the success or failure of a peach orchard. J. W. FISHER, JR.

TROUBLE DEPARTMENT.

The Productiveness of the Jonathan Apple.

Can you tell me of the bearing qualities of the Jonathan apple in this state, say trees from 15 to 20 years old? How do they compare with Wageners or Baldwins under the same conditions. We have a few trees

your trees have not borne much up to ten years, they ought to do well between 15 and 20 years. It would undoubtedly be advisable to endeavor to check the growth of the trees to some extent in order to get them into greater productiveness. In order to do this, legume cover crops and fertilizers should be kept from the orchard, and it might also be beneficial to productiveness to leave the orchard in sod for a few years at least.

STATE HORTICULTURAL MEETING.

The midwinter meeting of the Michigan State Horticultural Society will be held in Muskegon, Tuesday and Wednesday, February 2-3. An excellent program is being prepared and some of the big subjects in the interest of the fruit industry will be handled by experienced men in the business.

Mr. R. A. Gill, of Fort Clinton, Ohio, will be a guest of the society at the meeting and will tell of the peach industry, also his success in sizing and grading different fruits, from his personal experience.

For further particulars apply to Robt. A. Smythe, Secretary, Benton Harbor, Mich.

"Strawberry Plants that Grow" is the title of the new catalog sent by C. E. Whitten's Nurseries, Bridgman, Mich. It lists a large line of strawberry and other small fruit plants.



Established for 61 years. Seeds, bulbs, plants, shrubs and trees of the best quality. Sixty acres of home grown roses.

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100% Potato Planting
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Best Hardy Non-irrigated Seed 99.8% Pure 99% germination, \$10.00. Government tested. Absolutely guaranteed Northern grown, extremely hardy. No seed better. Have Turkestan Alfalfa Sweet Clover, Timothy, grass seed of all kinds. Ask for our latest 60-page book on growing Alfalfa, 92-page catalog and samples. All sent Free. We can save you money. Write today.

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Guaranteed as good as grows at \$1.00 per 1000 and up. Catalogue FREE.

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We are trying with all our might to furnish absolutely pure, Red, Alsike, Mammoth, Alfalfa, Timothy, Sweet Clover, and all other field seeds, with all blasted and immature grains removed. Write today for free samples and instructions "How to Know Good Seed."

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The greatest forage plant that grows. Nothing equal for fertilizing. Excels Alfalfa as a producer. Crop worth \$50 to \$125 per A. Easy to start. Grows everywhere. Can save you money on best tested, guaranteed seed. Write today for Free Sample, circular and 92-page catalog.

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Clover, Timothy, Alsike, Alfalfa and all kinds of Pure Field Seeds direct from producer to consumer. Free from noxious weeds. ASK FOR SAMPLES.

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STRAWBERRY PLANTS Of best quality in any quantity. Blackberries, Raspberries, Gooseberries, Currants, Grape Vines, Ornamental Shrubs, send for our new catalog free. Ever bearing Strawberry and Raspberry plants.

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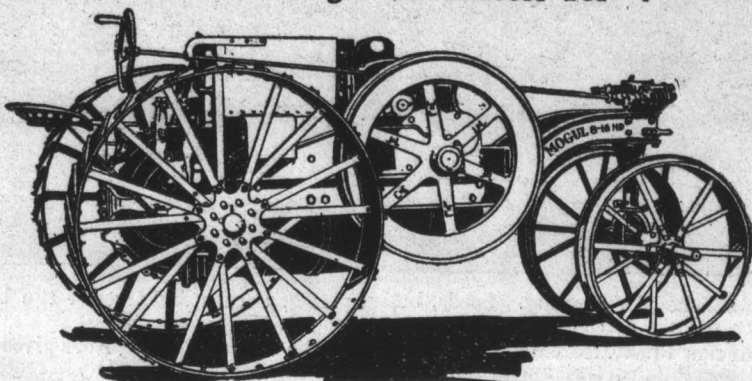
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A Mogul Oil Tractor for \$675



We announce for 1915 an all-purpose farm tractor with 8-H. P. at the drawbar and 16 on the belt—Mogul 8-16

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Being a four-wheeled, all-purpose tractor, you can use it every working day.

It will do all the plowing, disking and seeding.

It will draw manure spreaders, wagons, hay loaders, mowers or binders.

It will run a corn sheller, feed grinder, small shredder, thresher or ensilage cutter.

Any farmer can buy this new Mogul 8-16 tractor for \$675.00, cash, f. o. b. Chicago.

The man who can use one of these Mogul tractors pays, at this price, the least for which a good, reliable, all-purpose 8-16 tractor can be sold.

If you want to use a Mogul small-farm tractor for spring work, your order should be placed now with the I H C local dealer.

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FOOD LAW ENFORCEMENT IN AND FOR MICHIGAN.

BY FLOYD W. ROBISON.

A department of the state government which should command particularly the interest and attention of all of the citizens of the state alike is the Dairy and Food Department. A food law is unique in this particular in that it is a law of universal importance to the producer and to the consumer. Recognizing the great community of interest which exists in the manufacture, vending, and consumption of food and its allied products, makes the work of a food department of singular interest to all of the people.

A Food Department's First Duty is to the Consumer.

Probably the first and paramount duty of a Dairy and Food Department of a state government is to furnish a protection to the consumers of these various products. It was the demand of the consumers primarily for this protection which is without doubt responsible for the creation of the food department. There are instances on record in which food laws have been inaugurated at the request of producers but in general, food departments have been inaugurated, and food laws instituted at the behest of consumers. So we see, therefore, that a food law is primarily intended for the protection of consumers of food and allied products. This protection originally was against injurious ingredients in food products, that is, products injurious, or supposed to be injurious, to the public health. The originally greatest plea for the establishment of food laws and the creation of food departments was to prevent the sale to consumers of adulterated foods, which adulteration was considered to be prejudicial to health. In a similar way many of the great legal protests over allowed adulterations were protests where health interests were involved. Therefore, we repeat that the primary consideration in the enactment of food laws and in the establishment of food departments was for the protection of public health against poisonous and otherwise injurious ingredients added to the food products.

The Prevention of Fraud and Deception.

With the progress of food inspection it soon became evident that the work of a food department was expended in many other ways than in the protection of the public against injurious additions to food products, and we therefore find the second great duty of a food department to be "to prevent fraud and deception in the sale of food products." It is this second province of a food department which encourages, or has encouraged up to the present time, the most abundant efforts of a food department. Once it has been established that a product is injurious to health it has not been difficult to secure its elimination from food products. An excellent example of this is in the preparation of vanilla and lemon extract. It is not so very long ago that these extracts were prepared by various concerns in quantities, using wood alcohol as a solvent for the flavoring principle. It required little effort on the part of food departments to secure the removal absolutely of wood alcohol as a solvent, by the mere turning of the eye of publicity to the practice. We doubt if a single extract could be found on the market in the United States today containing wood alcohol, but a much more troublesome problem in the sale of extracts has been in the preventing of the use of imitating, though harmless, products.

For example, in the manufacture of

vanilla extract there is a product produced from the chemical treatment of coal tar called vanillin which is analogous to the vanillin which is normally present in the true vanilla bean. The temptation to use this synthetic product as a substitute for true vanilla extract has been very great and is now practiced even to a considerable extent. Likewise, an inferior grade of extract is made from decoctions of the tonka bean which furnishes a flavoring principal known as coumarin. This product, coumarin, is stronger in flavor than is vanillin but is not so delicate as is vanillin in the vanilla bean, consequently the extract of tonka bean has been used and is still used to cheapen the manufacturing cost of vanilla extract, and it has been a hard task for the food departments to regulate properly the use of this product in commerce. In the same way with lemon extracts.

The Adulteration of Lemon Extracts.

The oil of lemon produced from the lemon peel contains the flavoring properties of the lemon and consequently a true lemon extract consists of a solution of this oil which is extracted or expressed from the lemon peel. The use of such substances as citral and citronella, lemon grass, etc., has taxed the energies of the food department for their proper regulation. We frequently hear people say, "If the product used is harmless, why object to its use?" But it is as clearly a privilege of the consumer to be protected against fraud and deception in the food products which he buys as to be protected against fraud and deception in any other transaction. Insofar as food adulteration is concerned it is this phase of a food department's work which requires the closest attention and the greatest energies of the department.

The Food Department's Duty to the Manufacturer.

The third duty and purpose of a food department is to protect the honest, legitimate manufacturer and vendor of food products. We once heard a very high legal representative of the government state that he did not consider it the province of the food department to protect a food manufacturer in his business. But a little experience in the work of a food department will convince anyone that in protecting the honest, legitimate manufacturer lies the most direct road to eradicating the evils which a food department is created to combat. Indeed, the greatest criticism which has been made by food manufacturers against the operation of the food laws has been brought about through the failure of food departments, both state and national, to throw sufficient protection around the business of an honest, legitimate manufacturer.

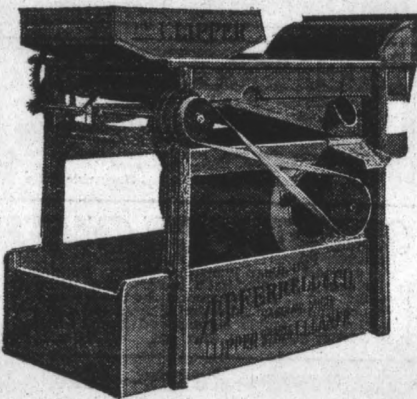
(Continued next week.)

CATALOG NOTICES.

"The Chatham System of Breeding Big Crops," is a large-sized, finely illustrated booklet printed in colors, sent upon request by the Manson-Campbell Co., of Detroit, Mich., manufacturers of Chatham grain graders, cleaners and separators, the perfected successors of the old-time fanning mill. This booklet contains valuable information for grain growers and farmers, as well as detailed descriptions of the well-known line of goods manufactured by this company. Write for a copy of this catalog, mentioning the Michigan Farmer.

The new Galloway sanitary cream separator, manufactured by the Wm. Galloway Co., Waterloo, Iowa, is described and illustrated in detail in a new 50-page art catalog sent upon request by this company. It illustrates the method and process of manufacture as well as the construction of the product, and lists as well other specialties manufactured by this company.

The Clipper Improved No. 1-B Grain and Seed Cleaner



This Mill has a principle that is different from all others. For years it has been thoroughly tried out and adopted by thousands of the best farmers, the U. S. Dept. of Agriculture, Agricultural Colleges, Experimental Farms and hundreds of the leading seedsmen, seed corn growers, etc.

Ours is the only mill making use of the "vertical blast" which actually weighs every seed and kernel, separating the light, shrunken, immature seeds from the plump, heavy mature seed, 98% of which will germinate under test. This point alone makes much of the difference between crop success and failure.

No Mill Will Do Good Work Without the Right Kind of Screens.

We furnish 12 screens for cleaning and grading all kinds of seed grain, seed corn, all kinds of clovers, alfalfa, timothy, millet, flax, peas, pea beans, cow peas, soy beans, etc. And, after the most careful study and tests in actual work, we guarantee this screen outfit to be the best that has ever been offered with any mill. There are screens for clover containing buckhorn and plantain, timothy containing pepper grass, cockle from wheat and other difficult separations.

The No. 1-B is sold under a 30-Day Guarantee of Satisfaction or money refunded.

Price, complete, east of the Mississippi, \$23.50 cash, FREIGHT PREPAID to your R. R. station.

In Successful Farming Three Factors are Prominent—the Soil, the Man and Good Seed. The Clipper Cleaner puts success within your reach by insuring Good Seed.

Write for Catalog and address of nearest jobber.

A. T. FERRELL & CO., SAGINAW, MICH.



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Cost only one-third as much as ordinary iron, wire or gas pipe gates, but last twice as long. Neat in appearance—best and strongest gate made—light, easy to handle, opens both ways. Boards are double bolted between eight angle steel uprights and double truss braces. Guaranteed never to sag.

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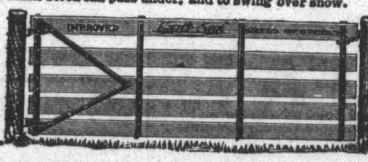
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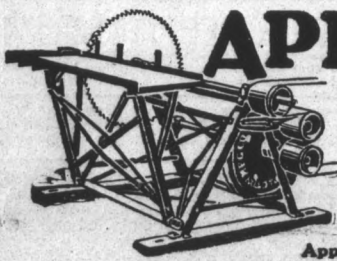


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40 years the Standard. Made strong, rigid and simple to stand years of hard service. Frame of heavy barsteel; or hard-wood, braced and bolted. Non-heating, self-adjusting boxes.

Make money sawing wood this winter. Your time and an Appleton wood-saw could bring you a big profit. Get booklet showing 10 styles for all purposes—all Appleton quality. Ask for our engine catalog too.

Appleton Manufacturing Co., 620 Fargo St., Batavia, Illinois



Dairy.

CONDUCTED BY COLON C. LILLIE.

LILLIE FARMSTEAD DAIRY NOTES.

The cow tester has just completed his monthly test and his report shows that several cows have produced over 50 pounds of fat during the month. Not a cow in the herd but what shows a profit, except a few that are nearly dry and will freshen again in a few weeks. I am quite well satisfied with the report, because it has been pretty cold weather and one would naturally expect cows to shrink in their flow of milk in such steady cold weather. The reason for the good production in cold weather is due in part, at least, to the fact that they have not been turned out doors to any extent. They have water in the stable, the barns are thoroughly aired each day and there is no necessity for their going out. I believe it is better for them to stay in, and I am sure it pays better.

I have never had young calves do better than they are doing this winter. They are being carefully fed. I can tell that. Calves should be fed regularly and they should be fed the same amount of skim-milk each feed. It pays to carefully weigh or measure the milk each time. To feed too little at one feed and too much at another always raises hob with young calves, and in fact with any young animals, pigs, for instance.

We never increase the amount of skim-milk as the calf gets older and larger. One reason is we want it to eat more and more roughage, corn silage, hay, straw, etc., as well as grain. The ration of skim-milk is five pounds night and morning, and a gill of flaxseed jelly. Then what hay, silage and grain they will eat. At first, of course, they waste some of the hay and grain but they soon learn to eat it and a careful man can feed it with very little waste. If we increased the skim-milk as they grew older they would depend on this and would not eat so much roughage, and we want to develop their capacity for roughage as young as we can and as fast as we can, because, when mature we want them to eat and digest fully two-thirds of their ration of roughage. Capacity for roughage in dairy cows means a cheaper ration, and a cheaper ration means greater profit and sufficient profit spells prosperity. We can wrangle over prices for dairy products, and it is well to consider this end of the business, but remember that production is the big factor after all. We must have something to sell and that something must be produced for less than the selling price. Prepare for this by growing better dairy heifers and developing them properly.

MAKING COTTAGE CHEESE AND SELLING IT.

I would like to know how to make cottage cheese, and if there is any market for it in Detroit and Toledo. At the present time we have about 100 pounds of skim-milk a day and next year we will have about 200. Can this be made into cottage cheese with enough profit to pay us to do it? I would like all the information in regard to this matter that you can give me. Are there any farmers' bulletins on cottage cheese. I have a feed mixer that I made myself that works perfectly and is quite fast. If you would care to have it I will send a description of it and directions for making it. Monroe Co. H. J.

I cannot make cottage cheese, my wife is the cheese maker. I know how to make butter, but my wife makes cottage cheese more by the "rule of thumb" than scientifically. Nevertheless, she makes good cottage cheese—sometimes. Really it is a simple matter to make this cheese. Let the milk sour, heat it gently to 80 de-

grees, drain off the whey through a sieve or cheesecloth until dry enough and then season with salt. The more cream you add, the better flavor the cheese will be.

Write the Wisconsin Experiment Station for their bulletin on this subject. That will tell you you should use rennet to sour the milk so you can have complete control and get the curd when you want it, and regularly; it will tell you to be exact about heating etc. Follow this method and your cheese will be much more uniform in texture and quality.

To make cottage cheese for the market you should be just as careful and systematic as the cheese maker is in making full cream cheese, then you will have a uniform product, and uniformity counts when you put a product like this on the market. To market cottage cheese is another problem. It will not keep long and must be consumed in a short time. You can sell any amount of it if you can deliver it often and cater to your trade. Most people prefer to buy cottage cheese made into little balls and exhibited on a clean plate. It ought to be put into tight boxes or pails, but people don't take to it that way. It is because they are not used to it. If it could be delivered to the dealer in a tub, say 20 pounds to the tub, and then the dealer cut it out with a ladle for his customers, this would be ideal. But people are not used to this and don't take to it.

I am satisfied the readers of the Michigan Farmer would like to see a cut of this feed mixer and get a word of description of it. I, for one, would be interested. Please do not keep us waiting long.

DUAL-PURPOSE COWS.

Our cows, of which we have 10, including heifers, are all grades and all colors, as well. We want to work into the beef cattle. What breed would you suggest? I rather fancy the dairy bred Shorthorns; would it be any great advantage to us to buy a registered animal? G. W.

Many people pronounce the Dairy Shorthorns the very best dual-purpose breed. The Red Polls have many advocates, while some think the Brown Swiss belong to this class and pronounce them good.

If you select Shorthorns, you must remember that this breed has two types, a dairy type and a beef type. In fact, all so-called dual-purpose breeds have this double type, and in selecting a bull you must be careful and select one from a milking family. The beef type of Shorthorns is as distinct a beef animal as a Hereford or a Polled Angus, and I take it you wish to preserve the milking qualities of your present herd of cows and perhaps improve them in that respect. A Shorthorn bull from a milking strain or family will probably fill the bill as well or better than any you can get.

BITTER MILK.

I see in the Michigan Farmer of January 2 that F. F. asks for a remedy for cow giving bitter milk. I had two cows last year that ran in the same pasture, drank out of the same river, stood side by side in the stable, ate out of the same manger, of the same kind of food; one gave good milk and the other gave bitter milk; it was so bitter that when it was fresh from the cow the chickens nor hogs would not eat it. Your advice to me then was the same as to F. F. now, "wash the milk-pail," but in my case the milk was thick, stringy, lumpy, bitter milk, whether milked in a pail or on the ground, when it came from the cow. The same cow gave bitter milk this winter. I got a free trial package of Dr. Hess' Stock Food (any other kind may be as good) and gave her a few doses in feed and the milk is all right. I have to repeat the dose about once a week. A. L. ROCKWELL.



There is no good reason why you should wait till Spring before getting a

DE LAVAL CREAM SEPARATOR

ON THE CONTRARY YOU may buy a De Laval NOW and save half its cost by May. If, for any reason, you can't conveniently pay cash you can buy a De Laval on such liberal terms that it will actually pay for itself.

AS TO YOUR NEED OF A separator, if you have the milk of even a single cow to cream you are wasting quantity and quality of product every day you go without one. This waste is usually greatest in cold weather and with cows old in lactation, and it counts most, of course, when butter prices are high. THEN WITH A SEPARATOR there is always the sweet, warm skim-milk and saving of time and labor in addition.

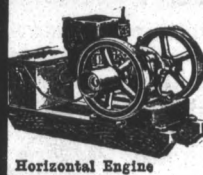
WHEN IT COMES TO A choice of separators De Laval superiority is now universally recognized. Those who "know" buy the De Laval to begin with. Those who don't "know" replace their other separator with a De Laval later—thousands of users do that every year. If you already have some other machine the sooner you exchange it for a De Laval the better.

