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50 CENTS A YEAR
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True Stories About Self-made Farmers

How by Careful Management and the adoption of a three-year crop rotation a young Gratiot County farmer accumulated a property worth \$12,000 in a dozen years

SUCCESS is a relative term. By it we usually mean that a man has prospered as well, or better, than the average of his contemporaries. Walter M. Brown, of Gratiot county, has succeeded in his farming venture, if we measure it by such a standard.

Success may come in a variety of ways. One may succeed through accident—what we frequently call "good luck." Or it may be the result of questionable shrewdness whereby one gains, but someone else must lose through contributing to that gain. But the success that usually gives the greatest satisfaction is the one that comes by way of honest, intelligent and persistent effort. Mr. Brown's success has come over the latter road.

Since we are speaking of success in farming, we need to measure it according to agricultural standards. Today Mr. Brown has 80 acres of the finest land in Gratiot county, and that means as good land as it is possible to find anywhere in the state, well fenced, with buildings that approximate in value \$3,500, land in a high cultural condition, fully 10,000 tile in working condition, and 30 apple trees just coming into bearing—in all, a property worth in round numbers, \$12,000. When he came from Clinton county in 1900 Mr. Brown would have readily parted with his earthly belongings and his capital stock for \$1,000. His accumulation since has all come from his farm. Not only this, but he and his good wife have raised a family of six children.

To accomplish these results, a system of general farming has been followed. The usual variety of grains has been grown, and hogs, cows, sheep, horses, and poultry raised.

While the cropping for the season of 1913 varied in some of its details from that of other seasons, it is quite typical of the plan followed by Mr. Brown and will give the reader an idea of the proportion of each of the general farm crops that he puts out. There were four acres of rye from which he secured considerable pasture, and 61 bushels of grain; eight acres of oats which yielded 400 bushels; ten acres of hay that produced approximately 20 tons; 18 acres of corn that averaged 110 baskets per acre; ten acres of beans that matured a crop of 168 bushels, machine measure, or 180 bushels as returned by the elevator; an acre of potatoes from which were harvested 80 bushels; 11 acres to pasture; 10 acres to woodlot and eight acres to roads, lanes, fences, yards, etc.

Beans have been the main cash crop, although wheat is grown frequently. The remainder of the crops are practically all fed out to the different kinds of stock. Following such a scheme it has been possible to greatly improve the fertility of the land. It is only fair to state that the

farm purchased by Mr. Brown had been rented for a number of years previous and had consequently reached a low stage in the scale of fertility, but that every field is now producing very satisfactorily as may be gathered from the above catalog of yields.

Before mentioning the live stock the reader would undoubtedly like to know the crop rotation used in this

ing it into the rotation every three years, by feeding the bulk of the products grown upon the farm, and by returning manure to the fields, remarkable strides were made in developing productiveness during the first few years of his occupation. Recently commercial fertilizer was added to the list of agents used to get better yields, and Mr. Brown's testimonial is that the results are definite and well

manure alone and consequently it is cheaper.

In the live stock department of the farm, sheep and hogs make up the larger part. The flock of breeding ewes consists of 25 grade animals. In disposing of the lambs from these ewes, Mr. Brown follows a practice that is not common in most general-farming districts. The lambs are usually dropped early, put onto pasture and carried through to September, when they are turned off direct from the field. The returns, considering the additional feed required for the winter, he believes to be much better than from the usual method of holding till December or later. Bean pods, cull beans, and some oats and corn are fed to the breeding ewes.

Two brood sows are kept. These sows usually raise about 30 shoats each year. These shoats consume a considerable portion of the corn grown, besides skim-milk and other by-products.

From three to four cows are kept for dairy purposes. The milk is separated on the farm and the cream sold to a local dealer while the skim-milk is disposed of as stated above. Young stock not wanted for dairy purposes are fed, frequently with other cattle bought in the neighborhood. The dairy cows, young cattle and the sheep, are capable of consuming the corn fodder, and other coarse feed grown upon the farm.

The chickens are common stock and are kept for the eggs they produce, as well as the surplus birds that are annually turned off. The eggs are sold at a near-by store. About 50 hens are carried over each winter.

The motive power of the farm is furnished by three work horses. While there are times when it crowds three horses to do the necessary work, they can do it under average conditions and keep down expenses during the slack months. Occasionally a colt is raised; the sale of which adds to the income of the farm.

There are those, no doubt, who will criticize some of the practices followed by Mr. Brown, but no one knows better than he himself that this farm can be made to return larger revenues. He appreciates that a better class of stock, the enlargement of his dairy business, the introduction of the silo, would all enhance the earning power of his equipment, and now that he has gotten well out of debt he proposes to make these changes. But we contend that the lack of these things makes his success the more remarkable. He has more than made ends meet, with the handicap of methods that one with more capital might adopt. What might have been his success had he been in a position to introduce these from the start?

There is one lesson that the owner



General View of the Farm Buildings of Walter Brown, of Gratiot County.

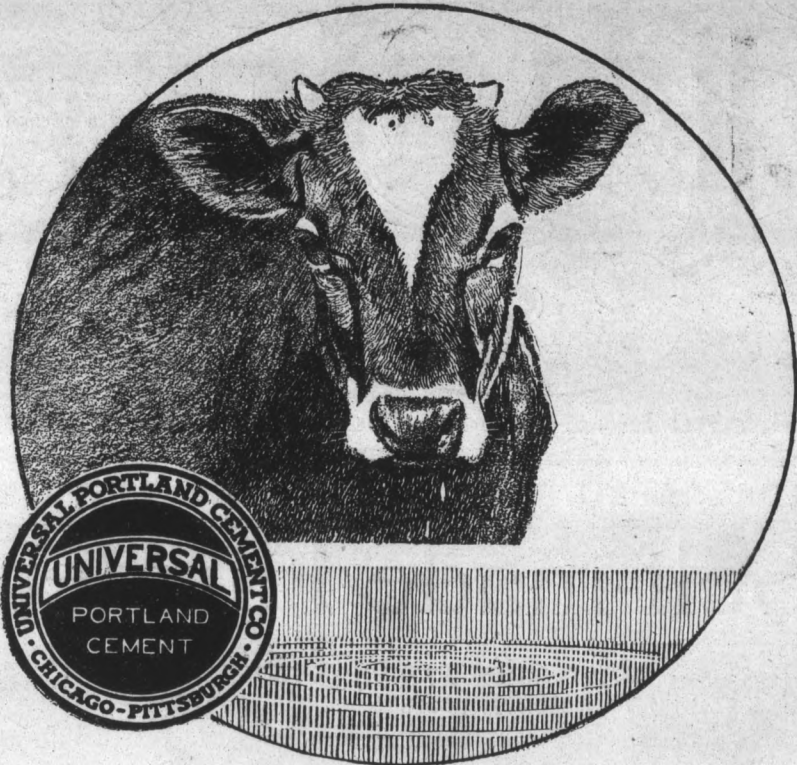
instance. Like most practical men, Mr. Brown has always felt that each particular case may require special handling as to the manner of cropping; however, he has two three-year rotations to which he adheres closely except where he feels that the field would benefit by some variation of the regular order. One of the three-year-rotations is to follow corn with oats and that with clover, and the other consists in sowing wheat after beans and seeding to clover.

Clover has been the important crop in building up this farm. By bring-

worth while where the soil is well drained, but in places where provision has not been made to relieve the soil of surplus moisture the results from the use of these fertilizers did not appear to be sufficiently large to warrant the expense. On drained land, however, by combining manure and commercial fertilizer, and the use of clover once every three years in the rotation, he believes more economical results are obtained than without the commercial product, that is, it is possible to feed the soil a more nearly balanced ration than with barnyard



Beans are the Main Cash Crop, Although Wheat is Grown Frequently.



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of this farm would teach with much emphasis, and that is the advantage to the soil of putting clover in the rotation every three years. By so doing he has been able to make a profitable farm of one that was badly run down. He contends that it has been this practice which has brought him over the obstacles of a heavy debt, considerable sickness, run-down and undrained land, no buildings, poor fences, etc.

Mr. Brown does not take the full credit for what has been done with this farm. His good wife and partner, he declares, has contributed every bit as much as he himself—her industry, economy and encouragement always lightening the burden and adding to the income and unmeasurably to the pleasure of farming.

FARM NOTES.

Improving a Run Down Soil.

I have 20 acres of very stony, poor land which I would like to improve. I would like to pasture the field this summer, then plow it in the fall and sow rye. Would cowpeas be a good crop to sow for both pasture and fertilizer and would sheep do well on such pasture? I sowed sweet clover here last year with no success.

St. Joseph Co. N. D.

Since sheep are to be pastured on this field this summer, it would be a better plan to prepare a good seed bed and sow to Dwarf Essex rape this spring. Then in late August disk up and sow to rye and vetch. The cowpeas would be a good crop to improve this soil, but would not make as good sheep pasture as the rape, while if the vetch is sown with the rye, this will provide a leguminous crop to utilize for hay or pasture, or to plow down next spring. Cowpeas are said to make excellent pasture for cattle but have not been used yet to any extent as sheep pasture in this state, although doubtless they could be so utilized.

Seeding Clover in Buckwheat.

I have a ten-acre field that I want to sow to buckwheat this season. Also would like to seed it to mammoth clover at the same time. As I have not had any experience with seeding in buckwheat I thought perhaps it would not be advisable to do so. Perhaps some Michigan Farmer reader could give their experience along that line.

Leelanau Co. SUBSCRIBER.

Clover can often be more successfully seeded in buckwheat than in other grain crops, provided the soil has been so handled as to conserve its moisture content until the buckwheat is sown. If, however, the ground is plowed just before the buckwheat is sown and the weather happens to be dry at this season of the year, there would be little prospect of success with the clover seeding.

Seeding Sandy Land to Clover.

Will you please tell me the best and quickest way to get the following described land seeded to clover? Soil is a sandy loam; has been in hay for about four years, and June grass is quite thick. Could I plant to beans and after harvesting same sow lightly with timothy as a nurse crop for clover the following spring?

Saginaw Co. F. R. D.

This plan would not work out in practice. The timothy sown in the fall would appropriate too much of the plant food and moisture to give the clover a good chance to become established when sown in the spring. If there has been difficulty in getting this land seeded, it might pay to apply lime then sow to clover with a thin seeding of oats following the beans, and cut the oats for hay so as to give the clover the best possible chance.

Seeding Clover with or without a Nurse Crop.

Have a field which was in potatoes last year and wish to seed to clover this spring. Which would be the best way to seed, without any crop or sow barley with the seed? The land is quite light and summer grass comes in quickly. Would barley be worth anything for hay if cut green?

Branch Co. A. W. C.

If a light seeding of either oats or

barley is used as a nurse crop and same is cut for hay before the nurse crop has caused the young plants to suffer for moisture, this would be fully as advisable as sowing without a nurse crop and perhaps more so where there is considerable summer grass as described in this inquiry. The oats would be more desirable from the standpoint of cutting same for hay, although on a light, thin soil a large growth could not be expected.

Planning the Crop Rotation.

I have a field of five acres which I manured last spring, plowed, sowed beans, which were good. In the fall I just worked it over and sowed it to rye, which is also standing good. My neighbors advise me to plow it under and sow corn on it, or leave it go for a rye crop.

Saginaw Co.

H. M., Jr.

The disposition of this field should depend largely upon the question of crop rotation. If desired, it could be seeded to clover in the rye this spring, or if a longer crop rotation is planned and the field is needed for crops this season, the rye could be plowed down and planted to corn. Other things being equal, a short crop rotation is best under average Michigan conditions for the maintenance of soil fertility.

Cultivating vs. Plowing for Oats.

Will oats cultivated in with a corn plow do as well as to plow the land and sow the oats? As I have no disk I intend to seed with alsike and timothy. This land is a little low and last year was in corn, and before that sod.

Van Buren Co. L. L. J.

A good seed bed can be prepared for oats with a good cultivator, but the work will not be very much less than would be required by plowing. If a thorough job is done, however, the prospect for an oat crop on such soil as mentioned in this inquiry would be fully as good.

MODERN CONVENIENCES ON THE FARM.

There is no reason why many farmers could not have some of the modern conveniences enjoyed by people who live in cities and villages, if they would only think so. Because there are many things that any ingenious farmer could do himself so the expense would be very little; such, for instance, as making a good drain directly from the kitchen in which wash water and other slops could be thrown, and carried several rods from the house, instead of being thrown on the ground near the door, which is very unsanitary, to say the least. And if the well is a number of feet from the house the water could be forced into a tank in the kitchen by a hand force pump and thus save the wife many steps every day. As many farmers have gasoline engines, the work of pumping water into the house as well as the barn, can be utilized for this purpose. A gasoline engine is no longer considered a luxury, but has become almost a necessity on nearly every farm of any size, because it can be put to so many labor-saving uses on the farm. And this is one of the principal things every farmer must take into consideration at the present time if he makes a success of his business. A neighbor living about a mile from my place, who has a gasoline engine, has recently purchased a storage battery and installed a perfect electric lighting system in his house and barn. And when he is running his engine to separate his milk or pump water, he can store up enough electricity to light his house and barn at night, so he does not have to be to any extra expense by running his engine on purpose to store up electricity. For this reason, aside from the expense of installing, (which was not large), his lights cost him but little. This shows what many farmers can do if they wish, without waiting perhaps for years for some power company before they could get electric lights.

Ottawa Co. JOHN JACKSON.

WHAT ABOUT THE SEED BEANS?

The beans in this section are more or less diseased. Is it safe to plant even those affected the least? Is there any way to treat them that will kill the disease so as to make the seed perfectly reliable?

Genesee Co.

J. H.

As has been previously stated in these columns, bean growers cannot be too careful about the quality of the seed which they plant this season. Of course, it does not matter whether home-grown seed or seed secured at a distance is used if it is free from anthracnose and blight, the fungous diseases which are so prevalent in the state at the present time, and which are damaging the bean crop each year to a greater extent. In fact, the home-grown seed might be preferable if it is free, or even reasonably free from these diseases. If there is any doubt about this, however, the proper thing to do is to send a small sample of the seed to Prof. Muncie, East Lansing, Mich., who is making special investigations in the matter of bean diseases in Michigan. If the beans show brown or yellow spots it is a safe conclusion that they are infected with one or both of these diseases, but they may be infected even if they do not indicate it to the inexperienced observer, hence it is better to send a small sample from the seed stock for expert examination.

While it is probable that most of the bean stock grown in lower Michigan is infected to some extent, it has been found from experience and observation that many sections in northern Michigan where the bean crop has been grown for but a short time are practically free from these fungous diseases as yet, and if the home-grown seed is infected it will pay a large dividend on the investment to secure seed from some northern Michigan point. In several cases in Shiawassee county where this northern grown seed was planted side by side with home-grown seed last year, the yield was several bushels greater per acre for the northern grown seed. The seed will cost a little more, but the beans run smaller in size so that there are enough more of them per bushel to make up for the increased cost, in the opinion of many who have planted them. This difference in the size of the beans is apparently due to climatic conditions as these beans will increase in size when grown in southern Michigan counties.

Securing the cleanest possible seed seems to be the only practical means of insurance against loss from these bean diseases which is available at the present time. The scientists at M. A. C. are working on the problem of controlling the diseases by the treatment of the bean seed, but no definite results have as yet been announced. It is up to the bean growers of the state to make the best possible selection of seed for this year's planting, and the wise grower will not delay a move in this direction until planting time arrives.

THE CONSERVATION OF MANURE.

Popular opinion is that the place for manure is on the field and not in the yard at any time; that there is more waste in the yard than in the field. Now at breaking up time is a good time to notice. While you watch the colored water from the yard, go to the dead furrows or runs from the fields where the winter's manure has been spread. Go farther and look at the brook that takes the water from the yard and the one that takes it from the field. Follow it to the river. It is red. Where did it come from, yard or field?

Tuscola Co.

D. MALIN.

It is undoubtedly true that for

the very greatest economy in the conservation of the farm manure it should not be applied to the fields when the ground is frozen and covered with snow. But it is equally true that for such conservation of the plant food content of the manure it should not be allowed to accumulate in the yard and lie exposed to the rains and, as is too often the case, to the wash of the eaves of the barn. The little red stream will be observed from the yard quite as readily as from the field. The very best way to conserve the value of the manure is to store it in a manure shed, well packed so as to prevent fire fanging until the ground becomes settled in the spring. This being impractical on many farms both practical farmers and scientists are pretty well agreed that the loss is less where put on the field as soon as made, than where the manure is allowed to accumulate in the yard until settled weather comes in the spring.—Eds.

SOW FLAX WITH BARLEY.

In your issue of March 21 I noticed that Mr. Lillie said he was going to sow some flax in his oats this spring, so thought I would offer a few suggestions. He will get better results if he sows the flax with barley, as they will ripen about the same time. Also, in sowing the flax do not mix it with the grain to sow with the drill as it will all work out before the grain is half out. We use a grass seeder, sowing the flax after the drill and then rolling the ground. Again at threshing time the flax will come out under the separator, so there will be no need of running the grain through a mill. We usually sow about three quarts per acre.

Huron Co.

THOS. RAWSON.

BOYS' AND GIRLS' CLUB WORK.

Alpena County.

About fifty boys and girls under the leadership of field agent, H. G. Smith, of Alpena county, are planning upon entering a potato-growing contest. Each child will grow the same variety and the acreage will be limited to one-eighth acre. All will plant the same variety, the Late Petoskey, sometimes called "The Dusty Rural." Through the generosity of a local banker each contestant will be provided with one and one-half bushels of pure seed.

In spite of unfavorable climatic conditions, a successful corn contest was conducted last year and many boys will continue to grow corn during the coming season. The variety employed is the Wisconsin No. 8.

Iron County.

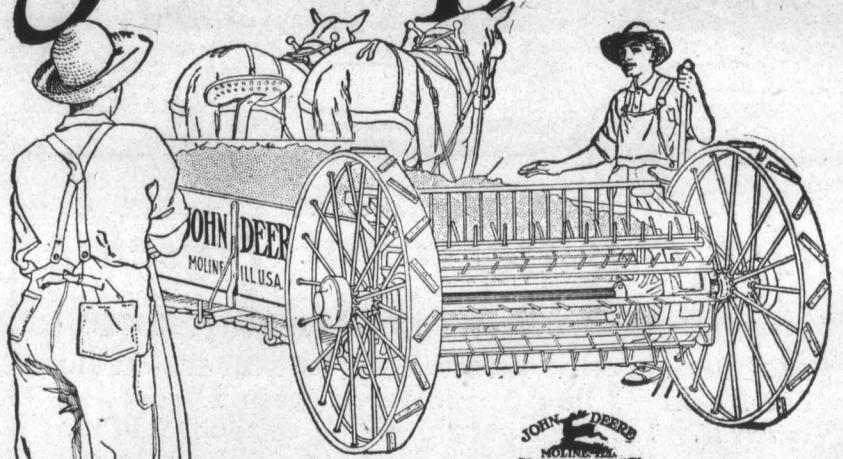
Over 200 boys and girls are entered for club work among the rural districts of Iron county. Two lines of work are being undertaken, potato growing and poultry raising. Commissioner of Schools, John F. Mason, will devote a large part of his time during the summer months to visiting club members and assisting them in developing their projects.

All entering the potato contest will grow the Sir Walter Raleigh, pure seed being obtained through County Agent R. G. Hoopingartner. The basis of acreage is made one-fourth acre. Iron county is splendidly adapted to potato culture. Herman Talbot, of Iron river, a 1913 club member, reports a yield of 43 crates from one-eighth acre.

Contestants choosing poultry raising as a project will select from among four standard breeds. The White Leghorn, Rhode Island Red, White Wyandotte, and Plymouth Rocks are the breeds.

Each contestant will hatch and rear the chickens from one setting of 15 eggs. In case of misfortune, a second setting may be secured and a fresh start made.—C. A. Rowland, Assistant in Club Work.

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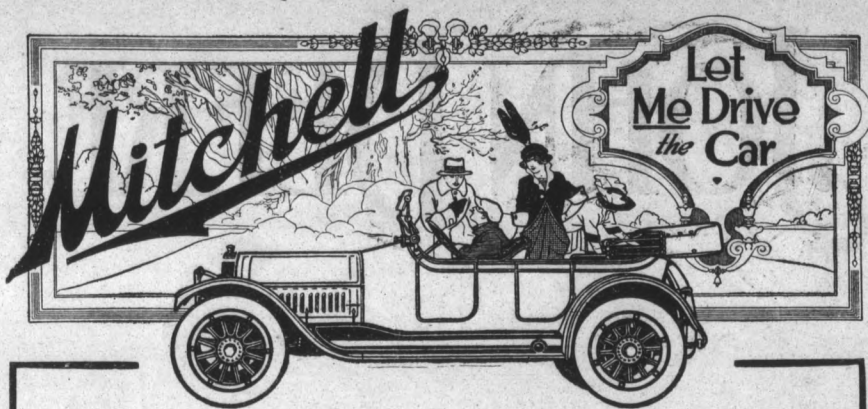
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Live Stock.

A GOVERNMENT HORSE FARM.

Near to Middlebury, Vt., is a farm owned and operated by the Federal Government, under the direction of the Bureau of Animal Industry of the Department of Agriculture, the main purpose of which is to breed and improve Morgan horses. There is an old gentleman living in Middlebury who has always bred Morgans and spent much time and money in advocating their superiority. In 1906 he succeeded in interesting President Roosevelt and the then United States Senator from Vermont in the necessity and importance of perpetuating this sturdy animal, with the result that the Department of Agriculture secured and established a small stud which was maintained in connection with the Vermont Agricultural College. In the following year, however, this wealthy Vermonter sold Uncle Samuel three good-sized farms for the munificent sum of three, dollars, on condition that the land be devoted to breeding Morgan horses. Thither was moved the government Morgan stud.

At the time of our visit there were about 60 head of all ages upon the farm. The mares and colts were running in pastures, while 12 to 15 stallions were stabled in roomy box stalls. The pastures are provided with water in each field supplied from a central system at the buildings and pumped by electricity operated automatically. These horses are given plenty of feed but no extra care, with the idea of rearing them under practical conditions which will maintain the proverbial Morgan hardness.

The numerous stallions maintained are utilized in developing another idea of the men in charge. The government is compelled to buy annually many horses for cavalry mounts and other army purposes. Such horses must be of a certain size, color, weight, and build, which requirements are not easily met. These men conceived the idea of using the Morgan stallions to produce horses of the character they must have. Here is the plan they are practicing.

These stallions are traveled in contiguous territory, so far confined to New England, and mares are solicited under certain conditions. Any farmer may breed a mare to a government stallion under the terms of a signed contract. This contract provides that the owner of the mare is given the option of either paying a service fee of \$25 when the colt is three years old, or he may sell the colt to the government at a determined price of \$150. If he elects the former, well and good; he pays the money and the transaction is ended. If he elects the latter, the government man inspects the colt and if it does not meet the requirements is rejected, and no service fee is charged. Upon such rejection the farmer may do as he pleases with the colt. If the government buys the colt no service fee is deducted. The purpose of all this is to interest the farmers in raising marketable colts, and at the same time establish a source of supply for army mounts.

