

{ 50 CENTS A YEAR.
{ \$2 FOR 5 YEARS

Details of the Cost of Potato Crop as Shown by a Simple but Complete System of Cost Records Kept on Cards 9x12 inches in Size.

erwise, is on the straight road to bankruptcy if they do not keep costs. You may as well sell gold dollars for any price offered, as to farm or operate any other business and sell your product in the market for unknown prices without knowing your cost of production.

Ohio.

E. C. PECK.

LILLIE FARMSTEAD NOTES.

Alfalfa.

Alfalfa is steadily working its way in favor at Lillie Farmstead. I now have 25 acres. That which I sowed several years ago promises a big crop this year. The field where the greater portion of it is I mixed orchard grass with the alfalfa, sowing only five pounds of the alfalfa to the acre. The rest of the field I seeded to alfalfa alone. The alfalfa is holding pretty well. It looks vigorous. I am going to get a cutting of two and a half tons to the acre the first cutting on this field. I am quite sure of this by the looks of it at the present time. The orchard grass grows so luxuriantly, and has grown so tall, that looking at it from outside the field one would think there was very little alfalfa, but when you come to go through the field you find out that there is a good liberal sprinkling of alfalfa all through the orchard grass. When the first crop is cut the orchard grass makes very little growth, but the alfalfa produces a second and a third crop. In some places it is rather thin because there wasn't enough seed sown. In some places in this field June grass is crowding the alfalfa and in other places it doesn't seem to crowd it. One portion of the field was sown to the Grimm variety of alfalfa and this seems to hold its own better than the other varieties, with the exception of a narrow strip on one side seeded to sand lucerne, the seed which I received from the government. This seems to hold just as well as the Grimm alfalfa, although this was sown alone without any orchard grass seeded with it, and I think it has had a better chance on this account.

The 17 or 18 acres of alfalfa that I seeded last year promises much better than I expected the first year after seeding. It is doing a great deal better than the first I seeded. In fact, that did not do very well. Even the second year it didn't grow very luxuriantly, but since then it seems to have become established and is vigorous. That which I seeded last year seems to be vigorous from the start, although it made very little growth the first year on account of the extreme dryness. It seems to me that the reason for this is the inoculation. Of course, I will admit it was seeded on land that has been in a rotation of crops and received stable manure and commercial fertilizer regularly while the first was on land soon after I bought the farm before it had any rotation of crops or any commercial fertilizer or stable manure, although we top-dressed and used commercial fertilizer when we seeded it. The last of the four acres seeded last year the very first days of July didn't promise so well early in the season or late last fall, but it is coming on wonderfully now. It is picking up and I am going to have a good stand on this late sowing. There are some bunches of June grass and other grass which I am going to try to cultivate out after we cut the alfalfa.

The five acres that I have just finished, June 4, I intended to sow a little earlier and sow it in May, but we had so much work to do in getting in the other crops and we have had such heavy rains at frequent intervals that this was delayed. This five acres is also on rough land, creek bottom and side hills. I intend to use it in the future for a hog pasture after it gets well established but, of course, my idea is to not pasture it so but what

we will cut it regularly for hay. We will not have a great many hogs in proportion to the amount of alfalfa so that we will have a crop of hay to harvest besides pasturing. In this way I hope to save alfalfa year after year for a number of years. I have taken some little pains to prepare this land for alfalfa. I followed Joseph Wing's advice as near as I could. Part of the land was in sweet corn last year and this land was heavily manured with stable manure and plowed down for the sweet corn. The rest of it was in sugar beets. This also was heavily manured and plowed down for the sugar beets and I put commercial fertilizer on the sweet corn and also on the sugar beets last year, and last fall we covered it over again with a medium coat of stable manure and plowed it, where the sweet corn grew last fall. On that portion of the field where we had beets a year ago the land was not plowed, but we disked it and harrowed it thoroughly this spring. We worked the ground over carefully when we prepared the rest of the fields for other crops early in the year, and sugar beets, and it has been worked once a week all the spring, and one reason why I didn't care even if we were a little late about sowing was that by giving it frequent cultivations after rains we would destroy a good many weeds that might be in the soil.

Applying Lime.

I applied lime with a lime distributor at the rate of two tons per acre. This was pulverized limestone. Of course, this was thoroughly cultivated in. From my use of the small amount of Grimm variety of alfalfa several years ago on the first field I sowed, I am of the opinion that this is harder than the average alfalfa. As I wanted this particular field to stick a long time I made up my mind that I could afford to pay an extra price for this variety and so I sent to Mr. Lyman, of Minnesota, and bought a bushel of seed for this five acres, paying \$36 for it. This would seem like an enormous price to pay for alfalfa, when you can buy Dakota seed for \$11 or \$12, and yet if this is more hardy it is worth the price. After we go to the expense of preparing land for alfalfa the extra price of the seed doesn't amount to very much. At any rate, my judgment told me that I could afford to pay \$36 for a bushel of genuine Grimm alfalfa seed, and I did it.

Inoculation.