WHY NOT START 1915 right in dairying? SEE and TRY a DE LAVAL NOW when you have plenty of time to investigate thoroughly. The nearest De Laval agent will be glad to set up a machine for you and give you a free trial.

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15.95 SENT ON TRIAL AND UPWARD AMERICAN CREAM SEPARATOR

Price, On Trial, Guarantee, Reliability, and Protection are features which make the American Cream Separator stand supreme in its field today. \$15.95 buys a new easy running, perfect skimming separator that skims warm or cold milk and makes heavy or light cream. Sanitary "marvel" bowl, easily cleaned. Thoroughly protected gears. Picture illustrates our larger capacity machines. **20 Year Guarantee** Backed by a reliable company. Western orders filled from western points. Whether your dairy is large or small, write for catalog at once. Address AMERICAN SEPARATOR CO., Box 2061 Bainbridge, N. Y.



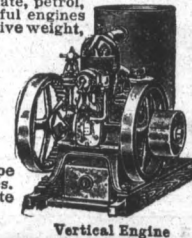
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Run on Kerosene—6c for 10 Hours

Ellis Engines develop more power on cheap lamp oil than other engines do on high-priced gasoline. Will also operate successfully on distillate, petrol, alcohol or gasoline. Strongest, simplest, most powerful engines made; only three working parts. No cranking, no excessive weight, no carbonizing, less vibration, easy to operate.

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Have patent throttle, giving three engines in one; force-feed oiler; automobile type muffler; ball-bearing governor adjustable while running and other exclusive features. Every engine sent on 30 days' approval with freight paid. 10-year guarantee. Write for 1915 catalog, "Engine Facts," showing New Models with special prices. ELLIS ENGINE CO., 2839 East Grand Boulevard, Detroit, Mich.



Vertical Engine

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We offer for the safe investment of your funds

MUNICIPAL BONDS

Yielding from 4% to 6% income, many issues tax free.

These bonds are paid from taxes—by coupons collectable thru any bank—and all the property of the Cities, Counties or other Political Subdivisions issuing them is pledged for the prompt payment of principal and interest.

We absolutely own all the bonds we offer and have spared no time and expense to make sure of their security and legality.

They are in denominations of \$100, \$500 and \$1000, and can be purchased on

OUR PARTIAL PAYMENT PLAN

if you so desire. This is explained in general information given in free booklet "Bonds of our Country," which will be sent on request. Write for one today.

BOND DEPARTMENT

THE NEW FIRST NATIONAL BANK,

COLUMBUS, OHIO

Cheapest and Best Feed for COWS!

Seldom does quality go in hand with low price, but right now **Dried Beet Pulp** is the cheapest standard feed you can purchase, as well as the best individual ingredient of a ration. You cannot afford to continue buying bran, middlings, corn meal, barley, oats and other carbohydrate feed when you can get a better feed like **Dried Beet Pulp** for **LESS MONEY PER TON**. At today's prices, **Dried Beet Pulp** offers you the biggest value that can be obtained.

Nothing Else
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This is a clean, whole-some, pure, dried, vegetable food—All of the sugar beet that's "left" after man's food (sugar) has been soaked out by water. Cows and all other animals are very fond of it—succulent, bulky, palatable, laxative—Absolutely free from Adulteration.

PLACE YOUR ORDER NOW

Larowe's Dried Beet Pulp can be bought now to best advantage and will keep indefinitely. Therefore, we would advise you to order in liberal quantities to insure having a supply to last through next summer when pasture fails. Your feed Dealer carries it in stock, or can get it for you.

Best Combination:

Dried Beet Pulp blends well with Gluten Feed, Distillers' Grains, or Brewers' Grains, but does exceptionally well with Cottonseed Meal which at present is the cheapest source of protein. Try a mixture of five pounds **DRIED BEET PULP** and two and one-half pounds of Cottonseed meal for safe, economical milk production.

For Fattening:

Dried Beet Pulp in the ration as a substitute for part of the corn used will materially assist in growth and finishing. Try it also for sheep and hogs.

Specify Larowe's Dried Beet Pulp

when you order and you will be sure of getting the best grade of dried beet pulp produced in this country.

The Larowe Milling Comp'y

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PERMANENT SILOS OF HY-RIB CONCRETE



are low in cost, easily built by ordinary labor and have given general satisfaction everywhere. Built without forms, they require only the usual scaffolding and the ordinary farm labor. Walls are absolutely water-proof and are not injured by silage juices. Fire-proof, storm-proof and rat-proof. Nothing to rot or wear out. Need no painting or repairs.

For farm buildings of every kind, Hy-Rib construction is simple, economical, permanent and fire-proof. Hy-Rib combines within itself re-inforcement, forms, lath and studs.

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containing useful information, illustrations, testimonials, etc., also examples of farm buildings. Tell us what you plan to build and receive this valuable book free, postpaid. Agents Wanted.



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Alexander's Combination Sanitary MILK PAIL AND STOOL

The best, most practical, most sanitary and most convenient milk pail yet devised. Sit on it and milk into the funnel. Pail is entirely closed and milk strained as it passes from funnel into pail. Get larger profits by producing better milk. Rust proof and indestructible. Easy to clean. Cow can't kick it over. See at the Annual Convention of Michigan State Dairymen's Association, Flint, Mich., Feb. 16, 17, 18 and 19 or write for free catalog and further details.

INDIANA BOARD & FILLER CO.
Dept 2, Decatur, Indiana



WILSON'S COREGA Holds False Teeth Firmly and Comfortably in the Mouth

Prevents Sore Gums. Corega is an Odorless, Tasteless and Harmless Antiseptic Adhesive Powder. Eat, talk, laugh, sing, cough or sneeze without annoyance or embarrassment. Dentists prescribe it. 50c, \$1, \$2 at drug stores or postpaid on receipt of price. Sample for 2-cent stamp. COREGA CHEMICAL CO., 417 Charles Bldg., Cleveland, Ohio

THE LIVE STOCK MEETING.

(Continued from last week).

The Fat Barrow Show.

While not large in numbers the show was a decided success and was judged by Wm. Waffle, of Coldwater, who explained his reasons for placing in a very careful and painstaking manner. Awards on foot were as follows:

Duroc Jerseys over 250 lbs.—1st, C. V. Edmonds; 2nd, J. A. Mitteer.

Duroc Jerseys under 250 lbs.—1st, H. G. Keesler; 2nd, Michigan Agricultural College; 3rd, M. A. Bray.

Berkshires over 250 lbs.—1st, H. F. Beckley; 2nd, Hibbard & Baldwin.

Berkshires under 250 lbs.—1st, W. H. Schantz; 2nd and 3rd, Michigan Agricultural College.

Yorkshire under 250 lbs.—1st and 3rd, I. R. Waterbury; 2nd, Michigan Agricultural College.

Chester White over 250 lbs.—1st, Adams Bros.

Chester White under 250 lbs.—1st, J. Berners; 2nd, Chas. Bray.

Poland-China over 250 lbs.—1st and 3rd, Michigan Agricultural College; 2nd, J. C. Butler.

After the final adjournment of Thursday's meeting the members adjourned to the pavilion where the barrow carcasses were judged by Mr. Wayne Dinsmore, of Chicago, and H. W. Norton, Jr., of Howell, the latter giving a very instructive demonstration.

First place was awarded to Chas. Bray—Chester White; 2nd to I. R. Waterbury—Yorkshire; 3rd to J. Berners—Chester White; 4th to W. H. Schantz—Berkshire.

The Draft Colt Show.

Thursday morning at 8:30 the pure-bred draft colts were judged by Mr. Wayne Dinsmore, awards being made as follows:

Percheron Stallion Colts—1st, M. A. C.; 2nd and 3rd, J. N. Hicks & Sons; 4th, M. A. Bray.

Fillies—1st, 2nd and 3rd, J. M. Hicks & Sons; 4th, R. E. Whitney.

Clydesdale Stallion Colt—1st, F. Eggleston.

Belgian Fillie—1st, August Miller.

At 9:30 the 50 pure-bred draft horses entered in the Michigan Horse Breeders' first animal sale, were paraded in the paddocks adjoining the agricultural building, making an excellent show.

The Allied Breed Organizations.

The reports of the secretaries of the Allied Breed Organizations, together with officers elected for the ensuing year, are as follows:

Michigan Horse Breeders' Association.
President, Jacob De Gens, Alicia, Mich; vice-president, J. Elliott, Onondaga, Mich.; secretary-treasurer, R. S. Hudson, East Lansing, Mich.

Michigan Guernsey Cattle Club.
President, G. W. Ray, Albion, Mich., R. F. D. No. 1; vice-president, T. V. Hicks, Battle Creek; second vice-president, John Ebels, Holland; third vice-president, O. S. Goodwin, Battle Creek; secretary-treasurer, C. G. Par-nall, Jackson.

Michigan Poland-China Breeders' Association.

President, J. S. Butler, Portland; secretary, Robt. Martin, Hastings; directors, W. E. Livingstone, Parma; Wm. Waffle, Coldwater; A. D. Gregory, Ionia.

Michigan Berkshire Breeders' Association.

President, J. F. Miller, Caledonia; vice-president, J. E. Hibbard, Bennington; secretary-treasurer, B. B. Perry, Leslie; directors, H. F. Beckley, Howard City; C. S. Baldwin, Bennington; E. L. Salesbury, Shephard; Tyler Hill, St. Johns; W. H. Schantz, Hastings.

Michigan Shropshire Sheep Association.
President, H. E. Powell, Ionia; secretary-treasurer, W. H. Schantz, Hastings.

Michigan Sheep Breeders' and Feeders' Association.

President, C. A. Tyler, Coldwater; secretary-treasurer, W. H. Schantz

Hastings; executive committee, H. E. Powell, Ionia; R. A. Kyser, Lowell; S. L. Wing, Kinderhook; H. H. Halliday, Clinton; Bert Smith, Charlotte; I. R. Waterbury, Highland; E. N. Ball, Hamburg.

Michigan Swine Growers' Association.
President, W. H. Schantz, Hastings; secretary-treasurer, Carey U. Edmonds.

Michigan Red Poll Breeders' Association.

President, N. C. Herbison, Birmingham; secretary-treasurer, E. J. Peabody, Mulliken.

Michigan Holstein-Friesian Association.

President, H. W. Norton, Jr., Howell; vice-president, W. O. Wilson, Okemos; secretary-treasurer, W. R. Harper, Middleville; executive committee, J. Hubert Brown, Byron; D. H. Hoover, Howell; P. Buth, Grand Rapids; M. W. Wentworth, Battle Creek; S. H. Munsell, Howell.

Michigan Hampshire Sheep Breeders' Association.

President, John Hull, Dimondale; secretary, Comfort A. Tyler, Coldwater.

Michigan Oxford Sheep Breeders' Association.

President, I. R. Waterbury, Detroit; secretary, B. F. Miller, Flint.

Michigan Hereford Breeders' Association.

Plans started for a mid-year meeting to be held at the State Fair at Detroit in September. Officers elected for the ensuing years are: President, T. F. B. Sotham, Lansing; first vice-president, E. J. Taylor, Fremont; second vice-president, Louis Norton, Quimby; third vice-president, Robert H. Rayburn, Alpena; secretary-treasurer, Earl C. McCarty, Bad Axe.

Michigan Aberdeen Angus Breeders' Association.

President, Marshall Kelly, Charlotte; vice-president, Geo. B. Smith; secretary, Alexander Minty, Ionia.

The Michigan Jersey Cattle Club.

The Michigan Jersey Cattle Club held a well attended and enthusiastic meeting at 1:30, January 13, 1915.

Although the president, Mr. R. R. Smith, was stricken some weeks ago with serious illness, he was so far recovered as to occupy the chair and preside over the meeting. After the routine business was transacted, Mr. S. B. Wattles addressed the meeting. After discussion, Mrs. Phebe H. Walker gave a talk. Mr. C. C. Lillie not being present, Mr. H. F. Roberts was called upon and gave a very interesting talk on the Jersey in general and also gave some of the methods he has pursued for the last 25 years in building up his magnificent herd of Jerseys.

After some general remarks by Prof. Anderson, the club elected officers for the coming year. Mr. R. R. Smith was unanimously elected president, and Mrs. Phebe H. Walker was elected secretary-treasurer, and meeting then adjourned.

Michigan Shorthorn Breeders' Association.

The thirty-fourth annual meeting of the Michigan Shorthorn Breeders' Association began with a banquet, Tuesday evening, January 12, served at the Wentworth Hotel, after which a social time was enjoyed by the members.

Wednesday morning at 9:00 o'clock, at M. A. C. was a demonstration by A. E. Stevenson, of Port Huron, on a bull and three cows from M. A. C., and three cows and three steers owned by C. A. Tray, of Okemos. At 1:00 p. m. came the Shorthorn meeting at Agricultural Building.

On motion it was decided to have a Shorthorn sale at the College during March.

The following are the officers for the ensuing year: President, W. W. Knapp, Howell; vice-president, H. B. Peters, Burton; secretary-treasurer, Floyd Anderson, St. Johns; directors, J. E. Walkinshaw, Belleview; C. T. Ottmar, Merlebeach; C. W. Crum, Mc-Bride.

**GILBERT HESS**

Doctor of
Veterinary
Science

Doctor of
Medicine

Start Right Now to Condition Your Stock For Spring

If you want your work horses to look sleek and pull hard on the bit when spring work comes along, take my advice and start in to condition them right now to help them get rid of their old coats, get full of vigor and ready for hauling, plowing and other hard work that calls for horseflesh, muscle and staying power.

The long, heavy milking season is ahead of you—see, therefore, that your cows are put in the pink of condition and that those with calf are fit and healthy.

Then there's the spring pig crop—by far the most profitable live stock crop on the whole farm—you ought to see that the sows are up to snuff and that the litters get a good start.

Understand, your stock have been penned up all winter and on dry feed, and as corn or oats and hay do not contain the laxatives and tonics so liberally contained in grass, some of your animals are most likely to be in bad shape.

And the ailments common among stock just now are chronic constipation, dropsical swellings, indigestion, stocking of the legs; but by far the worst disease (especially among hogs) is worms. Worms are the biggest pork robbers I know of. Let me urge you to condition your stock right now, so that they will be able to derive the full benefit of the pasture as soon as you turn them out. I want every farmer and stock raiser to feed

DR. HESS STOCK TONIC

A Splendid Conditioner and Worm Expeller

My lifetime experience as a doctor of veterinary science, a doctor of medicine and a successful stock raiser has taught me what are the needs of stock that require conditioning at this season, and I have put every necessary ingredient into this scientific preparation of mine—Dr. Hess Stock Tonic.

I have included *Tonics* to improve the appetite—*Blood Builders* to tone up and enrich the blood—*Laxatives* for the bowels and *Vermifuges* for cleaning out the worms. I don't know of anything under the sun better than Dr. Hess Stock Tonic as a worm expeller. Every ingredient in my Tonic is highly endorsed by the U. S. Dispensatory and other world experts for the particular purpose I use them for. I couldn't have stood before you men for 22 years unless Dr. Hess Stock Tonic had made good—had proven its wonderful merit.

Now, I have never asked any farmer (and I never will) to buy Dr. Hess Stock Tonic on my or anybody else's word. I've got the fairest proposition to make you that you've ever heard—the broadest guarantee you have ever read in all your life. Here it is—read it:

So sure am I that Dr. Hess Stock Tonic will put your stock in a thriving condition, make the ailing ones healthy and expel the worms, that I have told my dealer in your town to supply you with enough for your stock, and if it doesn't do as I claim—if it doesn't pay you and pay you well—return the empty packages and get your money back.

You can't buy Dr. Hess Stock Tonic of peddlers, but only first-class dealers whom you know. I save you peddler's wagon, team and traveling expenses, as these prices prove: 25-lb. pail \$1.60; 100-lb. sack \$5.00. Smaller packages as low as 50c, except in Canada, the far West and the South.

Send for my book that tells all about Dr. Hess Stock Tonic—it's free.

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Poultry Pan-a-ce-a

This is just the time you should be giving your poultry this splendid tonic. It will put them in fine condition, make your hens lay, ensure fertile hatching eggs and strong, vigorous chicks. Very economical—a penny's worth is enough for 30 fowl per day. Sold only by reliable dealers—never sold by peddlers. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50. Except in Canada and the far West. Guaranteed just the same as my Stock Tonic—your money back if it doesn't do as I claim.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks, or, if kept in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. Guaranteed just the same as my Stock Tonic—your money back if it doesn't do as I claim.

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DETROIT, JAN. 30, 1915.

CURRENT COMMENT.

Educating Farmers. Gradually our standards of education are being changed. Time was when it was considered that only those who were to follow the learned professions, so-called, had need for technical or higher education. Our system of free education has had the very beneficial effect of bringing to the public generally a broader view upon this question. With the application of science to agriculture, technical education has come to be generally looked upon as quite as valuable in farming as in any other business or profession. Gradually we have broadened the scope of our educational institutions to satisfy this need, and today, in addition to the full technical courses in the agricultural education offered by our colleges, short practical courses are also contained in the curriculum. Advanced agriculture is being taught in an ever-increasing number of high schools, elementary agriculture is being given in our primary schools, agricultural schools of short duration are being held in farming communities, institutes and other means of disseminating agricultural information are becoming more popular, while agricultural literature has improved in quality and increased in circulation among farmers.

Important as it is to educate the farmers of the future along technical lines, it is quite as important that the farmers of today educate themselves as broadly as possible for the more efficient solution of the individual problems which confront them. Their own standard of education must be raised to correspond with the spirit of the times if they are to make the most of their present opportunities. Education is not confined to the school room or the college classroom; it continues through life, but is neglected at the option of the individual. George Bernard Shaw, the distinguished English philosopher and sociologist, recently wrote, "A man who knows what everybody knows is an uneducated man; the educated man is a man who knows what other people do not know." The application of this statement which the average farmer might well make, is by using all of his faculties in observation, study and thought upon the problems confronting him, he may gain a better understanding of the agricultural problems with which he is confronted than the average of his contemporaries. In this sense he will be a well educated farmer, even though he may never have had a day of technical classroom

training. To this end he should utilize every agency which may bring him information of value bearing upon his special problems. These agencies are many, but we believe that none is more important than is the farmer's trade paper. The publishers of the Michigan Farmer have devoted every energy and resource at their command to make the paper of greater educational value during the coming year than ever before. If the reader is among the number whose subscription expires with this issue that fact will be indicated on the date tab following his name. If your date tab reads Feb. 5, or Feb. 15, an early renewal will obviate the missing of a single number, possibly containing information of educational and economic value worth many times the yearly subscription price to the individual reader who misses it. The special offer of three years for one dollar is still in force, or 50 cents will bring 52 issues to your door.

A Proposed New Dog Law.

The sheep breeders of the country have, through their various organizations, endorsed the proposed uniform dog tax law prepared by a committee of the American Shropshire Registry Association and circulated among prominent sheep breeders throughout the country through the efforts of Miss Julia Wade, Secretary of the Shropshire Association. This bill was endorsed by the newly organized Michigan Sheep Breeders' and Feeders' Association at the recent Live Stock meeting and also by the general live stock association, and it will, with slight amendments which will make it conform to our conditions, be introduced in our own Legislature at an early date.