Naturally there must be certain limitations as to the mares which may be bred, else there would be services which would be sure to be gratuitous. So far, however, the only practical limitation has been that the mares offered must be sound; of course, unreasonable lack of size may furnish cause for rejection. In accordance with this contract and conditions 300 mares were bred in 1913, and as many more rejected, due to failure to comply with the necessary qualifications.

Since its acquisition the farm has been much improved by the erection of substantial wire fencing, good practical barns and water system, while the superintendent informed me he used \$400 worth of dynamite last year in cleaning out trees from certain fields. The larger part of the farm is in pasture. The main crops are hay, corn fodder and oats.

Aside from the horses the only live stock is a flock of Southdown sheep, numbering about 50 ewes and their produce. They seemed to be good representative specimens of the breed and in fine condition. One man gives this flock his entire attention. How much more in keeping with the main purpose and character of this farm would be the maintenance of a choice flock of Merinos! They have certainly done as much to make the name Vermont known to all the world as have ever Morgan horses, as well as to bring its people wealth; likewise are they as practical and as valuable. For centuries Spanish government and nobility kept Merinos while for more than a century and a quarter the French government, despite revolutions and wars, and the fact that its form ran the entire gamut from anarchy to despotism, from monarchy to democracy, has preserved unharmed, its flock of Merinos. What more proper, or more fitting, then, that Uncle Sam should maintain and improve a flock of Vermont Merinos on his farm in the very center of the section which was most instrumental in developing and introducing these woolbearers, whose improvement of the native flocks stands out as one of the greatest feats of American live stock development in all the world in the nineteenth century?

This farm and its breeding operations is under the direction of Mr. Rommel, of Washington, while the active superintendent is Mr. Fred Hammond, a grandson of Edwin Hammond, one of the greatest breeders of Vermont Merinos. Everything about the farm is kept neat and apparently run practically and systematically. Especially noticeable was the courtesy and geniality of Mr. Hammond; upon my remarking that I was taking too much of his time, he replied that he was there to show the people, who ever came to see, the character of the farm and the manner of its operation, for it belonged to the people.

Washtenaw Co. ROSCOE WOOD.

DEVELOPING A SPRING FOR WATERING STOCK.

I have 25 acres of muck land with a county drain ditch on one side, which I use for pasture for horses and cattle. Now cattle will go to water in ditch, but horses will not, being too soft; also tried a wooden slanting bridge to water's edge, but still horses will not go, so I have to dip water out of ditch five feet deep for all stock to drink. I have a good spring in bottom of ditch. Can it be forced to surface of adjoining land? Neighbors adjoining ditch will not permit damming of ditch, so I can not use hydraulic ram.

Oceana Co. B. J.

Mr. Johnker's situation as stated, is aggravating. No one can advise, but might suggest. The answer seems to depend on the spring. If there is sufficient flow why not take a dry time and dig down, putting in crock; using posthole digger, taking pains to make crock fit so water cannot escape, and follow with crocks similar to crock wells, using cement for making tight joints. Perhaps some gravel in the bottom. Perhaps by making secure so water can not escape, the overflow might be high enough to permit trough to carry to tank. If not, would have a well on which he could use pump.

DITCHER.

FEEDERS' PROBLEMS.

Rape for Hog Pasture.

I have five acres of sandy loam which has been considerably run and was seeded last year, but I lost the seeding. I wish to sow to something that will build up the land and make hog pasture for the coming season. How would rape do? How much should I sow per acre, and at what time?

Oakland Co.

SUBSCRIBER.

Nothing could be sown on this land that would make better hog pasture during the summer than Dwarf Essex rape. It also seems to have a beneficial effect on the soil, but it is not a leguminous plant and does not add actual plant food to the soil. It seems, however, to store considerable fertility in its strong root system and this becomes readily available for succeeding crops. About five pounds per acre sown broadcast, on a well prepared seed bed will be sufficient seed to use. It can be sown as early in the spring as oats, if desired, or later for fall pasture if preferred.

Grain Ration for Farm Horses.

Can you tell me what is the best balanced ration for a horse that is working hard, weighing about 1,200 lbs., and how much would you feed at a meal? Also, how much hay would you recommend feeding, mixed timothy and clover?

Montmorency Co.

J. S.

The farm horse at maximum work requires about the same ratio of nutrients in its ration as the dairy cow. Oats constitute a well balanced ration for the work horses, and a combination of feeds which approximate the same ratio of nutrients will give the most economical results. The amount required to keep the horses in good condition at maximum work will vary with different individuals, varying from 12 to 16 lbs. of oats or equivalent for a horse of 1,200 lbs. in weight. Horses at farm work should be given a moderate feeding of hay morning and noon, and a liberal feed.

LIVE STOCK NEWS.

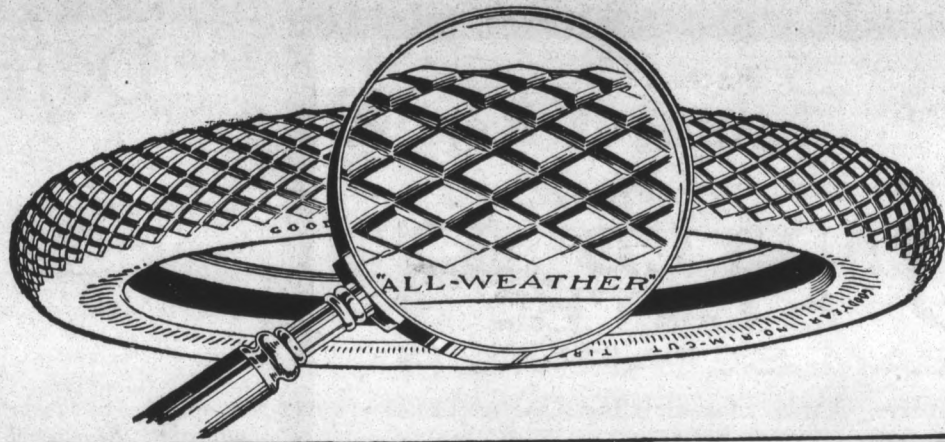
Importations of Mexican cattle are encountering various obstacles, and they are not as large as had been expected. Risk in handling these cattle is great.

Cliff Cherry, a large land owner and cattle raiser of Kendall county, Illinois, was in the Chicago market on a recent day with a shipment of three carloads of fat cattle. He reported a scarcity of cattle in this part of the state. Mr. Cherry is the owner of over 300 cows and heifers which he is breeding and is a firm believer in raising beef cattle for the market.

Texas cattle are reported as rapidly getting into good condition, and during April, May and June large shipments will be made from that state. San Antonio expects that about 5,000 cars of cattle will be gathered in that part of Texas, and if the cattle are not rushed to market too much in a lump, they will be absorbed without any difficulty, as there is sure to be a large demand at the chain of Missouri river markets.

The time of the year when calves are marketed liberally is here, and prices for calves in the Chicago market have experienced a regular smash-up, but thus far the retail price of veal is as high as ever, despite the fact that the best veal calves have been selling for \$8@8.50 per 100 lbs. Tuesday is known as "calf day," and on that day the offerings are much larger than on other days of the week.

The market for hogs is showing a strong undertone still, with every prospect of a continuance of high prices, and it is not at all unlikely that the better class will go higher than ever. The high point of the year in the Chicago market was reached some time ago, when prime butcher weights sold at \$9. Some dealers regard an advance of choice light and medium-weight butcher hogs to \$9@9.25 as a basis as quite likely, but they do not think that heavy packing hogs are likely to sell on a \$9 basis, at least for any considerable time. It is natural as the receipts run more and more largely to heavy hogs that these should drop to a marked discount and that the choicer lots of hogs of lighter weight should sell the highest of all, as has been the rule in former years.



What Ruins Your Tires?

Note How We Combat It in No-Rim-Cut Tires

Is it rim-cutting? That does ruin almost one in three of the old-type tires. It is the chief cause of tire expense.

But we make that impossible in No-Rim-Cut tires by a method which we control.

Is it blow-outs? No-Rim-Cut tires are final-cured on air bags, under actual road conditions. Thus we save the countless blow-outs due to wrinkled fabric.

This extra process—used by no other maker—costs us \$450,000 yearly. But it saves our tire users millions of dollars in blow-outs.

Is it loose treads? We paid \$50,000 for control of a process which lessens this danger by 60 per cent.

Is it tread wear? Then use Goodyear All-Weather treads. Double-thick treads made of very tough rubber. Made flat, so they run like smooth treads on dry roads, yet they offer wet roads a resistless grip. These treads are immensely enduring.

Needless Waste

Any tire cost you suffer for lack of these features is a needless waste. No-Rim-Cut tires offer all these pro-

tections. No other tire in the world offers one of them.

That's why these tires rule Tiredom. Last year our sales were \$33,000,000. We sold 11 times as many tires as in 1909. And this year's sales show the largest increase in our history.

Men have bought, in the past two years alone, more than two million Goodyear tires. They bought them because countless mileage comparisons have proved them the greatest tires.

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Prices on No-Rim-Cut tires, in the past year alone, have dropped 28 per cent. Now they far undersell some others. But that is due to our mammoth output, to our efficiency, and to our modest profits. Last year our profit averaged 6½ per cent.

At Goodyear prices you can get the best tires men can build. And you get four costly, tire-saving features found in no other tire.

Give these tires a chance to prove themselves this summer.

Goodyear dealers are everywhere.

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AKRON, OHIO
No-Rim-Cut Tires
With All-Weather Treads or Plain

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

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Write Us on Anything You Want in Rubber

GET ALL THE WOOL—LONGER AND BETTER—MORE MONEY!

You will net from 15c to 20c more on every sheep you shear with a Stewart No. 9 Machine. Don't labor with hand shears in the old, hard, sweaty way. Don't have aching, swollen wrists. Don't scar and disfigure your sheep with uneven shearing and spoil the wool with second cuts. Take off the fleece smoothly and quickly in one unbroken blanket with a



Stewart No. 9 BALL BEARING Shearing Machine

and get a length and quality of wool that will bring the highest price. The Stewart runs so easily a child can turn the handle while you shear. Extra profits soon pay for it. It's the most perfect hand operated shearing machine ever devised. Has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Price complete, including 4 combs and 4 cutters of the celebrated Stewart pattern, \$11.50.

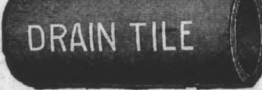
Get one from your dealer, or send us \$2.00 and we will ship C.O.D. for the balance. Money back if you are not well pleased with it.

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Stewart BALL BEARING Clipping Machine
To clip horses at the proper time improves them in every way. They look and feel better, do more work, rest better and get more good from their feed. Insist on having the "Stewart." It's the easiest to turn, does the fastest work, stays sharp longer and is more durable than any other clipping machine made. Get one from your dealer, price \$7.50 or send us \$2.00 and we will ship C.O.D. for balance. Satisfaction guaranteed.

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Write for FREE catalogue showing most complete line of Sheep Shearing and Horse Clipping Machines.

PRICE
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A Recent U. S. Government Report

Makes plain your need of a

UNITED STATES CREAM SEPARATOR

The skimming device of which is **GUARANTEED NEVER TO RUST.**

The scientific staff of the dairy division in the United States Department of Agriculture recently conducted a series of experiments to learn what effect, if any, iron (rust) has on cream and butter.

The tests definitely established the fact that even minute particles of iron (rust) caused certain undesirable flavors and that in every instance when butter was scored a few days after the making, the samples in which iron (rust) was present scored lower than the butter made from cream which contained no iron (rust).

In using the United States Cream Separator with non-rusting skimming sections of nickel silver you avoid all risk of having "metallic" butter. The U. S. sections are positively guaranteed never to rust. No other separator manufacturer gives you a printed non-rusting guarantee.

Yet, United States Cream Separators with this big exclusive improvement are sold at no higher prices than other separators without it.

It is time well spent to learn from your U. S. dealer or us more about the exclusive U. S. non-rusting feature.

VERMONT FARM MACHINE CO.,

Chicago
Salt Lake City

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Los Angeles



Dairy.

CONDUCTED BY COLON C. LILLIE.

PRODUCING PURE MILK FOR PROFIT.

Having the herd and having them tested as advanced scientific knowledge dictates, the care which will be productive of the best results is exceedingly important. The cow is very susceptible to external influences. Subjecting the animal to storms and hard weather invariably leaves its mark upon the milk. The dairy cow should never be permitted to drink from pools or from running streams, especially in localities which are well populated, for these ponds and streams probably contain the refuse of a dozen farms and a half hundred households. Pure spring or well water should be given with regularity and in abundance from troughs which are easily cleansed. For this purpose nothing answers better than enameled iron basins.

Do Not Feed Sloppy Food.

The food should be well selected and plentiful and should not be of soft, sloppy kinds, such as distillery or brewery refuse. It should never be kept in lofts above the stable where it is constantly contaminated by the foul odors from below. Great care should be exercised in regard to suddenly turning the animals out in the spring to indulge in overfeeding of green grass, which might cause bowel troubles among the children living upon the milk.

The personal hygiene of the cow is most important. The dairy animal must be carefully curried and combed twice daily. The floors of the milking stalls should be of stone, cement or concrete, and must be carefully scrubbed before the cow is brought in, and left wet, so that no dust will fly from them. A rope or strip of cloth should be suspended across the rear of the stall, separating the tail from the hind legs, to prevent the tail from switching dirt into the pail. Preceding the milkers, a helper must wash the udders, first with soap and then with clean water, at the same time looking for any spots or abrasions. If such sores exist, the animal must be at once taken from the milking barn and isolated in the infirmary, where she must remain until the place is entirely healed.

Preparation for Milking.

The milkers themselves should have nothing to do with the preparatory work but must be ready to follow the washer at once. Their costume should be pure white from head to foot, including linen caps, all fresh from the steam sterilizer, so that their clothing may be protected from dirt and grease, which may later be sources of contamination. The hands should be washed first with green soap, then after rinsing, soaked in a solution of boric acid or some mild antiseptic and washed again in boiled water.

The first few streams from each teat should be allowed to fall into a refuse bucket, thereby washing the dust and dirt out of the milk channels. The balance should be caught in an improved milk pail, so devised that the milk passes through two layers of sterilizing gauze and one inch of absorbent cotton. After milking one cow the milk should be hurried to the carrier's can, which must immediately be taken to the dairy. Within 12 minutes after leaving the cow it should have passed through the cooler and be reduced to a temperature approximating freezing. This is one of the most important points in all scientific dairy methods. Even the deeper glandular tissue of the udder contains bacteria or germs which will create deleterious changes in the

milk, but these are absolutely inert at low temperatures and if the milk is chilled enough after milking, and kept cold, it will keep for days.

Pure Milk Keeps Well.

After cooling the milk should be at once bottled, sealed and packed in crushed ice. Milk so handled has been sent to London and to Paris, and reached there without the slightest change. If milk is put up as above outlined, and proper care is used in so doing, there will be very little objection to the product. There is one additional procedure, however, that may be considered. It is best for every dairy to have a centrifugal separator, with which the milk and cream can be immediately separated. The advantage of this is, that in feeding infants, physicians like to feel that in dealing with milk they have an article of absolutely known percentages.

If the cream and milk are separated, they can be united again in such percentages as may be desired. Milk should contain four per cent fat, and 16 or 20 per cent cream. The percentage of fat must be plainly stamped upon the bottles. Aside from the great convenience, the separator is known to throw out mucus and minute blood clots, so small that they pass through the most perfect filters. This makes the milk more pure. To be sure, the separator and cooler are expensive; so are the self-binder and the threshing machine. However, we find it economical to have them.

Clean Milk Profitable.

The dairyman will find it most profitable to him to follow out these general outlines in placing a high grade article upon the market. If he is supplying a city market, he must face the fact that civilization is advancing along lines which indicate that other than pure milk will have no demand in the near future.

Now is the time that money can be made and a reputation established by offering to the market a milk which can be recommended by physicians and laity alike. Pure, absolutely pure milk, is the only commodity of which the demand is so much greater than the supply that the few producers can name their own terms and have them accepted by the public.

New York.

S. VAN AKEN.

DOES SILAGE EVER CAUSE COWS TO BECOME INTOXICATED?

A recent article in a local newspaper states that some cows near here became intoxicated from eating silage. I would like your opinion regarding this.

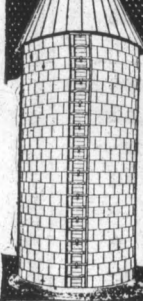
Genesee Co.

H. F. B.

I should treat the article in the paper as a huge joke, and a pretty cheap joke at that. Reporters sometimes find it pretty hard work to get interesting news for a cosmopolitan paper, and they seem to amuse themselves by writing things about agriculture of which they know but little.

When corn is put into the silo at the right stage of maturity a slight fermentation is produced, but this fermentation doesn't go far enough to change the sugar and starch to alcohol. It is only the acidity stage of decomposition. It is slightly acid and cows and other cattle have consumed silage for years and they didn't get intoxicated either. I don't believe it would be possible to get any condition of this sort. Corn silage has been kept in the silo for as long a period as ten years and then fed to cattle, and it was in just as good shape as it was the first year it was put in. It is really and truly preserved, and after this slight fermentation at first there is no chemical change whatever, and the silage can be kept year after year. We feed corn silage, not only to mature dairy cows, but to young growing dairy heifers, dairy calves, and even to lambs. I have fed it for 25 years and never had anything like this occur.

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Stronger—
less mortar—
on inside—every joint solid as rock.
Silage settles better—and keeps better in
**LANSING
Vitrified Tile Silo**

Write us and learn about this superior tile block. Walls reinforced with twisted steel—continuous doorway—easy climbing ladder—all features superior—yet cost is no more than others. First cost—only cost. Write for catalog.
J. M. PRESTON CO., Lansing, Mich.
Get our offer on Climax Silage Cutters and Bitwell Thrashers

OLD SILOS

At a very small cost can be made up-to-date and better than ever. We have the greatest patent that has ever been put on a wood stave silo. Your silo will last longer and make better silage—no danger of it blowing down—you never have to tighten and loosen the hoops—our patent automatically takes care of this part. Our customers say it is just what they have long been looking for. If you are going to build a new silo you can save big money by writing us before placing your order. You will want our patent improvements on your silo after seeing them on your neighbors', and now is the time to investigate before building.

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Let us show you how to save money on a new silo and make your old one better than ever.
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WHOLESALE FEED Save your money. Ask for price list. Everything in Feed.
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ROOF YOUR SILO With a Permanent Roof



To insure permanence the Silo roof must be built and nailed on rafters regardless of whether it is a stave, steel or masonry silo. The beveled or keystone construction of the stave silo demands a rafter built roof to keep the silo perfectly round.

The wind plays havoc with an insecure roof. It's a long way to the top of your silo. Put on a rafter built roof that will stay put, such as the

ECONOMY STEEL SILO ROOF

First in Strength and Permanence. For any kind of silo. Galvanized steel. Rust and fireproof. **Cheapest and Most Durable.**

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No silo complete without the Economy Roof. Demand of the stave silo salesman or the man who builds you a masonry silo that he complete it by putting on our Economy Roof. There is no roof just as good or that will last as long.

Don't be satisfied with "just a roof." Insist on the Economy. All silo manufacturers can and the best will supply the Economy Roof. If yours won't write us.

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Be an early buyer and save money on a Kalamazoo Wood or Tile Silo. Galvanized All-Steel Door-Frame provides continuous opening and safe, convenient ladder. Your choice of The Block Silo or seven kinds of wood—all Kalamazoo Quality. Catalog and special offer, free on request. Write today.
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\$15⁹⁵ AND UPWARD SENT ON TRIAL AMERICAN CREAM SEPARATOR

Thousands In Use giving splendid satisfaction justifies your investigating our wonderful offer to furnish a brand new, well made, easy running quart of milk a minute, warm or cold. Makes thick or thin cream. Different from this picture, which illustrates our low priced large capacity machines. The bowl is a sanitary marvel and embodies all our latest improvements.

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Our wonderfully low prices and high quality on all sizes and generous terms of trial will astonish you. Whether your dairy is large or small, or if you have an old separator of make you wish to exchange, do not fail to get our great offer. Our richly illustrated catalog, sent free of charge on request, is the most complete, elaborate and expensive book on Cream Separators issued by any concern in the world. Western orders filled from Western points. Write today for our catalog and see for yourself what a big money saving proposition we will make you. Address,

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





The women-folks praise the
BEATRICE
 Cream Separator
 for its easy cleaning
Says Farmer Onswon.

The great bugaboo with most separators is cleaning the bowl. The Centrifugal Washing Device does the trick for the Beatrice—washes, rinses, dries and aerates in two minutes.

One of the many good reasons for preferring the Beatrice is that it's a remarkably simple machine—very few parts—all of them easy to get at.

The makers have wisely constructed the Beatrice so it does not give trouble.

When you take home the Beatrice you are not taking home a machine to worry over. It is ready for duty, night and morning, for years to come.

But dependability is just one thing. Don't overlook the other requisites. The Beatrice gets all the cream whether milk is warm or cold. It turns as easy as any separator. And it's no job at all to wash up and clean up when you are through.

Buy your separator with your eyes open. Don't buy any machine till you know the Beatrice. My word for it, it will save you money and worry. Write the nearest office below for catalog and name of local dealer near you.

BEATRICE CREAMERY CO.
 CHICAGO

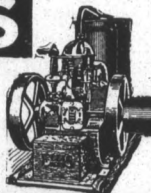
Des Moines, Ia., Dubuque, Ia., Lincoln, Neb., Topeka, Kan., Denver, Col., Oklahoma City, Okla., St. Louis, Mo.

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. Only three working parts.

ELLIS ENGINES

have patent throttle giving three engines in one; force-feed oiler; automobile type muffler; ball-bearing governor adjustable while running and other exclusive features. **MAKE US PROVE IT**—Every engine sent on 30 days' approval, 10-year Guarantee. Special factory prices on all sizes. Thousands of satisfied users. Write for big new 1914 catalog and special discount prices.



We Pay Freight.

ELLIS ENGINE CO., 110 Mullett St., Detroit, Mich.

It Pays to Feed Dried Beet Pulp

Increase production at a lower cost.

Better try it, you can't lose. Write

T. F. Marston, Bay City, E.S., Mich.



A CHALLENGE!

Challenge Churns have made good with 200,000 satisfied users and we can prove it! They are guaranteed to make first-class butter in 5 to 7 minutes. Their practical construction gets all the butter fat. Built along substantial lines, easy to clean, sanitary and 100 percent efficient. Many sizes. Send for Free Descriptive Circular Today. The Mason Mfg. Co., Box 11, Canton, O.

REGISTER OF MERIT JERSEYS.

Please give conditions in full upon which Jerseys may be registered; also qualifications for entry in the Register of Merit.

St. Clair Co.

E. D. D.

Cattle can be registered in the American Jersey Cattle Club, that are the product of pure-bred registered Jersey sires and pure-bred registered Jersey dams. When you have such cattle send to the secretary of the American Jersey Cattle Club and get pedigree blanks, and by paying the proper fees your animals can be recorded.