I believe that inoculation had very much to do with my getting such a vigorous lot of alfalfa plants from last year's seeding. Of course, I did not neglect it and I inoculated the same as I did last year, giving double inoculation. We went into the old alfalfa field where the plants were growing vigorously, and spaded up some soil. This was screened thoroughly and then we mixed one-third of this soil and two-thirds commercial fertilizer thoroughly together. Then the drill was set to sow 350 lbs. per acre. Now, besides this I went to the drug store and purchased five cents worth of glue and dissolved this in about a gallon of warm water and poured it into the bushel of alfalfa seed after I had put it into a galvanized iron wash tub, and then I took some of this soil that we got from the alfalfa field and mixed it thoroughly with the seed. The glue preparation had been mixed with the seed so that every seed was covered with this sticky solution. Then much of this soil stuck to the seed and when the glue became dry, of course it remained firmly fixed. Some of the bacteria stuck to the seed and they are right in the soil where the young plant, when the seed germinates, will need it. We sowed the seed with the grass seeder attachment of the drill and sowed a bushel of oats as a nurse crop at the same time and used a fertilizer as I have explained. Now we

have got some alfalfa inoculated soil right under the young plant, we have got some right with the seed, and as the roots go down they haven't got to go over an inch or two before they get to some more soil that is inoculated.

COLON C. LILLIE.

FERTILIZING A NEW SEEDING OF ALFALFA.

I have a field of alfalfa which I seeded last fall. It came on fairly well, notwithstanding the extremely dry weather. There is a fair stand at present, but it is spindling and hasn't a good color. Would it be profitable to sow on commercial fertilizer and drag in at this time? It was sown after rye, and quite a heavy growth of rye has grown up with it. We are clipping the whole for hay.

Calhoun Co.

H. S.

The trouble with this alfalfa is undoubtedly a lack of inoculation, rather than to a lack of fertility in the soil, although if there were plenty of available fertility in the soil the alfalfa would make a good growth without the presence of the bacteria. On most of our older soils, however, it will not produce a paying crop without the presence of these bacteria and on any soil the growth will be much larger if the plants are inoculated with the bacteria. The lack of the bacteria may be due to the fact that no inoculating material was used at the time of sowing, but it is far more likely to be the result of an acid condition of the soil, which will require an application of lime to correct before the best results can be secured with the crop. It would probably pay to make a liberal application of a complete fertilizer after the rye and alfalfa is removed from the ground, harrowing it in as suggested. This would prove a permanent benefit to the soil, as the alfalfa growing on the land would appropriate this readily available plant food and prevent any loss from leaching. The benefit of the fertilizer would be noted in the succeeding crop, even if it did not produce profitable results with the alfalfa, and there is a good chance that it might encourage a better development of the alfalfa plants which would enable them to survive until such time as natural inoculation takes place, as it will do if the soil is not in too acid condition to enable the bacteria to develop and multiply.

DEFINITION OF A GOOD FARMER.

Contrary as it may seem, Prof. Alfred Vivian, of the College of Agriculture, Ohio State University, has recently defined a good farmer as "one who does everything he can to produce acids in his soil," but he hastens to add that, "he is also one who learns how to detect acidity and then uses lime to correct it." This is simply a means of emphasizing the importance of adopting the best all around farm practices. Proper drainage, careful plowing and harrowing, thorough cultivation, the use of green manure crops and the application of manure and fertilizers will tend to slightly hasten the formation of acid. However, this gives no reason why the application of acid phosphate, for instance, should be discontinued. All of our soils need phosphorous and the way they can get it in sufficient quantities is through the use of some phosphatic fertilizer. The farmer should not hesitate to use acid phosphate because the effect of the heaviest applications of this fertilizer would be neutralized by 20 pounds of lime to the acre. The most important thing for the farmer is to know when the soil becomes sour and then apply the lime. It is significant in this connection to note that it is characteristic of acid soils to be low in the element phosphorous. Prof. Vivian advocates the application of lime in small quantities often, rather than a heavy application made to last for a number of years.

Practical Science.

THE WORK OF THE PRACTICAL SCIENCE LABORATORIES.

BY FLOYD W. ROBISON.

When the Practical Science department was organized nearly three years ago, one of the features which was most strongly emphasized was the laboratory feature. There are a great many problems which come to the attention of the farmer that it is entirely within the province of a laboratory to solve.

Laboratory work is more or less expensive work and when it becomes necessary for the farmer to pay the regular laboratory fees for this laboratory information he finds it impossible for him to do so.

During the writer's experience in official work, particularly within the state of Michigan, he found there was a great need for the establishment of some laboratory institution to whom the farmers could look for information on various matters which were problems to them but, as stated before, for these services to be acceptable they must be done without cost to the individual, or at the very minimum expense.

Most of the executive departments of the state are confronted with the enforcement of laws and with the fulfillment of duties especially fixed by statute. Consequently they are not authorized and are not warranted in expending funds for the solving of these private problems of individual farmers.