Space will not permit the reproduction of the text of the bill at this time. Suffice it to say that it increases the tax on dogs without making it oppressive, provides adequate machinery for the enforcement and collection of the tax, with the alternative of destroying the dog, imposes a penalty on officials charged with the enforcement of the law when delinquent in their duty as well as upon the dog owner, for misrepresentations to officials, requires the confinement of the dog to owners' premises and with reasonable exceptions gives any person the right to kill stray dogs. Adequate provisions are also made for the collection of damages for the killing or injuring of live stock or domestic fowls by dogs, except where same are killed or injured while running at large in violation of existing laws.

Altogether the bill is considered to be the best yet presented to properly protect the live stock interests and especially the interests of the sheep breeders of the state. It will be pushed by a committee of the sheep breeders' organization, but its passage would be aided by a plea from every sheep owner directed to his senator and representative in the Legislature.

Solving the Labor Problem.

Testimony which is being taken by the federal commission on industrial relations, in session at New York, is bringing out some very interesting opinions on the best remedy for industrial unrest from many so-called captains of industry and prominent men who have been identified with organized labor. The testimony given shows that many of the former class have a keen appreciation of the needs of the workingman and well defined opinions as to the best method of satisfying them. These proposed remedies range all the way from profit-sharing to a representation on the directorate of industries by the workmen. Opinion is somewhat divided on the question of the desirability and efficiency of labor unions, although the preponderance of opinion seems to be in favor of organization, efficiently conducted. Some of those who

have appeared before the commission express the opinion that labor organizations and capital, as at present administered, have similar faults and shortcomings.

Michigan Farmer readers will be interested in this comprehensive inquiry in an indirect way only, as having a bearing on the future of the labor market in general. Farm labor, as shown by the farm surveys which have been made in various sections of the country, including Michigan, is in general receiving a more liberal income than the labor income of the farmers themselves. But there is a phase of the farm labor problem which is worthy of the best efforts of each farmer employer to solve, and that is the problem of profitable continuous employment. The solution of this phase of the problem will do more to insure a permanent supply of efficient labor on the farms of Michigan and the country than even the payment of a higher scale of wages, which the average farmer could ill afford.

Giving permanent employment at a living wage the farmers will be able to compete with industrial concerns in the labor market, and under these conditions the better the city workers are paid, the better it will be for the farmers, since they will be larger purchasers of farm products.

HAPPENINGS OF THE WEEK.

Foreign.

European War.—Weather conditions continue to discourage any large movements of troops in the war zones of Europe. Notwithstanding this, the Germans made a desperate effort last week to break the line of the Allies at a point nearest Paris and succeeded in pushing the front of the latter forces back some distance. At other points along the western battlefield the Allies have made gains—near Rutoire the enemy was compelled to evacuate its advance position, in the valley of the Aisne progress is reported and in the Alsace district where the fighting is bitter, encouraging news continues to come to the Allies headquarters despite the difficult grounds over which the conflict rages. Further attacks upon Dunkirk and other coast towns by German air-men resulted in a few casualties. In the eastern theatre the Russians appear to have taken the offensive when the weather permits and have advanced on Prussia where it seems a large army has been gathered for the invasion. Little activity is reported before Warsaw, Poland, and to the south the movements are limited by reason of the heavy snows in the mountains. Reports from the Serbian frontier do not show any military activity there. In the Caucasus district the Russians are said to have inflicted another defeat upon the Turks. A naval battle occurred in the North Sea, Sunday, between British and German ships. After a four-hour fight the German cruiser Bleucher was sunk and two other ships were reported damaged. The Germans were steaming toward the English coast when sighted by the Britons and a running fight back toward the German shore followed, with the above results. Five British and four German battleships were engaged.

Roque Gonzales Garza has been ratified by the peace convention at Mexico City as provisional president of Mexico, to hold office till December 31. Before that date an election is to be held. The convention reserves the right to depose the provisional executive if he violates certain conditions laid down by that body.

Work of housing the victims of the recent Italian earthquake is progressing with dispatch. Early this week King Victor Emanuel of Italy made the rounds of the cities affected, to learn the condition from personal observation. The suffering is being intensified, however, by heavy storms now prevailing over that section.

Field Marshal Von Der Goltz, who was military governor of Belgium after the German occupation and until he was chosen to represent his government at Constantinople, is reported to have been fired upon in the Turkish capital. Several other officers are said to have been attacked at the same time.

National.

The Washington administration has answered criticisms of the government's attitude toward belligerent nations of Europe, it being charged that the effect of the actions of this government is favorable to the Allies and against the Germans and Austrians. The answer sets forth the position of the government as being absolutely

neutral. The answer maintains that in-so-far as contraband goods are concerned it is a matter for the belligerents to stop trading in such goods, and not a subject of prohibition on the part of neutrals. The letter goes into details and there seems to be a general opinion that it will go a long way toward establishing in the eyes of the whole world the absolute neutrality and impartiality of the United States government in the present European war situation.

Harry K. Thaw, who a year and a half ago escaped from the Matteawan asylum for the insane, in New York state, is again back in that state after his prolonged fight against extradition from New Hampshire. He is now to be tried on a charge of conspiracy in connection with his escape.

Judge Linesburg, of Johnston county, Oklahoma, is forbidding the newspapers to publish accounts of important cases because it is difficult to secure juries where this is done.

Many people and organizations are urging the state Legislature to take action in the matter of the Van Vorce case at Jackson prison.

MICHIGAN FARMERS' INSTITUTES.

County Institutes.—Allegan Co., Plainwell, Feb. 5-6; Barry Co., Hastings, Feb. 12-13; Berrien Co., Niles, Feb. 10-11; Calhoun Co., Homer, Feb. 17-18; Cass Co., Cassopolis, Feb. 11-12; Genesee Co., Clio, Feb. 5-6; Hillsdale Co., Reading, Feb. 15-16; Huron Co., Harbor Beach, Feb. 2-3; Ionia Co., Portland, Feb. 10-11; Jackson Co., Parma, Feb. 4-5; Lenawee Co., Adrian, Feb. 18-19; Livingston Co., Howell, Feb. 19-20; Mason Co., Ludington, Feb. 1-2; Mecosta Co., Big Rapids, Feb. 9-10; Midland Co., Laporte, Feb. 1-2; Muskegon Co., Holton, Feb. 3-4; Newaygo Co., Grant, Feb. 2-3; Oceana Co., Shelby, Feb. 4-5; Osceola Co., Reed City, Feb. 8-9; Ottawa Co., Coopersville, Feb. 5-6; St. Clair Co., Port Huron, Feb. 3-4; St. Joseph Co., White Pigeon, Feb. 12-13; Sanilac Co., Carsonville, Feb. 1-2; Shiawassee Co., Owosso, Feb. 11-12; Van Buren Co., Decatur, Feb. 9-10; Washtenaw Co., Willis, Feb. 25@26; Wayne Co., Belleville, Feb. 26-27.

One-Day Institutes.—Macomb Co., Washington, Jan. 30.

Muskegon Co., Trent, Feb. 1.

Charlevoix Co., Marion Center, Jan. 30; Maple Grove, Feb. 1; Boyne City, Feb. 2; Deer Lake, Feb. 3; Clarion, Feb. 4; Springvale, Feb. 5.

Allegan Co., Burnips Corners, Feb. 1; Dorr, Feb. 2; Moline, Feb. 3; Hopkins, Feb. 4; Martin, Feb. 8; Laketown, Feb. 9.

Ionia Co., Muir, Feb. 1; Orleans, Feb. 2; Danby, Feb. 3; Sebawa, Feb. 4; South Boston, Feb. 5.

Gratiot Co., Middleton, Feb. 1; Pompeii, Feb. 2-3; Alma, Feb. 4-5; St. Louis, Feb. 5-6.

Eaton Co., Dimondale, Feb. 6; Muliken, Feb. 6.

Ogemaw Co., Prescott, Jan. 29-30; Rose City, Feb. 1-2.

Livingston Co., Deerfield Center, Feb. 4.

Kent Co., Sand Lake, Feb. 8; Cedar Springs, Feb. 9; Rockford, Feb. 10; Grattan, Feb. 11; Caledonia, Feb. 12; Ada, Feb. 13; Grandville, Feb. 17; Byron Center, Feb. 18; Carlisle, Feb. 19; Canonsburg, Feb. 20.

Shiawassee Co., Shaftsbury, Jan. 30; Perry, Feb. 1-2; Maple River Church, Feb. 3.

Midland Co., Pleasant Valley, Feb. 8.

Calhoun Co., Penfield, Feb. 8; Battle Creek Twp., Feb. 9; Newton Twp., Feb. 10; Leroy Twp., Feb. 11; Athens, Feb. 12; Eckford Twp., Feb. 13; Rice Creek, Feb. 15; Partello, Feb. 16.

Washtenaw Co., Salem, Feb. 12; Ypsilanti, Feb. 13; Cherry Hill, Feb. 15; Saline, Feb. 16; Chelsea, Feb. 17; No. Lake, Feb. 18; Northfield Twp., Feb. 19; Ann Arbor Twp., Feb. 20.

Oakland Co., Ortonville, Feb. 15; Troy, Feb. 16; White Lake, Feb. 17; Clarkston, Feb. 18; Highland, Feb. 19; Wixom, Feb. 20.

Wayne Co., Redford, Feb. 17; Northville, Feb. 18; Denton, Feb. 19; West Sumpter, Feb. 20; Willow, Feb. 22; Flat Rock, Feb. 23; Eureka, Feb. 24; Romulus, Feb. 25.

District Round-up Institutes. Coldwater, Branch Co., Feb. 25-26-27.

Grand Rapids, Kent Co., Feb. 24-25-26.

Pontiac, Oakland Co., Feb. 24-25-26. Saginaw, Saginaw Co., Feb. 24-25-26. Farmers Week, (State Round-up), Agricultural College, March 1-6.

MICHIGAN STATE FAIR DATES.

Secretary and General Manager G. W. Dickinson announces the dates for the Sixty-sixth Michigan State Fair, which will be held at Detroit September 6-15, 1915.

Magazine Section

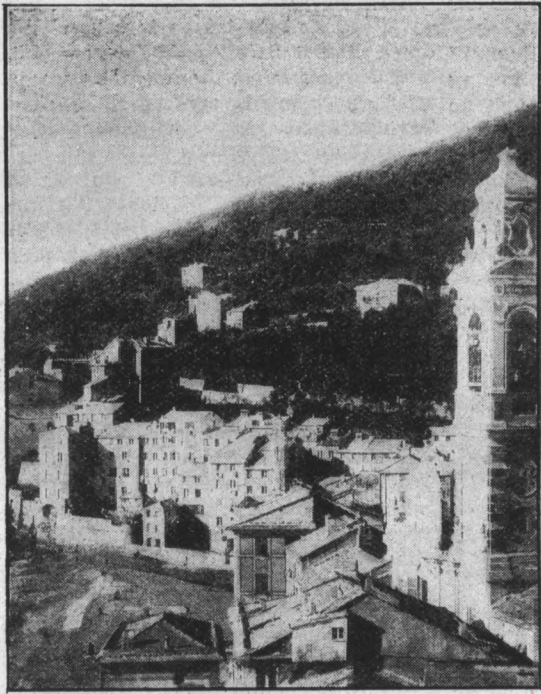
LITERATURE
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and GIRL
SCIENTIFIC and
MECHANICAL

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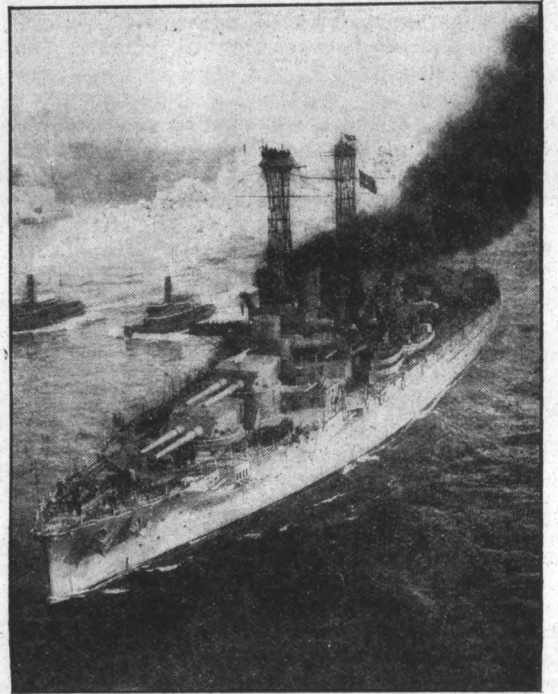
WORLD EVENTS IN PICTURES.



Sora, Italy, where 10,000 People were Killed.



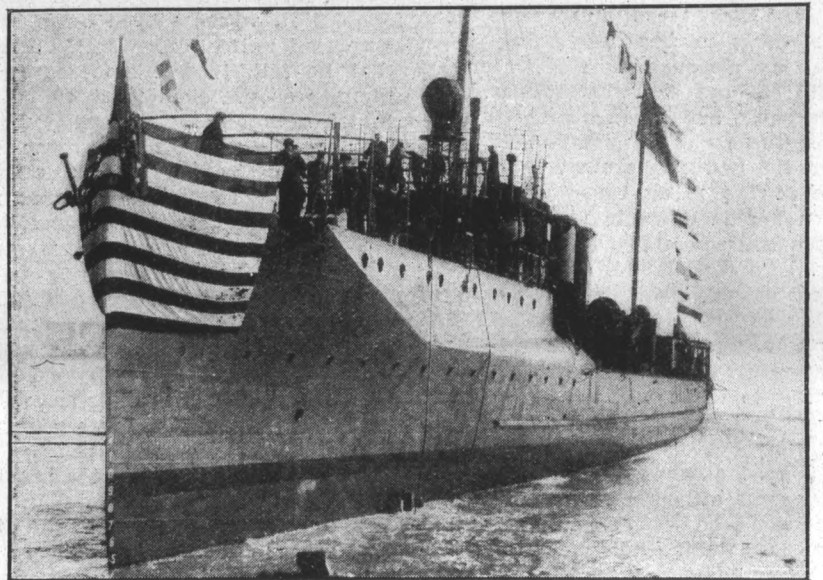
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Land O' Nod Stories.

By HOWARD T. KNAPP.

How Sharpnose Avoided the Trap.

THE trail of Sharpnose the Mink stretched away and away all the Minks, Weasels or Owls in the world. It seemed certain he must be on a very long journey indeed. For nearly a mile Billy Be Bo By Bum and Tinker Teedle Tee, the merry little elf, followed the neat little footprints in the snow that covered the floor of the White Forest like a soft carpet.

It was not a straight trail, not by any means, but twisted in and out like a corkscrew between the trees growing on the bank of the dried-up creek. Sometimes the tracks ran along the bed of the creek, then they would come up on the bank for a way, only to disappear in a clump of bushes or a briar patch, to reappear on the other side and once more follow the creek bed.

"This certainly is a crooked trail," said Billy Be Bo By Bum. "It looks to me as though old Sharpnose could not make up his mind where he wanted to go and was just running around in circles."

"He wants to go wherever there is a good dinner waiting for him," said Tinker. "The trouble is he can't find any of the Little People to kill and eat. But he is a patient fellow, even more so than his cousin Slinker the Weasel, and what he doesn't know about hunting could be written on the back of a postage stamp. There isn't much going on in the big woods that escapes his sharp little nose and eyes."

Just then the trail dipped down onto the creek bed again and led to a hollow log half hidden under the bank. Now there must have been something mighty interesting about that log, although for the life of him Billy couldn't see what it was. But Sharpnose had taken a great interest in it, there was no mistake about that. For he had run around and around the log so many times a path had been beaten down in the snow. But there was something queer in the way Mr. Mink had acted, something very queer indeed, and Billy Be Bo By Bum didn't understand it at all.

"What under the sun made him act that way Tinker?" asked Billy.

"Maybe there was something good to eat hidden in the log," replied Tinker. "Sharpnose is always interested in a good dinner, whether he is hungry or not, although I have never seen him when he wasn't as hungry as a bear just waking up from a long winter's nap."

"But then why didn't he crawl into the log and find out what was there instead of running around and around the outside? That's what I would like to know."

"Maybe he was afraid," replied Tinker. "You know there is no telling what was in that log and Mr. Mink is a cautious fellow who always tries to keep out of trouble."

"But I thought you said he wasn't afraid of anything," protested Billy, who was so puzzled he didn't know what to make of the case at all.

"Well, you certainly can't call old Sharpnose a coward," replied the merry little elf. "All the Little People admit he is the bravest fellow alive, considering his size, and that's why they fear him so much. But the Little People have one common enemy—man. He is the real terror of the White Forest, for, besides being so large and strong, he has more brains than all of them put together. There is no bird or animal that can successfully match its wits against a man who really knows the ways of the woods. The Little People know that,

so they fear man more than they do all the Minks, Weasels or Owls in the world."

"But a man couldn't hide inside of that hollow log," said Billy. "So why should Sharpnose be afraid to go inside?"

"Because his keen little nose told him a man had been around it lately," Tinker replied. "Mr. Mink always believes what his nose tells him, even if his eyes lead him to think differently. So while his nose told him there was something good to eat inside this log, the same guide also warned him that a man had something to do with it. He caught a whiff of the dreaded man smell, which is always a danger signal. Then his instinct, which is really an animal's way of thinking, warned him a trap was mixed up in some manner with that tempting dinner."

"A trap! Why, I don't see any signs

of a trap," said Billy in surprise. "Where is it Tinker?"

"Hidden inside of that log," answered the elf. "The hunter who wanted to catch Mr. Mink for his fine fur coat, put a piece of meat in the log, knowing Sharpnose would smell it even if he was a long way off. Then he placed a steel trap in the opening, right where Mr. Mink would have to step in it to get at the meat, but he was careful to cover it with dirt so Mr. Mink couldn't see it. If Sharpnose had so much as set his foot inside that hollow log, snap! the cruel jaws of the trap would have caught him by the leg and held him fast. So you see it was a good thing he didn't let his appetite get the best of him, but paid attention to what his nose told him and trotted along about his business."

"But where did he get his dinner?" asked Billy. "We've been following his trail now for ever so long and he hasn't found anything to eat yet."

"Well, it isn't often old Sharpnose goes to bed hungry," replied Tinker. "So let's follow his tracks a little further and if we don't find where he had a good dinner, my name's not Tinker Teedle Tee."

And next week I'll tell you how Sharpnose was fooled.

as the man who has saved not a few of us at Silverdale. We were in a very tight place before you came, and we are with you when you want us from this time, soul and body and all our possessions."

Alfreton's eyes glistened, and his hand shook a little as he touched the rim of Winston's goblet.

"There are folks in the old country who will bless you when they know," he said. "You'll forget it, though I can't, that I was once against you."

Winston nodded to them gravely, and, when the glasses were empty, shook hands with the three.

"We have put up a good fight, and I think we shall win, but, while you will understand me better by and by, what you have offered me almost hurts," he said.

"What we have given is yours. We don't take it back," said Dane.

Winston smiled, though there was a wistfulness in his eyes as he saw the bewilderment in his companions' faces.