Register of Merit Jerseys is a different proposition. Registered Jersey cattle can only be eligible to the Register of Merit class, when they have produced a certain amount of dairy products in a given length of time. A two-year-old heifer, in order to be registered in the Register of Merit class must produce 250½ pounds of butter-fat in 365 days following her freshening as a two-year-old. For every day a cow is over two years old when she begins her test, you must add one-tenth of a pound of butter-fat. This increases in this way until the cow is five years old, when she must produce 360 pounds of butter-fat in one year to be eligible to the Register of Merit. This amount holds for all cows five years old or older. She is eligible to registration in Class AA if she has produced the required amount of butter-fat in the year and also carried a calf 155 days during the test period. She is eligible to registration in Class A if she has produced the required amount of butter-fat but not necessarily carrying a calf that length of time.

HOLSTEIN BREEDERS MEET.

Pontiac-East Michigan Holstein-Friesian Association met at the assembly rooms of Pontiac State Hospital the afternoon of March 26. After enrolling of new members a paper from the pen of G. A. Dimoc, of Kalamazoo, was read.

He showed that the foundation upon which rests the work of those breeders who have accomplished notable results was the painstaking and scientific application of the laws of breeding. These laws were dwelt upon somewhat, particularly the principles of variation and prepotency.

This feature of heredity was traced through high per cent of characteristics received from immediate parents of animal, to the marked influence in determining the strongly line bred character distinctions of ancestors many times removed.

Mr. Dimoc was unable to be present, but his paper, "The Successful Breeder," will be sought after as among the best in Holstein-Friesian literature.

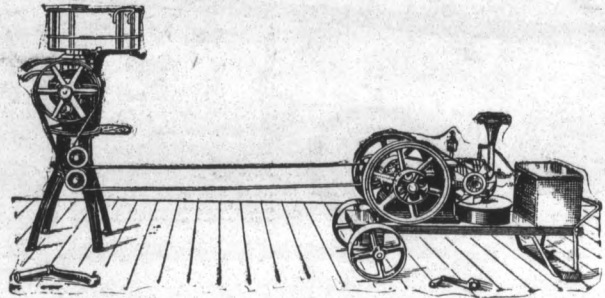
The Hon. D. D. Aitken, of Flint, delivered the address of the afternoon taking up possibilities of organization coupled with the advertising the association is planning to do. The market question for pure-bred milk (Holstein-Friesian) as well as animals, indicating progress over conditions of 50 years ago, was submitted for earnest thought of the membership. The relation of typhoid and tuberculosis to strict sanitary measures of present day was touched upon.

Some instances of error in the tuberculin test were cited, but in spite of the limitations of test, a hearty co-operation was asked in all matters pertaining to the universal use of it as it is the best means at hand at present to determine the disease.

A review of work accomplished by the breed at the State Fair was followed by a strong plea for additional representation, and a summing up of advertising possibilities in connection with this line was further acted upon by the association at the finish of Mr. Aitken's address, by the appointment of a committee to commence work in this direction at once.

Geo. H. Brownell, of Detroit, gave an enlightening talk on publicity. He discussed the advertising campaign tentatively adopted by the association, and ably seconded Mr. Aitken's outline for creating a pure-bred meat and milk market. He dwelt at some length upon the matter of a state isolation farm, now growing in popular favor, and reviewed the progress made and the work done for this by Holstein-Friesian interests.

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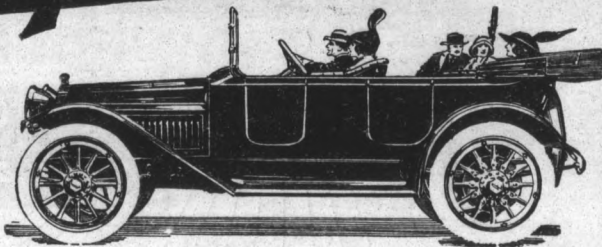
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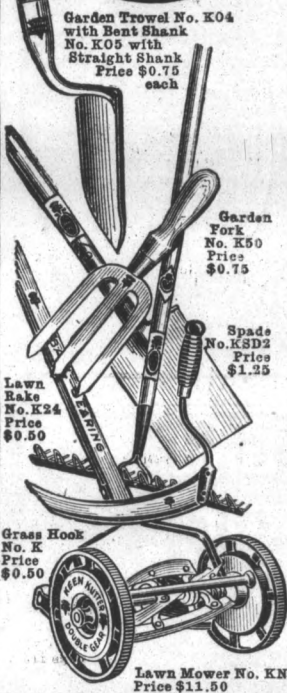
I've told you that I like Keen Kutter wood-workin' tools 'cause they make good. I've told you that I like Keen Kutter garden tools 'cause they make me like 'em better the more I use 'em. Now I'll tell you why I like Keen Kutter grass-cuttin' tools, an' that's 'cause they're just the same in makin' good as all the rest of the Keen Kutter tool outfits. They've got the stuff in 'em that counts for gettin' there, an' that's *quality*.

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means that any piece that carries the Keen Kutter trade mark is guaranteed to deliver good work for a long time, whether it's a lawn mower, a garden trowel, a pair of hedge shears, a spade or a jack knife. You try 'em and you'll meet up with my experience. I've never yet had to take any tool back to the dealer an' ask for my money, though he's authorized to return it, any time we say so—you or I. That's the kind of a guarantee you want—isn't it? Sure it is. We can always get a square deal from the Simmons people.

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Tom Profit.



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That secures highest prices for your fruit. Write for 1914 catalog showing our complete line and secure your baskets and crates at WINTER DISCOUNTS.

The Berlin Fruit Box Co.
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Horticulture.

PROPAGATION OF PLANTS FROM CUTTINGS.

From the point of economy as well as efficiency in getting plants true to the parent stock, the propagation from various forms of cuttings is the most important of all methods. The grape, currant, gooseberry, cranberry, such trees as willow, poplar and cottonwood, and shrubs of the order of hydrangea, tamarisk, privet and a few others are propagated in this way from mature wood cuttings.

The essential method of preparing the cuttings consists in cutting the wood into convenient lengths, each length containing from two to five buds. Grape cuttings are usually made about a foot in length, and contain from three to five buds. Other cuttings may be shorter. They may be cut at any time after the leaves fall till the sap begins to rise in spring, though it is more desirable to make the cuttings in early winter, put them in bundles of uniform length and bury in the ground below the frost line or pack in sand or moist sawdust in the cellar. The early cuttings callous over, and thus root more readily.

Making Cuttings.

While any cutting may root, the proper way to cut them is to make the lower cut just below a bud, within a half inch. All the wood below the lower bud dries up and perishes, and it is more desirable to have none of this on the cutting. Clean slanting cuts with a sharp knife should be made, and the cuttings made so that they will all be about the same length.

In spring, as soon as the ground is sufficiently dry to work, the cuttings should be put out. Open a furrow deep enough to contain the cuttings so that only one or two buds will show above the ground. Set the cuttings in the furrow, or trench, six inches apart, being careful to set with bottom or butt end down. Draw the earth up to them and press firmly. The success of growth depends on frequent and shallow cultivation and in keeping down weeds. Grapes, more universally than other plants, are propagated by this method, and with proper care 90 per cent will root. The following spring, these plants will be ready to set in the vineyard or garden where they are to grow.

Propagating Roses.

Roses are propagated from cuttings of either mature or green wood, but need such protection as is afforded by an inverted fruit jar or sash. The "confined air" causes them to root more readily, after which the glass may be removed.

Where irrigation is practiced, poplar, willow or similar trees may be propagated by setting green posts four to six inches in diameter and eight feet long, at the edge of the ditch where there is a plentiful supply of water. They will soon grow into shade trees. The mariana plum is the only fruit tree that readily roots from cuttings, though under favorable conditions other varieties frequently root in this way.

Missouri. H. F. GRINSTEAD.

SPRING PRUNING OF THE SMALL FRUITS.

Except for the purpose of getting out the old stuff the practice of pruning is not thought of as being essential to small fruit culture by a great many growers. They fail to realize that the quality and size of the fruit will be better and that the patch can be kept in more vigorous health by cutting out useless parts which act as a drain on the plants. Pruning also is of great help in the control of dis-

eases such as the anthracnose of the raspberries and the cane borer of the gooseberries and currants, and makes more easy the picking of the fruit and the cultivation of the ground.

Pruning Gooseberries and Currants for Results.

In the pruning of the gooseberry and the currant there are a few important things to consider. One of them is to be on the lookout for the cane borer and cut them out when pruning. This insect usually enters the cane near the top and works down. It consumes the pith of the cane and the excrements it leaves gives the center of the cane a black appearance. In pruning, part of the cane older than the last season's growth should be clipped back a little at the top to see whether the center, or the pith, is a healthy green or not. If not, the cane should be clipped back until the healthy pith is reached.

To get the best results from the gooseberry and the currant there should be about five good bearing canes when the bushes are trained in the bush form. The tree form of training is not practical, because, should the borer get into the trunk, it would practically ruin the bush, and also, the top cannot be renewed as well when the bush is trained in this form. The canes bear their best for about three years, therefore to keep the bush at its maximum in bearing, the canes should be renewed occasionally. The pruning should be planned so that one or two of the shoots which sprout from the ground should be left each year to take the place of the old canes. The tops of the canes should also be thinned out some and if the past season's growth has been very large it should be clipped back a little.

Pruning Raspberries and Blackberries.

The raspberry and blackberry patches should also be pruned at this time of the year. It is supposed that the growing canes of the black raspberry and blackberry were summer pruned when about three feet high and the canes thus encouraged to make good laterals. These laterals should now be cut back to about six inches and all but five of the strongest canes should be cut out altogether, as that number will furnish the amount of bearing surface for best results. Of course, if the old canes were not cut out in summer, they should all be cut out in the spring.

The blackberries should be kept in hills as much as possible with about five good bearing canes to the hill. The laterals should be clipped back to six inches in length as in the case of the black raspberries.

Red raspberries need no pruning except to cut out surplus shoots and old canes which were not cut out last summer. In thinning out the shoots only the strongest should be left. They should also be kept in hills with about six shoots in the hill.

TOMATOES.

Tomatoes should be started in flats in the house or in the hotbed early in spring. The plants are much improved by transplanting into pots, flats or another part of the hotbed, setting them three inches or more apart each way. They should not be planted out in the open ground until all danger of frost has passed. Set plants in rows four feet apart and three feet apart in the rows and pinch in the plants so that they may not quite cover this space but allow room to get among them.

One ounce of seed will furnish 1,000 plants. Cultivate thoroughly until the plants cover the ground.

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1000 bu. Disease Free. Blight Resisting. Scab Resisting. High Yielding. Fine Eating. Shipped in New Clean Sax. Grown on Maplewood Farms. Angus Bulls, too.

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TROUBLE DEPARTMENT.

Green Crop for Strawberry Ground.

I have a small piece of ground in strawberries which, for certain reasons, I would like to keep in strawberries. This season will be the second picking, and as soon as they are through bearing I wish to plow the ground and sow something on it that will give me something for green manure. I will use both barnyard manure and commercial fertilizer, but want something growing on the ground after the strawberries are taken off. What will be the best crop to sow or plant at that time, about July 15?

Midland Co.

J. B. C.

Turning under the strawberry patch after it is through bearing, will give you some green manure, but as you suggest, it would be best to have the ground covered during the latter part of the summer. If your soil is depleted of humus there is nothing better than sand or winter vetch to sow at the time you mention. With fairly favorable conditions this plant will make a lot of humus and will also gather nitrogen from the air for fertilizing purposes.

If you intend to set strawberries the following spring, with the green manure and barnyard manure you turn under, there is a possibility of this large amount of vegetable material loosening up the soil too much for the best results with strawberries. The vegetable matter may not be decayed enough in that time to give the fertilizing value and will tend to dry the soil on account of its coarseness. It would be advisable to plant some hoed crop the following year and then the strawberries after that.

Care of Young Orchard.

I have an orchard of 150 young trees, consisting of apples, peaches, pears and plums. The orchard has been plowed each spring and a hoed crop raised between the trees. Last season about the first of August I sowed the ground to rye and vetch and have a good stand. The trees are also mulched quite heavily with marsh hay, using tar paper protectors. Now which would be the best for the orchard, to plow it again and keep it cultivated, or to leave the mulch around the trees and cut the rye and vetch for hay? The soil is sandy but in a good state of cultivation and the trees have made a good growth. If you think it would be best to plow it, at what time should it be plowed and how? Two years ago I plowed it east and west, plowing to the trees. Last spring I plowed in the opposite direction. Now it ought to be plowed some other way, but I hardly know how to do it.

Branch Co.

H. S. S.

The best way, from the standpoint of the orchard, would be to continue your practice of sowing cover crops and turning them under in spring unless the trees are making too much growth and therefore will be delayed in coming into bearing. This might more likely be the case with the late bearing varieties, such as the Spy and the Baldwin. The fact that you have peaches and plums scattered through this orchard would make it more advisable to cultivate the orchard, as such fruits always do best under cultivation.

You might plow and cultivate the tree rows and leave a strip of grass in the middle to cut for hay for a year or so, without injury to the trees, if you desired. For trees the age of yours the cultivated strip should be the width of four or five furrows on each side of the tree row. The plowing should be done late in April, or as soon thereafter as possible.

It would be advisable to plow one way all the time, as the roots of the trees then become established to that way of plowing. In changing your direction of plowing you are disturbing and tearing up roots which have become established in the upper soil. It is easiest to plow to the trees but occasionally the furrows should be thrown from the trees so as to keep the ground from ridging up too much.

When in doubt consult the Trouble Department.

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may demonstrate no better than some lesser cars. It may even look no better. But the chassis is built, in the hidden parts, like no other car in this class. And the results will show in time.

Reo the Fifth is built to endure. It is built for safety, for low cost of upkeep, for long years of perfect service. The man who builds it has for 27 years been learning how to better cars.

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It takes six weeks to build Reo the Fifth. Days are spent on tests and inspections rarely applied to cars. Days are spent to get utter exactness, by grinding and re-grinding.

All steel is twice analyzed. The most radical tests are applied to

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This year we give you the streamline body. We give you the best system of electric starting and lights. We give you dimming searchlights, and many new ideas in equipment.

And we give you a price \$220 less than last year, with electrical equipment. This is due mainly to the fact that all our special machinery has been charged against previous output.

This car will save the average user hundreds of dollars because of our extra care. And legions of men know this.

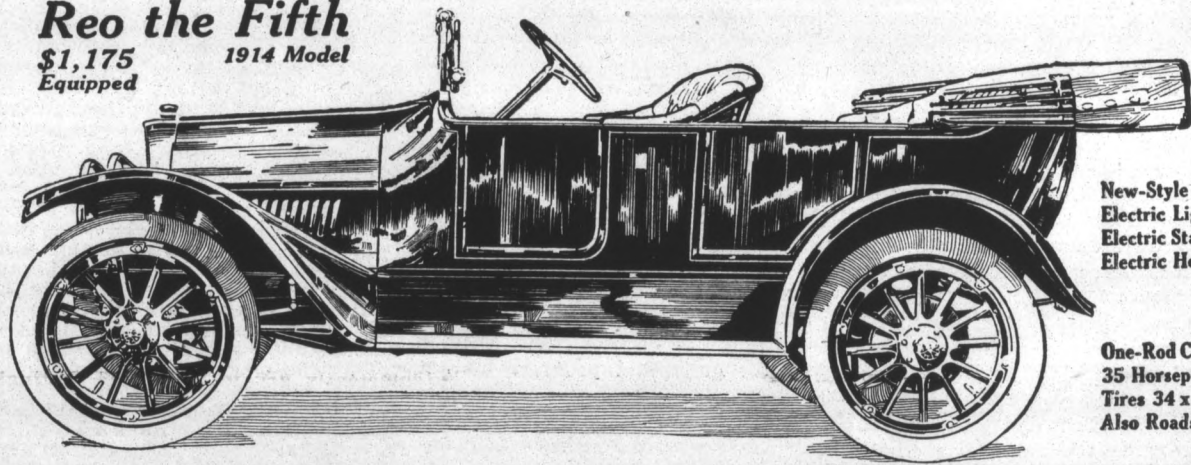
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Purchase a Southern Farm

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DETROIT, APRIL 11, 1914.

CURRENT COMMENT.

With the opening of the spring campaign every farmer who has not previously done so, should prepare to keep some kind of a cost account in order to get at least an approximate idea of the cost of producing the different commodities grown upon his farm. Too few farmers have anything like an accurate idea of the cost of producing the commodities which they sell on the open market as a means of securing the necessary cash income, yet this is the most essential kind of knowledge for the development of farm management which will produce a maximum income from the farm with a minimum of labor and with due consideration to the maintenance of the fertility of the soil.

Obviously, the best time to begin the fiscal year of the farm is in the spring, at or about the close of the winter feeding season, since at this time the stock of forage and grain, and of live stock, if stock feeding is a factor in farm production, will be at its minimum point for the year, and the taking of an inventory will be greatly simplified, and an inventory of the farm and its equipment and supplies is an absolute essential to the keeping of any adequate system of farm accounts. Hence, the first step in the direction of inaugurating a farm accounting system should be the taking of an inventory which will form a basis for comparison next year and enable the owner or operator of the farm to make an accurate accounting of his gain or loss for the year.

But the farm accounting should not stop here, for it is even more necessary that the farmer should know where he made or lost his money during the year, than to simply have an accurate idea of this fact concerning which he could make a close guess in any event. The cost of a bushel of potatoes or wheat, or a hundred pounds of milk or pork, is of more interest in relation to the problem of farm management than is the simple fact as to the net gain or loss in the operation of the farm as a whole, hence some effort should be made to arrive at approximately accurate estimates of such costs.

It is, of course, extremely difficult to arrive at exact conclusions as to the cost of any farm product, owing to the complex factors to be taken into consideration. The cost of labor, and especially of team work in

the field, is a difficult cost to fix and at the start must be a more or less arbitrary estimate. In the matter of the cost of team work, for instance, the interest on the cost of the team, and equipment, its depreciation in value, the cost of feeding and care for the year, etc., must be spread over the number of days when actually employed at productive labor in order to get at the actual cost of this factor in crop production. This year's cost records will help to solve such problems for next year, and in the meantime the estimate placed upon such cost, if applied to all products alike, will at least have a relative value in arriving at accurate comparisons of profit or loss in the different lines of farm production, hence the keeping of some simple form of cost accounts should not be delayed on account of this difficulty.

The use of a little judgment of the kind commonly called "horse sense" in the vernacular of the day, will enable any farmer to make approximately accurate estimates of each item of cost which enters into the production of a crop, and it will be a simple matter to make a daily record of same throughout the season. Once any farmer has persevered in the keeping of such a record for even a single season he will be sure to continue the work, since its value will be so obvious as to dispel any doubt which might exist in his mind as to the wisdom of, and profit in, such a course.

As a means to the end of interesting every Michigan Farmer reader in this proposition, we have planned to publish examples of different forms of cost records throughout the season. Some of these may, and doubtless will, contain suggestions of value to readers who are operating under similar conditions. But this is really an individual problem, like a majority of the problems which the farmer has to meet and solve, and a degree of personal initiative is desirable in this direction as well as in every other phase of efficient farm management. May we then not hope that every Michigan Farmer reader will inaugurate some kind of a cost accounting system this spring, to the end that he may be able to make a fairly accurate estimate of what each and every class of products produced on his farm costs him under his own farm conditions? If so, more will have been accomplished for the future betterment of Michigan agriculture than could be done by the printing of volumes of technical articles relating to the growing of farm crops.

The last Legislature enacted a law of considerable importance which will shortly go into effective operation. This law provides that the State Superintendent of Public Instruction with the co-operation of the State Librarian shall prepare lists of books suitable for township and district libraries. These officers are now preparing such lists, which will shortly be ready for distribution, and will be furnished to each officer entrusted with the care and custody of their respective libraries. Unquestionably, this law is one which should prove beneficial in operation, since there is no doubt but that selections of books, particularly for school libraries, have not always been wisely made. A prominent educator recently made the assertion that he had visited schools where "The Life of Jesse James," and the most trashy of novels, were accorded a place on the shelves of the school library, the explanation offered being that the township library had been divided up among the school districts and these were included in their allotment. Doubtless this kind of books make interesting reading for the youngsters, but their imaginations

may be safely trusted to supply an adequate element of adventure without such inspiration.

No school plant is ideal without a library of well selected books, but the selection of books adapted to the age of the child as well as books of suitable character is vital, and such a list will doubtless be useful to school officers in making proper selections.

HAPPENINGS OF THE WEEK.

National.

Secretary Daniels, of the United States Navy Department, has issued an order which absolutely prohibits the use or introduction of alcoholic liquors upon any vessel of the navy or within the confines of any navy yard or shore station. The order is to become effective July 1, and will concern 64,700 men.

Last week the lower house of Congress passed the Sims measure which repealed the free tolls provision for coastwise shipping through the Panama canal, by a vote of 247 to 162. The measure is now before the Senate.

Mrs. Lillian Stevens, National President of the W. C. T. U. is reported dangerously ill at her home in Portland, Me.

A fast train went through a bridge on the Wabash Railroad west of Attica, Ind., last Saturday, three persons being killed and 35 injured. The bridge had been weakened earlier in the day by the wreck of a freight train.

All the big lines of railways east of the Mississippi are financially interested in an alleged system of wholesale robbery by railroad employes, said to have been revealed through investigations by federal officials. The loss through the robberies is claimed to amount to hundreds of thousands of dollars. Grand juries in several states will be called upon to return indictments against suspected employes.

The Illinois spring elections, which take place on Tuesday of this week, are being generally watched because of the women voting there for the first time. In the state there are 258,000 women registered, and it is expected that 80 per cent of these will vote. The main issue is local option.

Five tourists' hotels were destroyed by fire at St. Augustine, Fla., the oldest city in the United States, last week. The loss is estimated at \$500,000. Many records and curios dating back to the days of Spanish rule in the sixteenth century were burned.

Announcement has been made by the organization committee of the new currency law of the boundaries of the 12 districts into which the country is divided for operating the new system and of the 12 reserve cities. A total of 7,548 banks will be affected by the new measure. Lower Michigan is placed in Chicago's territory, while Upper Michigan is in the territory of which Minneapolis is the center.

Fully 600 Michigan school teachers attended the Michigan Schoolmasters' Club at Ann Arbor last week.

At the election in November 33 senators must be selected for the upper house of Congress. Two of these will be to fill vacancies. Of the 31 present members whose terms expire March 3rd next, 17 are republicans and 14 are democrats. National interest is taken in the contest in Alabama between Representative Underwood, of the National House of Representatives, and Congressman Hobson.

Foreign.

King Gustav, of Sweden, is seriously ill, and there is general anxiety for him throughout his own and other countries.

Last week a blizzard off the north Atlantic coast caused a great loss of life and much property damage to the fishing interests of Newfoundland. Seventy-seven persons of the sealer Newfoundland, perished, while it is believed that 173 more men on the ship Southern Cross have succumbed in the terrible storm. This is the greatest tragedy in the history of fishing in these famous fields. The disaster was aggravated by the drifting ice floes.

During the week events in Mexico have favored the rebels. Torreón has been captured, and the federal forces driven far beyond that city. Many of the city's inhabitants, including 800 Spaniards, are being deported to El Paso, Texas, by order of Gen. Villa. This action is similar to the one following the taking of Chihuahua four months ago. Gen. Villa has also been exonerated by a commission appointed by Carranza, chief of the constitutionalists, of the murder of W. F. Benton, the British subject and rancher in Mexico.