The Michigan Farmer considered that it could undertake this matter, the only consideration being that the person making inquiries and availing himself of these privileges should be a subscriber to the Michigan Farmer. This really involves a very inconsiderate expense, as the subscription price of the Michigan Farmer is not enough to pay the cost of scarcely one single analytical determination in the laboratory.

From time to time matters have come into the laboratory for analysis and consultation which have been so manifestly of a public character that the results have been published in the laboratory columns of the Practical Science department. The great bulk of this work, however, has been work which has been of value only to the individual farmer sending it, and so has been reported direct to him and has not been published through the columns of the paper.

The Laboratory Report Covers Everything on the Farm.

It was designed originally that this service should extend to the examination of milk and cream so that farmers might determine the real value of the cows in their herds; that it would include also the examination of commercial fertilizers and commercial feed stuffs which the farmer either contemplated buying, or concerning the value of which some question arose in his mind; questions regarding any materials he was using on the farm or in the home; the sole idea being to make this department a ready laboratory reference department at the service of the subscribers to the Michigan Farmer.

The feature dealing with the testing of milk and cream, however, has been the most pronounced feature of the laboratory work. This department has analyzed many hundred samples of milk and cream for individual farmers, some to determine the butter-producing values of their herds of cattle, others for the purpose of mutual satisfaction in relation to cream and milk furnished to the local creameries.

Use Care in Taking the Sample.

In selecting samples of any description (Continued on page 632).

Horticulture.

Ward Orchard Notes.

We have had the common human experience of having things work out different than planned, in the last spraying. We had fully hoped that we would be able to report at this time on hauling water to the spray rigs with the tractor, using the thousand-gallon tank we recently received. But we were considerably delayed in getting the trucks ready for the tank and the tank arrived a little later than we expected, so it was not ready until the after blossom spraying was nearly over.

The plan of using three leads of hose to each tank worked out very well, although we had a little trouble at first in getting the men spraying used to it, as they often got in each other's way. When the two men on the ground took care of their own rows and the man on the tank sprayed the tops of both rows, they worked without interfering with each other, or lapping over and skipping places. Of course, by this arrangement the men often got considerable spray on themselves, but they did not mind it and went at it cheerfully. In fact no one can do a good job of spraying in any way if he is too particular as to getting his clothes soiled.

The System Used in Spraying.

Everything in the spraying worked off very nicely until toward the end, when two of the rigs gave out so that it was necessary to send to the factory for repairs. When all rigs were running well we had 12 men spraying, three on each rig, one man at the spray shed mixing up the spray materials and tending to the pumping outfit, and one trouble man who kept the rigs in good running order. He spent a great part of his time on the saddle horse, going from one rig to the other, seeing that everything was in running order and making adjustments if necessary.

The four rigs averaged about 37 tanks a day, the greatest number put out being 39½, and the smallest 35. The average time for spraying out a tankful was 25 minutes, that is, with three leads of hose and two nozzles on each rod, making six nozzles to the rig. None of the rigs had any trouble maintaining 250 lbs. of pressure with that number of nozzles attached, but we cut the pressure down to 200 lbs., as the strain on the engine, pumps and hose would not be as great, and the results were just as good.

Making the Spraying More Thorough.

A thing we did which we believe assisted us in getting the spraying done more thoroughly, was to not allow the same outfit spray both sides of the same row. When they got to the end they skipped a row in going back. In this way if a man had any individual peculiarities in spraying, the results of it would be spread, and perhaps overcome to a great extent by another man spraying the other side of the row.

We can not recall a blossoming period which passed over as quickly as the one this year. The hot weather following also made the calyx cups of the apples close much sooner than usual, and unless the spraying was done very quickly the cups were closed before it was done. We did not finish our after blossom spraying until June 8, and therefore a large share of the fruit was beyond the proper stage for this spraying. We intend to start the second spraying after the blossoms about June 12, and as the sprayings have been, and will be, thoroughly done, we do not antici-

pate any trouble with the codling moth.

Condition of Fruit and Foliage.

The foliage and fruit look very fine and healthy, there being very little evidence of insects or diseases. Occasionally we find a very little scab on the foliage and sometimes the work of the green fruit worm and the apple leaf roller, but otherwise there is nothing.

Wagener, Wealthy and Duchess have set heavily to fruit, so that they will need considerable thinning. The Jonathan has also set well, but the fruit is well distributed and will not need thinning. At present we have indications for a very slight June drop. The Baldwin and Shiasawsee are set very light.

Cultivation Delayed.

We are away behind in our cultivation as we have not got over the orchard once yet. The grass is getting quite high, but we intend to keep the tractor with the 40-disc harrow "a-pecking away at it" until about the middle of July, when we shall cease cultivation. The disc works up the heavy sod much better than we had hoped it would. All we hope to do this year is to get the sod fairly subdued and then next year start cultivation early, and then quit early, say about the first of July. We feel quite certain that we could have very easily taken care of the cultivation as it should be, with the equipment we have, had we been able to start in time.

During the last hot spell, June 8-9, tractor driving in the orchard, where the trees are so dense, was unbearable, and we had to lay idle during the hot part of the day. On June 8 the spray rigs also had to quit for about two hours on account of the heat.