"Well," he said slowly, "you can do a little for me now. Colonel Barrington was right when he set his face against speculation, and it was only because I saw dollars were badly needed at Silverdale, and the one means of getting them, I made my deal. Still, if we are to succeed as farmers we must market our wheat as cheaply as our rivals, and we want a new bridge on the level. Now, I got a drawing of one, and estimates for British Columbia stringers, yesterday, while the birches in the ravine will give us what else we want. I'll build the bridge myself, but it will cheapen the wheat-hauling to everybody, and you might like to help me."

"Dane glanced at the drawing laid before him, but Alfreton spoke first. "One hundred dollars. I'm only a small man, but I wish it was five," he said.

"I'll make it that much, and see the others do their share," said Dane, and then glanced at the broker with a curious smile.

"How does he do it—this and other things? He was never a business man!"

Graham nodded. "He can't help it. It was born in him. You and I can figure and plan, but Courthorne is different—the right thing comes to him. I knew the first night I saw him, you had got the man you wanted at Silverdale."

Then Winston stood up, wineglass in hand. "I am obliged to you, but I fancy this has gone far enough," he said. "There is one man who has done more for you than I could ever do. Prosperity is a good thing, but you, at least, know what he has aimed at stands high above that. May you have the Head of the Silverdale community long with you!"

CHAPTER XIX.

Under Test.

THE prairie lay dim and shadowy in the creeping dusk when Winston sat a redwood stringer near the head of his partly-finished bridge. There was no sound from the hollow behind him but the faint gurgle of the creek, and the almost imperceptible vibration of countless minute wings. The birches which climbed the slope to it wound away sinuously, a black wall on either hand, stretched back into the silence in front of him. Here and there a smoldering fire showed dully red on the brink of the ravine, but the tired men who had lighted them were already wrapped in heavy slumber.

The prairie hay was gathered, harvest had not come and for the last few weeks Winston, with his hired men from the bush of Ontario, had toiled at the bridge with a tireless persistency which had somewhat astonished the gentlemen farmers of Silverdale. They, however, rode over every now and then, and most cheerfully rendered what assistance they could,

Winston of the Prairie

BY HAROLD BINDLOSS.

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CHAPTER XVIII.

"If I had anything to cover I should still wait," he said.

"That," said Dane, "is not exactly good news to me."

"Our turn will come," said Winston gravely.

That day, and during several which followed it, wheat moved down, and Dane said nothing to Winston about what he felt, though his face grew grimmer as the time went on. Barrington was quietly impassive when they met him, while Alfreton, who saw a way out of his difficulties, was hard to restrain. Winston afterwards remembered that horrible suspense, but he showed no sign of what he was enduring then, and was only a trifle quieter than usual when he and Alfreton entered Graham's office one morning. It was busier than ever, while the men who hastened in and out seemed to reveal by attitude and voice that they felt something was going to happen.

"In sellers' favor!" said the broker. "Everybody with a few dollars is hammering prices one way or the other. Nothing but wheat to be heard of in this city. Well, we'll simmer down when the turn comes, and though I'm piling up dollars, I'll be thankful. Hallo, Thomson, anything going on now?"

"Chicago buying," said the clerk. "Now it's Liverpool! Sellers holding off. Wanting a two-eighths more the cental."

The telephone bell tinkled again, and there was a trace of excitement in the face of the man who answered it. "Walthew has got news ahead of us," he said. "Chicago bears caved in. Buying orders from Liverpool broke them. Got it there strong."

Winston tapped Alfreton's shoulder. "Now is the time. Tell him to buy," he said. "We'll wait outside until you've put this deal through, Graham."

It was twenty minutes before Graham came out to them. "I'll let you have your contracts, Mr. Alfreton, and my man on the market just fixed them in time," he said. "They're up a penny on the cental in Liverpool now, and nobody will sell, while here in Winnipeg they're falling over each other to buy. Never had such a circus since the trade began."

Alfreton, who seemed to quiver, turned to his companion, and then forgot what he had to tell him. Winston had straightened himself, and his eyes were shining, while the lad was puzzled by his face. Still, save for the little tremor in it his voice was very quiet.

"It has come at last," he said. "Two farms would not have covered your losses, Alfreton, if you had waited until tomorrow. Have supper with us, Graham—if you like it, lakes of champagne."

"I want my head, but I'll come," said Graham, with a curious smile. "I don't know that it wouldn't pay me to hire yours just now."

Then Winston turned suddenly, and running down the stairway shook the man awaiting him by the arm.

"The flood's with us now," he said. "Find Colonel Barrington, and make him cover everything before he's ruined. Dane, you and I, and a few others, will see the dollars rolling into Silverdale."

Dane found Barrington, who listened with a grim smile to what he had to tell him.

"The words are yours Dane, but that is all," he said. "Wheat will go down again, and I do not know that I am grateful to Courthorne."

Dane dare urge nothing further, and spent the rest of the day wandering up and down the city, in a state of blissful content, with Alfreton and Winston. One of them had turned his losses into a small profit, and the other two, who had, hoping almost against hope, sown when others had feared to plow, saw that the harvest would repay them beyond their wildest expectations. They heard nothing but predictions of higher prices everywhere, and the busy city seemed to throb with exultation. The turn had come, and there was hope for the vast wheat lands it thrived upon.

Graham had much to tell them when they sat down to the somewhat elaborate meal Winston termed supper that night, and he nodded approvingly when Dane held out his glass of champagne and touched his comrade's.

"I'm not fond of speeches, Courthorne, but I fancy our tastes are the same," he said. "Still, I can't let this great night pass without greeting you

until it was time to return for tennis or shooting sweepstake, and Winston thanked them gravely, even when he and his Ontario axmen found it necessary to do the work again. He could have told nobody why he had undertaken to build the bridge, which could be of no use to him; but he was in a measure prompted by instincts born in him for he was one of the Englishmen who, with a dim recognition of the primeval charge to subdue the earth and render it fruitful, gravitate to the newer lands, and usually leave their mark upon them. He had also a half-defined notion that it would be something he could leave behind in reparation, that the men of Silverdale might remember more leniently the stranger who had imposed on them; while in the strain of the mental struggle strenuous occupation was a necessity to him.

A bundle of papers it was now too dim to see lay beside him clammy with dew, and he sat bare-headed, a pipe which had gone out in his hand, staring across the prairies with an ironical smile in his eyes. He had planned boldly and striven tirelessly, and now the fee he would not take would surely be tendered him. Wheat was growing dearer every day, and such crops as he had sown had not been seen at Silverdale. Still, the man who had few compunctions before he met Maud Barrington, knew now that in a little while he must leave all he had painfully achieved behind. What he would do then he did not know, for only one fact seemed certain—in another four months, or less, he would have turned his back on Silverdale.

Presently, however, the sound of horse-hoofs caught his ears, and he stood up when a mounted figure rose out of the prairie. The moon had just swung up, round and coppery, from behind a rise, and when horse and rider cut black and sharp against it his pulses throbbed fasted and a little flush crept into his face, for he knew every line of the figure in the saddle. Some minutes had passed when Maud Barrington rode slowly to the head of the bridge, and pulled up her horse at sight of him.

The moon turning silver now shone behind her head, and a tress of hair sparkled beneath her wide hat, while the man had a glimpse of the gleaming whiteness of rounded cheek and neck. Her face he could not see, but shapely shoulders, curve of waist, and sweeping line of the light habit were forced up as in a daguerreotype and as the girl sat still looking down on him, slender, lissom, dainty, etherealized almost by the brightening radiance, she seemed to him a visionary complement of the harmonies of the night. It also appeared wiser to think of her as more than a being of flesh and blood whom he had ventured to long for, and he almost regretted when her first words dispelled the illusion.

"It is dreadfully late," she said. "Pluto went very lame soon after I left Macdonald's, and I knew if I went back for another horse he would have insisted on riding home with me. I had slipped away while he was in the granary. One can cross the bridge?"

"Not mounted!" said Winston. "There are only a few planks between the stringers here and there, but, if you don't mind waiting, I can lead your horse across."

He smiled a little, for the words seemed trivial and out of place in face of the effect the girl's appearance had on him, but she glanced at him questioningly.

"No!" she said. "Now, I would have gone round by the old bridge, only that Allardyce told me you let him ride across this afternoon."

"Still," and the man stopped a moment, "it was daylight then, you see."

Maud Barrington laughed a little, for his face was visible and she understood the slowness of his answer. "Is that all? It is moonlight now."

"No," said Winston dryly, "but one is apt to make an explanation too complete occasionally. Will you let me help you down?"

Maud Barrington held out her hands and when he swung her down watched him tramp away with the horse, with a curious smile. A light compliment seldom afforded her much pleasure, but the man's grim reserve had now and then piqued more than her curiosity, though she was sensible that the efforts she occasionally made to uncover what lay behind it were not without their risk. Then he came back, and turned to her very gravely.

"Let me have your hand," he said.

Maud Barrington gave it to him, and hoped the curious little thrill that ran through her when his hard fingers closed upon her palm did not communicate itself to him. She also noticed that he moved his head sharply a moment, then looked straight in front again. Then the birches seemed to fall away beneath them, and they moved out across the dim gully with the loosely-laid planking rattling under their feet, until they came to a strip scarcely three feet wide which spanned a gulf of blackness in the shadow of the trees.

"Hold fast!" said Winston, with a trace of hoarseness. "You are sure you feel quite steady?"

"Of course!" said the girl, with a little laugh, though she recognized the anxiety in his voice, and felt his hand close almost cruelly on her own. She was by no means timorous, and still less fanciful, but when they moved out into the blackness that closed about them above and beneath along the slender strip of swaying timber she was glad of the masterful grip. It seemed in some strange fashion, portentous, for she felt that she would once more be willing to brave unseen perils, secure only in his guidance. What he felt she did not know, and was sensible of an almost overwhelming curiosity, until when, at last, well-stiffened timber lay beneath them she contrived to drop a glove just where the moonlight smote the bridge. Winston, stooped and his face was clear in the silvery light when he rose again. Maud Barrington saw the relief in it, and compelled by some influence stood still looking at him with a little glow behind the smile in her eyes. A good deal was revealed to both of them in that instant, but the man dared not admit it, and was master of himself.

"Yes," he said, very simply, "I am glad you are across."

Maud Barrington laughed. "I scarcely fancy the risk was very great, but tell me about the bridge," she said. "You are living beside it."

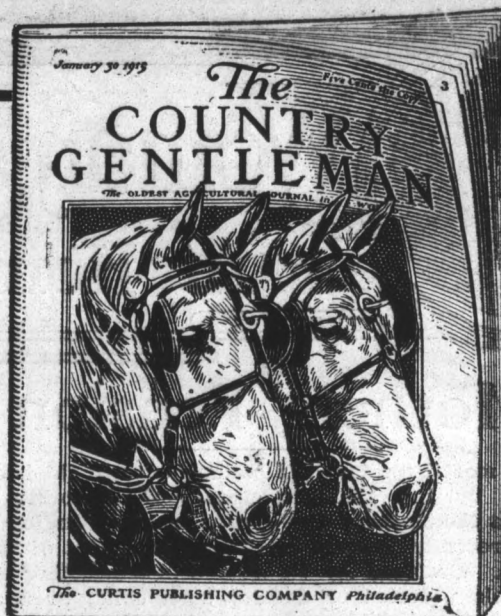
"Yes," said Winston. "In a tent. I must have it finished before harvest, you see!"

Winston smiled dryly. "I am used to it, and can do all the cooking that is necessary," he said. "It is the usual home for the beginner, and I lived six months in one—on grindstone bread, the tinctured glucose you are probably not acquainted with as 'drips,' and rancid pork—when first I came out to this country and hired myself, for ten dollars monthly, to another man. It is a diet one gets a little tired of occasionally, but after breaking prairies twelve hours every day one can eat almost anything, and when I afterwards turned farmer my credit was rarely good enough to provide the pork."

(Continued next week.)

As the granite comes to the surface and towers into the highest mountains, and, if we dig down, we find it below the superficial strata, so in all the details of our domestic or civil life is hidden the elemental reality which ever and anon comes to the surface and forms the grand men who are the leaders and examples, rather than the companions, of the race.—Emerson.

Happiness is a sunbeam, which may pass through a thousand bosoms without losing a particle of its original ray.—Sir P. Sidney.



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Woman and Her Needs

At Home and Elsewhere

The Mothers' Pension Act.

PERHAPS the most important bill ever passed by the Michigan Legislature is the Mothers' Pension Act, which recently became a law in this state. Designed by its promoters to enable widowed or deserted mothers to support their children at home rather than send them to almshouses or asylums or to give them away, it seems one of the wisest provisions which could be made for the care of dependent or neglected children. But for some reason it is not yet accomplishing all that its promoters desired.

This is due to several causes. For one thing, many mothers are still in ignorance that such a law has been passed, in spite of the publicity given it in the daily papers and by public speakers. Others shrink from applying for aid through a mistaken notion that it is charity and they might as well apply to the poor commission, thus proclaiming themselves paupers. As a third cause promoters of the bill contend that in some counties the judges are opposed to the bill and withhold help where it should be given, on flimsy pretexts that the mother is not really needy or is unworthy of the care of her children.

The fund is not a charity in any sense. The state simply recognizes that the mother who is prevented by the children from going out to work is as worthy a citizen as the soldier who fights in defense of his country and as deserving of support. The soldier is supported by the state. Why not the mother? And the money which pays the pension comes from the same general fund that pays the salaries of the officers.

Big as it is in its scope, the act itself is really very short as to wording. It is in reality only an amendment to the Juvenile Court's act regarding the treatment of dependent, neglected or delinquent children. It read as follows:

"Provided, that if the mother of such dependent or neglected child is unmarried, or is a widow, or has been deserted by her husband, or if married has been divorced, and is poor and unable to properly care and provide for said child, and is otherwise a proper guardian, and it is for the

welfare of such child to remain in the custody of its mother, the court may enter an order finding such facts and fixing the amount of money necessary to enable the mother to care properly for such child, such amount not to exceed \$3.00 a week for each child. Therefore, it shall be the duty of the county treasurer of the county of which such child is a resident, to pay from the general fund of such county to such mother at such time as such order may designate the amount so specified for the care of such dependent or neglected child until the further order of the court. Such order shall not require the approval of the board of supervisors or county auditor or auditors."

The method of securing the money is as simple as the act itself. The mother who needs help and comes under the provisions of the act goes to the probate judge of her county or writes him asking for an application form. Upon receiving this she must fill it out properly and truthfully and return it to the judge. He has the case investigated and if it is found that the mother needs the help and is a fit person to bring up her children he must give her an order to present

to the county treasurer, who must pay her the pension as ordered by the judge.

The amount which each mother shall receive is left to the discretion of the judge. Often the mother has some resources or can work a little and needs only a few dollars each month to make ends meet. Again, the mother may be entirely dependent upon the pension and need more money. Some mothers with four children are given but \$3.00 a week, as they have other help, while perhaps the next mother to apply may get \$3.00 a week for only one child.

Mothers who are facing a prospect of breaking up their homes and giving their children to the care of strangers should take advantage of this pension act without delay. In this way they can keep their children with them and still feel that they are in no way dependent upon charity. They are as much entitled to this pension as any soldier's widow, and in bringing up worthy citizens are doing as much for the state as any soldier. DEBORAH.

This article, the thirteenth of 52 special articles to be published in consecutive issues, is the first installment of the series on "Laws Relating to the Property Rights of Women." Another article of this series will appear in this department at an early date.—Eds.

big enough to feel humanity's failings, because they have come short themselves, and who can show us our own faults while we think they are revealing their own. Fortunate, indeed, are we if we have such a critic, the true friend who can "make us do the thing we are able to do" by showing us ourselves.

But if the criticism comes not thus kindly only the fool will refuse to take it because of its bluntness. The cutting remark that stings we are apt to resent, to throw away with the feeling that it is unjust and that in that direction at least we are above reproach. But in most cases if we sit down calmly, after the first bitterness is worn off, and analyze the thrust, we shall find it is not entirely unmerited. Take, then, the part that is just and act upon it, and in so doing prove yourself a bigger man than your critic.

The housekeeper whose ways are so perfect as to need no mending, the farmer whose methods are so good as to be above criticism, the business manager who is so far above his subordinates as to hear no comments but flattering ones, all are in a bad way. For there is no one living whose ways are so near perfection that they can not be bettered. Each day sees some new discovery in the kitchen, on the farm, in the business office, and often the one who makes the discovery is so unimportant a personage that his suggestion will be quite lost if the powers that be will not accept criticism. It is well to remember that when we cease to adopt new views we cease to grow. And often than not our enlarged viewpoint comes to us in the shape of a criticism of our present methods.

If we set up as critics ourselves, however, it is well to remember there are two sorts, honest criticism and carping criticism, which is no criticism at all, nothing but fault finding. And for every honest critic there are 99 fault-finders, men and women who having failed themselves are looking for something to decry in their friends. They are trying, with a beam in their own eye, to pick the mote out of their brother's, hoping thus to justify themselves. From all such critics, good Lord, deliver us. And from that frame of mind let us see to it that we keep ourselves free from it by

Only the Fool Resents Criticism.

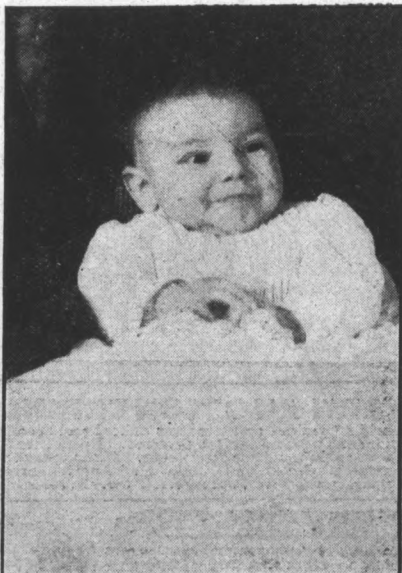
I BELIEVE it was Winston Churchill who said that the best advice he ever got was from his wife when she was mad at him. Other lesser lights acknowledged that the advice handed out at this time is usually truthful, though not always couched in polite language. In short, most of us have at some time or other had our most useful lessons given us by some close friend who was for the time possessed by that frenzy called righteous indignation by those who will not admit they lose their temper. And wise are we if we act on advice so given, for, like the stern parent, they are "doing it for our good," although they may not realize it at the time.

We grow on criticism, that is, we grow if we are wise enough to accept the criticism and act accordingly. And

therein lies the difference between the successful person and the failure. For he who would succeed must realize first of all that he is not perfect, and secondly that others can judge of him more clearly than he can judge himself. The wise man is greedy of criticism, the criticism of both friend and foe. While the fool resents suggestions that might, with profit, alter his course, and insists on following his own way with the firm conviction that he alone is right.