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A Farmer's Tour Through the Holy Land.

By PROF. ALFRED VIVIAN.

IS there anyone who has not, at some time in his life, wished he might see with his own eyes the land sacred to all Christendom, the birthplace of the Savior? Who can describe the sensations of the pilgrim when at last his long cherished dream becomes a reality?

Palestine is the "mother of religions" and is revered not only by the Christian but by Jew and Moslem as well; for it is the home of the former and many of the spots most sacred to the Mohammedan are found within its borders. It is off the main traveled routes, and its comparative inaccessibility makes it less a tourist resort than it might be if more easily reached.

Lower Palestine has one line of railroad (from Jaffa to Jerusalem), the entire length of which is 54 miles. It is a narrow gauge line and the journey takes a little over four hours, or an average of 12 miles per hour; but during that journey the train climbs from sea level to an altitude of about 2,600 feet. The first part of the way lies across the plain of Sharon which with the towns of Lydda and Ramleh are replete with Biblical associations. The train passes close to Ekron mentioned in connection with the ark of God (1 Sam. v-vi) and later runs along the valley of

not much is left of the Jerusalem of the Bible, for it has been many times destroyed and rebuilt. As the re-buildings were made upon the debris of the old cities, one must dig a hundred or more feet to find them, for recent excavations show that in some cases the foundations of the old city walls are 130 feet below the present surface of the ground.

While this condition of affairs throws doubt on the exact location of many of the sacred spots of Jerusalem there is enough left to fill the visitor with reverence. What matter if Pontius Pilate stood here or six feet from here when he said, "Behold the Man!" What matter if this altar or yon hilltop marks the spot where the cross stood upon which the Lord was crucified? Is it not enough to know that the natural features of the country remain practically unchanged; that kings and prophets and holy men of old looked upon these scenes;

Whatever one's belief, a visit should be made to the Church of the Holy Sepulchre, for this is accepted by the Roman, Greek, Armenian, Syrian and Coptic churches as marking the spots where Christ was crucified; where he was buried in Joseph's tomb "wherein was never man yet laid" (John xix 41); and where he again appeared to Mary after his resurrection. Many other traditions with little scriptural foundation are associated with this building. At any time of the day may be witnessed an interesting service by one or more of the sects having chapels here.

A visit should be made to the Mosque of Omar, or "Dome of the Rock" as it is properly called, which stands upon the summit of Mount Moriah where tradition says Ornan had his threshing-floor; where Abraham offered up Isaac; and where afterwards the Jewish Temple, the glory of Israel, stood. The Mosque

from the city. It commands a splendid view of the Holy City, which lies like a map in the foreground. To the eastward is seen the valley of the Jordan and the mountains of Moab and Bilead. The Dead Sea seems quite close at hand, owing to the clearness of the atmosphere. It was on this mountain that Christ stood when he lamented over Jerusalem and here he taught his disciples to pray. Below lies the Garden of Gethsemane, the scene of that night of anguish, where today are found olive trees which were probably alive at that memorable time.

We journeyed to Jericho over the same route which was followed by so many Biblical characters, and which marks the boundary between the tribes of Benjamin and Judah. The road from Jerusalem to Jericho lies through a barren, treeless land. Rocky limestone hills tower on either side, appearing at a distance to be entirely devoid of all vegetation, although many flocks of sheep and goats manage to pick a precarious living from the scant herbage. Jerusalem is 2,000 feet above and Jericho 800 feet below the sea level, and although only 15 miles apart in an air line, some 10 miles extra must be traveled in order to wind the way down the steep mountains. On the road lies the



Scenes in the Holy Land.

1. Village of Bethany, where Christ Raised Lazarus from the Dead. 2. Olive Tree said to be over One Thousand Years Old. 3. Camel Train Resting Near the Mount of Temptation. 4. Plowing on the Plains of Rephaim—Near Bethlehem. 5. Donkey Train.

Sorek famous for its ancient viticulture, and for its connection with the story of Samson and Delilah. The line now enters a rugged gorge called Wady Ismain, which it climbs until it reaches the highlands near Jerusalem. The sides of the ravine are precipitous limestone hills, dotted here and there with villages and showing in many places unmistakable signs of terracing which probably dates to the time of Roman occupation.

"Jerusalem is builded as a city that is compact together." "As the mountains are round about Jerusalem, so the Lord is round about his people" (Psalms cxlii. and cxlv.). The mountains are indeed "round about Jerusalem" for the city is built on four hills, and as far as the eye can see in every direction rises mountain after mountain. The older part of the city, enclosed by irregular walls, is probably much smaller than the city which existed in the time of Christ. Old as the city now seems, continue.

that the son of God trod the ground upon which we here walk; that somewhere in the buried city underneath our feet He did bear His cross, and these hills trembled by the earthquake's power when he expired.

A new Jerusalem is rapidly developing outside the walls, and most of the newer and better buildings are found here, but the interest of the traveler is centered in the old walled city with its crooked, dirty streets. In many cases the streets run right through buildings and in others are covered over for several blocks. Queer little shops abound, and everywhere prevails the utmost indifference to sanitation, which is one of the characteristics of the Oriental mind. Beggars are in evidence on all hands, and the cripples and deformed, as well as the thousands of cases of blindness and sore eyes, fill one with pity mingled with disgust that such a state of affairs can be allowed to

is a magnificent building with its colored tiles and marbles glistening in the sunlight, and its beautiful windows (the making of whose glass is a lost art), but the mind refuses to dwell upon the present building and turns to the past when the psalmist wrote and the patriots sang of the Temple's glory, and then thinks of the fruit of disobedience, and how glory vanished, until at last the pagan hosts utterly destroyed the holy place. Now no Jew may enter the temple area, and just outside the wall they may be seen at the "Jew's Wailing Place" wailing out lamentations over the destruction of the Temple, and praying for the restoration of the kingdom.

To merely catalog the interesting things seen at Jerusalem would exceed the limits of this letter, but we can not pass on without mentioning the Mount of Olives. This mountain, associated with so many acts in the life of Christ, lies a short distance

little village of Bethany where the Savior raised Lazarus from the dead; and the house of Mary and Martha as well as the tomb of Lazarus, although of doubtful authenticity, are pointed out to the visitor. A short detour on foot permits of a view into the deep gorge of the brook Cherith where Elijah was fed by the ravens—the supposed spot being marked at the present time by a monastery.

Jericho is located on the level plain of the Jordan River, the old town being some distance from the present filthy and uninteresting village. From a distance all that can be seen is a mound of earth, but recent excavations have uncovered the ruins of a town which was undoubtedly the Jericho of the Bible. It is interesting to note that nearly all of the old villages in Palestine are upon mounds such as this one. The old houses were built of sun-dried mud bricks, and as they crumbled to pieces the dirt was left in place. All the ma-

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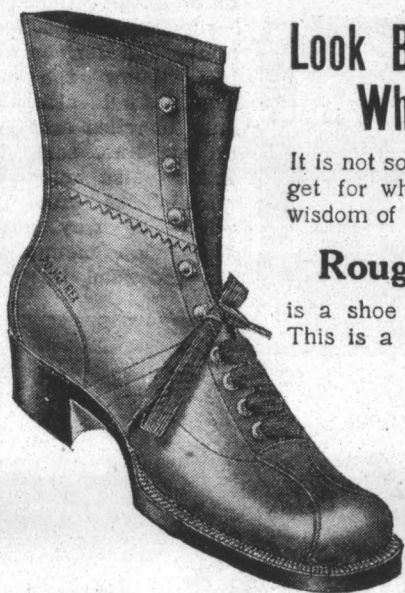
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nure of animals and other refuse was allowed to accumulate in the streets, and each time a house was built it was upon the top of the existing debris. The excavations at Jericho show that there are at least three towns, one below the other, on this site. Old Jericho consisted of mud huts just like those found in the village of today. Nothing ever changes with the Arab, and we saw many of them making bricks out of mud mixed with straw and dried in the sun just as was done 4,000 years ago. The debris accumulates in the village and the villager builds over it just as his ancestor did from time immemorial.

Near old Jericho is Elisha's Fountain, a tremendous spring whose waters make possible a small oasis in the otherwise desert land. This is the spring mentioned in Second Kings II whose bitter waters were sweetened at the command of Elisha. Near here is the Mount of Temptation which many authorities believe to be the mountain mentioned in the description of our Lord's Temptation (Matt. iv.)

About nine miles away lies the Dead Sea; in some ways the most remarkable body of water in the world. It is 1300 feet below the level of the Mediterranean Sea, being the most depressed sheet of water known. Into it empty the Jordan and one or two smaller streams. There is no outlet, the level of the water being maintained by the excessive evaporation during the hot summer months. The water is of the brightest blue imaginable, but is so strongly impregnated with salts that nothing can live in it. The human body can not sink in it, and we saw men floating on their backs like corks with arms and feet high in the air. Standing upright in the water the body will float with about one-third above the surface. The water has a nauseous, bitter taste, and if allowed to dry on the skin leaves an irritating deposit of salts.

Standing on an elevation near the Dead Sea and looking north, a ribbon of green is seen stretching away into the distance, made by the trees along the bank of the Jordan River. Every stage of this river is sacred with historical associations, and one can with reasonable certainty, locate approximately the places where many of the events occurred. Time and again the river is mentioned in the Bible, from the crossing of the Israelites on dry ground (Joshua iii), to the baptism of our Lord himself by John the Baptist. (Matt. iii). Here every year at the Epiphany season about 10,000 members of the Greek church baptize themselves in the Jordan, the river having been previously blessed by the priest. They dress in their shrouds for the occasion, and many who can not come themselves send their shrouds by others to have them dipped in the sacred water. The banks of the river are rich in varied foliage; oleanders stand in thick masses beautiful with their rose colored blossoms. We shall never forget that night at Jericho, with the moon shining over the Moabite hills, illuminating the valley of the Jordan with her silvery rays, as we tried in imagination to picture the many events which had taken place in this historical valley.

Even so short a visit as this one has made plain some things in the Bible not clearly comprehended before. Toward evening we looked up unto the hills and saw the shepherds walking with stately step along the hillside the sheep following behind. No dog was there to worry them, nor did any of the sheep seem to stray away. The picture served as a reminder of the parable of Jesus when he said:

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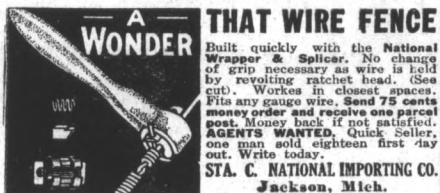
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And a stranger will they not follow, but will flee from him, for they know not the voice of strangers." (John x).

Water is scarce in this country and the places where the shepherd can water his flock are few. It often happens that several flocks meet at one of these fountains and become mixed while the shepherds visit or eat their humble repast together. Upon departure the shepherds stand apart, and each gives his peculiar call, when the sheep separate and cluster around their respective masters. Thus a bit of imagery which would be lost on the occidental mind is made clear by a very little knowledge of oriental custom.

At the inn of the Good Samaritan, while waiting for the horses to rest after the long pull up the mountain, two men walked in and at the same time heard a peculiar cry almost like that of a young baby. The men reached down in the bosom of their blouses and each drew out three young lambs, evidently only a few hours old, which again recalled a passage of Scripture:

"He shall feed his flock like a shepherd; he shall gather the lambs with his arm, and carry them in his bosom." (Isiah xi ii.).

The road from Jerusalem to Bethlehem passes through the fertile plain of Rephaim where David had three battles with the Philistines. Further along are seen the fields of Boaz in which gleaned Ruth the Moabitess, and it is easy to imagine that the fields nearby were those in which the shepherds kept watch over their flocks on that memorable night when the angel appeared to them to announce the birth of Christ the Lord (Luke ii.). Another sweetly pathetic story is associated with the tomb of Rachel near the road, which, while it may not mark the exact spot of Rachel's grave, must be very near the place. (Genesis xxxv.).

Bethlehem is frequently mentioned in the Scriptures, but its crowning glory is the wondrous event recorded in the second chapters of Matthew and Luke, which makes Bethlehem a household word wherever Christianity is professed, and causes the thoughts of millions to be turned to this Judean village as year by year the Christmas tide comes round.

The spot first sought by the visitor is the Church of the Nativity which is located on the reputed site of the village inn of the time of Christ. Beneath the church is the rock-hewn stable so common in those days, and in which the Savior was born. Perhaps the churches are not justified in locating the exact spot where the manger stood, but there is good reason to believe that it was somewhere in this stable. A silver star marks the place where the manger is supposed to have been. Outside the church the old market place remains as it was two thousand years ago.

EASTER.

BY L. M. THORNTON.

Oh, merry bells of Easter tide
O'er barren boughs you ring,
Where northern skies frown angry wise

And your wintry breezes sing.
But dear your tidings to my heart
And sorrows pass away,
Such news you bring, of Christ the King.

This Resurrection Day.
Oh, merry bells of Easter tide
O'er southern field and dell,
Your strains are heard while every bird

The chorus helps to swell.
But southern hearts must know some griefs

For loved ones passed away
You quench their tears, you calm their fears.

This Resurrection Day.
Oh, merry bells of Easter tide
You sound on every wind,
Your story blest to every breast
To comfort all mankind.

Since He who opened wide the tomb,
Walked forth Divine, to say,
Beyond the Pall, Life waits for all
This Resurrection Day.

Lay Your Building Problem on This Table



Famous Board of Seven Master Designers, Builders and Manufacturers

"I'll Pay \$1.00 for Every Knot"

—that's my 1914 challenge to every man who buys or sells lumber! I'll pay \$1.00 per knot for every knot any customer can find in our Red Cedar Siding shipped from Bay City. I stand ready to prove to you in this way that the lumber in Aladdin Houses is higher in grade throughout than is regularly carried by any seller of lumber in America. Clear Siding, Clear Flooring, Clear Interior Finish and Clear Shingles are furnished for every Aladdin Dwelling House.

O. E. SOVEREIGN,
Gen. Manager.

Before this Board of Seven comes every Aladdin House for the acid test of perfection. No detail escapes the keen, searching analysis of these experts. The designer must prove his plans to the complete satisfaction of: First, the Master Designer, for accuracy; Second, the Master Builders, for practicability, strength and structural harmony; Third, Factory Experts, for elimination of waste, standardization of lengths and economy of costs. Unless the work of these high priced men could be spread over a thousand houses, the cost would be prohibitive. No other organization can subject each house design to this searching and costly inspection.



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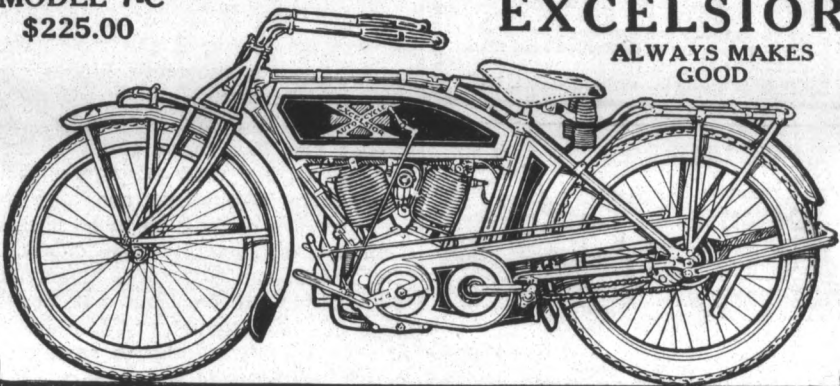
Send me your Catalog No. 410 House

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\$225.00

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5 miles...3-07 3-5
10 miles...6-18
50 miles...33-55 1-5
75 miles...50-55 2-5
100 miles...68-01 4-5

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Burns Oil or Gasoline

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The Detroit Vapor Stove Co., Detroit, Mich.

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"Heaven and Hell" Swedenborg's 400 page work, 15c. postpaid. Pastor Landenberger, Windsor Place, St. Louis, Mo.

Woman and Her Needs. At Home and Elsewhere. Success.

NEXT after the question, "How can I be popular?" the question which agitates most young folks is, "How can I become a success?" In fact, not only young folks, but old folks as well, are agitated by the question and the great god success numbers more worshippers than all the other gods and goddesses combined.

We all want to be successful. And why not? Success gives us a feeling of sureness and confidence which enables us to go to still further successes, while the unsuccessful person has a feeling of hopelessness which makes it well-nigh impossible for him to "make good."

It is perfectly legitimate to wish to be a success. But first stop to decide what you consider a success. I know a woman who married successfully. I say this because she told me she did. And the reason she says this is because she married a man with lots of money. She lives in a large house and keeps two servants all the time, with a woman twice a week for scrubbing and washing and a man for the yard and furnace. She has so many clothes there are scarcely occasions enough in the year for her to wear them all. Her table is well set, when she can keep a good cook to prepare the food, she travels whenever she feels like it, has an electric car, entertains lavishly, is entertained as lavishly and is constantly seeking pleasure.

Is she happy? Well—she is nervous. She ought to be happy, having nothing to do and no temporal worries. But unless she is constantly on the go, or being amused at home, well, things aren't just smooth. She must be constantly excited in order not to give way to nerves. If she were a child I'd say temper, but being a successfully married woman it can't be that. She must be constantly stimulated. She has the attitude of a woman who is afraid she is going to miss something if she isn't ready to jump at a moment's notice and start out to some club or reception. She has no time for her family. Although she has three children they see less of her than strangers. The nurse looks after them and as a result they are coming up to be useless members of society. The oldest, a girl of ten, can not dress alone, and the six-year-old boy can not button his own shoes, though children younger than he are helping to earn their own living by peddling papers. In a word, they are not being taught self-reliance, which is the most valuable lesson a child can learn. The motto of the entire family is, "Let someone else do it." While the mother is away serving on child-labor committees her own children are at home growing up into parasites.

I have another friend, who did not marry successfully, because her husband only gets \$12 a week. By-the-way, the first woman's household costs her that much a day to keep up. This friend has three children, too, which means five to feed, clothe and shelter on \$12 a week. She ought to be the one to be nervous, poor thing, with a problem like that to solve. But as a matter of fact, she is the calmest, happiest person imaginable. Her children have no advantages, my first friend says, for there is no money. But they never seem to miss them. They can at least go to public school, and at home there is always harmony,

an advantage entirely lacking in the other home. The girl of ten not only dresses herself, but the baby as well. And she can wash dishes and tidy a room and bake a plain cake and broil a chop as well as her mother. When mother is in bed with a headache, daughter can get a good plain meal for father, and she is as proud as can be over the fact.

The motto of this home is "Everybody pull together," and each member lives up to it. The housemother is not always informed on the very latest news of the day, but there is no friction, no nerves. The family takes its troubles and pleasures together and if the pleasures are simple they leave no sting behind.

Which woman is the success? My first friend says she is, and my second friend takes it for granted that she could never hope to be rated with the successes. But personally, when I consider her happy, well ordered, peaceful home and then compare it with the spirit of tension and irritability which rules in the other, I think the term success ought to be given to the woman without money. It all depends on what you mean by success. I agree with Edgar Guest:

"If I have kept my faith in God,
If I have cheerful been and kind,
If I have been content to plod
And seldom grieved and never whined,
But bravely faced each morning task,
No more of me the Lord will ask."
DEBORAH.

THE PARCEL POST FOR FARMERS' WIVES.

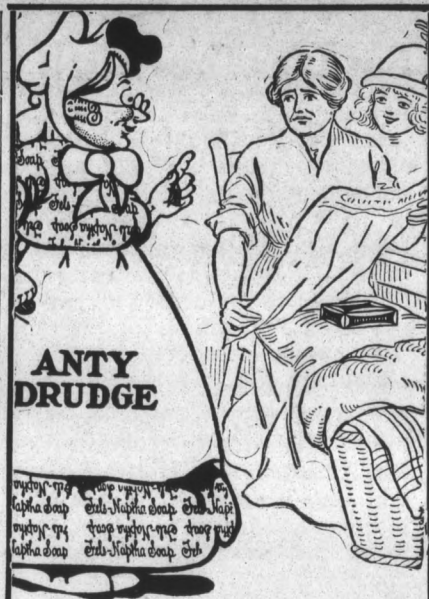
BY CLAUDIA BETTS.

The claim is made that, although the farmers were the most anxious and insistent for the parcel post law, they are using it much less than some other classes of people. Probably one reason is that we haven't yet become accustomed to its many benefits, and another is that the rates have been so high. But as the rates are reduced and people get accustomed to buying by parcel post, it will open an avenue by which the farmer's wife and daughter can add very materially to their income.

I read not long ago of a man who advertised in one of the city dailies to ship fresh fruit and vegetables direct to the consumer. He used an ordinary market basket and shipped twice a week to each customer whatever fruit or vegetable was in season. He could not allow customers to specify their preferences as it would have been impossible to fill orders that way, but he always aimed to give them good value for their money.

That is important in building up a parcel post trade. We must furnish better goods at a little less than the price charged by city dealers in order to gain and keep customers. A market for butter, honey, hickory nuts, etc., could readily be established and if customers are satisfied they will tell their friends, and so a profitable business might be established. If one is conveniently situated near a large city, one might find a good market for cut flowers. Probably the best varieties to ship would be asters, sweet peas, dahlias and gladioli. If shipped regularly they might yield a good profit during a season.

The parcel post certainly offers great possibilities and we ought to take advantage of it. Many women do much of their buying of dress goods, millinery, furs, etc., from the mail order houses of Chicago, New York and other large cities, and if a reliable firm is patronized it is usu-



Mrs. Shiftless—"I'm ashamed to have you catch me reading when I ought to be washing my blankets. But I sent Mary to the village for some soap that wouldn't shrink wool, and the storekeeper wrapped it up in this newspaper that has such an interesting story in it. I just couldn't resist a look at it for a minute."

Anty Drudge—"Well the storekeeper knew his business. He sent you Fels-Naptha Soap. Now, if you'll spare me a few minutes I'll show you how to use it in lukewarm water. You can get through in no time, and then you can finish your story with an easy mind. Fels-Naptha is grand for all kinds of woollens, it makes them as soft and downy as when new."

Fels-Naptha will get your clothes on the line in a couple of hours after breakfast, and you can start ironing Monday afternoon, feeling rested and refreshed. That will make your Tuesday's work easier, too.

Fels-Naptha Soap works best in lukewarm water, and little rubbing is necessary. Your blankets will be soft and white.

Buy Fels-Naptha by the box or carton. The easy directions on the Red and Green Wrapper should be followed.

Fels & Co., Philadelphia.



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Quality—High-class steel, heavily zinc coated inside and outside.

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Adaptability—Adapted to all conditions and will prove absolutely satisfactory wherever a good wire fence is desired.

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Durability—Have been in service since 1898, in every section of the United States, and the oldest posts are today as good as when set.

Adapted to All Wire Fences. Increase the life of a fence. Put a wire fence on permanent American Steel Posts and preserve the fence indefinitely; put it on wooden posts and it is like building a brick house on a wooden foundation.

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ally satisfactory. In many instances the article can be bought for about two-thirds the price paid the local dealer.