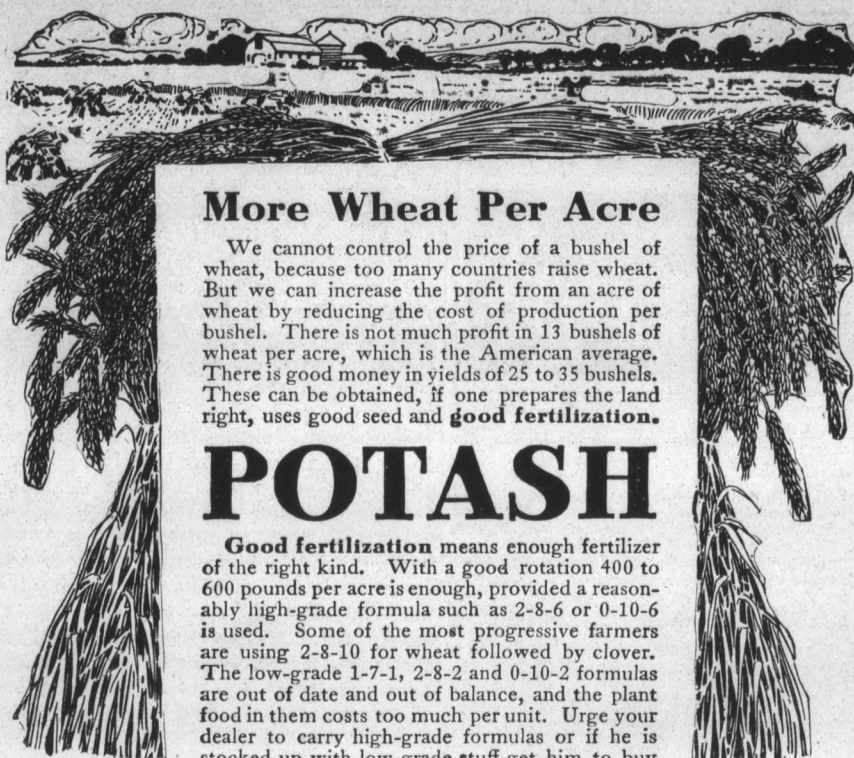
SPRING STRAWBERRY NOTES.

The plants in our newly set strawberry bed are growing nicely, the best, I think, I ever had them; anyway, every plant is alive and appears thrifty. The ground was a clover sod, white clover mostly; over this was spread a fair quantity of stable manure, before plowing; in fact, the manure was drawn on snow. The ground was plowed early, as soon as it was fit for the plow, and kept worked down, but the plants were not set till the middle of May. Usually this would have been too late to secure good results, but the season is nearly, if not quite, two weeks later this spring than usual, so that the delay is not likely to work harm to the bed of plants.

Our few everbearing strawberry plants are already full of bloom, while there are scarcely any buds in sight on the plants in the regular bed; it seems to be in their nature to send out bloom as soon in the spring as it is warm enough for vegetation to make growth. A very few of the blossoms have been blackened by the frost, but there is a large amount of perfect bloom in sight, and much more coming out. There is sufficient bloom in sight to make a large crop of fruit, if each blossom would mature a good-sized berry, such as one would expect of the Warfield or some other reliable sort.

M. N. EDGERTON.

The statement that eternal vigilance is the price of success holds true in small fruit growing. While the enemies of small fruit cause considerable loss, our greatest loss is due to our own slack methods of fruit culture. In other words, carelessness and negligence are the most serious pests we have.



More Wheat Per Acre

We cannot control the price of a bushel of wheat, because too many countries raise wheat. But we can increase the profit from an acre of wheat by reducing the cost of production per bushel. There is not much profit in 13 bushels of wheat per acre, which is the American average. There is good money in yields of 25 to 35 bushels. These can be obtained, if one prepares the land right, uses good seed and good fertilization.

POTASH

Good fertilization means enough fertilizer of the right kind. With a good rotation 400 to 600 pounds per acre is enough, provided a reasonably high-grade formula such as 2-8-6 or 0-10-6 is used. Some of the most progressive farmers are using 2-8-10 for wheat followed by clover. The low-grade 1-7-1, 2-8-2 and 0-10-2 formulas are out of date and out of balance, and the plant food in them costs too much per unit. Urge your dealer to carry high-grade formulas or if he is stocked up with low-grade stuff get him to buy

some potash salts with which to bring up the potash content to a high grade. One bag of muriate of potash added to a ton of fertilizer will do it.

If you prefer real bone or basic slag in place of acid phosphate try 300 to 400 pounds per acre of a mixture of 1600 pounds of either with 400 pounds of muriate of potash. You will find that Potash Pays.

These high-potash mixtures produce better wheat, clover, heavy grain and stiff straw.

We sell Potash salts in any quantity from 200 pounds up. If your dealer will not get potash for you, write us for prices and for our FREE booklet on Fall fertilizers.