Happy is the soul who has a loving critic. One who can sugar coat the truth and make it slide down so easily that the bitter pill is not recognized until reflection shows us that our pet hobby has been revealed as useless, or worse still, as positively dangerous to us. There are some such rare souls in the world, men who are

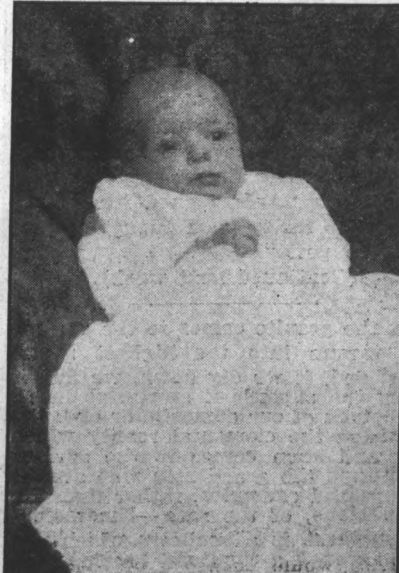
Four More Prize Winners in the Michigan Farmer Baby Contest.



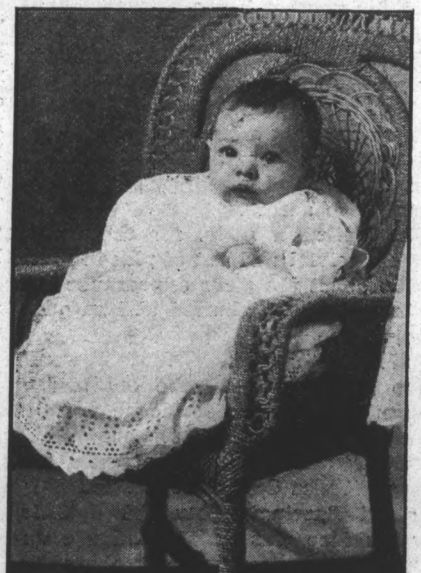
Florence Elaine Bingham, 2nd Prize.



Walter George Drexler, 4th Prize.



Robert Elwood Miller, 7th Prize.



Naomie Cereda Wehr, 8th Prize.

mingling much with our fellows, entering as much as possible into their lives and studying the variations of that human nature of which we are all partakers. Solitude may have its virtues, but society has infinitely more. And the greatest of its virtues is its mellowing power, the power which brings us finally to realize that first, last and always we are all made of the same clay.

DEBORAH.

SIDE LINES FOR FARM WOMEN.

BY GRACIA SHULL.

Aside from regular sources of income every farm woman should carry a side line. The telephone, rural delivery and parcel post makes this possible and very convenient. One farmer's wife who is handy with the needle takes orders over the telephone for infants' clothing and makes delivery by parcel post. She furnishes all material and clears 50 cents on the dollar. Material is purchased at wholesale in quantities, thus effecting a considerable saving.

Infants' clothing is easily and quickly made and is always in demand. Neatness, daintiness and a knowledge of proper materials are essential. Dainty crochet edgings and insertings, and tatting for trimming, or a bit of dainty embroidery, hem stitching or hand-stitched tucks will add considerably to the price of the garment.

Sewing is only one of the profitable side lines carried on by farm women. Several who I know are devoting their spare moments to the raising of herbs of every variety, from the common catnip to the more aristocratic anis, dill and marjoram, and derive neat incomes from the sale of their herbs and simples. One dear old lady now past three score and ten, makes rose jars, rose petal pillows, sachets, candied rose petals, and clover blossom pillows. Her rose jars are made from all sorts of roses, gathered from her own bushes, and from wild roses that bloom in fields and along the highway. Attar of roses and sweet spices are combined with the rose petals. Clear crystal jars with glass covers are used to hold the petals. Ten dollars each is the price she asks and receives for these dainty jars of fragrance. The past year she made and sold several strands of rose beads. These brought her two dollars and a half per strand. The rose beads were alternated with gold, or silver, garnet, opal or other colored beads, as per the order of the customer.

Selling Dutch cheese in attractive form is another woman's hobby. She purchases the waxed paper pails such as confectioners use for delivering ice cream. Pint sizes only, are used. The cheese is pressed into these pails, a sprig of parsley is laid on top, then the cover is adjusted and made secure. Twice each week a hamper containing two dozen pint pails is sent to the city and a clear profit of ten cents per pail, or pint, is realized. This woman also makes and sells mince meat, sauer kraut, white hominy, dill pickles, etc. Her income is never under ten dollars per week.

Still another farm woman puts up school lunches for children of well-to-do parents living in the city. These lunches are prepared from pure farm products, are put up in waxed cartons and sell at ten cents each. A folded paper napkin is provided for each carton. The luncheon consists of nut or other bread sandwich, square of pure-home-made cake or gingerbread, or a couple of cookies, an apple, pear, or a little paper cup of fruit jam, jelly or butter. Occasionally there is a paper pot of cheese or baked beans, a baked apple or pear, a tiny salad with plain dressing, a stalk of crisp celery or a bit of home-made candy. This woman delivers these lunches, personally, every day of school. Settlement is made through the school principal who distributes the lunch boxes at noon. She

receives her own lunch free in return. Still another profitable side line is baking. Orders may be taken via telephone and delivery made via parcel post. Boston brown bread, nut bread, whole wheat and white bread, cakes, cookies, doughnuts, bread sticks, cheese straws, tidbits, and even beans may be safely marketed by parcel post if the articles are properly packed and labeled.

Apples and vegetables may be sold to the fancy trade over the telephone or through advertising, and a neat profit over usual prices may be obtained. Every apple, potato, carrot or other vegetable should be wrapped separately, then packed in a corrugated paper hamper, or carton, and our Uncle Samuel will gladly carry the product from grower to consumer at a very moderate rate.

One woman in Michigan, living on a little farm on a much-traveled road has put out her shingle and serves lunches to auto parties. In summer the lunches are served from rustic tables out under the trees. Rustic benches and hammocks are provided for the guests. In winter, her large dining-room with beamed ceiling and huge, stone fireplace, is turned into a public dining-hall. Only plain, nourishing home cooking is provided and the tiniest of luncheons brings a quarter of a dollar. Dinner costs from 50 cents to one dollar per plate. The higher price prevails only at "special" dinners. She also serves hot lunches to skaters, as her home is near a little inland lake much frequented by skating parties.

Of course, we always have with us such side lines as lace making, carpet weaving, the making of rugs, etc. However, it is the strictly "new" side lines that count. Raising fancy asparagus, specializing on currant jelly, jam and wine, or gooseberry conserve, grape juice, huckleberry preserves or sauces or jams, home-made candied or crystallized fruits. There are many golden dollars in every one of these side lines. If farm women would only figure out the one to which her locality was best adapted, I am sure she could not help but succeed.

SHORT CUTS TO HOUSEKEEPING.

Put a teaspoonful of common baking soda in a saucer and pour enough kerosene over it to damped well. Rub this on your silver and it will take all the tarnish off with little rubbing. Wash in soapy water and rinse with hot water. Wipe dry and your silver will look like new after only a few minutes work.—J. J. O'C.

Cold water with but little soap should be used for washing colored silks. If the color runs, vinegar should be stirred into the water until the color sets.—J. J. O'C.

A RAZOR SNAP.

A new lot of Imported German Razors at 50 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 is 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 50 cents each, postpaid, or a half-dozen at \$2.00, postpaid.

A Strop Bargain, Too.

We also have a new lot of Presto All-in-One razor strops that dealers sold at \$1.00 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 razor. It combines the strop and hone in one.

The special price on the strop alone, while the supply lasts, will be 50 cents, postpaid, but if ordered together with one of the above razors the price of both will be only 75 cents postpaid, or \$1.25 with the Michigan Farmer one year; \$1.60 for three years and \$2.50 for five years.

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

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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.

We send sample copies of the Michigan Farmer only.

Mention if you are a new or renewal subscriber. Renewals will be dated ahead from their present date.

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NAME OF PUBLICATION.	See explanation.			
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Times, Detroit, Mich.	2 00	2 00		
Herald, Grand Rapids, Mich.	2 50	2 00		
News, Grand Rapids, Mich.	2 00	2 10		
Press, Grand Rapids, Mich.	2 00	2 25		
Courier-Herald, Saginaw, Mich.	2 00	2 30		
News, Saginaw, Mich.	2 00	2 00		
Tribune, Bay City, Mich.	2 00	2 10		
Blade, Toledo, Ohio.	2 00	2 05		
News-Bee, Toledo, Ohio.	2 00	2 05		
State Journal, Lansing, Mich.	2 00	2 01		
Chicago Herald.	3 00	3 10		
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World, N. Y. City.	1 00	1 20		75
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Journal, Detroit, Mich.	1 00	1 15		70
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Produce News, Chicago.	1 00	1 05		60
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American Poultry Journal, Chicago, (m)	1 00	1 20		75
American Poultry Advocate, Syracuse.	50	80		35
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American Swineherd, Chicago, (m).	50	75		35
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Poultry Weekly, Boston, Mass.	50	75		35
Fruit Belt, Grand Rapids, Mich.	1 00	70		25
Green's Fruit Grower, Rochester, (m).	50	80		35
Hoard's Dairyman, Fort Atkinson, Wis.	1 00	1 20		75
Jersey Bulletin, Indianapolis, Ind. (w)	1 00	1 35		90
Kimball's Dairy Farmer, Waterloo, Ia. (s-m)	1 00	1 05		75
National Sportman, Boston, Mass. (m)	1 00	1 15		70
Poultry Keeper, Quincy, Ill. (m).	50	80		35
Poultry Pointers, Grand Rapids, Mich.	50	70		25
Poultry Success, Springfield, O. (m).	50	75		35
Reliable Poultry Journal, Quincy, Ill. (m)	50	80		35
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Everybody's Magazine, N. Y. City. (m)	1 50	1 60		115
Etude, Philadelphia, Pa. (m).	1 50	1 60		115
McClure's Magazine, N. Y. City. (m).	1 50	1 60		115
Musicalian, Boston, Mass. (m).	1 50	1 55		110
People's Home Journal, N. Y. City. (m)	50	55		40
Red Book Magazine, Chicago, Ill. (m).	1 50	1 55		110
Review of Reviews, N. Y. City. (m).	3 00	3 00		
Ladies' or Household.				
Delineator, N. Y. City. (m).	1 50	1 60		115
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Housewife, N. Y. City. (m).	1 00	1 10		35
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McCall's Magazine, N. Y. City. (m).	50	75		30
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Farm Commerce.

Successful Co-operative Marketing.

IN an October issue of the Michigan Farmer, the writer described the rapid progress of the co-operative idea in this section, and mentioned the forming of a new co-operative shipping association at Quincy in Branch county. The record of this association has been so striking and phenomenal during its brief existence, that some facts in regard to it can not fail to be of interest to all who are in the slightest degree concerned with the co-operative movement.

The Quincy association was organized on September 26, 1914, with a membership of 110. On January 2, 1915, the membership had increased to 221. When the association was launched, each member took \$10 worth of stock, of which \$3.00 was paid in. With this money, scales and other necessary equipment were purchased.

ures in specific instances. Now we are ready for figures on a series of shipments. On 14 deckloads of hogs, sheep, and calves, shipped after the quarantine was raised, farmers realized over \$1,300 more than they could have received from local buyers. To this date, January 7, 47 deckloads of stock have been shipped by the association, and in every instance more has been received than would have been possible in selling to the home buyers.

Supplies Bought Cheaper.

Surely, the facts and figures given speak for themselves. But this is not all. Farmers are buying shelled corn, through the association, at a saving of four cents per bushel. Coal is also being purchased at a saving worth while. Plans are on foot for the purchase of a warehouse with the idea



Sorting Apples at the South Haven Fruit Exchange.

Soon after the association commenced doing business, extraordinary conditions prevailed, due to the live stock quarantine. The hoof-and-mouth disease was discovered in the locality, and for weeks a rigid quarantine was enforced. This was a trying time for the farmers, many of whom had hogs and other stock ready for the market. When at last the quarantine was lifted, the prices which had already declined went still lower, due to the rush on the market of shipments of live stock that had been held up for weeks. Local stock buyers took advantage of the unsettled market conditions, and in many localities reaped an easy harvest. And it was just here that the Quincy Co-operative Association demonstrated its usefulness to the farmers. A few figures will tell the story in a manner simple and clear enough to convince even the most skeptical.

Co-operation Brings Better Prices.

Figures in specific instances will be of interest, and we will follow these with generic facts: When the quarantine for shipping to Detroit was lifted, local buyers offered five and one-half cents for hogs. The association received in Detroit six and three-fourths cents, netting the farmers 72½ cents per hundred weight more than they would have received from local buyers. A shipment to Buffalo a day or two later netted the farmers one cent more per pound for hogs than local shippers were paying. In the case of veal calves the difference was even more marked. One farmer sold two calves which netted him over \$13.00 more than he could have received from local buyers. Another farmer who had a 200-pound calf, was offered five cents per pound by local shippers. He shipped with the association and the calf brought 11 cents in Buffalo, netting the owner a little better than \$20.

In the foregoing paragraph are fig-

ures in specific instances. Now we are ready for figures on a series of shipments. On 14 deckloads of hogs, sheep, and calves, shipped after the quarantine was raised, farmers realized over \$1,300 more than they could have received from local buyers. To this date, January 7, 47 deckloads of stock have been shipped by the association, and in every instance more has been received than would have been possible in selling to the home buyers.

The Co-operative Idea Gaining Favor Among Farmers.

In the light of the facts, it is indisputable that co-operation in this section has been of inestimable benefit to the farmer. In fact, it is difficult to find a farmer in these parts who opposes the movement. To get the movement started seems to be the greatest difficulty. When the co-operative idea once takes possession of a locality, it grows rapidly. At this writing it is said that a co-operative shipping association is being formed at Coldwater. The co-operative spirit has evidently been caught from Quincy, which is only five miles away. No movement among the farmers in recent years has met with more signal success than has the co-operative idea. Its spread bids fair to be rapid and enduring. It promises to the farmer his just share from the fruits of his labor.

Hillsdale Co.

J. A. KAISER.

CO-OPERATION THAT CO-OPERATES.

(Continued from page 113).

hand and was ready to buy all that were offered. The beans are cleaned and sorted and then sold in carlots.

Only 40 per cent of the stock of this association has been paid in, but at the recent annual meeting of the stockholders it was decided to call for the other 60 per cent so as to extend the operations and benefits of the society. It was also decided that new members would have to pay \$150 for new shares of stock of par value of \$100. The books of the association show that each share is worth, fully paid, \$139, showing only \$11 to be charged for good will. This is a small amount considering the prestige gained by the exchange in its two years of successful operation, its advertising and establishment of well recognized brands of fruit under its trademark.

Organized on a Conservative and Businesslike Basis.

The reason this association has been so successful from the start is that the growers had confidence in those who were instrumental in starting it. Mr. C. J. Monroe, who is known throughout the state as a banker and a fruit grower, has given much of his time and thought to this organization, and to him is due much of the credit for its being organized in such a conservative and businesslike manner. The shares of stock cost enough to make the purchaser have special interest in the organization and to work for its permanency. Therefore growers are not likely to join and then desert when prices are good elsewhere.

A member is not required to sell all of his fruit through the association; for instance, he may sell his peaches and pears through the exchange but dispose of his apples by private sale. But what was promised must necessarily go through the exchange.

Some Advantages of the Exchange.

Aside from the saving in the expense of marketing and the higher prices received for their products, the members found it a great advantage to be relieved of the packing and marketing end of the business. They have



Loading Cars on Packing House Side Track.

more time to give to the growing and and as a result many orchards have received better care than ever before. Many of the orchards around South Haven contain a large number of varieties. The members having such orchards find that the fruit of the varieties of which they had just a few trees brings higher prices through the association because it is sold with the same varieties of fruit from other orchards in large enough quantities to demand a good price. From the association's standpoint these off varieties are also an advantage, as it can fill the demand for the less common kinds at premium prices and at the same

time develop a source of demand for the common kinds.

The territory covered by the Exchange is South Haven and vicinity. One grower hauls his fruit 12 miles, while another has his orchards 18 miles from the packing house. In the case of the latter the fruit is either shipped in by rail or special arrangements are made for packing.

Disposing of the Fruit.

The fruit is sold entirely in carlots. The source of disposal is the business which the manager had established before his connection with the association, through advertising, and through the services of a produce handlers' rating company. This company gives the moral and financial standing of all produce firms so that much of the fruit is sold by telephone to firms rated reliable. After a reputation is established the product is not hard to sell. For instance, a commission man bought of this association peaches at \$1.25 per bushel when they were selling in Chicago at 30 cents. The reputation the brands of the exchange gained through proper packing and selling made the fruit worth this premium price to the commission man.

On the advantages and successful management of co-operative enterprises, Mr. Myhan spoke as follows:

"I might go into a lengthy discussion of how legislation and the courts have protected mighty combinations which have built up colossal fortunes at the expense of the producer and consumer. I can see no way at present to reduce the cost of living to the consumer and give more of the dollar to the producer, except by co-operative buying and selling.

The Essentials of Successful Co-operative Organization.

"You ask me how we will co-operate? There is just one way and only one way. That is, to organize your association with sufficient capital and go ahead and do business. The producers of fruits who depend upon commission merchants in the large centers to dispose of their products are doing business in a crude, unsatisfactory and unprofitable way. In illustration, I will give you as an example a grower who ships a carload of apples containing 200 barrels, from South Haven to Chicago, that sell at \$3 per barrel. His freight, commission and cartage would amount to \$110. Selling through the South Haven Fruit Exchange, F. O. B., the cost would be five per cent, or \$30, making a saving to the purchaser of \$80 on one car of fruit and if you add five per cent to take care of the shrinkage caused by dishonest sellers, your total cost over and above co-operative selling would be \$110, or \$140 to market your carload of apples in Chicago.

"The only way to obtain satisfactory results in co-operative marketing is to have a central packing house where fruit is put up under the supervision of a salaried and reliable manager. This eliminates any temptation the grower may have to practice the nefarious schemes that are credited to commission merchants. Under these conditions, the brand of an association will mean something and will materially broaden the market.

"In forming a co-operative marketing association, do not get your expectations overheated, as you will meet with disappointments, as all business enterprises do, and find difficulties to overcome, all of which can be successfully accomplished if you organize with sufficient capital, employ an efficient manager and have a capable board of directors to sustain him. The only way I can see that you will get your share of the dollar is to co-operate."

I got the Michigan Farmer since the first of May, and I haven't had a farm paper its equal since I have been getting farm papers. I am taking four papers at present and the Michigan Farmer is the best.—Wm. A. Hirschberger, Fairview, Mich.

THE AUTO-OILED WINDMILL WITH DUPLICATE GEARS RUNNING IN OIL

Every bearing is constantly flooded with oil. Two quarts of oil in the gear case of this 8-foot auto-oiled windmill will keep the gears and every bearing flooded with oil for a year or more.

The galvanized steel helmet covers the gears, keeps out rain, keeps out dust, keeps in oil. The mill needs oiling but once a year.

There is a windmill, known the world over as "the windmill which runs when all others stand still." This new windmill with gears and bearings flooded with oil runs in much less wind than that well known windmill.

The two large gears, which lift the load straight up, are each independent of the other and each is driven by its own pinion on the main shaft and must take its half of the load at all times.

The auto-oiled windmill, with its duplicate gears and two pinions lifting the load straight up, is unbreakable. Every 8-foot mill is tested under a pumping load of 3000 pounds on the pump rod. For the larger sizes the load is proportionately greater. We know that every one of these windmills is unbreakable. We venture the assertion that this is the most nearly perfect, best made, best tested, best oiled, most nearly perpetual, automatic and self-sufficient of any machine of any kind ever made for farm work and the most nearly fool-proof.