Of course, many merchants object strongly to this method, but if the profit is in our pocket instead of the merchant's, why not?

HOME QUERIES.

Household Editor:—What is the difference between the "English" and the "Russian" way of serving a dinner?—Curious.

In the English way, the food is served from the table, the hostess serving soup, dessert and salad, while the host serves the meat course. In Russian style everything is served from the side by servants, the master and mistress being practically guests.

Household Editor:—How do you blanch almonds?—M. B.

Cover with boiling water and let stand over the fire until the skin readily slips off between the fingers, five or ten minutes. Then drain off the hot water, cover with cold water and slip off the skins under the water. Dry in a warm oven or spread on a platter and dry on the table.

Household Editor:—Will you please tell me the correct furniture for a large living-room? Would a large mirror be good taste?—A. M.

A large library, or reading table, to be placed in the center of the room under a ceiling light, book cases, large easy chairs, one or two plain, straight chairs and a good leather couch are all appropriate for the living room. The furniture should all be plain, simple and durable, the best you can afford, either fumed oak, mission, golden oak, or any good substantial wood which you like and can afford. Reserve mahogany and white woods for the parlor, if you have one. The mirror would be all right if it has a plain, quiet frame of wood. I would not use one with a gilt frame in a living-room. The idea is to have everything for use, and reserve frills for show rooms.

In reply to M. E. S., I am sending my method for making and using everlasting yeast. To start it take the water that potatoes have been boiled in, put in a quart fruit jar, within two inches of the top, add one-half cup of white sugar and one cake of dry yeast, let stand 24 hours, stirring occasionally, when it is ready to use. When wanted, take half for a baking, then put two tablespoons of sugar in the jar and more potato water but no salt. This is all there is to it. Heat and cold do not seem to hurt it.—M. E. B.

SHORT CUTS TO HOUSEKEEPING.

If new earthenware is boiled before using, it will last longer. Put it in a kettle, well covered with cold water, and heat until boiling, then let the ware cool with the water. This always makes lantern globes almost proof against breaking.—Mrs. O. W.

A serviceable spread for a table much in use where there are children, can be made by braiding or crocheting pretty carpet rags. It may be made in any shape desired.—Mrs. W. B. S.

Instead of using a wooden darning get a shoetree and put the stocking on it. Then you can see exactly where the darn ought to go. Another good idea is to paint half of your darning ball white, and use it under black-footed stockings.—F. T. M.

EASTER DAY.

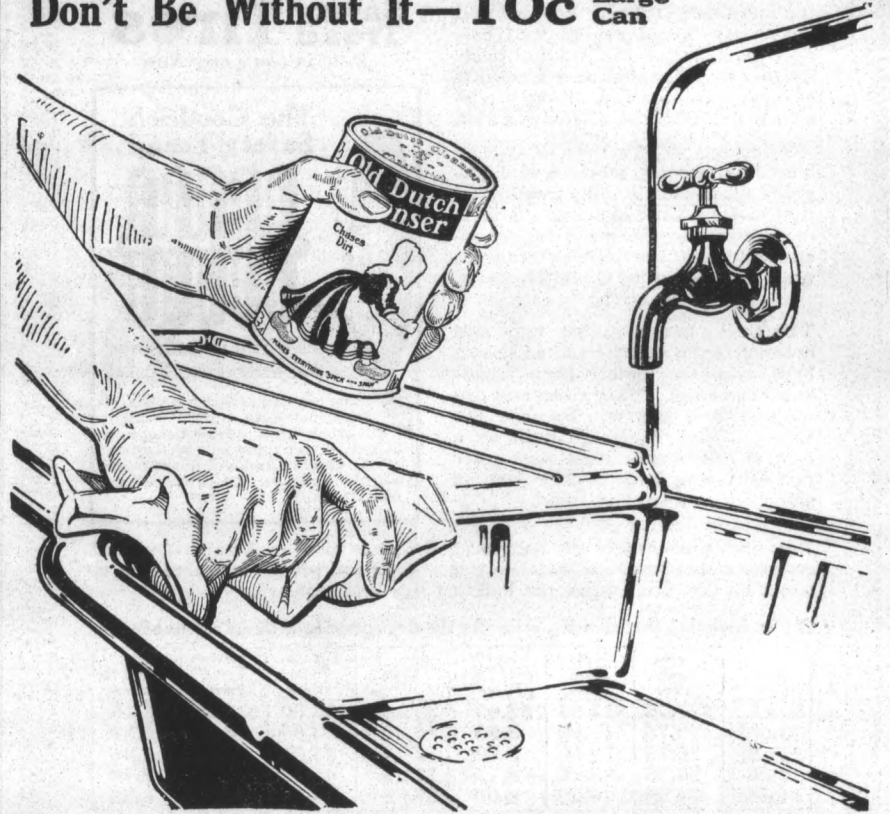
BY L. M. T.

Because my Lord arose on Easter Day
I breathe upon the breeze a roundelay.
Because He broke the fetters of the tomb
My soul casts off its gyves of fear and gloom.
Because He reigns, in Heaven enthroned, I know,
His is the way my faltering feet should go.

Keeps SINKS SNOWY WHITE

"OLD DUTCH" cleans the sink "as quick as a wink." Quickly banishes grease, dirt and stains from porcelain, enamel and metal parts. Equally effective for scrubbing wooden sink boards.

Don't Be Without It—10c Large Can



ARISTOS FLOUR

gives you the most for your money. It makes home baking well worth while. There's more and better biscuit in every sack of Aristos Flour.



This Trade Mark

on Every Sack

Success on Baking Day



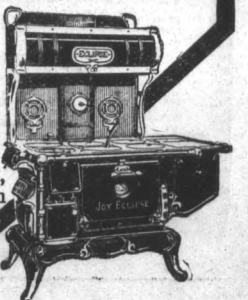
THIS handsome, durable Eclipse Range does justice to good cooks and helps the inexperienced. It will soon pay for itself in the fuel it saves, in the labor and time saved, in sure cooking results and in the joy of the family at meal time.

ECLIPSE

Write us for name of Eclipse dealer in your community. See for yourself the beauty in design, style and trimming of this and others of the big Eclipse line.

Write us for FREE book, "What Should I Get When I Buy a Stove?"

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Goodrich Unit Molding is the original "Safety First" idea in tire-making.

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The fine, strong fabric and high-grade rubber are literally interlocked by Goodrich Unit Molding. This is one reason why the treads do not separate and why "tire troubles" are practically unknown to Goodrich users.

The thick, tough rubber bars and crosstie of the safety tread as shown here, make a "Safety First" roadway for the car. They clean and dry the path and grip it. Because the Safety Tread design is built as a unit, it rides easier than any other non-skid tire, and in fact just as smoothly as a smooth tread.

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The Accepted Standard

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Tread runs as a smooth tread does and gives more actual service and mileage.

Pay no more than the following prices for the accepted standard automobile tire:

Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices	Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices
30x3	\$11.70	\$12.65	\$2.80	34x4 1/2	\$33.00	\$35.00	\$6.15
30x3 1/2	15.75	17.00	3.50	35x4 1/2	34.00	36.05	6.30
32x3 1/2	16.75	18.10	3.70	36x4 1/2	35.00	37.10	6.45
33x4	23.55	25.25	4.75	37x5	41.95	44.45	7.70
34x4	24.35	26.05	4.90	38x5 1/2	54.00	57.30	8.35

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Factories: Akron, Ohio
Branches in All
Principal Cities



There is nothing in Goodrich
Advertising that isn't in
Goodrich Goods

Farm Commerce.

Advertising and the Farmers' Markets.

TO get \$165 for a horse that is worth \$225 is discouraging, particularly so when a few days later it is learned that two men from different communities were looking for just such an animal as was sold and would have gladly paid the higher price for it.

Multiply Your Chances.

It has been said many times that competition is the life of trade. While students do not always agree that competition is best for business under all circumstances, it is certain that a horse will sell for a better price when there are five men after it than where only one is bidding and he not being anxious to buy. Here competition is the life of trade from the standpoint of the seller; and without exception the person who would dispose of a product is better satisfied with the price he receives on a competitive market than on one where there is no competition.

Then, too, a buyer may desire a product of a certain character; he may wish a sire that will strengthen the weak qualities in his dairy cows, or a strain of oats peculiarly adapted to his soil and climate. Now if he is a good judge and has a clear idea of what he is after, there is far more likelihood of his securing the coveted sire, or oats, if he has fifty sires to select from or twenty kinds of oats to choose out of, than where he had but one or two of each offered.

From both the standpoint of the seller and the buyer it seems important, therefore, that many be informed of the desire to sell and to buy. The seller wishes to attract many buyers and the buyer smiles when he sees numerous offerings of the kind he is after. All parties are more apt to be better satisfied when dealing is done under such circumstances.

There is no Paradox.

Lest the reader think that here is a paradox, that is, that in fulfilling one condition it would be an impossibility to fulfill the other, it is well to further explain: Where a farmer has, for instance, a horse for sale he would reasonably expect to receive more nearly what the horse is worth if there were a hundred men bidding for the animal than if there were five, since there is more likely to be some person or persons among the hundred who would find the animal or article offered to meet his or their particular needs. On the other hand, if a buyer has a hundred horses to pick from he is more certain to find what he wants. Now if there are a hundred men who want horses and there are a hundred horses for sale, a far greater number of the men will find the animals they want and the horses will sell at better figures, if all the men have a chance at the whole number of horses than if each man knows of but one or two of the horses offered.

Now this illustrates the advantage of advertising. By giving the public notice of what you want to buy or what you have to sell, you enlarge the number of persons who offer goods, or the number who would purchase of you, as the case may be. The supply of goods is not enlarged nor the general demand increased always, but there is a better chance of getting in touch with the man who wants the very thing you have, worse than any other man, or of finding the person who has the identical thing you would buy. And here is the reason that there is no inconsistency, or paradox, in the aims of the buyer to

find many sellers and the seller to find many buyers.

This, then, leads us to the question of how shall we go about to enlarge the circle of those interested in marketing certain products of the farm? How can a farmer interest a large community in the things he would sell or buy?

Experience is undoubtedly the best guide in a matter of this kind, and while we find that some business is gotten by those who sell to their neighbors, and perhaps a little more by those who show products at the fairs, the great majority of the farmers who succeed in selling their surplus stock, or other products, or who get the things they are after, is the class who advertise in the press.

There Are Illustrations.

Speaking generally, it must be noted that farmers have neglected to use the local papers and the farm journal for doing the very thing that is so important in marketing, i. e., interesting a large community in the things he would buy or sell. A few however, have availed themselves of these channels of spreading information. A Michigan breeder of Shorthorn cattle wrote us in February as follows: "I am all sold out of bulls. Have sold 17 this winter. Change my advertisement to Shorthorn cattle." Mr. Barnum tells in a letter that this journal sells more poultry than all other advertising put together. A northern Michigan bean grower who had seed free from anthracnose, etc., advised his publisher in these words: "Please do not run my bean advertisement in March as ordered. Am flooded with orders. More business than I could possibly handle."

What they Show.

Now these testimonials are but a few of hundreds from satisfied farmers who have tried the advertising method of reaching a large community of persons, and they unmistakably show that such a method has a place in the farmer's program, as well as in that of the merchant. Of course, there are many articles of a staple nature where advertising would seem to be of no account, the same with the farmer as with the merchant, but on the other hand, there is a wide field where much better returns could be had in selling, and more satisfaction in buying, if appropriate advertising is done.

Take potatoes: Off hand, it would be said that it is not worth while to advertise potatoes, and it no doubt would be useless in most instances; but experiments have been tried in the sale of high quality potatoes grown in upper Michigan, and it has been proven that by advertising sales can be readily made at prices considerably advanced over those offered in the usual channels of trade. Even now a campaign is on to induce people to eat more apples, which should help the sale of this fruit. Such advertising has aided greatly in the disposition of citrus fruits and western apples, and no one would care to guess what products could not be sold at better advantage if the selling were to be preceded by a judicious advertising campaign.

Advantage in Community Work.

Inasmuch as it frequently happens that certain districts, or belts, grow certain staples to greater perfection than do other less happily situated localities, community advertising becomes possible and profitable. The illustration given above of the citrus paradox, in the aims of the buyer to



**What is
the Matter with the
Shingle Nails Nowadays?**

IN OLD TIMES, nobody ever heard of such a thing as the shingles falling off a building because the nails had rusted through. Now half of them are rusted off before they're ten years old.

Fifty years ago nails were made from pure, old-fashioned iron, which rusted very slowly and evenly. Nearly all modern nails are made from steel with a high content of impurities.



**AMERICAN INGOT IRON
ARMCO CULVERTS**

99.84% Pure Iron.

are made from an iron even purer than that of our grandfathers' days, and experience is demonstrating that they will have an IMMENSELY LONG SERVICE LIFE.

Guard against the substitution of ordinary steel by insisting on the Triangle Brand or on complete chemical analysis.

For full information about AMERICAN INGOT IRON Culverts
Flumes, Roofing, Siding, Corn Cribs, Silos, Tanks,
Portable Houses and Fencing, write to

**Armco Culvert
Publicity Bureau**

571 Walnut St.

Cincinnati, Ohio

Please mention the Michigan Farmer when you are writing to advertisers and you will do us a favor.

RUBBER ROOFING

65¢ Just think of it! 108 square feet of the best one-ply roofing ever made at only 65¢ per roll. No matter what your roofing needs may be you can not beat the quality or values we give.

WARRANTED 20 YEARS

will withstand any climate and weather. No special tools or experience needed to lay it. Just figure how much is needed and send your order in today. If heavier grade is wanted—108 sq. ft. 2 ply 85¢; 108 sq. ft. 3 ply, \$1.05. Central-Galvo Brand Rubber Roofing will stand the test of time. We specialize in all grades of Roofing, Red and Green Slate and Flint Surface, and WE WILL SAVE YOU MONEY.

FREE Nails and Cement furnished FREE. No extra charges need be bought.

PAINTS

Don't buy a drop of paint anywhere until you know Central paints and prices. No other paint in the market will give the same lasting satisfaction. Sold in 1 gal. cans at \$1.15—5 gal. kits at \$1.15—25 gal. barrels at \$1.08—50 gal. barrels at \$1.05.

GUARANTEED 10 YEARS

made of best pigments, pure linseed oil, high grade driers and thoroughly tested. Same relative saving on all paints and varnishes. Get our prices on all your paint requirements, we will save you money.

WE PAY FREIGHT on 10 gallons or more within 500 miles.

FENCING

13¢ Our wire fence department is the largest of its kind in the country. Every foot of fence is guaranteed to be the best buy for the money. Here is an example, 20 inch Central Junior Special Farm Fence at 13¢ a rod.

We Will Save You Fencing Money just figure out your requirement whether Farm, Hog, Poultry or Road Fence, send for our Big 1914 Catalog and you will agree with us that we can save you big money. All Fencing fully guaranteed.

Write for Our 1914 Catalog containing thousands of bargains in farm implements, Farm Machinery, Sewing Machines, Wind Mills, Harness, Buggies, Wagons, Furnaces, Stoves, Hardware and Central Double Discing Harrows—it's FREE.

CENTRAL ROOFING & SUPPLY CO.

1501-7 S. Sangamon St. Dept. 304, Chicago, Illinois

Send Today for FREE Catalog

THINKING OF LIFE INSURANCE?

Then write to the one Company that gives its policyholders the benefit of the commissions other companies pay their agents. That Company is the

POSTAL LIFE

Assets nearly \$10,000,000	Insurance in force nearly \$50,000,000
----------------------------------	--

Commission Dividends ranging on whole-life policies up to

40%

of the premium go to policy-holders the first year. Renewal-Commission Dividends and Office Expense Savings covered by the

9½%

guaranteed dividends go to Policyholders in subsequent years. The usual contingent policy dividends, based on the Company's earnings, still further reduce the cost each year after the first.

"I will pay you to write and find just what the POSTAL will do for you. Just say: 'Mail insurance particulars as mentioned in MICHIGAN FARMER for April 11. And be sure to give (1) Your full name; (2) Your occupation; (3) The exact date of your birth. Address: Postal Life Insurance Company 35 GASSAU STREET NEW YORK"

KRAUS PIVOT CULTIVATORS

AXLE

Invented by a practical farmer. Best for actual service. Simple in construction. Your boy can run it. Light draft, perfect balance. Least wear, long life. All parts accessible; all castings malleable iron. Cultivates hillsides, uneven land, crooked rows. A slight foot pressure moves shovels and wheels instantly to right or left; the horses furnish the power, you only steer. Can be equipped with the

Akron Fertilizer Distributor

the greatest improvement in recent years. Apply commercial fertilizer while cultivating. Our Booklet contains most up-to-date and valuable information—send for it.

THE AKRON CULTIVATOR CO.
DEPT. 65 AKRON, OHIO.

gests how this is done. In advertising staple products of this kind it is probable that community advertising, such as co-operative associations, and similar organizations may do, will attain a considerable magnitude. Michigan potato growers have a chance to do profitable publicity work, also her apple men and general fruit growers because of the excellence of her potato and fruit crops. We shall expect in future years to see much advertising of this character, for in the past year or two the amount of it done has attracted no little attention.

So it seems that the farmer as he enters more generally into the field of business and fits some of the rules and methods of the business world to agriculture, will appropriate the advertising idea, and when this is common, the man endowed with efficient intellectual powers, either naturally or by reason of special training, will be much better equipped to conduct the commercial end of farming than will the untrained agriculturist.

Crop and Market Notes.

New York.

Genesee Co.—Winter grains and seedling are still nicely covered. Potatoes are offered more freely, and as a result the price has dropped to 57¢. A few beans are also marketed. Hens are beginning to lay; eggs 24¢. The farmers in this vicinity have contracted a large acreage of peas, lima beans and tomatoes for the cannery. Butter, dairy 27¢; creamery 30¢; pork, dressed 12¢; live 9¢; chickens 15¢@17¢; lambs, dressed 13½¢; wheat \$1; oats 45¢; beans \$1.80@1.90; cabbage \$20 per ton; loose hay \$11@13 per ton.

Pennsylvania.

Crawford Co.—Winter crops are looking fine, wheat never looked better, also new seedling looks well. The farmers are busy in their sugar camps; the sap is running well. Roads are not in bad condition for this time of the year. Prices: Eggs 20¢; butter 30¢; potatoes 7¢ per bu; apples \$1 per bu; parsnips 60¢ per bu; milk \$1.90 per cwt; chickens 10¢.

Highland Co.—We have had a cold, rough March, which has affected the grass and wheat to some extent, on account of the hard freezing on the bare ground, and making spring work late. Farmers have begun plowing. There are prospects of a large acreage of corn. Hens are beginning to lay; eggs 15¢; butter 25¢; corn 70¢@75¢; oats 45¢@50¢; hogs \$8.75; cattle \$7@8; potatoes \$1.20; hay \$12@15; hens 12¢@14¢.

Holmes Co.—The cold spell of six weeks duration has been succeeded by spring weather. Wheat has suffered some by freezing, but cannot tell how much yet. A greater part of last year's wheat crop has been marketed at 93¢. About 60 per cent of hay crop is still in farmers' hands, and the price is \$11. Cloverseed is plentiful, selling at \$8. Horses are not in much demand. Cows scarce and high. There is plenty of rough feed for stock. Cattle and hogs are in good demand.

Sandusky Co.—Wheat is showing the effects of the severe winter. Meadows seem to be in good shape. There will be a large acreage of oats and corn. There is still some frost in the ground, which is delaying spring work. Farmers are busy trimming and spraying and cleaning up. Roads are good, being dry on top. There is not much being sold except eggs and dairy products. Eggs are plentiful at 16¢; butter 24¢. Hay is slow at \$10@12; wheat 93¢; oats 38¢.

Ashtabula Co.—Weather is mild and warm now, but the roads are muddy and in bad condition. Winter wheat is looking good. Live stock has wintered in good condition. Sugar making is about over; it was a light season, and syrup sells for 90¢ per gallon. There are numerous sales, and stock sells high. Hens are laying well; eggs 18¢; cloverseed, red \$9; alsike \$12; timothy \$3.50; butter 23¢@25¢; dressed pork 11¢; chickens, live 14¢; wheat 90¢; oats 40¢@45¢; buckwheat \$1.50 per cwt; potatoes 60¢@80¢; loose hay \$10; calves \$10@11; sheep \$6@6.25; cattle \$8.75@9.

Columbiana Co.—The weather is somewhat milder the past few days and has the appearance of spring. Roads are in good shape, being nearly dry in some places. Farmers have been doing considerable hauling of manure, lumber, tile, etc. Wheat and meadows seem to be in good condition. (Continued on page 434).

You Smoke a "Better" Tobacco —Why Not Smoke The Best?

THE tobacco you now smoke you consider "better tobacco than you ever smoked before." Naturally, you kept trying until you found a "better" one.

But it stands to reason that since there is a difference in tobaccos, you may be missing still greater pleasure in a still better smoke—in the BEST smoke, in fact.

Tuxedo is the best smoke because no better tobacco leaf grows.

Tuxedo

The Perfect Tobacco for Pipe and Cigarette

Tuxedo is treated by the famous original "Tuxedo Process" for removing the sting and bite of the natural vegetable oils.

Tuxedo was born in 1904. Its first imitator appeared two years later. Since then a host of imitations have sprung up.

No other tobacco can give the unique pleasure of Tuxedo because no other maker has yet been able to equal the Tuxedo quality.

YOU CAN BUY TUXEDO EVERYWHERE

Convenient pouch
inner-lined with
moisture-proof paper **5c**

Famous green tin,
with gold lettering,
curved to fit pocket **10c**

In Glass Humidors, 50c and 90c

FREE

Send us 2 cents in stamps for postage and we will mail you a souvenir tin of TUXEDO tobacco to any point in the United States. Address

THE AMERICAN TOBACCO COMPANY
Room 1199 111 Fifth Avenue New York



WALLACE IRWIN
writer and lyricist

"Tuxedo is always welcome. A pleasant smoke, a mental bracer—the ideal tobacco."

Wallace Irwin



HENRY HUTT
famous artist

"A pipeful of Tuxedo puts new life into me. The mildest and purest tobacco grown."

Henry Hutt



GEORGE E. PHILLIPS
Mayor of Covington, Ky.

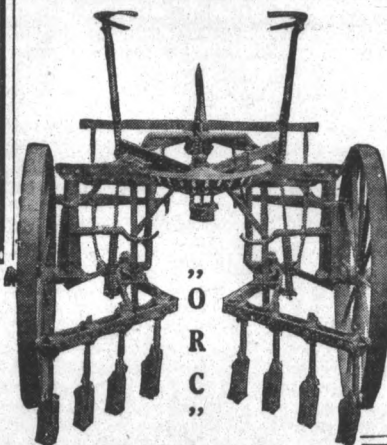
"A good pipe, and Tuxedo to fill it, and I'm satisfied. The tobacco in the little green tin has no rival as far as I am concerned."