GERMAN KALI WORKS, Inc., 42 Broadway, New York

Chicago, McCormick Block
Savannah, Bank and Trust Bldg.

New Orleans, Whitney Central Bank Bldg.

Atlanta, Empire Bldg.
San Francisco, 25 California Street

APPLETON Silo Filler

"Who makes it?"—that is far more important than any description. Thousands have proved that "Made by Appleton" means the best that can be built. Appleton has a 40-year reputation for making farm machines right. Appleton Silo fillers are guaranteed to do more and better work with less power than any other silo filler operating under equal conditions. Solid oak frame, braced, bolted and mortised; impossible to pull out of line. Special high-grade tool-steel knives correctly spiraled to give clean, shearing cut. Cuts ten lengths from ¾ to 2½ inches. Tremendous capacity; throat on larger sizes takes whole bundles. One lever controls feed rolls and table. Independent belt driven blower; speed adjustable to minimum use of power for any height silo. Positive, self-feed frictionless table; saves power and labor. Lowdown, cut-under frame makes machine easy to handle. Safety device positively prevents breakage. Four sizes.

Free: Book on Silo Building

Describes all types of silos; how they are built, and the advantages of each kind. Catalog of Appleton Silo Fillers, Corn Huskers, Gasoline Engines, Manure Spreaders, Corn Shellers, etc., also free. Appleton Mfg. Co., 420 Fargo St., Batavia, Ill., Est. 1872

LIME

Pulverized magnesium lime rock for "sour" soils. Write for LOW Summer Prices direct to you from Muskegon and Benton Harbor, Michigan. LAKE SHORE STONE CO., Milwaukee, Wis.

The ACRE-AN-HOUR Sifter
Beats every hand implement for killing Potato, Melon Bugs, Cabbage Worms, etc. Applies Plaster, Lime etc., mixed with Paris Green or Arsenate of Lead. Regulates to cover big or little plants, also to apply any quantity of any kind of manufactured dry insecticides. Will operate as fast as desired. Better, easier and faster than any \$5, \$10 or \$15 spray pump. Insist on your dealer showing you this wonderful little implement. Prepaid, 75c. Agents wanted. Circulars. ACRE-AN-HOUR SIFTER CO. DEPT. E. POUGHKEEPSIE, N. Y.

LIME

You should get the highest grade of limestone manufactured. Buy it upon the basis of analysis. We manufacture the highest grade pulverized limestone sold in Michigan. Let us prove it. Ask for sample and analysis. CAMPBELL STONE CO., Indian River, Mich.

CIDER MAKING

Can be made profitable if the right kind of machinery is used. WE MAKE THE RIGHT KIND. Send for catalogue. Established 1872. BOOMER & BOSCHERT PRESS CO. 472 West Water Street, Syracuse, N. Y.

LILLIE'S SPECIAL BRANDS BUFFALO FERTILIZER

Made from best material. Always reliable. Lime, Potash, Acid Phosphate, Nitrate of Soda. Agents wanted in unoccupied territory. Ship direct to farmers in carlots. Fertilizer questions answered and farm soil surveys made on request. Colon C. Lillie, Sales Agt., Coopersville, Mich.

BINDER TWINE, 8½ lb. Want farmer agents. Circular and sample FREE. THEO. BURT & SONS, MELROSE, OHIO.

LEARN AUCTIONEERING at World's Greatest School and become independent with no capital invested. Term opens August 3d. Write today for free catalogue. Jones Nat'l School of Auctioneering, Carey M. Jones, Pres., 14 N. Sacramento Blvd., Chicago, Ill.

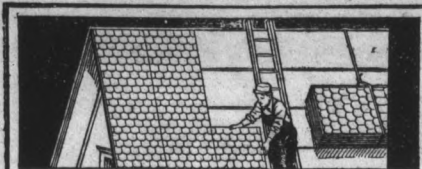
MOTORCYCLES At REDUCED PRICES

Limited number of the highest grade Motorcycle on the market at a great sacrifice. Get the benefit. Buy now. All models fully guaranteed. Brand new, crated ready for delivery in your locality. Write at once before the stock is sold. THE MOTORCYCLE CO., Box C. 216 South 12th Street, Philadelphia, Pa.

Save Money Worry and Work on Your Home

Build the Lewis EASY BUILT way. Find out what Lewis service means to you. Cut out the middleman's profits, exorbitant lumber prices and high labor costs. We ship direct from the mills to you. All materials saved and worked to fit, your whole home ready to erect. Every detail of construction planned and taken care of by master designers. The Lewis EASY-BUILT Home Book tells all about our method. Get it and post yourself on the modern economical way to build. Contains many beautiful plans of EASY-BUILT Homes. If you are going to build, write today and get this book. Lewis Manufacturing Co., 1208 Lafayette Ave., Bay City, Mich.

LEWIS EASY-BUILT HOMES



STEEL Shingles or Wood???

Will you buy wood shingles, which burn and rot, or Edwards Steel Shingles, which are absolutely rot-proof and fire-proof?