There is no friction on any part of the furling device when the mill is running and very little when the wheel is furled.

A small child can easily furl this windmill or an automatic regulator can take care of it. One of these mills has been furled 10,000 times in one day by a man on our premises—more times than it would ordinarily be furled in 30 years of service.

A band brake, of the automobile type, is used, and it always holds.

The gear case contains two pairs of gears and the supply of oil. From this gear case the oil circulates to every bearing in a constant stream. It flows out through the friction washers in the hub of the wheel and is automatically returned to the gear case. Not a drop of oil can escape. It is used over and over. So long as there is any oil in the gear case the gears and every bearing will be flooded with oil.

If you are tired of climbing a windmill tower; if you are tired of buying repairs and having them put on; or, if you are tired of waiting for a big wind, let us furnish you an unbreakable, self-oiling, ever-going mill to go on any old tower. It costs but little and you will get the difference between no water in a light wind and an abundance of water in almost no wind. The flooding of all the working parts with oil, the perfect balance of the wheel and vane on the tower, the very small turntable on which the mill pivots and the outside furling device make this difference.

Now there is no objection to a high tower. Have as high a tower as you need to get wind. You don't have to climb it. Your dealer can come once a year and put in oil, if needed, and inspect the mill.

Running water purifies itself—stagnant water, standing water, collects and retains impurities. If you pump from your well constantly all the water it can spare, the water that comes in to take its place will be pure. If the water in your well stands until you happen to want some, and you pump but little, then it is likely that surface water will flow into it and carry in impurities. The unsafe well is the one that has standing water. A flowing stream is the thing to be desired.

The auto-oiled windmill makes all this possible as it can run from one year's end to the other with practically no wear and no cost. If interested, write Aermotor Co., 1146 So. Campbell Ave., Chicago.

Why not have flowing water, cool in summer and warm in winter, always fresh and pure? It will cost next to nothing. It will give health to your family and stock. Let the water run into a good size reservoir and raise all the fish of the choice kinds your family can eat, and have water to irrigate your garden and make it raise many times as much as it would otherwise. Water costs nothing. Use it.

We need and must have the best dealers everywhere. They need us if they are going to remain in the windmill business. Write right now.

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If they don't get it in their feed, the little pigs or the chickens will have to furnish it. Besides, sows need strength-giving food prior to this time. Young pigs thrive and all hogs gain rapidly and resist disease better with

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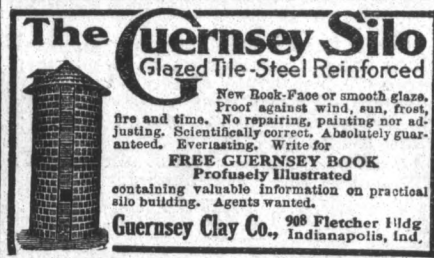
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Reduces freight cost; fire and frost-proof; weight anchors itself; ample hoops galvanized; priced at your town; 5 year guarantee; free sample.

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and freight prepaid on the new 1915 "RANGER" bicycle. Write at once for our big catalog and special offer.

Marvelous improvements. Extraordinary values in our 1915 price offer. You can't afford to buy without getting our latest propositions. **WRITE TODAY.**

Boys, be a "Rider Agent" and make big money taking orders for bicycles and supplies. Get our liberal terms on a sample to introduce the new "RANGER."

TIRES, equipment, sundries and everything in the bicycle line half usual prices. Factory prices on Motorcycle and Automobile Supplies.

Mead Cycle Co., Dept. L-77 Chicago.

Markets.

GRAINS AND SEEDS.

January 26, 1915.

Wheat.—While the market is unsettled at all times, prices continue to advance. On Tuesday they were at the highest point reached since the war opened. Foreign buying continues unabated and readily absorbs primary receipts so that, notwithstanding the liberal delivery at primary elevators due to the attractive prices, the visible supply shows a decrease of nearly three million bushels for the week. Because of the high prices dealers are not loading up heavily with wheat. On Monday the local demand for flour was quiet. One year ago No. 2 red wheat was 99c per bu. Quotations are as follows:

	No. 2	No. 1	May
Wednesday	1.42	1.39	1.45
Thursday	1.43	1.40	1.46
Friday	1.43½	1.40½	1.46½
Saturday	1.44	1.41	1.47
Monday	1.45½	1.42½	1.49
Tuesday	1.46½	1.43½	1.50

Chicago, (Jan. 25).—No. 2 red wheat \$1.44½@1.47; May 1.45½; July 1.26½.

Corn.—This cereal has advanced with wheat, although receipts have been very large. On Monday over 900 cars were received in Chicago. The increase in the visible supply last week exceeds four million bushels. Exporters are taking the grain liberally, both in Chicago and on the seaboard. One year ago the price for No. 3 corn was 64c per bushel. Quotations are as follows:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	73½	74½
Thursday	74	75
Friday	74½	75½
Saturday	74½	75½
Monday	74½	75½
Tuesday	75	76

Chicago, (Jan. 25).—No. 4 yellow corn 71½@72½c; May corn 79½c; July 80½c.

Oats.—There appears to be a general demand for oats. In Australia spot oats are selling at \$1.04 per bushel. The British government is said to be buying this grain in the Winnipeg district. At the leading markets in this country there are liberal inquiries for the cereal which, with the general foreign demand, has put prices on a higher basis. One year ago standard oats were quoted at 42c per bushel. The visible supply is about the same as last week. Quotations for the week are as follows:

	Standard.	No. 3
		White.
Wednesday	55½	55
Thursday	55½	55
Friday	55½	55
Saturday	55½	55
Monday	56	55½
Tuesday	56½	56

Chicago, (Jan. 25).—No. 3 white oats 54½@55c; May 57½c; July 54½c.

Rye.—There is an active export demand for rye and values have gone up 5c since last week. No. 2 rye is now quoted at \$1.23 per bushel.

Beans.—Market is firm at higher quotations. At Greenville farmers are selling on a \$2.80 basis. Detroit quotations are: Immediate and December shipment \$2.90; February \$3.00; May, \$3.20. Chicago prices steady. Stocks are small. Pea beans, hand-picked, choice, quoted at \$2.95@3.10; common at \$2.60@2.80; red kidneys choice, at \$3.25@3.50.

Clover Seed.—Demand is fair and prices easy. Prime spot \$9.50 per bu; March \$9.65; prime alsike \$9.30.

Toledo.—Prices rule steady to lower. Prime cash \$9.55; March \$9.65½; prime alsike \$9.42½.

Timothy Seed.—Prices unchanged. Prime spot \$3.40 per bushel.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$7.30; second \$7.10; straight \$6.50; spring patent \$7.50; rye flour \$6.50 per bbl.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$26; standard middlings \$28; fine middlings \$32; coarse corn meal \$30; corn and oat chop \$27 per ton; cracked corn \$34.

Hay.—Quotations are steady. Carlots on track at Detroit are: New, No. 1 timothy \$16@16.50; standard \$15@15.50; No. 2, \$14@14.50; No. 1 clover and mixed \$13@13.50.

Chicago.—Market quiet and lower; offerings liberal. Choice timothy \$17@18; No. 1, \$15@16; No. 2, \$13.50@14. New York.—Steady. Prime \$22; No. 1, \$21.50; No. 2, \$20@21.

Straw.—Steady. Detroit prices are: Rye straw \$7.50@8; wheat and oat straw \$7@7.50 per ton.

Chicago.—Rye straw \$10@10.50; oat straw \$8.50@9; wheat straw \$8@8.50.

DAIRY AND POULTRY PRODUCTS.

Butter.—The increasing demand brought an advance of ¼c in price over that of last week. Extra creamery 30½c; firsts 27½c; dairy 21c; packing stock 19c per pound.

Chicago.—A firm feeling exists and prices rather favor sellers. There was an advance of ¼c. Extra creamery 30½c; extra firsts 29@29½c; firsts 27@28½c; seconds 23@26c; packing stock 20½c.

Elgin.—The price for the week, based on the majority of the sales, is 30½c, which is ¼c higher than last week.

Poultry.—Market is steady with demand fair. Springs 13c; hens 8@13c; ducks 13@14c; geese 12@13c; turkeys 16@17c.

Chicago.—A good demand existed and the supply rather light. Prices on fowls and springs are slightly higher. Springs showing spurs are discriminated against. Turkeys 14c; fowls 11c; springs 13½c; ducks 15c; geese 10@12½c.

Eggs.—Market steady at prices for fresh stock slightly higher. Fresh stock sells at 33c per dozen; current receipts 29½c.

Chicago.—Market is easy at prices slightly lower than last week. Offerings were fair, the cold weather in some sections curtailing movement. Only slight changes in prices. Miscellaneous lots, cases included, 25@32c; ordinary firsts 30@31c; firsts 31½@32c.

Pork.—Market steady for dressed hogs, light weights selling at \$8.50 per cwt; heavy \$7@7.50.

Veal.—Quoted steady at 13@13½c for fancy and 9@10c for common.

FRUITS AND VEGETABLES.

Apples.—Market active and well supplied, with no change in prices. Baldwins \$2.50@2.75 per bbl; Greenings \$2.75@3; Spy \$3@3.35; Steele Red \$3.50; No. 2, 40@50c per bushel.

Chicago.—Apples are moving fairly well at former prices. The demand should be much greater than it is. The prices as quoted are for refrigerator stock. Common storage sells for 50c@51 less. Baldwins \$2@2.50; Kings \$2.75@3.25; Wagener's \$2.25@2.50; Jonathans \$3.50@4; Greenings \$2.25@2.50; Northern Spy \$3@3.50. Western box apples are selling for \$1@2.25 per box.

Potatoes.—Market quiet with prices unchanged. Carlots 30@33c per bu; in bulk 36@40c per bushel in sacks; at Chicago the market is fairly brisk at slightly higher prices. Michigan white, in bulk, are quoted at 38@43c per bu; at Greenville, Mich., 27@29c in bulk.

WOOL.

The feature of the market the past week was the strong demand for low grade wool. This was due to the activity of manufacturers in filling export orders. Further demand for these grades is probable, as an order for three million yards of fabrics for the Russian government is now being considered by American manufacturers. While fleece wools have only limited calls, prices are firm to higher. Quarter-blood prices range from 31½@32c; unwashed delaine 26@27c for Michigan; unwashed combing 27@29c.

GRAND RAPIDS.

Local mills paid \$1.35 for red wheat and \$1.32 for white Tuesday. The bean market is still excited, with rumors of \$3 beans in some places. The potato situation does not change much and there is not much activity in apples. Dairy butter is lower, with dealers quoting at 22c to country merchants. Fresh eggs are worth around 30c. Dressed hogs are quoted at 8c and live fowls are unchanged at 10@12c.

DETROIT EASTERN MARKET.

A fair volume of business was done Tuesday morning. Prices are ruling steady. Potatoes were in slightly larger supply, with the bulk selling at 45c. Apples still offered freely with prices ranging from 40c@1. There was much frosted stock on hand at low figures. Carrots 35c; parsnips 45c; cabbage 45c; eggs 43c; pork \$9@9.50 per cwt; chickens, live 14c; hay is coming in fair quantities and ruling at \$18@20 per ton.

THE LIVE STOCK MARKETS.

Buffalo.

January 25, 1915.

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

Receipts here today as follows: Cattle 130 cars; hogs 100 d. d.; sheep and lambs 50 d. d.; calves 500 head.

With about 130 loads of cattle on the market here today and only 16,000 reported in Chicago, our market was dull and draggy and only barely steady

from start to finish, and at the close this evening there are several loads of weighty cattle left over. Our advice to all our shippers in the country is to be careful in buying these weighty cattle, as plenty of them sold here today for less than they cost in Ohio and Indiana. Should Chicago come light Wednesday and Thursday, we look for a little improvement here next Monday, but as long as the runs keep up in the west like they are at present, there will be no advance in these cattle.

We had a fairly liberal supply of hogs today, but none too many for the demand, in fact light hogs were very scarce and sold at a lot higher than the close of last week; pigs selling as high as 8c per lb; yorkers and lights from \$7.50@7.75; mixed grades \$7.25@7.40, and strictly medium and heavy at \$7.10@7.25. Roughs generally \$6.50 and stags \$5@5.50. Our market closed a little bit quiet on everything but light stuff and a fair clearance was made.

The market was active today on heavy lambs and sheep, slow on the heavy, with prices strong quarter higher than the close of last week; most of the choice handy lambs selling at \$9.15, and we look for steady to shade lower prices last of the week.

We quote: Handy lambs \$9.10@9.15; 85 to 90-lb. lambs \$8.75@9; 100 to 120-lb. do \$7.25@7.50; cull to fair \$5@8.25; yearlings \$6@7.90; bucks \$4@4.50; handy ewes \$5.50@5.75; heavy ewes \$5.25@5.50; wethers \$6@6.25; cull sheep \$3.50@4.50; veals, choice to extra \$12.25@12.50; fair to good \$7.50@12; heavy calves \$6@8.

Chicago.

January 25, 1915.

Cattle. Hogs. Sheep.
Receipts today..16,000 50,000 12,000
Same day 1914..23,480 35,985 28,727
Last week ..42,354 197,934 61,956
Same wk 1914..53,546 184,335 111,088

The recent unsatisfactory cattle market was held mainly responsible for today's light Monday receipts. Butcher stock sold earlier than steers, with prices a little better on an average, and it was thought that the steers would be disposed of at firm values, although the demand was not over-large. Hogs were in large supply, and prices were irregularly lower, with a restricted eastern shipping demand. Hogs brought \$6.40@7.15, and the best weighty pigs sold around \$7. Hogs marketed last week averaged 225 lbs., comparing with 219 lbs. a year ago. Sheep and lambs were 15@25c higher this morning, with prime lambs selling at \$8.75 and fat yearlings salable at \$7.75 or more. Eastern shippers paid the high prices for lambs, local packers holding back. The weak point in the market of late has been the poor demand from shippers, only 3,862 sheep and lambs being shipped from here last week, comparing with 22,037 a year ago. On the other hand, close to 40,000 hogs were shipped from here last week, comparing with 33,277 a week earlier and 31,279 a year ago.

Cattle were not marketed as freely last week as a week earlier, the recent severe declines in prices tending to cause numerous owners to wait for reactions before sending in further supplies, but supplies were sufficient, as the packers had good quantities of beef in their coolers. Hence, it was a matter of the greatest difficulty for sellers to secure any improvement in prices, and the market remained most of the time in a weak condition. The bulk of the steers offered sold at \$7@8.50, average prices being the lowest seen in many weeks, with the better class of long-fed, heavy steers taken at \$8.50@9.25 and the common to fair class of thin steers of light weight at \$5.30@7.25. Plain to medium warmed-up steers brought \$7.30@7.85, medium to good steers \$7.90@8.20 and good steers \$8.25@8.45. There was a good demand for the better class of handy-weight yearling steers at \$8.25@9, and a sale was made of 14 fancy yearling heifers in quarantine that averaged 1,153 lbs. at \$9.25, but the next best sales of fat heifers were at \$8@8.25, and very few sold over \$7.75. Ordinary to good yearling steers sold at \$7.25@8.20, and butchering cows and heifers sold at \$4.70 and upward, the best cows being salable at \$7@7.25. Cutters went at \$4.25@4.65, canners at \$3@4.20 and bulls at \$5@7, only a few prime bulls being disposed of at \$7.10@7.25. Calves were in the customary demand, prices ruling at \$4.50@10.50 for coarse heavy to prime light vealers. The lowest prices of the season were paid for heavy beef steers, with the demand running mainly on fat steers of light weight that did not cost a high price. Quarantine conditions continued to make low prices for steers marketed prematurely, and numerous sales took place at disappointingly low figures. During the previous week the top for heavy steers was \$9.40.

Hogs have been depressed on various days lately by the packers, who were prepared to take every possible advantage furnished by larger receipts

than usual and of small eastern shipping orders. Evidently, many stock feeders are becoming discouraged by the course of the market and are losing no time in letting their hogs move to market, the increasing dearthness of corn and fear that hogs will fall to still lower levels causing them to sell a large part of their holdings that have acquired moderate weight. Corn is reported as selling at from 65@70c in Illinois and Iowa at loading stations, and stockmen are inclined to the view that it is not going to pay out where swine are kept long enough to become fat and heavy, particularly where no cattle are being fed along with the hogs. Hogs are selling at much lower prices than in most recent years, while corn commands unusually high prices everywhere. Hogs opened the week with a boom that carried the best to \$7.25, declined later to a point that placed the top at \$6.87½, and rallied on Saturday, with an extreme range of \$6.60@7.25. Pigs closed at \$4.50@7.15, while the highest-priced hogs weighed around 160 pounds.

Sheep and lambs have fluctuated a great deal in values recently, declines following advances, and prices depended much on whether the eastern shipping demand was large or small. Receipts have been running very much smaller in numbers than a short time ago, and prospects look bright for the future of the market, but sheepmen should keep close watch on market conditions and ask their commission firms as to the most favorable time for selling. Colorado sheepmen have been showing their faith in the future by holding back their offerings whenever prices were lower. At the week's close prices were: Lambs \$6.50@8.50; yearlings \$6.35@7.65; wethers \$5.75@6.35; ewes \$4@6; bucks \$4@4.50. Higher prices in the near future are expected.

MICHIGAN CROP REPORT.

In answer to the question, "Has wheat during December suffered injury from any cause," 22 correspondents in the state answer "Yes" and 321 "No," and in answer to the question, "Has the ground been well covered with snow during December," 260 correspondents throughout the state answer "Yes" and 79 "No."

The total number of bushels of wheat marketed by farmers in December at 72 flouring mills was 142,037 and at 89 elevators and to grain dealers 197,324, or a total of 339,361 bushels. Of this amount 228,535 bushels were marketed in the southern four tiers of counties, 94,635 in the central counties and 16,191 in the northern counties and upper peninsula. The estimated total number of bushels of wheat marketed in the five months, August-December, was 6,500,000.

Fifty mills, elevators and grain dealers report no wheat marketed in December.

The average condition of live stock in the state is reported as follows, comparison being made with stock in good, healthy and thrifty condition: Horses and swine 97; cattle 96, and sheep 98.

The average prices for the state on January 1 of some of the principal farm products were as follows:

Wheat per bushel was \$1.09; rye 94c; corn 68c; oats 46c; hay per ton \$11.86; fat cattle \$6.46 per cwt; fat hogs \$6.67 per cwt., and dressed pork \$8.79 per cwt.

The price of each class of horses was as follows: Under one year old \$54.24; between one and two years old \$89.44; between two and three years old \$130.16, and three years old and over \$167.60.

Milch cows were worth \$62.18 per head.

The price of wheat is 18c, rye 32c and oats 5c higher than one year ago and corn 1c lower.

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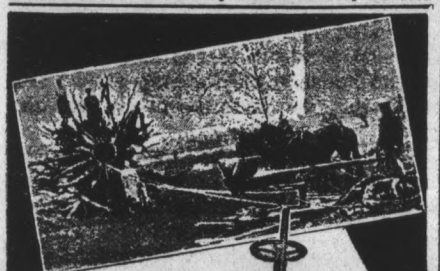
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THIS IS THE FIRST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.
January 21, 1915.
Cattle.