George E. Phillips

Bigger Crops of Better Quality—

that's the final object of ALL cultivation. As you cultivate, so shall you reap. Many times, persistent cultivation has made two ears grow where one grew before, in spite of poor soil and contrary weather. You can quickly and thoroughly cultivate any crop in any kind of soil by using

DAYTON PIVOT AXLE CULTIVATORS



Made for the man who values perfection in farm implements. Furnished with 32 inch and 38 inch wheels which are just right for quick movement and dodging. Made in 6 sizes, with a big variety of shovels from which to take your choice. A special hoeing attachment can be used with the spring tooth style. Of perfect balance and easiest draft, though made as strong and durable as we know how with thirty years experience back of us.

FREE Catalog Shows

every important detail of Dayton Pivot Axle Cultivators. It also fully describes and illustrates the famous new "Little Giant" Balance Frame and Dayton Two-Row Cultivators. You owe it to yourself to investigate the complete line of "O. R. C." farm machinery. Write for this instructive catalog To-Day Sure!

The Ohio Rake Co.,
Box 20, Dayton, Ohio

POTASH by Parcel Post

We will sell you 20 pounds Muriate of Potash or 20 pounds Sulfate of Potash for \$1.00.

DELIVERED FREE by Parcel Post—anywhere east of the Mississippi and north of Tennessee and North Carolina.

Send cash, stamps or money order to our nearest office

GERMAN KALI WORKS, Inc., 42 Broadway, NEW YORK
McCormick Block, CHICAGO, ILL. Continental Bldg., BALTIMORE, MD.



Fraver Says

I am well pleased with my Buckeye Machine—it is all that you claim. I have done an average of \$400 worth of work a month. I have dug 1162 rods in 6½ days, 247 rods in one day and 66 rods in two hours. It cost me 2½ cents a rod and I received eighteen cents.

ALFRED FRAVER
Postoria, O.

BUCKEYE TRACTION DITCHER

A perfect trench at one cut

has put hundreds of men into independent and profitable businesses. In every farming neighborhood there is a splendid opportunity for contract ditching. Even at 100 to 150 rods a day, the profit is from \$15 to \$18 daily and most men are busy nine or ten months a year.

Send for the Buckeye Book of Facts F. and see what other men are doing and what you can do. Write today.

The Buckeye Traction
Ditcher Company
Findlay, Ohio

Builders also of Buckeye Open Ditchers and
Buckeye Gasoline Engines for farm use.

FARMS AND FARM LANDS FOR SALE OR EXCHANGE

M. R. Farmer—Are you going to buy a farm? Let me tell you all about farms near Detroit. R. E. Hall, "The Farm Man" 504 Free Press Bldg., Detroit, Mich.

HOMESTEADERS—I know of a fertile valley in the west. No irrigation. You can homestead 320, Address Jas. Edmonson, Hillsdale, Mich.

Listen—Improved farms, close Detroit & Pontiac, half million people. Best markets, 240 bu. potatoes per acre last year, and 100 bu. corn, \$30 to \$75 per acre. Easy terms. Write E. F. Winemiller, Rt. 8, Pontiac, Mich.

MICHIGAN FARMS—The second best State in the Union. We have farms of all sizes. We can suit you on prices. Send for free list. D. & F. MACKERCHER, 206 Clark Bldg., Grand Rapids, Mich.

FOR SALE—80 acres of good farm land, good buildings, good location 2½ miles from city. Share in good cheese factory. Will sell at \$75 per acre. John Bachler, Marine City, Michigan.

166 Acre Tile Drained Farm—On paved road leading into Detroit. All under plow. Clay loam. Flowing well, house, barns, etc. Near Detroit-Toledo Electric Line. Will divide to suit. James A. Hurst, 1020 Hammond Bldg., Detroit, Mich.

CASH FOR YOUR FARM I bring buyers and sellers together. Write me if you want to buy, sell or trade. Established 1881. Frank P. Cleveland, 948 Adams Express Building, Chicago.

FARMS, GOOD, CHEAP, PROFITABLE. UNUSUAL OPPORTUNITIES NOW. State Board of Agriculture, Dover, Delaware.

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

McClure-Stevens Land Co. Successors to A. J. Stevens & Co. Established 1883 Farm, Fruit and Stock Lands. We own 18,000 acres of choice unimproved land in Gladwin and Clare counties. Sold on easy payments. Interest 6 percent. Write for information. Gladwin, Michigan.

Investigate This: Excellent land in Minnesota, Washington and Oregon—adjacent to the Northern Pacific Railway—the best developed sections of the Pacific Northwest obtainable at low prices. State land on long payments deeded land on crop payment plan; good climate, good schools—no isolated pioneering. Send for literature saying what state most interests you. L. J. BRICKER, Gen. Immig. Agt., 380 Northern Pacific Ry., St. Paul, Minn.

VIRGINIA FARMS You can become happy and independent farming in Virginia. You can grow profitably alfalfa and all grasses, corn, fruits, grains, beef and dairy cattle. Virginia boasts the finest apple growing section in the world. Farms \$5 per acre and up. We welcome you. Write now for booklets, maps and other literature. G. W. KOINER, State Commissioner of Agr., Richmond, Va.

Disabled Owner Must Sell 384 Acres Equipped, \$3500 Disabled owner wants to close out before planting; remarkable opportunity for a hustler; broad fertile fields; immense crops; pasture for 30 to 45 head; valuable wood and timber, choice fruit; close to lake on state road to market town; 7-room house, 3 big barns, other buildings; 5 cows, 2 pigs, hens, hay in barn, tools and furniture included if taken now and only \$1500 cash needed; full details and location, page 1. "Strout's Spring List of Farm Bargains," just out, copy free. E. A. STROUT FARM AGENCY, Station 101, Union Bank Bldg., Pittsburgh, Pa.

Markets.

GRAINS AND SEEDS.

April 7, 1914.

Wheat.—The excellent condition of the new crop is overshadowing other news items and the price of wheat shows a tendency to drop. A year ago the price was \$1.12 per bu. Quotations for the past week are:

	No. 2	No. 1	White.	May.
Wednesday	97¾	97¼	98¾	
Thursday	97¾	97¼	98¾	
Friday	98	97½	99	
Saturday	97¾	97¼	98¾	
Monday	97½	97	98½	
Tuesday				

Chicago, (April 6).—No. 2 red 93 @94c; May 90¾c; July 86¾c.

Corn.—In spite of shipments from Argentine and a weakening of the wheat trade, the corn deal showed strength and advanced a cent Monday. One year ago the price for No. 3 corn was 54½c per bushel. Quotations for the past week are:

	No. 2	No. 2	Yellow.	May.
Wednesday	66½	66½	68½	
Thursday	66½	66½	68½	
Friday	66½	66½	68½	
Saturday	66½	66½	68½	
Monday	67½	67½	69½	
Tuesday				

Chicago, (April 6).—No. 3 corn 67½@69c; May 68¾c; July 68¾c.

Oats.—The delay of spring work by the continued cool weather has been a bullish factor in the oat deal and on Monday the price held steady in spite of the easier wheat trade. One year ago the price for standard oats was 37½c per bushel. Quotations for the past week are:

	No. 3	Standard.	White.	May.
Wednesday	42	41½	41½	
Thursday	42	41½	41½	
Friday	42	41½	41½	
Saturday	42	41½	41½	
Monday	42	41½	41½	
Tuesday	42	41½	41½	

Chicago, (April 6).—No. 2 white oats 41½@42c; May 39¾c; July 39¾c.

Beans.—Demand good at advanced prices. The local board of trade quotes immediate and prompt shipments at \$1.98; May \$2 per bu. Chicago reports a steady trade. Pea beans hand-picked, choice, are steady at \$2; common \$1.75@1.85; red kidneys, choice \$2.80.

Rye.—This cereal is active. No. 2 is quoted at 68½c per bu.

Barley.—At Chicago barley rules easy and is quoted at 54@64c per bu., while Milwaukee quotes the malting grades at from 52@65c.

Cloverseed.—Values took another drop. Prime spot \$7.65 per bu.; alsiike at \$7.95. Toledo prime cash is quoted at \$7.50 and prime alsiike at \$9.75.

Timothy.—Prime spot is selling at \$2.30 per bu.

Alfalfa.—Higher at \$7.50 per bu.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent \$5.30; second \$5; straight \$4.75; spring patent \$5.10; rye flour \$4.40 per bbl.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$29; coarse middlings \$28; fine middlings \$30; cracked corn \$30; coarse corn meal \$29; corn and oat chop \$26.50 per ton.

Hay.—Demand steady; prices unchanged. Carlots on track at Detroit are: No. 1 timothy \$15@15.50; standard \$14@14.50; No. 2, \$12.50@13.50; light mixed \$14@14.50; No. 1 mixed \$12.50@13; No. 1 cloyer \$12@12.50.

New York.—The market continues steady. No. 1 timothy, \$20@21; No. 3 standard \$15@20; light clover, mixed \$18@19; clover \$17@18 per ton for the large bales.

Chicago.—Prices here rule higher. Choice timothy is quoted at \$18@19 per ton; No. 1, \$16@17; No. 2, \$13@14 per ton.

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

New York.—Rye straw \$17@19; oat straw \$11 per ton. Chicago.—Rye straw is quotable here at \$7.50@8; oat straw \$6.50@7; wheat straw \$6.50@7 per ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Market firm with prices 1½c higher. Extra creamery 26c per lb; firsts 25c; dairy 17c; packing stock 14c.

Chicago.—Market is steady, with prices slightly higher. Extra creamery 25c; extra firsts 24c; firsts 21½@22½c; seconds 19@20c; ladies 17@18c; packing stock 16c per lb.

Elgin.—Market is firm at 24½c per lb., which is the same as last week.

New York.—The market is weak, although prices are slightly higher than last week. Creamery extras 25¾@26¼c; firsts 24½@25½c; seconds 22@24c; packing stock 13@15½c per lb.

Eggs.—Market stimulated by the approach of Easter. Prices slightly higher. Current receipts of fresh stock are quoted at 19c.

Chicago.—Market steady at prices about the same as last week. Miscellaneous lots, cases included, 17@18¼c; ordinary firsts 17@17½c per doz; firsts 18@18¼c; seconds 15½@16c.

New York.—Market firm at last week's prices. Fresh gathered extras 21½@22c; extra firsts 20½@21c; firsts 20@20½c.

Poultry.—Market firm at slightly higher prices on all poultry. Live—Sparrows 19@20c; hens 20@21c; turkeys 18@20c; geese 13@14c; ducks 17@18c.

Chicago.—The market is steady with no change in prices. Quotations on live are: Turkeys, good weight 16c; others 12c; fowls, choice 18c; spring chickens 18c; geese 12c; ducks 16@17c per lb.

FRUITS AND VEGETABLES.

Apples.—Demand is fairly good and prices are unchanged. No. 1 \$5.50@6.50; No. 2, \$4@4.50 per bbl. In Chicago the market is quiet, although fancy stock is held steadily. Trade in box apples is dull. Prices have not changed: Barrel stock is quoted: No. 1 Jonathans \$6@7; Spies \$5.50@6; Baldwins \$5@5.75.

Potatoes.—Market is firm, with prices slightly higher. Quotations: In bulk 60@62c per bu; in sacks 65@67c per bu for carlots. At Chicago the market is firm, and some are holding for higher prices. Good Michigan stock is quoted at 60@65c per bushel.

Cabbage.—Steady with prices unchanged. Good quality is quoted at \$3@3.25 per bbl. At Chicago the supply is excessive and demand is only fair. Prices about the same. Holland or Red \$1.50@1.75 per bb., \$20@22.50 per ton.

Onions.—The local market is steady with prices unchanged. Quoted at \$3.25@3.50 per sack for yellow and \$1.75 per crate for Spanish. At Chicago the market is weak. Holders are getting anxious to get rid of old stock. New stock is also slow. Good yellow sells for \$2.50 per sack and Spanish at \$1.50 per crate.

WOOL.

Boston.—Supplies have been moving out very rapidly since the first of the year. While last week's sales were far below former weeks, the amount aggregated 2,000,000 lbs. Prices are being well maintained on all desirable lots. The supply of fleece wools is practically exhausted. Michigan ½-blood is quoted at 23@24c; Michigan fine, 20@21c for unwashed. Washed fleeces are selling on about a 28c basis. In the wool growing states contracting is going on at a rapid pace at prices several cents above those obtained for similar grades a year ago.

GRAND RAPIDS.

The potato market advanced five cents during the past week, with buyers paying 50c for stock. Local dealers say that the situation is peculiar and that outside markets do not warrant the advance. A recent canvas made by the Grand Rapids & Indiana Railroad shows that between 2,600 and 3,000 cars of potatoes have moved from loading stations on this road this season and the railroad people estimate that 1,500 cars remain to be moved, largely in farmers' hands, for shippers as a rule have unloaded and their warehouses are empty. A similar condition is said to exist on other Michigan railroads. The bean market is also higher, with white pea quoted at \$1.55@1.70. Eggs are firm for the Easter market, dealers paying 17½c. Poultry is scarce and higher, with 15½c live weight offered for fowls and chickens.

DETROIT EASTERN MARKET.

The offerings Tuesday morning were readily taken by the buyers. Potatoes are up to 90c. No apples were offered; onions sold as high as \$2 per bushel, and cabbage up to \$1.15. Horseradish 10c per bunch; eggs 22@23c per dozen. Loose hay is coming in more slowly, with the price still ranging from \$13@17 per ton.

THE LIVE STOCK MARKETS.

Buffalo.

April 6, 1914.

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

Receipts of stock here today as follows: Cattle 175 cars; hogs 90 d. d.; sheep and lambs 85 d. d.; calves 1600 head.

With 175 cars of cattle on our market here today and with only 16,000 reported in Chicago, our market on all cattle of good quality and finish, weighing above 1200, was strong to 10c per cwt. higher than last week. Cattle of common quality and butchers' weights sold from barely steady to about 10c per cwt. lower than last Monday. At the close of the market everything was well cleaned up at steady prices, with steady prospects for the future at present prices.

We had a fair supply of hogs here today, about 90 d. d. all told. Trading was slow and all grades about a nickel lower, outside of pigs. This class ruled strong. Pigs sold at \$9.25 generally. Best grades \$9.35. Closing trade was dull and a few going over unsold.

The market was active today on both lambs and sheep. Prices 25c lower than the close of last week on lambs; sheep steady. Choice handy lambs selling mostly at \$8.40. We look for steady to shade higher prices on lambs last of week; it will depend upon receipts.

We quote: Choice lambs \$8.35@8.40; heavy do, \$8@8.10; cull to fair do, \$7@8.25; yearlings \$7@7.50; bucks \$4.50@5.25; handy ewes \$6.25@6.50; heavy do, \$6@6.25; wethers \$6.75@7; cull sheep \$4.50@5.75; veals choice to extra \$11.50@12; fair to good \$9.50@11; heavy calves \$5.50@8.

Chicago.

April 6, 1914.

Cattle. Hogs. Sheep. Receipts today..16,000 36,000 29,000 Same day 1913..27,069 39,498 20,721 Last week38,881 95,369 90,916 Same w'k 1913..39,651 167,801 82,316

The condition of the cattle market at the present time may be inferred from the slowness of the general demand today, with so small a Monday supply. At a late hour very few steers were sold, and values for cattle not strictly choice were no more than steady. Prime beefs and fat butcher stock were called about a dime higher. Hogs were active at an average decline of 5c, with an \$8.90 top. The hogs received last week averaged 234 lbs. The run of lambs and sheep was excessive, and trade dragged at declines of 10@25c, but some prime yearlings brought \$7.50, few being offered.

CROP AND MARKET NOTES.

(Continued from page 433).

tion. There is very little produce being marketed. Hens have been laying well for the past two weeks; eggs 24c; butter 24c; apples \$1.25 per bu; potatoes 75c per bu.

Indiana.

Wayne Co.—The ground is thawed out, but is not dry enough for plowing or sowing oats. Wheat and young clover looks fairly well. Roads are in excellent condition for the time of year. Some wheat and corn is being marketed. The farmers who have sugar bushes are now making maple syrup, but the production will not be large this year. The syrup sells for \$1.25@1.50 per gallon. Hens are laying well; eggs sell for 16c; wheat 93c; corn 60c; hay \$10@12; hogs \$8.25.

Daviess Co.—There have been no oats or potatoes planted, as is usually done in March. Wheat and new meadows are slightly damaged but are much better than a year ago. There are few products for sale except poultry, butter, eggs, etc. Cattle \$7.50@9; hogs \$7.50@8.50; horses \$125@200; milch cows \$60@100; hay \$17.50@20; corn 55@70c per bu; wheat 90c; potatoes \$1 per bu; chickens 13c; butter 20c; eggs 18c.

Jay Co.—Roads are good. Much stock is moving to market owing to the scarcity of feed. Many silos are empty, and feeders are forced to ship. Good prices prevail. Wheat is coming out in fair condition. Cloverseed is all sown. No oats sown yet. Mice did much damage to young trees and shrubs during the snow. Eggs 16c; chickens 11c; hay \$7@11; corn 85c per cwt; oats 36c. Many farmers are buying autos.

Iowa.

Osceola Co.—We are having fair weather. Snow is all gone, though we did not have much this winter. The ice harvest was a month later than usual, but the quality was very good. The top wages for hired men is \$40 per month. Land values are high, prices paid recently being around \$167 per acre.

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PLANTS—Plum Farmer Black Raspberry Plants, 10c each. 5c per dozen, the greatest Black Raspberries on the Market; Strawberry Plants, Choice varieties at 5c per 100. Long Yellow, King Edward, Helen Davis, Senator Dunlap and Bride of Michigan; Crimson Rambler Rose Plants, strong three-year Field grown at 50c each. King Humbert Cannas large dark Red, 10c each. **HENRY WINKELHAUS, Box 673, Howell, Mich.**

PEACH TREES, Orchard Size, 4 & 5c each Elberta, etc. New catalog free of all kinds of nursery stock. **W. A. ALLEN & SONS, Geneva, Ohio.**

APPLE TREES—Not by the million, but the finest stock grown. Free from disease and true to name. Also other fruit trees at Granger prices. **D. G. BANKER, Dansville, N. Y.**

BARLEY—Wisconsin pedigree barley No. 13. Have a small quantity of extra choice for seed. Price \$1.50 bu. bag free. **GEO. A. TRUE, Armada, Mich.**

SEED POTATOES—The Horticultural Division of the Mich. Experiment Station has surplus of Sir Walter Raleigh seed potatoes for sale. Price \$1.50 bu. F. O. B. Lansing, Mich. Money must accompany order. Address Horticultural Division, East Lansing, Michigan.

FOR SALE—250 BUSHELS of BEARELESS BARLEY reclaimed for seed. **H. L. COLE, Palmyra, Mich.**

HOME-MADE CONCRETE MIXER—Runs by hand or 1 1/2 H. P. engine. New castings furnished if desired. Write for descriptive folder. **G. C. SHELDON, Nehawka, Neb.**

THIS IS THE FIRST EDITION.

The first edition is sent to those who have not expressed a desire for the latest markets. The late market edition will be sent on request at any time.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

April 2, 1914.

Cattle.

Receipts 1464. Market steady with Wednesday, but 15¢ to 25¢ lower than last week on everything but canners, stockers and feeders which are steady.

We quote: Best steers and heifers \$8@9; steers and heifers, 1000 to 1200, \$7.50@7.75; do 800 to 1000, \$7@7.25; do that are fat, 500 to 700, \$5.50@6.50; choice fat cows, \$6@6.25; good do, \$5@5.50; common cows, \$4.50@4.75; canners, \$3@4.25; choice heavy bulls, \$7@7.25; fair to good bolognas, bulls, \$6.25@6.50; stock bulls, \$5.50@6; choice feeding steers, 800 to 1000, \$6.75@7; fair do, \$6.50@6.75; choice stockers, 500 to 700, \$6.50@6.75; fair do, \$6@6.25; stock heifers, \$5.50@6.50; milkers, large, young medium age, \$60@75; common milkers, \$40@50.

Haley & M. sold Costello 4 heifer av 572 at \$5.90, 2 butchers av 810 at \$6.25, 2 steers av 945 at \$7.25, 3 do av 797 at \$7; to Mich. B. Co. 1 bull wgh 1430 at \$6.50, 1 cow wgh 1000 at \$6, 16 steers av 766 at \$7.30, 1 bull wgh 900 at \$6.75, 1 cow wgh 990 at \$6; to Bresnahan 1 cow wgh 776 at \$4; to Mason B. Co. 2 heifers av 590 at \$6.75, 1 cow wgh 990 at \$4.75, 10 steers av 743 at \$7.25, 2 cows av 975 at \$5.15; to Thompson Bros. 2 do av 1075 at \$5.75, 1 heifer wgh 670 at \$6.65, 16 butchers av 766 at \$7.15; to Kull 26 steers av 871 at \$7.50; to Gerisch 20 do av 1043 at \$7.40;

Spicer & R. sold Mich. B. Co. 4 steers av 790 at \$7.25; to LaBoe 1 do wgh 620 at \$6, 1 cow wgh 960 at \$5.75; to Bresnahan 1 do wgh 810 at \$4.50, 1 do wgh 1040 at \$5.25; to Mich. B. Co. 11 steers av 904 at \$7.30, 1 bull wgh 1360 at \$6.65, 8 steers av 946 at \$7.40, 1 bull wgh 1290 at \$6.65, 13 steers av 891 at \$7.40, 1 do wgh 1140 at \$8, 1 bull wgh 1140 at \$6.65, 2 cows av 1340 at \$6.50; to Mitchell 5 stockers av 708 at \$7; to Merritt 3 cows av 970 at \$5.35; to Sullivan P. Co. 4 steers av 1000 at \$6.25, 4 do av 895 at \$7.25; to Hammond, S. & Co. 1 bull wgh 1600 at \$6.60; to Mich. B. Co. 12 steers av 800 at \$7.50; to Rattkowsky 1 cow wgh 1700 at \$6.65, 2 do av 890 at \$5.35, 1 do wgh 1150 at \$6.50, 1 bull wgh 1490 at \$7; to Mason B. Co. 7 cows av 1093 at \$6.25, 9 steers av 905 at \$7.40; to Thompson Bros. 2 cows av 1005 at \$5.25, 16 steers av 860 at \$7.35, 7 do av 943 at \$7.60, 1 do wgh 1020 at \$7.60; to LaBoe 1 heifer wgh 750 at \$6.75, 1 steer wgh 1040 at \$7.50; to Fruitchey 34 stockers av 356 at \$6.65, 4 cows av 790 at \$5.35; to Heinrich 12 steers av 1076 at \$7.60.

Receipts 582; market active and 75¢ higher. Best \$11.50@12; others \$7@10.75.

Bishop, B. & H. sold Nagle P. Co. 4 av 150 at \$10, 6 av 135 at \$10.50; to Sullivan P. Co. 5 av 120 at \$10.75, 3 av 150 at \$11, 1 wgh 130 at \$9, 2 av 120 at \$10.50, 5 av 150 at \$8, 16 av 155 at \$10.75, 3 av 170 at \$11.50; to Thompson Bros. 5 av 145 at \$11, 6 av 135 at \$11; to Hammond, S. & Co. 5 av 125 at \$10.50, 10 av 147 at \$11; to McGuire 4 av 130 at \$9.50, 21 av 150 at \$11.75; to Mich. B. Co. 14 av 135 at \$11.75; to Sullivan P. Co. 8 av 130 at \$11.50, 5 av 150 at \$12, 4 av 175 at \$8.50, 7 av 135 at \$11.50, 10 av 159 at \$11.75, 7 av 140 at \$11.75, 6 av 155 at \$12; to Parker, W. & Co. 3 av 170 at \$12, 5 av 140 at \$10, 4 av 145 at \$11.50, 4 av 110 at \$9, 8 av 145 at \$11.50, 8 av 140 at \$11.25, 11 av 125 at \$11, 2 av 140 at \$8.50.