Will you buy wood shingles, that have to be nailed on, one at a time, or Edwards Steel Shingles, that go on in clusters of 100 or more? Will you buy wood shingles at a big price or Edwards Steel Shingles at low prices, direct from the maker?

The time to decide is now—before you have invested your good money.

Edwards Steel Shingles Factory Prices—Freight Paid

Don't judge Edwards Steel Shingles by common galvanized roofing—which always rusts. We have a method that absolutely prevents rust from getting a foot-hold, as 125,000 people have found. It's the famous Edwards Tightcote Process.

No painting, no extras, no tools, no expert workmen needed. Hired man can do it with hammer and nails. Put 'em on right over old roof or on sheathing. Outlast four ordinary roofs. No dealer's profit to pay. Sold direct from factory to user. And we now pay the freight!

WRITE Get off a postal tonight and our Special Price Offer and Roof Book No. 687 will come by return mail. Then judge. Then decide "which is which"—Edwards Steel Shingles or wood shingles. Give size of roof, if you can. (132)

THE EDWARDS MFG. CO.
617-667 Lock Street, Cincinnati, Ohio

15.95 AND UPWARD ON TRIAL. AMERICAN CREAM SEPARATOR

A SOLID PROPOSITION to send fully guaranteed, a new, well made, easy running, perfect skimming separator for \$15.95. Skims warm or cold milk; making heavy or light cream. The bowl is a sanitary marvel, easily cleaned.

Absolutely on Approval.

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from Western points. Whether your dairy is large or small write for our handsome free catalog. Address:

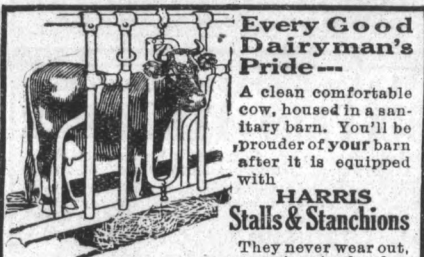
AMERICAN SEPARATOR CO. BAINBRIDGE, N. Y.

Only \$2 Down One Year to Pay!

\$24 Buys the New Butterfly Jr. No. 1. Light running, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims 56 qts. per hour. Made also in four larger sizes up to 5 1/2 shown here.

30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog folder and "direct-from-factory" offer, buy from the manufacturer and save half. (132)

ALBAUGH-DOVER CO. CHICAGO
2195 Marshall Blvd.



Every Good Dairyman's Pride—

A clean comfortable cow, housed in a sanitary barn. You'll be prouder of your barn after it is equipped with

**HARRIS
Stalls & Stanchions**

They never wear out, never get out of order. The simplest and most serviceable devices of their kind. A comfortable cow gives more and better milk. This means bigger profits from your herd. Write for our

Illustrated Catalog FREE
Tells all about our labor saving barn equipment. Ask for it on a post card today.

The Harris Mfg. Co., Box 150 Salem, Ohio

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 ENGINE

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.

Dairy.

CONDUCTED BY COLON C. LILLIE.

MAKE A GOOD RESOLUTION AND KEEP IT.

The resolution that every dairyman should make who hasn't got silage to feed this summer when the pasture becomes short, is to resolve that he will build a silo this summer for the express purpose of carrying over enough corn silage so that a year from this summer he will have corn silage to feed when the dry weather comes. Numerous dairymen have made this resolution before, but they have failed to keep it. There is no use in making a good resolution unless you keep it. The keeping of it is what counts. The road to business failure is paved with the skeletons of good resolutions. The resolution dies on the mark. A silo doesn't cost very much. Any farmer in Michigan who has cows can stand the necessary expense of putting up a silo for summer use. Then they ought to build the silos for winter use first because they need that most. But if they haven't got a silo then they should build a silo of large enough capacity so that it will carry them the entire year, if they need it. If, perchance, there is a proper distribution of moisture this summer and the pastures do not dry up, as they do some years, the silage will be good for the following year and you won't have to put up so much silage. But you will need it, the cows will eat it, and they will pay for it, and you will be glad you put the silo up. It is the best investment that a dairyman ever made. There is nothing that will take the place of good grass pasture as well as good corn silage. One ought not to depend solely on pastures for the supply of food in the summer time.

COW FAILS TO BREED.

I have a cow that has given milk since a year ago last November. Is in good flesh and gives about 14 qts. of milk a day now, but have not been able to get her with calf again. She is the best cow I ever had and I hate to sell her.

Hillsdale Co.

C. D.

The best advice I can give you is to consult a veterinarian. Perhaps your local veterinarian, upon making an examination, will find that the neck of the womb is closed, or something of that sort, which he will be able to rectify and enable you to get your cow pregnant again. There are various powders and other medicines on the market which it is claimed will make barren cows breed. I know but little about these, because I have never tried them. We are troubled in this same way very often. We turned off two cows this spring for beef that failed to breed, for what reason I do not know. I simply know that we kept breeding them regularly, as C. D. has done with his, and they didn't get pregnant again, but gave milk for a long time. They finally got so that they did not give a profitable mess and they were not with calf and I did not think I could afford to keep them any longer, and so turned them off and got what I could for them for beef. I really do not know how to overcome this difficulty. I think if you would talk with your local veterinarian that he could advise you better than anyone else. Perhaps he knows some remedy or could do something which would adjust matters to get your cow pregnant again. It is certainly worth while to talk with him about it. Very often a veterinarian has remedies of his own which are very effective, but in many cases we get conditions where it is impossible to get the cows to conceive again, and finally become worthless dairy cows

and the only thing to do is to turn them off for beef and raise a new one in her place or buy a new one. I know of no other way.