Receipts 735. Market steady with Wednesday and about steady with last week; run was light and all last week's holdovers were cleaned up today.

Best heavy steers \$7.50@8; best handy weight butcher steers \$7@7.50; mixed steers and heifers \$6.25@6.75; handy light butchers \$6@6.50; light butchers \$5.50@6; best cows \$5.50@6; butcher cows \$4.75@5.25; common cows \$4@4.50; canners \$3@4; best heavy bulls \$6.25@6.50; bologna bulls \$5.25@6; stock bulls \$4.50@5.

Haley & M. sold Hoffend 4 heifers av 582 at \$5.25; to Hammond, S. & Co. 6 butchers av 660 at \$6.15, 3 bulls av 957 at \$6, 1 cow wgh 800 at \$4; to Remick 3 do av 920 at \$4, 1 do wgh 1480 at \$5, 2 do av 960 at \$5; to Feldman 5 cows av 990 at \$4.75; to Kamman B. Co. 5 do av 1040 at \$5.05, 21 butchers av 820 at \$6.65; to Thompson Bros. 8 steers av 956 at \$6.90, 6 do av 716 at \$6.25, 3 do av 800 at \$6, 1 cow wgh 1240 at \$4.50; to Sullivan P. Co. 2 steers av 1150 at \$7, 2 bulls av 900 at \$5.50, 1 do wgh 1280 at \$6.25.

Sandal, S., B. & G. sold Golden 7 cows av 1043 at \$4.60; to Mason B. Co. 15 butchers av 840 at \$6.75, 2 cows av 880 at \$5.25, 1 heifer wgh 650 at \$6; to Hoffend 2 cows av 900 at \$4.50; to Rattkowsky 1 do wgh 1280 at \$6, 1 do wgh 1200 at \$5.60; to Breitenbeck 5 bulls av 748 at \$5.25, 21 steers av 800 at \$6.50; to Thompson Bros. 6 do av 915 at \$6.85, 1 do wgh 560 at \$6; to Kamman B. Co. 1 bull wgh 1200 at \$6.20, 8 steers av 1109 at \$7.10, 10 butchers av 752 at \$6.10.

Veal Calves.

Receipts 318. Market steady. Best \$10.50; others \$6.50@9.50.

Sandal, S., B. & G. sold Parker, W. & Co. 2 av 150 at \$9.50.

Reason & S. sold Loucher 6 av 155 at \$10; to Garben 7 av 140 at \$10, 3 av 145 at \$9.

Sheep and Lambs.

Receipts 3629; market steady on sheep; lambs 15@25c higher. Best lambs \$8@8.25; fair do \$7@7.50; light to common do \$6.50@7; heavy do \$6.75@7; fair to good sheep \$4.50@5.25; culls and common \$3@4.

Sandal, S., B. & G. sold Parker, W. & Co. 6 lambs av 75 at \$7.75.

Roe Com. Co. sold Thompson Bros. 21 lambs av 48 at \$6.50; to Nagle P. Co. 73 do av 75 at \$7.75, 56 do av 80 at \$7.50, 18 sheep av 110 at \$4, 13 do av 100 at \$4; to Barlage 13 lambs av 85 at \$7.50, 10 do av 84 at \$7.50, 6 sheep av 88 at \$3.

Reason & S. sold Parker, W. & Co. 29 sheep av 125 at \$5.15, 2 do av 110 at \$5, 42 lambs av 83 at \$7.90, 21 do av 68 at \$7.25, 3 do av 70 at \$7.75; to Sullivan P. Co. 13 do av 50 at \$6.60, 10 sheep av 72 at \$3.75, 27 do av 85 at \$4.65.

Bennett & S. sold Sullivan P. Co. 33 lambs av 85 at \$7.75.

Hogs.

Receipts 8115; none sold up to noon; sellers asking steady prices \$6.85.

Packers bidding \$6.75, few sold at \$6.80; balance being held over.

Friday's Market.

January 22, 1915.

Cattle.

Receipts this week 842; last week 1,603; market dull at Thursday's prices. Best heavy steers \$7.50@8; best handy weight butcher steers \$7@7.50; mixed steers and heifers \$6.25@6.75; handy light butchers \$6@6.50; light butchers \$5.50@6; best cows \$5.50@6.25; butcher cows \$4.75@5.25; common cows \$4@4.50; canners \$3@4; best heavy bulls \$6.25@6.50; bologna bulls \$5.25@6; stock bulls \$4.50@5.

Veal Calves.

Receipts this week 414; last week 463; market steady. Best \$10.50; others \$7@10.

Sheep and Lambs.

Receipts this week 4,380; last week 7,880; market steady. Best lambs \$8@8.25; fair do \$7@7.75; light to common do \$6.50@7; heavy do \$6.75@7; fair to good sheep \$4.50@5.25; culls and common \$3@4.

Hogs.

Receipts this week 10,957; last week 11,316; market steady at \$6.75@6.80; heavy hogs not wanted by packers, that is, those above 190 lbs. average;

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THIRD	\$100.	Geo. Chapman, Attica, Mich.	"	345.25 "
FOURTH	\$100.	A. F. Walbrecht, Central Lake, Mich.	"	339. "
FIFTH	\$100.	E. A. Stass, Royal Oak, Mich.	"	335.78 "
SIXTH	\$100.	Dan. Reish, Wales, Mich.	"	330.58 "
SEVENTH	\$100.	J. H. Linck, Goodland, Mich.	"	323.08 "
EIGHTH	\$100.	J. Sparling, Colfax, Mich.	"	305. "
NINTH	\$100.	F. Brown, Waupun, Wis.	"	304.15 "
TENTH	\$100.	F. I. Faunce, Summerfield, Mich.	"	301.23 "
Average Yield				331.33 "

The average yield of Indiana, Wisconsin and Michigan according to Government Bulletin 641 is 110. "

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and calendar of pure bred poultry; 70 varieties illustrated and described, many in natural colors. Perfect guide to poultry raisers—full of facts. Low prices on stock and eggs for hatching. Incubators and brooders. 22 years in business. You need this noted book. Send 10c for it—today.

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and Almanac for 1915 has over 200 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c.

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Wisconsin Wins In Big Hatching Contests

EVERY YEAR
130 Egg Incubator
150 Chick Brooder
BOTH For
\$10 Freight Paid
East of Rockies
180 Egg Incubator
and Brooder \$12

Wisconsin Incubators won in 1910, 1911, 1912, 1913 and 1914 in National Hatching Contests—Thousand of machines competing. Catalog tells all about it—and why Wisconsin are winners. If ordered together—

BOTH MACHINES \$10—Freight Paid East of Rockies
Wisconsin have hot water heat, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under tray. Incubator and Brooder shipped complete with thermometers, lamps, egg-testers, all set-up, ready to use when you get them. Incubators finished in natural color showing high-grade Calif. Redwood lumber we use—not painted to cover up cheap material. Send for catalog and we will send you a sample of the material, then you can compare it with the kind others use. If you will do this we know you will order a Wisconsin. Money back if not satisfied.

Wisconsin Incubator Co., Box 112 Racine, Wis.

Poultry.

CAUSE AND CURE OF FEATHER-EATING.

When the hens are shut up in small quarters, as is often the case in winter, they are liable to form the habit of feather-eating. This is due in most cases to some deficiency in the diet. While it occurs most commonly with birds that are closely confined it will sometimes develop in hens that have wider range. There are several causes. Insect parasites is the most frequent. The birds in pecking themselves pull out their feathers and swallow them. If the diet is unsatisfactory, the moisture in the pin feathers seems agreeable to the taste and they continue until the practice is formed. From plucking their own feathers they soon learn to pluck them from one another. The accident of pulling a feather when relieving the irritation caused by vermin leads to the habit, but is not generally enough to confirm them in the vice if they are fed plenty of green material and animal matter. Birds forming the habit at moulting time may sometimes keep themselves practically naked all winter by pulling the pinfeathers as fast as they start.

One of the first things to be done is to separate the feather-eaters from the flock, as the vice is one that may be taught to others. In fact, it is usually one or two birds at first that start the habit. Confining them in a small coop and feeding them well for a few weeks will often result in curing the birds. Away from other hens and well fed they seem to forget the feather-pulling. If this is not effective put another hen in the same coop, after covering her with carbolated vaseline or some other substance that the birds will not like the taste of. This need not be used on the entire body but on the backs or parts that the feather-eater usually attacks. When this does not cure, a sharp knife should be used, and a fricassee will finish the job. In valuable flocks, where it is not desired to kill the hen, file the mandibles of the beak so they will not quite meet. This will not hinder the bird when eating but will prevent her from grasping the feathers with sufficient strength to pull them out.

Idleness in the pens may cause the forming of the habit. Keep the birds busy. Make them work for their food and they will not be so liable to get into mischief. I have heard it said that certain breeds are more subject to the vice than others, but I believe this to be a fallacy. If conditions are not right birds of any breed will contract the habit.

A small quantity of sulphur fed in the mash occasionally, will often prevent the vice or perhaps arrest it at the first.

N. H.

CHAS. H. CHESLEY.

DIFFERENCE BETWEEN STRAINS OF POULTRY.

In regard to Barred Rock fowls, what is the difference between the B. and H. strains, and which is the laying strain?

Van Buren Co. Mrs. M. E. H.

A strain of a certain breed of poultry is brought about by the work of a poultry breeder who breeds his chickens with certain objects in mind. In some cases this object may be the production of fine feathers and form for show purposes, while in others the utility standpoint or egg production is given chief consideration. Most every poultry raiser who is in the business in a commercial way breeds his poultry with certain objects in view, and therefore develops a strain of his own of the particular breed in which he is interested. Those who advertise their strains have established or are endeavoring to establish a reputation for their strain.

There is no way of telling whether a certain strain is a good laying strain or not except by taking the word of the breeder or the past reputation of the strain he is advertising. One may also find out by trying the strain, but often the one who does so has not the proper knowledge as to the care of poultry, and regardless of how good the strain is, the hens will not produce eggs unless given proper care. Thoroughbred and specially bred poultry needs thoroughbred care in order to produce thoroughbred results. The strain is only one factor in producing productive hens, but it is a factor which takes time to develop and therefore it is advisable for one to buy fowls or eggs of a well developed strain, provided he intends to give them proper care.

SEASONABLE POULTRY NOTES.

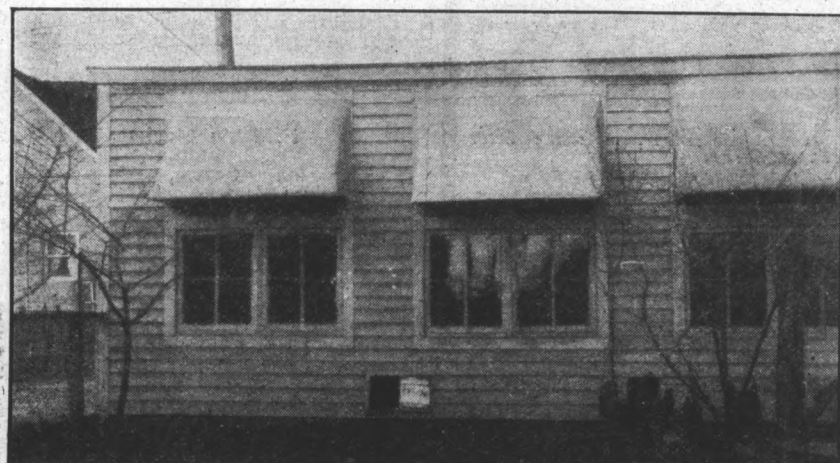
A good method of feeding cabbage is to suspend the heads from the roof of the house with a strong string and make the hen jump for every bite she gets.

Charcoal should be kept before the hens all the time in hoppers. Charcoal is a blood purifier and aids digestion.

A load or two of gravel dumped into the poultry house or yard will provide the flock with an abundance of grit.

A hen that has recovered from a severe attack of roup, should be marked so that no mistake will be made when the breeding pens are made up. A hen that has had the roup should never be used as a breeder, as roup weakens vitality.

T. Z. RICHEY.



Here is the conception of an Illinois woman who believes in providing a hen home as against a hen house.

She makes use of the awnings in summer to prevent the sun from beating into the house and heating it to the discomfort of the occupants. In winter as well as in summer this poultrywoman believes in having plenty of fresh air. She lowers the windows slightly, and the awnings keep out snow and rain.

In mild weather when the hens want to keep out in the run, and when there are showers, the fowls stand under the awnings after the habit of a fowl to get in out of the wet.

Illinois.

J. L. GRAFF.



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ROYALTON BRED POULTRY—Fine S. C. Brown Leghorns and White Hocks Cockerels at \$2, \$3 and \$5; from prize winning stock, D. F. VALENTINE, Sup't., Temperance, Michigan.

Bourbon Red hen turkeys \$4 each. Rose and single comb. Rhode Island Red cockerels \$2 each, 3 for \$5. F. J. Napier, Novi, Mich.

Barred Rock Cockerels—Big boned and well barred. Single birds \$2, 200 more \$1.50 each. A. A. WOOD & SON, Saline, Michigan.

R. C. & S. C. Rhode Island Red Eggs, \$1.50 per 15; postpaid. Also S. C. Red Cockerels. "Satisfy customers". Jennie Buell, Ann Arbor, Mich.

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Trained Running Fox Hounds—30 Fox and Coon hound pups, Ponies. Send stamp. W. E. LECKY, Holmesville, Ohio.

Ringlet Barred Rock Cockerels, Birds of quality. R thirty years the standard. \$3 a piece \$5 for two. PLAINVIEW STOCK FARM, Romeo, Michigan.

White Rock Cockerels, prize winning variety, 8 lbs. and over, now \$2.50. Eggs in season, order early. MRS. FLORENCE HOWARD, Petersburg, Mich.

Mammoth Bronze Turkeys—Pairs not skinned. Hens \$4.00. COLLAR Bros., Copperville, Michigan.

WHITE WYANDOTTE COCKERELS, EGG-A-DAY POULTRY RANCH, Marshall, Mich.

65 Breeds—Chickens, ducks, geese, turkeys, guineas, hares and dogs. Stock and eggs reasonable. 60-page catalog free. H. A. SOUDER, Box 50, Sellersville, Pa.

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BARRED ROCK COCKERELS—\$3 each, two for \$5. Large, farm raised. Winners for 10 years. J. A. Barnum, Union City, Mich.

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White P. Rocks, Pekin and white runner ducks, White guineas, eggs and day old ducks and chicks. H. V. HOSTETLER, St. Johns, Michigan.

White Leghorns Day-Old-Chicks. We guarantee satisfaction to all our customers. MAPLE CITY POULTRY PLANT, Box C, Charlotte, Michigan.

Grange.

PUBLIC SERVICE DISCUSSED AT OAKLAND POMONA.

Co-operation was the chief subject on the program at the Oakland County Pomona held with Pontiac Grange Tuesday, January 12. It was an all-day meeting, the morning session being taken up with preliminary work. After an excellent dinner, served by the ladies of the Pontiac Grange, the afternoon session started with the election of officers and a set of officers capable of doing full justice to the Pomona for the coming term was elected. The chief address of the afternoon's program, in charge of C. S. Bartlett, was given by Rev. Fay C. Bartlett, of Wixom, who has been successful in making the church of practical value to his community and in federating the social forces of Wixom. His subject was "the Relation of the Grange to the Community," in which he urged the Grange to be of public service. He said that the Grange would get renewed life if it would lose itself in public service, giving to the community what it could, instead of getting all it could out of the community. He told of the inspiration he received from Mr. Gardner's address at the State Meeting at Battle Creek, and of the instances of public good the Granges in Massachusetts were doing, and the resulting strength and popularity of the Grange there. F. A. Wilken, Detroit, told of the necessity of co-operation in the proper marketing of farm products and spoke of the plan of organization of several successful co-operative farmers' organizations. Music and recitations were interspersed throughout the program and were enjoyed by all. Addresses were also given by retiring Master Holden and Master-elect Tucker.

Mr. Holden urged the earnest co-operation of the Grange in the securing of a county agent for Oakland county and Mr. Tucker commented upon the care of the rural cemeteries, the wider observation of Memory Day, at which time the graves of the brothers and sisters gone beyond should be decorated. Rural sign advertising was also mentioned by the new master, who stated that the Grange should give this nuisance more attention. The meeting closed with the installation of the new officers, after which the visiting members further enjoyed the hospitality of Pontiac Grange by partaking of a fine luncheon.

AMONG THE LIVE GRANGES.

Ann Arbor Grange held its regular meeting at the home of Mr. and Mrs. C. F. Widenmann on the Fuller road January 8. During an enthusiastic business meeting, the action of Hon. Samuel W. Beakes, representative from Michigan, on the prohibition question came in for severe criticism, and the secretary was authorized to send him a letter acquainting him of the Grange sentiment. A lengthy discussion of the rest room for Ann Arbor followed, and a vote of hearty thanks was tendered the Civic Association for its splendid co-operation, also to those supervisors who lent their support to the movement. The following subjects were announced by the lecturer as a program for study and discussion for the coming year: Schools and child training; crops and methods; home furnishings and surroundings, and community service. At the close of the business meeting the following officers were installed by Mr. and Mrs. Sperry, of Pittsfield Union Grange: Master, R. C. Hill; overseer, H. G. Burnham; lecturer, Miss Flora Buell; steward, Gilchrist Chalmers; assistant steward, Floyd Uloth; chaplain, Mrs. H. G. Burnham; treasurer, C. F. Widenmann; secretary, Oscar McDougall; gate keeper, Franklin Jewell; Ceres, Mrs. A. W. Van Ben-schoten; Pomona, Mrs. R. C. Hill; Flora, Mrs. Nellie M. Rice; lady assistant steward, Mrs. Floyd Uloth.

Monroe County Pomona Grange No. 51 will meet with Frenchtown Grange, Saturday, February 6. Take electric car and get off at Hurd Road.

Farmers' Clubs

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

CLUB DISCUSSIONS.

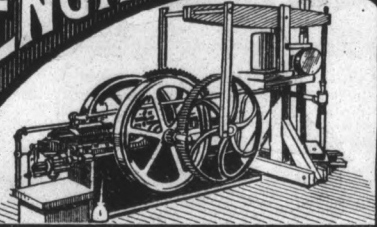
An Xmas Meeting.—The December meeting of the Columbia Farmers' Club was held at the home of the president, Mr. Willis Crego, who was assisted in entertaining by Mr. and Mrs. Geo. Frederick. Xmas decorations gave the spacious rooms a festive appearance. An excellent program followed the appetizing and well served dinner. Mr. Luther Cook read a most instructive paper on "Short Courses at the M. A. C." showing samples and models of the work done there in iron and wood work. Miss Mae Crego read a paper on the "Origin of Xmas," that was most timely. Mrs. Ladd read about the "Orphans at Home." Mrs. Gary gave a reading and Merle Peterson recited. The Austin family sang several selections, "The Old Wooden Rocker" being especially enjoyed, and the Ball and Loomis Quartette closed the program with a beautiful Xmas selection. The roll call, wit and humor brought forth many laughable incidents. This closing meeting of the year was considered one of the best and the general opinion was that a most successful and profitable year had been spent, and that the Club had progressed in interest.—Maude Smith, Reporter.