Sheep and Lambs. Receipts 3462. Market strong. Best lambs \$8.25; fair to good do, \$7.50@8; light to common lambs, \$7@7.25; yearlings, \$7.25@7.50; fair to good sheep \$5.75@6; culls and common \$4@5; clip lambs \$7.

Spicer & R. sold Young 26 lambs av 80 at \$7.50; to Mich. B. Co. 10 do av 55 at \$7, 36 do av 78 at \$8, 38 sheep av 120 at \$6, 4 do av 110 at \$4.50.

Haley & M. sold Parker, W. & Co. 18 lambs av 70 at \$8, 10 do av 59 at \$7.25.

Bennett & S. sold Newton B. Co. 30 lambs av 95 at \$8.

Hogs. Receipts 5883. None sold at noon; prospects 10c higher or \$8.80@8.85.

Bishop, B. & H. sold Parker, W. & Co. 2000 av 200 at \$8.85, 410 av 180 at \$8.80.

Roe Com. Co. sold Sullivan P. Co. 107 av 200 at \$8.85, 91 av 160 at \$8.80.

Haley & M. sold Hammond, S. & Co. 885 av 200 at \$8.85.

Spicer & R. sold same 350 av 200 at \$8.85, 100 av 170 at \$8.80.

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To make the most money out of your hay crop, you must handle it quickly.

You must know positively that your machines will be in shape to work from early till late without one moment's delay.

FLYING DUTCHMAN HAY TOOLS are the best made—most reliable hay tools on the market. They can be depended upon every minute of the haying season.

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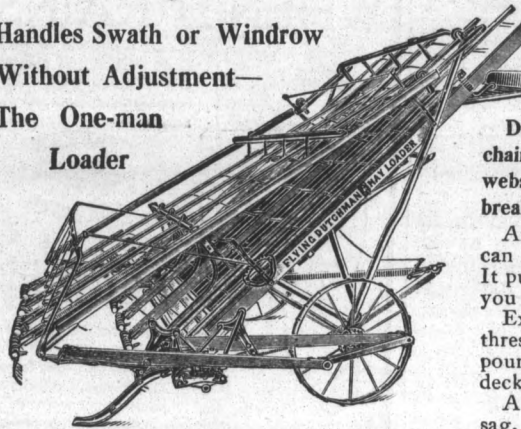
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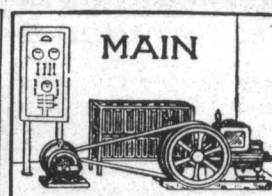
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I have another lot of 125 chicks just hatched. I am giving your remedy and have not lost any so far. I am nearly out of Abbott's Remedy now. I want you to send me two large boxes. —Mrs. Tillie Adler, La Salle, Mich.

This remedy for white diarrhea, chicken cholera and other bowel ailments in poultry may be secured from The Abbott Alkaloidal Company, Ravenswood, Chicago, Illinois. Fifty cents and \$1.00 boxes with booklet on poultry diseases by parcel post. Money back if not satisfied.—Advertisement.

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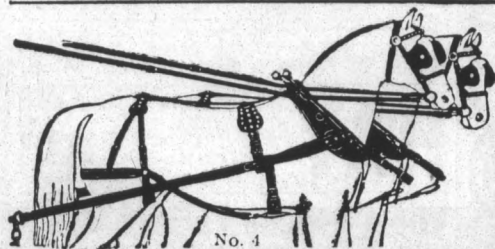
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REFLEX SLICKER

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Poultry.

A PRACTICAL BROODER HOUSE.

Experience has told me that the practical brooder house will be the one in which the greatest number of chicks can be reared with safety and retain their vitality. In the construction of the houses which I have on my poultry farm I held close to the Cornell plan with flat roof, for I found that these houses can be more cheaply constructed than the "A" shape house, and are far cooler on hot days, and, as well, give the caretaker more "head room." Two of these houses may be built while one of the others is being constructed, which is considerable in the saving of time.

I used six-inch matched lumber for the outside, 2x4's for the rafters, and 4x4's for the corners. The windows in front were hinged from the top so that plenty of air might circulate into the house on rainy days, without danger of having it rain in. Cotton cloth was tacked over the other openings until late in the season, when the stock had reached the stage when too much air could not be given them. The dimensions of these houses is 6x8 feet, with the front six and one-half feet high, and the back four and one-half feet. This gives an incline which will insure winter snows not remaining on the roof.

The opening for the chicks to trav-

fresh water again. The mash feeders should be filled each day to insure plentiful supply.

Two little tricks which I learned last season repaid me a thousand times, and saved the lives of hundreds of chicks. I use the portable hovers, as I do not like the ones which cannot be removed easily when cleaning, or be put away at end of season. I took a strip of two-foot chick wire, one-inch mesh, and cut it to proper length to circle hover and leave a six-inch space out from heater all around. By making use of two strips of wood I nailed the ends of this together, which left a complete circle of wire. This was placed about the heater for the first three days, both day and night. The chicks did not stray away from the heater, and learned their proper place for "mothering." This saved a large number of chicks, for they are sure to walk out from underneath the hover at night, and by straying into a corner, will become so chilled that by morning they cannot be saved.

The other plan was to nail strips of one-inch mesh wire in the corners, so that when the stock crowded in the corners they could not smother each other as there was an air space behind them.

By covering the roof with two-ply roofing, I figured that I could, by giving my own time, build this house for about \$20. All openings were covered with one-inch mesh wire, which was an insurance against rats or other enemies of the stock, and allowed



A Convenient and Practical Brooder House.

el in and out was arranged at the side, near the corner, with a little hood arrangement which kept the storm out of the opening. I used a board two feet wide and three feet long for a door to this. It was nailed through one corner, and worked on the slide plan. This was closed each night as soon as it had grown dusk. Hoppers were arranged on the sides of the houses, with separate compartments for the mixed dry mash, charcoal, grit and meat scraps. The water fount was hung from a nail near at hand. The floor was made of matched lumber, and this I covered with one foot of alfalfa meal, and buried a peck of chick feed in same previous to placing the chicks in the house. With the use of a mash feeder this fed them for two weeks without my continuous care, and eliminated the need of feeding every two hours. Brooding the number of chicks that I do, it would be utterly impossible for me to feed the stock in each house every two hours, and farmers who manage large farms will find that the care that stock will demand in a practical house of this type will surprise them. By placing fresh water in the fount early in the morning, and keeping the lamp trimmed each day, no further care will be needed until noon and night for

SOME POULTRY EXPERIMENTS.

In an experiment at the Pennsylvania Experiment Station with 200 growing chicks from one to two weeks old, those fed a wet mash of cracked corn, pin-head oats, shredded wheat, waste, and beef scrap, grew faster than those fed a dry mash of the same composition. The Plymouth Rocks and Rhode Island Reds made greater gains than Leghorns under the same conditions.

In a crate fattening experiment a lot of 16 chickens averaging 3.31 lbs. each, gained 10.75 lbs. on 105 lbs. of a mixture consisting of wheat, bran, corn, chop, and wheat middlings, 3 lbs. each with 1 lb. of beef scrap. Another lot of 16 chickens averaging 2.37 lbs gained 8 lbs. on 60 lbs. of the same feed, and another lot of 25 chickens, averaging 1.24 lbs. each, made a gain of 13 lbs. on 74 lbs. of feed. It is stated that the gain in weight is but a small part of the benefit of crate fattening, the most important being the improvement in the quality of the flesh.

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EGGS from prize winning Barred Rocks, R. C. White Leghorns, Silver Spangled Hamburgs, Fawn & White Runners, Circular free. Holstein bull calves Hengerveld Dekol blood. Riverview Farm, R. No. 8, Vassar, Mich.

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ORPINGTONS—Single Comb White Cockerels, eggs, day-old chicks, safe delivery guaranteed. Order ahead. Mary Thompson, Redford, Mich.

Eggs for Hatching from Mammoth Rouen Ducks, 11 D. G. Fisher, Route 3, Box 98, Birmingham, Mich.

EGGS—White Holland Turkey, 9 for \$3.00, white egg strain; Indian Runner Ducks 12 for \$1; Barred Rock 15 for \$1. T. B. & E. H. McDonagh, Burt, Mich.

FANCY (S. C.) WHITE LEGHORN COCKERELS. Price \$2 and \$3 each. Choice eggs, \$1 per setting. John McNicoll, Station A, R. 4, Bay City, Michigan.

S. C. White Leghorn Eggs—\$1 per 15, \$5 per 100. Very select heavy laying strain. J. W. WELLS, Montague, Michigan.

Rose Comb Rhode Island Red Eggs 15 for \$1.50. BUELL BROS., Ann Arbor, Michigan.

PLYMOUTH Rock cockerels 5 to 11 lbs., according to age, hens 5 to 8 lbs., 15 eggs \$2; Mammoth Bronze Tom Turkeys 8 to 35 lbs., according to age. Price \$3 to \$25, 10 eggs \$4. A. E. ORAMTON, Vassar, Mich.

FOR SALE—We have the finest pens of White Orpingtons in Indiana, backed by trap-nested stock. Eggs in lots of 50 or more 5c apiece. R. H. MACKINDER, Nappanee, Indiana.

EGGS FOR HATCHING—Buff Orpington, \$1 per 15; \$2.50 per 45; \$5 per 100. MRS. CALVIN FULLER, R. No. 2, Bancroft, Mich.

Barred P. Rock Eggs—From the Bradley strain for Hatching at \$1.50 per setting. A. A. PATTULLO, Deckerville, Michigan.

RINGLET BARRED ROCK COCKERELS FOR SALE. R. The N. Y. winning and laying strain. Two for \$5, one for \$3. Eggs from the noted strain \$1.50 per 15. PLAINVIEW STOCK FARM, Romeo, Michigan.

ROSE COMB WHITE LEGHORN EGGS for setting. R. 15 for \$1.50, 50 for \$3, 100 for \$5. A. R. LEEVEY, R. No. 23, Elsie, Mich. Union Phone 106-3 R.

Rose Comb Rhode Island Reds. Consistent winners at Lansing and Bay City. Some good breeding males, also eggs for hatching. Send for free mating list. J. Ezra Welsh, Mason, Mich.

FOR SALE—Eggs for hatching from M. Pekin Ducks and R. C. Br. Leghorns, two best lines in America, also a few chicks, at \$1.50 each, and two Jersey bull calves elig. to reg. Claudia Betts, Hillsdale, Mich.

EGG-A-DAY—Barred Plymouth Rocks, Bred-to-Lay. Eggs, \$1.50 per 15; \$2.75 per 30. EGG-A-DAY Poultry Ranch, Marshall, Mich.

Barred Rock Eggs, 15 For \$1.50, 100 For \$7. W. O. COFFMAN, R. No. 6, Benton Harbor, Mich.

WHITE LEGHORNS DAY-OLD-CHICKS—Wyckoff Maple City Poultry Plant, Box C, Charlotte, Mich.

White Wyandottes—Eggs from best pens \$3 per 15; \$9 per 50; \$15 per 100; from 3 pens 75c per 15. David Ray, 202 Forest Ave., Ypsilanti, Mich.

BARRED ROCK EGGS FOR HATCHING—\$1.50 per 15. J. A. BARNUM, Union City, Michigan.

CHICKS—We ship thousands each season. Booking orders now for spring delivery. Prices always right. Free booklet. Freeport Hatchery, Box 12, Freeport, Mich.

BUFF PLYMOUTH ROCKS—Heavy winter layers. Eggs \$2.00 per setting. Write wanta. GEO. W. WAGNER, Ann Arbor, Mich.

LILLIE FARMSTEAD POULTRY B. P. Rocks, R. I. Reds, and S. C. W. Leghorn eggs for sale, 15 for \$1.25 for \$1.50; 50 for \$2.50. COLON C. LILLIE, Coopersville, Mich.

Eggs for Hatching—From white Indian runner and Pekin ducks, R. I. Reds, White African guineas. H. V. Hostetter, Route No. 1, St. Johns, Mich.

PRIZE WINNING BARRED ROCKS, S. C. Reds, Pekin and Indian Runner Ducks. Stock for sale, eggs \$1 up. Circular free. EMWOOD FARM, R. R. 13, Grand Rapids, Mich.

Pine Crest White Orpingtons—As good as the best. Eggs. Write for catalogue. MRS. WILLIS HOUGH, Pine Crest Farm, Royal Oak, Michigan.

BARRED P. Rocks—Cocks, Hens, Cockerels and pullets for sale. Also tricos and game-mated. Guarantee to satisfy you. Ostrander Bros., Morley, Mich.

S. L. WYANDOTTE EGGS—From great laying strain of Blue Ribbon Birds. Satisfaction guaranteed. F. E. Cowdrey, Ithaca, Mich.

SILVER, GOLDEN and WHITE WYANDOTTES. White Stock Especially good, send for circular. Browning's Wyandotte Farm, R. 30, Portland, Mich.

Tells why chicks die

J. C. Reefer, the poultry expert of 1804 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write MR. REEFER for one of these valuable FREE books.

Grange.

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

APRIL PROGRAMS.

State Lecturer's Suggestions for Second Meeting.

Song.

Roll call, responded to by each member giving a sentiment or fact relating in some way to a cow.

Recitation or reading, "The Farm Creed."

Which is more profitable, making butter at home or selling cream at a creamery?

1. Making butter. 2. Selling cream. Character song.

Care of cream to be sent to a creamery, a ten-minute paper by a man. Discussion led by a woman.

Reading, "The Discontented Farmer."

Music.

Exhibit of dairy utensils, models and pictures, in charge of steward.

Treasurer assists lecturer in securing helps for this program.

BENNINGTON GRANGE.

The worthy lecturer of Bennington Grange has given me the task of naming the good points I received from last meeting's program. Well, I think that program worthy of mention in the Grange department of the Michigan Farmer, and think if our State Master, Mr. Ketcham, had been present he would have been impressed with the notion that an ordinary Grange under ordinary circumstances can produce a program worthy of mention at some Pomona meeting. Perhaps he might have remembered it some time at a Grange gathering in northern Michigan. I once heard him tell of the good meetings they have up there.

The first was roll call, responded to by the patrons mentioning some labor-saver they thought of, and perhaps we all thought of more when we reached home. The Michigan Farmer had a good article for the ladies on this subject some time ago.

Mrs. Drury and Mrs. McKowen impressed us with the idea that if we wished the Grange to prosper we must not be afraid to put forth the best within ourselves for its advancement. It applies to every member.

Mrs. Ruess suggested that we contemplate a corn club for our boys the coming summer. This impressed me very favorably. The worthy lecturer read a very entertaining letter from Mr. and Mrs. Shadbolt. We all wished that we might call upon them in their beautiful southern home.

The question, "Which pays best, for a man to work a small farm alone, on a large one and hire help," was discussed very ably but all in favor of the large farm. I think I might have derived more benefit from that subject if something had been said for the small farm. If the time had not been limited I think some good things might have been said in favor of the small farm. It might be a good subject for discussion at some future time. One thing is certain. A microbe of independence can run through the veins of the small farmer that never can through the man on the big farm who has to depend upon hired help to get his work done.

We were then most highly entertained by members of the Grange who presented a dialog dealing with the house servant problem. Though somewhat of an exaggeration it gave each one the impression that so long as we are given health and strength it is most desirable to do our own housework and thereby be independent of the servant question.

We adjourned, all feeling amply repaid for having gotten together to enjoy each other's society for a day.—Mrs. John Burgess.

AMONG THE LIVE GRANGES.

Gratiot County Much Alive.—State Lecturer Chas. F. Kiefer, of Morley, Mich., is helping us make things hum once more in "Old Gratiot." We have not as yet attempted to revive the dormant Granges but are making a strong effort to infuse new blood and re-enthuse those of our Granges which are not up to normal. We have subdivided the county in three parts, with a local deputy for each section. Our Pomona boasts over \$125 in the treasury and with that fund to draw upon we bid fair to keep things moving. Bro. Kiefer will have completed a canvas of our county by the end of the third week in March.

Farmers' Clubs

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

THE FARM LABOR PROBLEM.

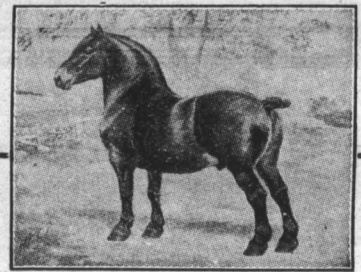
(Continued from last week.)

I believe that another equally important reason for the few competent workers that are seeking employment on the farm may be found in the lack of society and recreation there. To one reared in the excitement and society of a city, with the numerous show-houses and other forms of recreation—cheap and garish though they may be—to such a one, especially if young, life in the country seems intolerably monotonous. They would agree with a Toledo man who brought his family to live in a neat, comfortable tenant house four miles from Ann Arbor. They had a good home, plenty of fruit and vegetables for the gathering, reasonable work at good wages, but they preferred physical want in the city to social starvation in the country, and soon moved back. Perhaps if they had stayed longer, or if the country people had been a little less conservative and taken them in, these city people would have found less need for Toledo, but our rural dwellers make less attempt to become acquainted with these transients. "What is the use?" they argue. "They will soon move away. Besides, they often belong to a more or less degenerate type." Unfortunately, too many of our present-day laborers are practically degenerates, and the fact that they do not care to be associated with them in name or in person, is one reason why the better class of young men shun farm work.

(Continued next week.)

CLUB DISCUSSIONS.

Favor Township High School.—The Greenbush Farmers' Club held its March meeting at "Cherry Lawn," with Mr. and Mrs. John Zigler on March 19. About 80 members and visitors were present to listen and take part in the excellent program. The Club opened by singing, "The Farmer Feeds them All," followed by the Lords Prayer in unison. Following the secretary's report, Mrs. Robert Cahoon opened the program by a recitation, followed by a vocal duet by two of our little ones. After a song by the Club, adjournment was made for a bountiful dinner. Afternoon session opened by a song by the quartet. J. M. Hoxie then made an excellent address on "Some of the Defects of our Rural School System, and their Remedies." He pointed out very clearly that our country boys and girls are getting but small returns from the vast sums of money raised for our educational system. He contended that only six per cent of our rural scholars ever reached higher institutions of learning. He further argued that our money was taken to the cities to learn the professions, which do not materially advance or specialize farm life and its duties. He advocated by his own experience that an education by theory and practice were two distinctly different things. His remedy for our rural schools was the township high school. "What is the best money crop for farmers in this locality?" was discussed by C. A. Sevey and others. He thought, as did most of the members, that the corn crop was by far the best crop when everything was taken into consideration. Rev. Plews of Maple Rapids, was then introduced by the president, and gave a very excellent address on "Physical Culture." He pointed out that it was physically necessary and by God ordained, that we should take the very best care of our bodies. He took a decided stand against the foolish customs of modern day dressing. If we will do away with many of our customs and habits in eating, drinking, and dressing, it will aid materially to the longevity of life. Several visitors were present from Washington Center Club, and Essex Club. The next meeting will be held with Mr. and Mrs. Robert Cahoon and Mrs. Willard Cahoon, at the "Orchard Hill Farm."—Edgar Burke, Cor. Sec.



HEWO BELGIANS They Are Here!

H. & H. Wolf, importers of Belgian Horses exclusively, advise old and prospective patrons that their new 1913 importation is now in their barns. It is in all respects by far the most select lot of horses of this breed that have ever been stabled in their barns. Big, weighty, typey drafters of quality all through, that challenge comparison with the Best Anywhere. A select lot of mares, too. Get our terms and Guarantee. This will interest you as much as the horses.

Hewo Stock Farm
Wabash, Indiana
More than a quarter century
with the breed.

Special Announcement.



The fine lot of horses received in our last two importations are now in fine shape and you are invited to come and see America's foremost selection of

Belgians & Percherons

BELL BROS., Wooster, Ohio

JNO. CRAWFORD,
Horse Importer,
Byron, Mich.

70 Head for Sale
Percheron, Hackney and
Clydesdale Stallions.

Also Some Fine Percheron & Hackney Mares with foal. Now gentlemen I am going to sell. Be sure to get my price before you buy.

15 Black Percheron Stallions
MUST BE SOLD.
\$250.00 AND UP.

A. A. PALMER & SONS, Belding, Mich.

AUCTION! AUCTION!! AUCTION!!!

Of horses and mules every Monday. Private sale daily. From two to five hundred head always on hand, farm mares and chunks, delivery and wagon horses pavement sore city horses, and drafters and work horses of every kind. South ST. PAUL HORSE AND MULE CO., Union Stock Yards, South St. Paul, Minn.

FOR SALE—1 big, heavy boned, Reg. Percheron Stallion, 1 yr. old past. Also 2 Reg. Percheron mares in foal. M. A. Bray, Okemos, Ingham Co., Mich.

FOR SALE—3 Reg. Percheron Stallions, 3 to 7 yrs. old. F of breeding and individual merit combined. Come or write, H. B. Peters, Burton, Mich. R. R. Sta., Elsie.

Percheron Stallions—Pure bred Percheron stallion colts, 22 mos. old, wt. 1300 to 1350 lbs. \$400 to \$600 each. JOHN E. AMES, Byron, Ohio.

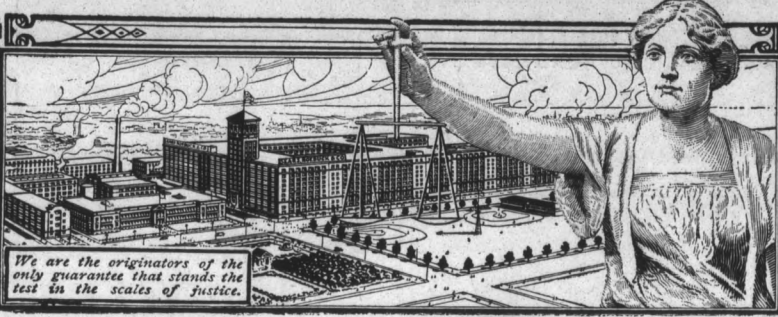
PERCHERONS—The only farm in the state where International first prize winners have actually been bred and raised. Come over and buy a good one; no reasonable offer refused. John Schipper, Filmore Center, Mich.

SOME fine young registered Clydesdale Stallions for sale from 1 to 4 years old. In the spring some will make ton horses with lots of quality and good action. Must be sold before the first of April. F. A. PETZ, Capac, Michigan.

FOR SALE—Pure Bred registered imported German Coach Stallion, Arco No. 3593. Guaranteed sound, a good getter and sold for no fault; weight 1500. Must be sold at once. W. AUSTIN EWALT, V. S. Mc. Clemens, Mich.

FOR SALE—Pair of 5-yr.-old black mares. Both in foal, weight 850 lbs. A good pair. Price \$650. HARRY STRUBLE, Muir, Michigan.