BARN QUESTIONS.

At what height from the ground should the windows of a barn be hung (placed), and what size sash? Also, about wall; to be concrete below the surface and stone wall above. How deep below surface would you advise making the concrete, one foot being allowed for grading above? The stone will be laid to window base. Does the plank frame barn seem good to you? Our builder approves, but thinks them more expensive.

St. Clair Co.

C. E. K.

The higher you can build the windows in the building the more light you can get from the windows. Low windows do not admit anywhere near as much sunlight as high ones do. I do not know how high the ceiling of your basement and stable is. However, it will undoubtedly be seven or eight feet, which is usually the height. If your basement is too high it is like a room with a high ceiling, it takes a great deal of extra fuel to keep it warm in cold weather. You can get good results with a seven-foot basement. An eight-foot is really higher than necessary, although it will do no harm, except in extreme cold weather as I say, it is difficult to keep it at proper temperature for the comfort of the animal. If your basement is to be seven feet in the clear, then I would have the window sills four feet from the ground or the floor and have the windows run nearly to the ceiling. This would make three-foot windows, and you can have them single sash if you prefer. It is a good plan to have single sash with about four to six lights in a window. Don't get the lights too large, because some of them are liable to be broken and it is more expensive to replace large-sized glass than small-sized. You can have these windows hung so that the tops can be tipped in for ventilation and prevention of draft. If the windows are raised or lowered with a double sash the wind will blow directly in, but with a single sash the top can tip in, and when you want ventilation from the windows the draft will shoot up to the ceiling and not directly upon the animals. It doesn't matter very much about the size or shape of the windows. You can put in such as will suit your fancy. The thing to bear in mind is to have a sufficient number of windows and have them large enough so that you will have four square feet of glass for each animal that you intend to keep in the basement. That is the rule for the amount of glass to use.

The depth of the trench for the wall of a basement barn or any building is simply to get down to good firm ground and down below the frost. If the ground freezes in the trench below the wall when it thaws out the building is liable to settle, that is, the frost will heave it out of shape. So we want to go down below the frost line and get good solid ground. I think that two feet from the surface, after you have graded as you intend to, to the bottom of the trench or bottom of the wall will be sufficient.

The plank frame barn is considered by many builders to be the ideal structure now days. Timber is rather expensive and you can make a lighter frame out of planks than you could out of strong timber and you can get the same strength with a less amount of lumber so I don't think a plank frame costs more than one of timber. My idea always has been that it costs less. There is no use in having great square heavy timbers in a barn. People used to think it was necessary, and they had plenty of timber and it was quite expensive to make them smaller. But experience has proven that it is not necessary to have such heavy timbers in a barn. You can get all the strength that is desired with less lumber, and the best way I

know of to get a nice substantial frame is with the plank frame. This form of structure has proven satisfactory in every way so far as I know in every instance where it has been used and it is recommended by the very best farm architects.

MICHIGAN JERSEY CATTLE CLUB.

The summer meeting of the Michigan Jersey Cattle Club was held at the home of H. B. Wattles, Troy, Mich., on June 11. Nearly half a hundred Jersey breeders were present, and devoted the morning to looking over the fine Jersey herd of Messrs. Wattles & Sons, and in looking through their fine dairy barns which are strictly modern in construction and equipment. Proverbial country hospitality was more than maintained in the excellent dinner served by Mrs. Wattles in the spacious dining-room of their modern home. The business of the day was transacted "over the teacups" after the breeders had banqueted, and was participated in by the interested breeders with appropriate enthusiasm. Mr. Wattles introduced the president, Mr. R. R. Smith, of Howell, who presided over the meeting. Mr. Smith addressed those present on the possibilities which were open to the Club to do effective work for the Jersey breed. Interested visitors, including representatives of the farm papers who were present, the manager of the State Fair and others, were called upon for brief addresses, after which the future program of the Club was fully discussed by the members. It was decided to institute a campaign to increase the membership and to offer something in return in the way of added publicity for breeders who had surplus stock to sell. It was also determined to have a "Jersey Day," with a banquet in the evening on the day Jerseys are judged at the State Fair this year. President Smith and Secretary A. P. Edison will conduct an active campaign in the matter of securing the co-operation of the Jersey breeders of the state in these objects, and also in the matter of making exhibits at the State Fair, which has offered a special premium of \$100 to any breeders' association whose members enter 50 head of cattle for exhibit at the fair through the medium of the Association. An expression of appreciation was tendered Mr. and Mrs. Wattles for the entertainment offered, and the breeders one and all advanced the sentiment that the meeting had been a most profitable one, and that the work outlined would prove effective in promoting increased publicity for and recognition of the acknowledged merits of the Jersey breed.