Annual Oyster Dinner.—The Ray Farmers' Club met in January at the home of Mr. and Mrs. E. M. Frost for their annual oyster dinner. About 60 members were present. After a sumptuous dinner the meeting was called to order by the president, J. A. Priest. First on the program was a song by the Club, after which was a short business meeting. Following prayer by J. P. Gilmore, the Ray Quartet favored the Club with a song. Mrs. Myron Degroff read "Solving a Problem," which was greatly enjoyed. Mr. J. P. Gilmore and Mrs. McGregor sang a duet. A reading by Miss Carrie Wyman was loudly applauded. The meeting then adjourned to meet February 11 at the home of Mr. and Mrs. Lewis Broughton.—Mrs. E. M. Frost, Cor. Sec.

Will Hold Institute.—The Salem Farmers' Club held its annual meeting at the pleasant new home of the vice-president, Mr. Irving Johnson. A bountiful chicken-pie dinner was served to a large number of guests and members of the Club, and a very pleasant social hour was enjoyed. The meeting was then called to order by President Thompson and music, recitations and readings made up a very interesting program. The Club then discussed the subject of holding an institute. It was voted that such institute be held in February at the Salem town hall. A letter of sympathy and appreciation was voted to Mr. and Mrs. Daniel Smith, who have been unable to meet with us on account of sickness. The Club then proceeded to election of officers, which resulted as follows: President, G. H. Thompson; vice-president, Irving Johnson; recording secretary, Miss Grace Geiger; treasurer, Ira Soper; corresponding secretary, Mrs. H. C. Thompson.

Enters Seventeenth Year.—Washington Center Farmers' Club held its January meeting at Elmdale Stock Farm, with Mr. and Mrs. Frank Heinlen. The officers elected at the December meeting are: President, S. G. Crowl; vice-president, Mrs. F. L. Cook; recording secretary, Mrs. O. J. Campbell; corresponding secretary, Mrs. S. N. French; treasurer, Mrs. Frank Heinlen; organist, Mrs. B. S. Gillman; assistant organist, Miss Marita Gobe. The new officers were all present. The programs for the year are interesting and the Club enters upon its seventeenth year with unusually bright prospects. A paper by Mrs. O. J. Campbell entitled, "Looking Backward," gave a review of the work accomplished in the 16 years of the Club's existence shows progress along every line. The questions discussed at this meeting were, "The progress of temperance," by C. A. Mathews and others. "The Burden of Taxation," by F. L. Cook. Chas. S. McHenry, of Charlotte, entertained the Club with a number of stories and recitations. He also gave a talk in the interest of the Michigan Live Stock Insurance Company. Mr. H. J. Wells, secretary and treasurer of that company, was also present. The question box brought out a lively discussion on hog cholera and its prevention, which will be continued at our next meeting. We are anxiously waiting for the appearance of the "Associational Topic" in the Michigan Farmer. We are ready to discuss anything that may be handed out to us. Next meeting will be held at "Social Glen" with Mr. and Mrs. Frank Brown the second Thursday in February.—Mrs. S. N. Frank, Cor. Sec.

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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.

Strangles in Swine.—Last spring I had a bunch of hogs take sick, cough, had high fever, discharged mucus from nose, lost flesh rapidly, did not cough violently when quiet, but as soon as they exerted themselves much they would cough real hard. Our local Vet. thought they might have the cholera, but soon as they were turned out and had a change of feed and air they seemed to get well. The one the Vet. cut open had spots on liver—that's all. Sometime ago I put a bunch of young pigs in same lot and pen; now they are showing the same symptoms. Same Vet. now believes they have a sort of distemper. **F. L. Camden, Mich.**—Your young pigs suffer from either strangles or catarrhal fever; however, they show most if not all the symptoms of strangles. This is not considered a fatal disease in swine. Apply equal parts of turpentine, aqua ammonia and raw linseed oil to their throats three times a week and give each pig 3 grs. of quinine at a dose three times a day, to reduce their fever give tincture aconite in 10-drop doses four or five times a day, in feed or water. Disinfect their pen, keep them dry and clean. Mix equal parts of ginger, gentian, licorice and cooking soda and give each pig half a teaspoonful at a dose three times a day.

Wounded Coronet.—Last October my horse wounded pastern one inch above hoof, two inches in length, the wound healed partially and left ridge which I would like to have removed. **J. M. Omena, Mich.**—Dissolve 1 oz. of powdered sulphate copper in a quart of water and apply to wound twice a day. You might also apply equal parts powdered alum and oxide of zinc occasionally.

Swollen Hind Legs.—I have a colt coming three years old whose hind legs are both stocked to hock and he has been in this condition since last October. **P. D., Ida, Mich.**—Give colt 1 dr. potassium iodide three times a day and apply one part iodine and nine parts lard to swollen leg twice a week. It is possible that if you would bandage legs in cotton, it would not be necessary to apply medicine.

Indigestion—Sluggish Kidneys.—I have a three-year-old colt that is not thriving and his water is sometimes the color of blood and thicker than it should be. **A. B. McR., Cass City, Mich.**—Mix together one part ground nux vomica, one part powdered nitrate of potash, three parts bicarbonate of soda and three parts ground gentian and give him a tablespoonful at a dose in feed three times a day.

Cow Gives Bloody Milk.—I have a cow that occasionally gives bloody milk; she has a small bunch near end of teat and occasionally teat swells. **W. H. L., Battle Creek, Mich.**—Dissolve 1 oz. of acetate of lead in one quart of water and apply to teat three times a day. Bed her well, milk her with care.

Lice.—What can I apply to rid my calves of lice? **R. A. B., Marcellus, Mich.**—Apply insect powder, or coal-tar disinfectant, such as you find in advertisements in this paper.

Ringworm.—I have two cows that are troubled with either ringworm or some other skin trouble, and I would like to know what to apply. **J. S.**—Apply one part iodine and 15 parts lard to sores three times a week.

Loss of Appetite.—I have several pigs eight months old that have poor appetites. Slaughtered six for home use, found them sound, but liver was not just right. **E. V. W., Ann Arbor, Mich.**—Dissolve phosphate soda in hot water and give each pig a teaspoonful twice daily. Also give them ground gentian in each feed, a teaspoonful is a full dose and it should be given two or three times a day.

Tuberculosis.—I would like to know what ails my hens; they grow thin and soon die. I find nearly all of them have liver trouble, lumps on bowels and white spots on liver. **A. P., Ashley, Mich.**—There is no remedy for your sick birds. Change feed, if you feed milk, have cows tested with tuberculin, as their milk may possibly be causing all the trouble.

J. N., Conway, Mich.—Your calves died of blackquarter and had they

been vaccinated might have never been infected. When disease is once established it usually proves fatal.

Lice on Horses and Cattle.—Would like to know what to put on horses and cattle to kill lice. **R. M., Howell, Mich.**—Apply one part carbolic acid and 30 parts water, or one part coal-tar disinfectant and 20 parts of water three times a week.

Rheumatism—Congested Udder.—I have a seven-year-old mare that shows a little hitch in hind leg and this is of udder swells when she stands in stable. I also have a cow that came fresh ten days ago which has an inflamed leg. Have applied white of egg and oil, but it fails to help her. **G. R., Williamston, Mich.**—Give your mare a teaspoonful of powdered nitrate of potash and 1 dr. of sodium salicylate at a dose in feed twice a day, and exercise her every day. Leave her udder alone; she is perhaps suffering from a rheumatic ailment. Apply one part fluid extract of phytolacca and four parts of alcohol to udder of cow twice a day. Feed her some roots and bed her well.

Functional Spinal Paralysis.—I had a mare that I found down in the stable one morning; she was unable to get up, so I called our local Vet. who said it was weakness in her back, but could not tell just what it was. Afterwards I slung her up and in a few days she was able to walk, but got down again and was never able to walk again. One hind leg swelled and broke just below stifle joint. We dressed and cared for her for four weeks, then she got so she could not stand in the sling, but would fall on her head and knees, so I killed her. The Vet. refused to open her for fear of taking blood poison. This mare never had any fever and pulse was normal. **W. O. S., Wheeler, Mich.**—Your mare suffered from functional spinal paralysis and was perhaps incurable. The abscess on thigh was the result of bruise and I do not believe that she suffered from blood poison.

Weakness of Hind Quarter.—I have two registered boars seven months old, weighing about 175 lbs. each, and for the past three days one of them does not stand straight on hind legs, showing a little weakness. I have been feeding ground corn and oats, some corn on cob, also roots and skim-milk; besides, they have clean quarters to sleep and feed in. Also, a yard about 40x40 to exercise in. **O. L. P.**—If you will discontinue feeding corn for 30 days, he will perhaps get all right. Rub hind quarters with alcohol twice a day. Give him 15 grs. of ground nux vomica, 5 grs. of potassium iodide three times a day.

Indigestion.—I have a calf nine months old that has remained low in flesh all summer, autumn, and so far this winter. I have given him copperas, gentian and ginger, equal parts, a teaspoonful once a day; his appetite is good for roughage. **S. S., Wolverine, Mich.**—Give calf a teaspoonful of fluid extract gentian, a teaspoonful of fluid extract cinchona and 30 drops of fluid extract nux vomica at a dose in either feed or water three times a day. Feed him plenty of grain, clover hay and roots.

Stocking.—When my eight-year-old horse stands in stable two or three days his legs stock. He is fed corn and mixed hay, but he is not thriving. **M. B., Clayton, Mich.**—Every horse should have some exercise daily and for want of exercise and proper feeding his legs stock. Feed him some well salted bran mash, or roots to keep his bowels open; also give him 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.

Sows Fail to Come in Heat.—I have two sows which farrowed the latter part of September. The little ones have been weaned four weeks; the sows are in good condition, but they fail to come in heat. **E. L. F., Adrian, Mich.**—Give 10 grs. of ground nux vomica, 40 grs. of ground capsicum at a dose in feed two or three times a day.

Indigestion.—I have a brood mare that is not thriving, is not able to stand much work and her coat looks rough. **C. H. N., Kinross, Mich.**—Increase her feed, groom her well twice a day. Give her a teaspoonful of salt, a dessertspoonful of hypo-sulphite of soda, 1 dr. powdered sulphate iron, ½ oz. ground gentian at a dose in feed three times a day.

Splint Lameness.—We have a horse lame in left fore leg and am not sure whether the trouble is in foot, back tendon, or splint. Have applied blister to coronet, back tendons without making it less lame. He has a splint, also a small bunch on lower part of abdomen. Part of time he is not very lame. **B. A. F., Corunna, Mich.**—I am inclined to believe lameness in either splint or bony bunch on pastern; therefore, you had better apply one part red iodide mercury and four parts lard to each of these bunches every week or ten days.



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OWN A FARM—My unimproved farming lands in Gladwin county, Mich., will make you independent. Small payment down, 10 years' time on balance. Price \$10 to \$20 per acre. Write for particulars. U. G. REYNOLDS, Gladwin, Michigan.

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Imported Percheron Stallion that won first as a 2-yr.-old at the Ill. State Fair and a Gold Medal as a yearling in France. Has superior breeding, is absolutely sound, and a sure breeder. Colts to show. Dapple gray, weighed 1900 lbs. when younger. Price for quick sale, \$400. Now is the time to get in the horse breeding business. Write for further particulars.

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Four Pure Bred Angus Bulls. Extra good ones. One Fallow bull. Eight and nine months old. Priced reasonable. Inquire F. J. WILBER, Clio, Mich.

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O. I. C.—Spring boars all sold. We have some fine fall pigs ready to ship. JOHN BERNER & SON, Grand Ledge, Michigan.

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O. I. C's—I have some good Sept. boars ready either sex, not akin. ¼ mile west of depot. OTTO B. SCHULZE, Nashville, Michigan.

O. I. C's—I have some good Sept. boars ready either sex, not akin. ¼ mile west of depot. Ovid. J. W. HOWELL, R. No. 17, Ovid, Michigan.

Duroc Jerseys of the heavy boned type. Bred Sows and fall Pigs of both sex for sale. M. A. BRAY, Oakemos, Ingham Co., Michigan.

DUROC JERSEYS From Prize-Winning Stock. Write, or better still, come.

Brookwater Farm, Ann Arbor, Mich., R. F. D. 7.

Duroc Jerseys: A few choice boars and bred gilts, also S. C. W. Leghorns and Buff Rock Cockerels. J. MCNICOLL, Sta. A. R. No. 4, Bay City, Michigan.

Duroc Jerseys—A few choice gilts bred for April and May farrow. Fall pigs either sex. S. C. STAHLMAN, CHERRY LAWN FARM, Shepherd, Michigan.

DUROC JERSEYS—Aug. and Sept. pigs with plenty of size and great quality. Also gilts bred to prize winning stock. F. J. Drott, R. No. 1, Monroe, Mich.

Bred Sow Sale of O. I. C. and Chester Whites ON JANUARY 22, included in this we have 40 choice gilts and ten tried sows and ten boars, these are good herd boars that we have used ourselves and they were in our show herd also all the sows from our great show herd. Write for catalogues and pictures, come and spend one day with the biggest and leading herd in the state. We also have fall pigs and service males for sale. Shipped O. O. D. so You Can See Them Before Pay For Them.

ROLLING VIEW STOCK FARM, Cass City, Mich. Michigan.

DUROC JERSEYS—3 Spring boars and 25 bred gilts ready to ship. CAREY U. EDMONDS, Hastings, Michigan.

CHOICE DUROC GILTS Bred to Highland King, Fancy Col. Again or Cherry Prince for sale. This is one of the strongest trios of herd boars in any one herd in the state. We also have a few spring males for sale.

Send for catalog of our Bred Sow Sale FEBRUARY 23, 1915

Remember we have 200 sows and gilts to select from. KOHLI & MISHLER, New Paris, Indiana.

DUROCS—5 good good boars, weight 200 lbs. \$25. Can ship anywhere in Mich. About 30 gilts will be bred for April, best blood lines. Also Holstein Calf, H. G. Keesler, R. No. 5, Cassopolis, Mich.

DUROC JERSEY—Bred gilts for March and April farrow; bred right and priced right. W. C. TAYLOR, Milan, Michigan.

Capitol Herd Duroc Jersey Swine. Established 1888. Sept. pigs. Write for description, prices and etc. J. H. BANGHART, PROP., Lansing, Michigan.

DUROC JERSEYS—Spring pigs of either sex at reasonable prices. Pairs not akin. W. J. BAUMAN, Burr Oak, Michigan.

Duroc Jerseys—Aug. pigs either sex, also one Holstein bull calf from tuberculin tested dam at reasonable prices. E. H. MORRIS, Monroe, Mich.

POLAND CHINAS—60 head registered boars and sows; fine stock. A. G. MEADE, Colby Ranch, Stanton, Michigan.

POLAND CHINAS of the big type. Boars ready for service. Sows bred for spring farrow. A. A. Wood & Son, Saline, Mich.

POLAND CHINAS—Choice gilts bred to "Big Type," boars of great quality; also young boars. L. W. BARNES & SON, Byron, Michigan.

50 Big Type Poland China Brood Sows to be sold at Saturday, Feb. 13, 1915, at the T. H. Jackson Stock Farm, Peter Mouw breeding. Catalog ready. T. H. Jackson, C. L. Ullery, South Bend, Indiana.

Poland China Sows and Gilts bred for March and April farrow. Also fall pigs, satisfaction guaranteed. G. W. HOLTON, Kalamazoo, Mich.

LARGE TYPE P. C.—Either sex, pairs and trios, not akin. Am booking orders for bred gilts. W. J. HAGELSHAW, Augusta, Mich.

Large Strain P. C.—A few spring boars left, one litter of Big sows 194417 and Giant Defender 194419, and gilts bred to Young Hadley and Big Defender that weighs 600 as yearling. H. O. SWARTZ, Schoolcraft, Michigan.

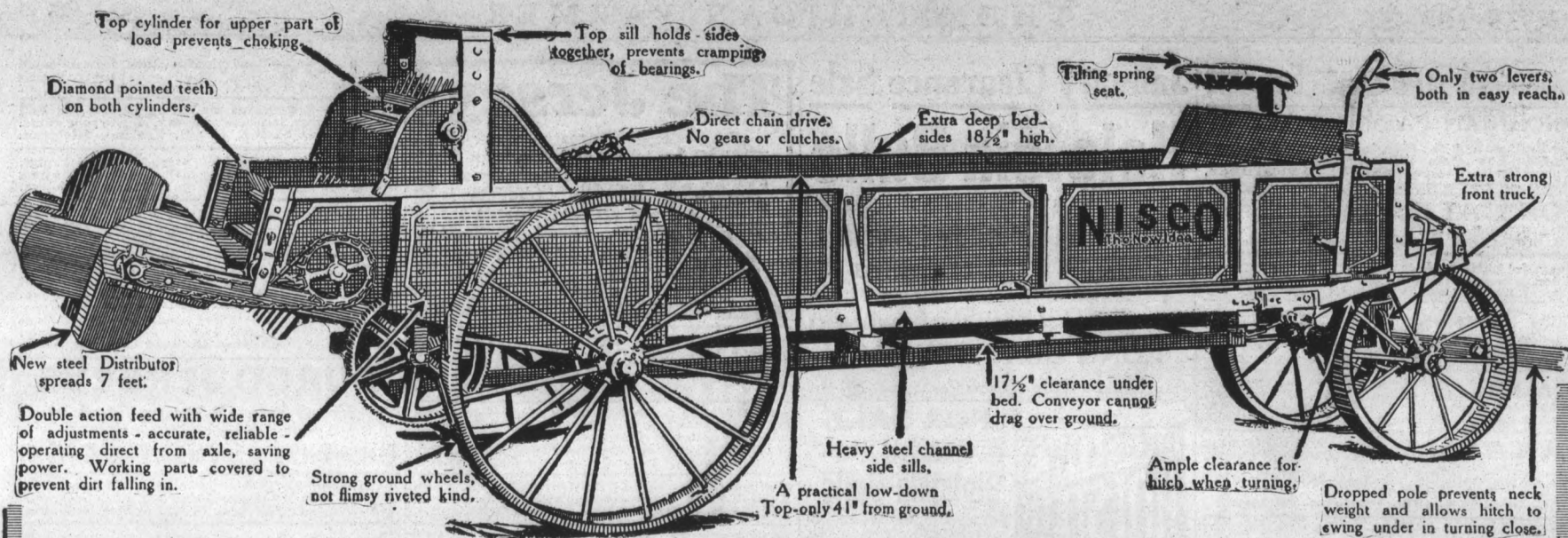
Big Type Poland China Boars and Gilts plenty of size and great quality. I know I can please you. ROBERT MARTIN, R. F. D. No. 7, Hastings, Mich.

Big Bone Poland China Brood Sows—Bred for spring farrow. Fall pigs at great bargains. Write today for special price list. MAPLEWOOD STOCK FARM, Allegan, Michigan.

POLAND CHINA SOWS of big medium type, bred for spring farrow. R. J. LANE, R. 7, Clare, Michigan.

Large Styled Poland China Gilts bred. Grothy fall pigs not akin. Choice B. P. Rock cock'ls at bargains. Robert Neve, Flushing, Mich.

Poland Chinas, either sex, all ages. Something good at a low price. Bargains in boars ready for service. P. D.



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