A BALKY HORSE can be made to start remedy. For further particulars write to O. F. HOPPE, Ann Arbor, Michigan.



David Bradley CORN Planters

Our price for the Bradley No. 1 Flat Drop Force Drop Corn Planter, complete with check rower is \$28.50, direct from our own factory. Its equal, if obtainable elsewhere, would cost you \$40.00 to \$50.00.

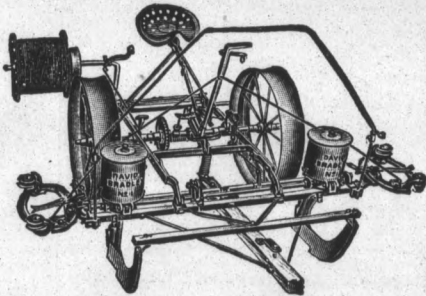
For complete description and prices turn to the implement pages of our big General Catalog, or if you prefer, send for our new Planter and Implement Book which contains descriptions and illustrations of the complete line of Bradley planters, plows, cultivators, harrows, spreaders, etc., besides buggies, wagons, harness, gasoline engines, supplies for dairymen, poultrymen, fruit growers and bee keepers. We make edge drop planters too. These are also described in the book we will send you. Just say "Send me your Planter Book No. 75M76 on a postal card and mail to

Sears, Roebuck and Co., Chicago

THIS is the old reliable David Bradley No. 1 Flat Drop Force Drop Corn Planter. For over thirty years it has held first place with thousands of farmers in all parts of the country under all conditions. Recent improvements have made it *even more popular than before.*

It takes all kinds and sizes of seed, deposits without scattering. Is strong and durable, yet light enough in weight and in draft for any ordinary team to handle easily.

Simple, easy to adjust and drops uniformly. Hinged seed boxes tilt forward, making it easy to change plates. These and many other advantages are fully explained in catalog described at left.



Vitalize your roofs

Your roof must have power to resist the blazing sun, the forceful wind, the pouring rain and the driving snow.

Real life and resisting power come from *natural* asphalt. We use the natural asphalt from Trinidad Lake to make

Genasco

THE TRINIDAD-LAKE-ASPHALT

Ready Roofing

The natural oils of this asphalt stay in Genasco and make it proof against rot, cracks, and leaks.

Be on the safe side—get Genasco for all your buildings.

The KANT-LEAK KLEET makes seams watertight without cement, prevents nail-leaks, and gives an attractive finish. Ask your dealer for Genasco—smooth or mineral surface; several weights. Write us for the Good Roof Guide Book and samples.

The Barber Asphalt Paving Company

Largest producers in the world of asphalt and ready roofing.

Philadelphia

New York San Francisco Chicago

Practical Science.

A CRITICAL STUDY OF THE MILK PROBLEM.

BY FLOYD W. ROBISON.

(Continued from last week.)

The Cost of Milk Approximates Five Cents Per Quart.

With other items of depreciation, such as money necessary to keep the land and buildings up to their original condition, it may be readily seen that the dairyman must receive five cents per quart for his milk before he has fully covered the cost of the production of that milk and the money invested therein. That farmers do not get five cents per quart for their milk is not sufficiently well known in the cities, and when they do not receive this amount then they either are not receiving six per cent interest on their investment or else they are making up for the deficiency by infringing on the legitimate domain of some other business in which they may be interested.

We believe that the greatest progress in successfully securing a wholesome supply of milk will be made by having the public generally realize the cost and difficulties in the production of milk, and we want dairymen to appreciate the value of the investment which they have in this business. And after proper consideration is given by the consumer and the city milk distributor for the work and money involved in the production of milk, then it becomes possible, and then only, to demand of the dairyman that more attention be given to the sanitary condition of the milk under consideration.

The Cost of Distribution of Milk.

We think we have covered in a general way, the real costs entailed by the producer. We are at present not in position to give the costs of the distribution of this milk. It is certain that the distribution of milk in the city costs more under our present system than it should. It is difficult to say how, short of municipal control of the distribution of the milk or of co-operation on the part of milk distributors, this can be remedied. The trouble of trying to remedy conditions of distribution has heretofore been that the minute distributors get into a co-operative frame of mind, the immediate result always is the increasing of the cost of milk to the consumer, instead of lowering it, and without any additional considerations being given to the producer. The rivalry among distributors is so keen that it is necessary for their wagons to cover the same routes, the same streets. If distributor A. has a milk customer within a certain block in the north end of the city, then there are usually from two to a half-dozen milk distributors who furnish milk to some one family in this same block every day. The cost of the distribution of this milk is several times what it should be at this point were all of these patrons supplied by one wagon.

We do not know how this can be offset unless it may be done municipally or unless permission is given for different companies in the city to co-operate in the distribution of the milk. But unquestionably this is one very large item of expense, for the distribution of milk by wagons is an expensive item. For figuring the money represented in the distribution as \$2,000,000, which would amount to \$80 per cow, we would find that \$120,000 must be realized on the year's work to account for the interest value of the money alone. This would be equivalent to 0.2c per quart which, of course, must be added to the cost of the distribution of the milk, all of

which items, of course, the consumer who buys the article must pay for.

The most remarkable thing about this, we think, will be apparent to the reader, and we are especially anxious that it become apparent to consumers, is that the dairyman must receive greater returns for his product. We believe that legislation on this matter through the medium of an investigating committee, composed of competent, practical men, which committee would have the power at the same time to establish proper methods of procedure in the retailing of milk and proper transportation of the milk, would safeguard to the producer a satisfactory price for his product, which gives a fair margin of profit over the costs entailed in the production of milk, and would likewise indicate to the consumer what a fair price for this commodity, milk, should be. This, at the same time, would insure the production, state-wide, of clean, high quality milk.

SURFACE CULTIVATION DEFINED.

Please advise me in regard to surface cultivation of crops, especially in sandy and sandy clay soils. What I want to know is the difference between a surface cultivator and a shovel cultivator.

Gratiot Co.

H. A. M.

Surface cultivation means the stirring of the surface soil thoroughly for a depth of say two inches and leaving it in a fine level condition so as to form an effective soil mulch. The most suitable implements for surface cultivation are those which will best leave the soil in the condition above described. Special implements are now made for this purpose, which are undoubtedly superior to those in common use. Of the cultivators in general use, the spring-tooth comes nearer to giving the desired results than the shovel cultivators, and of the latter those having narrow shovels give a better soil mulch effect than those with wider teeth.

CATALOG NOTICES.

Ross Bros. Co., Worcester, Mass., send upon request a handsome 120-page illustrated catalog of vegetable, grass and flower seeds, in which is listed a complete line of these goods, as well as farm implements, tools, and other specialties. Mention the Michigan Farmer when writing for this booklet.

"I. H. C. Almanac and Encyclopedia," published by the International Harvester Co., Chicago, is a 100-page booklet containing a large variety of information of value to every farmer, handily indexed for reference. This is a valuable little booklet which should be a welcome addition to every farm library. Mention the Michigan Farmer when writing for a copy.

"The Happy Engine Owner," is the title of a 64-page booklet published by the Hercules Electric Co., Indianapolis, Ind., telling all about gas and oil engines, and ignition in particular. Different types of ignition are treated in separate chapters, while all gas engine troubles, their causes and remedies are thoroughly discussed. Mention the Michigan Farmer when writing for a free copy of this interesting and valuable booklet.

The Marlin Firearms Co., 127 Willow street, New Haven, Conn., have recently published their Ideal Handbook No. 24, which contains a large amount of practical shooting helps, information regarding rifles, pistols, shotguns, and the proper ammunition for each, etc. Tells how to cast bullets, how to measure powders accurately and re-load ammunition, how to save money and do better shooting with less wear on your gun, etc. This book, together with catalog of repeating rifles and shotguns, will be sent on receipt of stamps for postage, by the above firm.

The hundredth anniversary of the writing of the national anthem, "The Star Spangled Banner," will be held in Baltimore in September of this year.

Veterinary.

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

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

Weakness.—I have a two-year old colt that perspires when in stable, but does not appear to be sick. H. B., Berlin, Mich.—If you work colt, clip him and give a tablespoonful of the following compound powder at a dose in feed three times a day: Powdered nitrate of potash, ground gentian, fenugreek, bicarbonate soda and salt. His bowels should be kept open and his food changed.

Difficult Churning.—I have a new milch cow and every churning is full of false butter. What is the cause, and is there a remedy? O. E. F., Ridgeway, Mich.—You may keep your cream in too cool a place, for you should have no trouble in churning cream into butter made from a fresh cow.

Irritation of Sheath.—The urine has irritated sheath of my 12-year-old horse so much that the parts are very sore and I would like to know what to apply. F. M., Ashley, Mich.—Apply one part oxide of zinc and five parts vaseline to sore parts of sheath once a day. Give him 1 oz. of bicarbonate of soda at a dose in feed three times a day. Keep him well bedded.

Effects of Milk Fever.—Four weeks ago one of my cows freshened, followed by an attack of milk fever, and later she relapsed, now she is only giving about a quart of watery, slimy fluid, which is mixed with some blood. J. E. S., Allegan, Mich.—Her udder has become so congested and infected that you might as well dry her, for it will not pay you to milk her.

Scours.—A calf four weeks old died after having scours 20 days, now another calf four days old shows the same symptoms. This calf is fed milk by hand.—A. W., Standish, Mich.—Give your calf 10 grs. of salol at a dose four times a day. Disinfect and thoroughly clean stable, and do not forget to treat the navel of all young animals at birth, for by doing so you will prevent such ailments as this.

Ringworm.—I bought a cow that had a few blotches on one side and now several of my cows have similar sore places. A. C. D., Mt. Clemens, Mich.—Apply one part iodine and 15 parts fresh lard to sore parts three times a week. Before applying the ointment, the sore parts should be washed thoroughly with soap and water before the first application is made.

Cow Ejects Food.—In front of my five-year-old cow and in bottom of manger every morning I find a quantity of partially masticated food and I am inclined to believe she drops part of her cud. This cow seems to be healthy and is due to freshen in a few weeks. W. D. R., Ionia, Mich.—Feed her one-third less bulky fodder and increase her grain supply.

Loss of Power.—I have three pigs that have kidney worms, causing them to lose the use of their hind quarters. I have been giving a teaspoonful of powdered copperas divided between the three pigs once a day. M. J., Clio, Mich.—It is very difficult for an expert to tell whether pigs suffer from kidney worm or not. I am inclined to believe that your hogs have been fed too much fat-producing food and not enough bone, muscle and tendon producing food. Instead of corn, give them oats, oil meal, bran, tankage and roots. Keep them dry, warm, and see that they exercise some every day. Apply one part turpentine and three parts olive oil to back every day or two. Mix a teaspoonful of air-slaked lime in their feed night and morning.

M. H., St. Clair, Mich.—Your pig is incurable.

Mange.—I have a pig nine months old, with a dry, deep scurf over its entire body, causing intense itching. W. H. C., Jackson, Mich.—Apply one part sulphur, one-half a part carbonate potash and two parts fresh lard to itchy parts of body three times a week. After the itchiness leaves, apply one part oxide of zinc and nine parts vaseline every day or two.

Duroc Jersey Sow Looked Like Picture of Skinny Hog In Ad—She Is Now In Good Condition

"I want you to know what MERRY WAR POWDERED LYE did for a valuable red Duroc Jersey sow of mine. . . . when our sow took sick we did not know what was the matter with her—she looked just like the picture of your skinny hog in your ad, so we used a can of MERRY WAR POWDERED LYE and she was able to stand up in three days. When we began using MERRY WAR POWDERED LYE we expected to find her dead at any moment. She is now in good condition and I expect her to farrow me at least ten pigs first of August. . . ."

(Original letter on file in our office. Name and address will be furnished upon application to us, E. Myers Lye Co.)

Merry War POWDERED Lye

Costs Only 5c per Hog, per Month, To Feed Regularly, Twice Each Day

A 10c Can of Merry War POWDERED Lye Contains 120 Feeds—

enough to keep a hog well conditioned for 2 months. For sale at most druggists, grocers and feed dealers. It is convenient to buy in case lots, 4 dozen cans, \$4.80, at which price we will ship it to you direct, prepaid, if your dealers won't supply you. When ordering send us your dealers' names.

Don't Take Chances

Putting Anything Claimed To Be "Just As Good" In Your Hogs' Stomachs

Don't make doubtful and perhaps dangerous experiments with "any old lye". Merry War POWDERED Lye has been proven—its use is not an experiment—it is safe to use according to simple directions. Let us send you free our valuable booklet "How to Get the Biggest Profits from Hog Raising".

E. MYERS LYE CO., St. Louis, Mo. Dept. 178



Gates Soft Ground Shoe.

The Gates is simple, efficient, easily put on and taken off. If you want the best and most successful soft ground shoe under all conditions for over 20 years buy the GATES. Fits any horse, the shoes being so attached as to readily adjust to any size foot. A trial will satisfy you. Write for full details. Agents wanted. T. TROWBRIDGE, Deatur, Michigan

JACKS and MULES

Raise mules and get rich. 18 Jack and Mule farms under one management, where can be seen 250 head fine large Jacks, Jennys and Mules, 14 to 17 hands high. Good ones. Stock guaranteed. Write for prices today. Address KREKLE'S JACK FARM West Elkton, Ohio. Branch barns, Clinton, Ind.



100--4th Consignment Sale--100

OF REGISTERED

HOLSTEIN CATTLE

Wednesday, April 22, at 12 M.

Sale will be held in the city of Howell, Livingston Co., Mich., rain or shine.

This is our 4th annual sale, and we aim each year to put up a better class of cattle. They are a fine lot of cattle, including many with A. R. O. records. They are from the best families of the breed, such as Hengervelds, DeKols, Pontiacs, King of the Pontiacs, King Sigs, Pontiac Korndyke, Grace Fane 2d, 35.55; Sadie Vale Concordia, 30.64; Susie DeKol Paul, 30.15; Pontiac Clothilde DeKol 2d, 37.21; Queen Cantrell 3d, 30.71; Hillside Do Do, 31.94. Also bear in mind our consignments are all females, most all from or bred to such stock as mentioned above. Catalog April 8.

MARK B. CURDY, Secretary.

COL. PERRY & COL. KELLEY, Auctioneers.

S. C. White Leghorns. Bred for size, shape, vigor, egg production. 12 yrs experience breeding Leghorns. Hatching eggs \$4 per 100, day-old chicks \$10 per 100. A. O. Howard, Tecumseh, Mich.

Fox and Wolf Hounds

of the best English strain in America 40 years experience in breeding these fine hounds for my own sport. Save your pigs sheep and poultry. Send stamp for catalog.

T. B. HUDSPETH, Sibley, Jackson County, Mo.

HOUNDS FOR HUNTING Fox, Coon, Skunk FERRETS and Rabbits. Send 2c stamp. W. E. LECKY, Holmesville, Ohio.

WANTED HERD of 15 to 25 good Dairy Cows, must be within 100 miles of Pt. Huron. State exactly what you have and price. Address, DELL SHAIN, Route 1, Pt. Huron, Mich.

BREEDERS' DIRECTORY.

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ABERDEEN-ANGUS

HERD FOUNDED IN 1900. Strains represented consist of Trojan Ericas, Blackbirds and Prides, only. Black Quality Itto, a bull of rare individuality and merit, heads the herd. WOODCOTE STOCK FARM, Ionia, Mich.

AYRSHIRES—One of the foremost dairy breeds. Bull calves for sale. Write for description. Michigan School of the Deaf, Flint, Mich.

ANGUS CATTLE FOR SALE

We have on hand several choice pure-bred Angus bull calves which can be sold for immediate delivery. These calves are sired by Louis of Viewpoint, a Grand Son of Lucy's Prince, the International Grand Champion bull for three years in succession. We also have for sale a few choice heifers from this herd bull. Will make a price on Louis of Viewpoint as some of his heifers are old enough to breed. Address

GLENWOOD FARM, Addison, Michigan.

FOR SALE—Reg. Guernsey Bull calf, five months old. C. B. UNDERHILL, New Hudson, Michigan.

HEREFORD BULLS 2 six months old 1 18 months old. ALLEN BROS., Paw Paw, Michigan.

For Sale—Choice Guernsey Bull calves, Sired by Im'p Deaneles Seguel 14630, out of Dams second to none. EDWIN MILLER, Birmingham, Michigan.

GUERNSEYS—Reg. Tuberculin Tested. Windsor mere Farm, Watervliet, Mich. J. K. BLATFORD, Auditorium Tower, Chicago, Ill.

GUERNSEY BULL CALF, nicely marked, 3 weeks old, great grandson of Gov. Chene, \$50 takes him. AVONDALE STOCK FARM, Wayne, Michigan.

FOUR YOUNG GUERNSEY BULLS, old enough for service, for sale. Exceptional breeding and in dividuality. Village Farm, Grass Lake, Michigan.

HOLSTEIN BULLS AT FARMERS PRICES Sired by one of the best bulls of America. LONG BEACH FARM, Augusta, Kalamazoo Co., Mich.

Registered Holstein Bull 4 months old, dark marking, his dam is a 14.33-lb. grand-daughter of Pietertje Hengervelds Count DeKol, 98 A. R. O. daughters, 4 above 30-lbs., his sire is a son of a 33-lb. cow who has a 29-lb. four year old full sister, \$85 delivered. Write for pedigree. Robert W. Fay, Mason, Mich.

HOLSTEIN FRIESIAN CATTLE BREEDERS of high record cows. Young bulls at farmers prices. JONES & LUTZ, Oak Grove, Michigan.

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100 1/2 white, and a choice high grade heifer calf 4 mo. old, 1/2 white, not akin, B.B. Reavey, Akron, Mich

Holstein Friesian Cattle Herd Headed by Albina Bonte Butter Boy No. 93124. Average for dam and sire's dam A. R. O. at 4 yrs, butter 7 days 28.37 lbs. No stock for sale. W. B. Reader, Howell, Mich.

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HERD No. 1—13-year-old bull with 27 lb. dam, 5 1/2-year-old A. R. O. heifers, from A. R. O. dams and A. R. sires and all bred to A. R. bulls. Choicest breeding, fine conformation, perfect udders, nicely marked, and a chance to start where it would take years to breed up to.

HERD No. 2—Yearling bull with 4 world's records in his breeding.

1 10-year-old, 26 years old, 22 years old and 13 years old, and 5 of them bred to A. R. bulls, the 6th not bred. All A. R. O. cows.

HERD No. 3—1 four months bull from a 33-lb. sire and out of a 21-lb. grand-daughter of Paul Beets DeKol. 5 three months old heifers from A. R. O. dams and by a 27-lb. sire.

Bulls and calves always for sale.

L. E. CONNELL, Fayette, Ohio.

FOR SALE JERSEY BULL—14 mo. old, also Bull calf 6 mo. old. Large for age and of extra type. Address. NEWMAN STOCK FARM, Marlette, Michigan.

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JERSEYS—Bulls calves bred for production. Also cows and heifers. Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

JERSEYS—Two yearling bulls, well bred and well grown. We invite personal inspection. SMITH & PARKER, Howell, Michigan.

Lillie Farmstead Jerseys (Tuberculin tested. Guaranteed free from Tuberculosis.) Several good bulls and bull calves out of good dairy cows for sale. No females for sale at present. Satisfaction guaranteed.

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Durocs & Victorias—A few extra Sept. Boars and bunch of Gilts for 1st of April farrow.

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O. I. C's—Gilts bred for June farrow. A few good boars on hand. I pay express. G. P. ANDREWS, Dansville, Ingham Co., Michigan.

O. I. C's.—I HAVE A NICE LOT OF HAND. OTTO B. SCHULZE, One-half mile west of Depot, Nashville, Michigan.

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O. I. C.—16 sows bred for spring farrow, 30 fall pigs, large and growthy. Write your wants. GLENWOOD STOCK FARM, Zeeland, Mich.

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Chester Whites—Reg. Bred Gilts—Orders taken for spring pigs and Collie pups. Holstein Bulls at Bargains. RAY B. PARHAM, Bronson, Mich.

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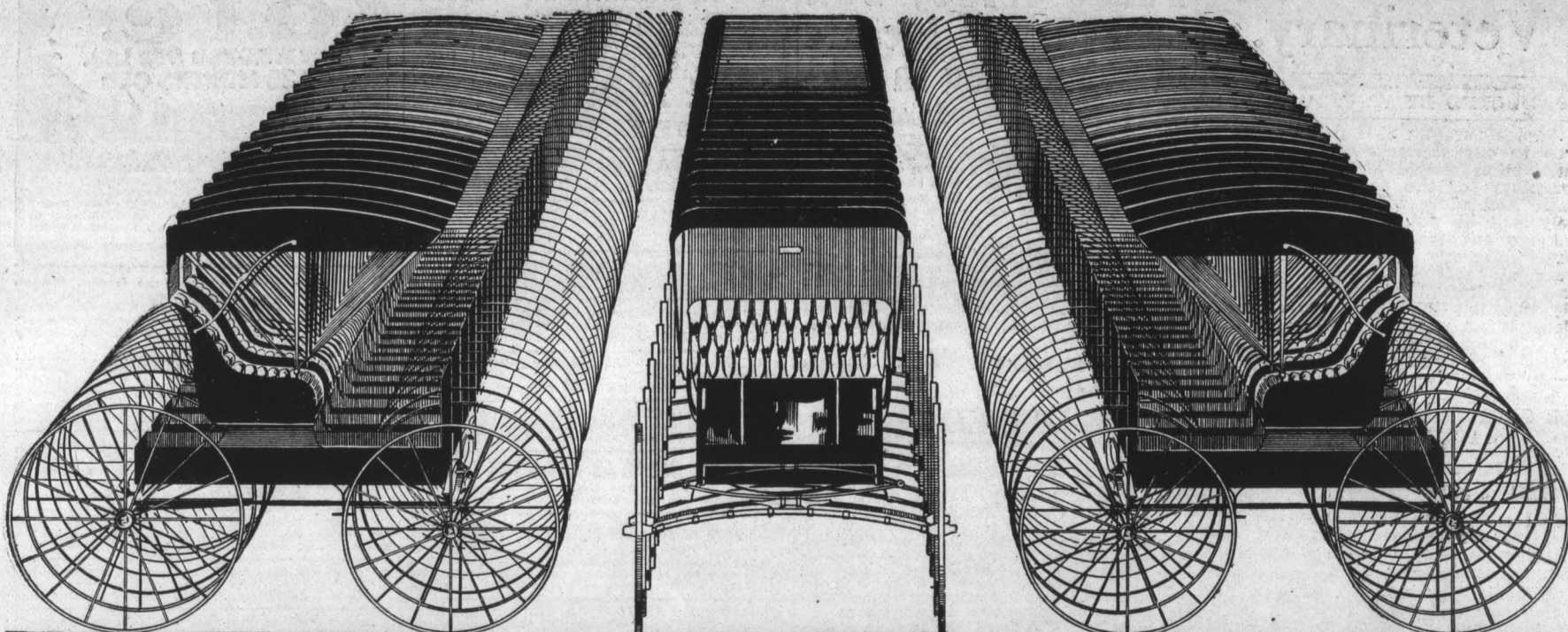
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