EXPERIMENTS IN SALTING BUTTER.

Recent experiments show that salt added to butter in a wet condition was better distributed and more in solution than were the dry salt lots. The average percentage of moisture retained in the finished butter was practically the same with both saltings. Tests on the retention of salt in the butter by the two methods do not agree. Butter churned to about the size of wheat granules contained more moisture and less salt than did butter churned to lump size. Grittiness in butter was found to be due to an overabundance of salt.

ANNUAL MEETING OF DUTCH BELTED BREEDERS.

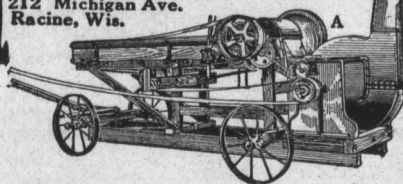
At the annual meeting of the Dutch Belted Cattle Association of America, in New York, appropriations were made for more publicity and a new set of rules and by-laws were adopted. The annual meeting which has been held heretofore in May was changed to meet in December hereafter. The secretary's report showed double the transfers, registrations and memberships over last year. The following officers were elected: President, H. W. Lance; vice-president, Northrup Fowler; secretary-treasurer, E. J. Kirby, Covert, Mich.

The FREEMAN Ensilage Cutter

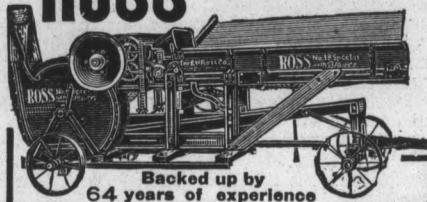
Best for Over 30 Years

Strongest, safest, most durable and capable cutter ever perfected. Runs smoother, faster, cuts cleaner, uses less power. Adjustable knives, large feed rolls, safety fly wheel, safety stop lever. Blower-elevator fills silo quickly, cuts expense, prevents waste. We also build (patented) Enclosed Steel Carriers which keep feed from blowing away. Get full particulars of the Freeman Line before buying—it means satisfaction and money-saving to you. Write for catalog today.

THE S. FREEMAN & SONS CO.
212 Michigan Ave.
Racine, Wis.



ROSS SILO FILLERS



Backed up by
64 years of experience

The Ross is the only machine of this type that is equipped with steel cutting apparatus, steel blower disc, and steel truck. Other machines of this type are furnished with cast iron cutting apparatus, cast iron blower disc. The steel equipment makes the Ross indestructible, and the most reliable and durable silo filling machine on the market. Strong claims made for strength, capacity, durability and ease in feeding. Ask for large catalog The E. W. Ross Co., Box 114 Springfield, Ohio



Proof Against Air, Sun, Fire Wind, Moisture and Time

Notice End View of B.V.T. Block—double inside and outside walls; triple dead-air chambers—an exclusive B.V.T. feature—insures air-tight joints. Write for free booklet—G

BRAZIL HOLLOW BRICK & TILE CO.
BRAZIL, INDIANA

Kalamazoo SILOS

"Best by Every Test"

The "KALAMAZOO" is the silo for you! It answers every question—meets every demand that can be made in use. Your choice of Tile Block or seven kinds of wood. Thousands of satisfied users praise its perfect construction. Special improvements, found in no other silo, make the "KALAMAZOO" the one you need. Investigate now!

Write for Catalog

Send for Free Catalog and Special Offer today.

Settle
the Silo
Question
Right

KALAMAZOO TANK & SILO CO.
Kalamazoo, Michigan
Branches: — Minneapolis, Minnesota
Kansas City, Mo.—No. Ft. Worth, Texas

"OHIO" 1914 Model

The Silo Filler With the Direct Drive

Wonderful recent improvements of "Ohio" eclipse anything ever before produced. One lever controls all movements—reverses by wood friction at finger pressure. Self-feeder—with famous "Ball Dog" grip. Patented Direct Drive—Shear cut—non-explosive, non-clogging. Enormous tonnage on half inch cut—50 to 250 tons a day—6 to 16 h. p. 20-year durability. "Ohio-cut" silage famous—cuts all crops. Used by Experiment Stations everywhere. Guaranteed. Many big new features this year.

Write for folder B, free, also send 10c for 264-page book, "Modern Silage Methods."

THE SILVER MFG. CO.
Salem, Ohio

WRITE FOR BOOK

Kalamazoo Center Shear Silo Filler



Write Today
KALAMAZOO TANK & SILO CO.
Kalamazoo, Mich.
Minneapolis—Kansas City—No. Ft. Worth, Tex.

Mention the Michigan Farmer
when writing to advertisers.

Live Stock.

FEEDERS' PROBLEMS.

Making up a Ration for Small Pigs.

How shall we feed our spring pigs? We have corn, oats, rye and oil meal and can get good middlings at \$30 per ton. We will have alfalfa and rape pasture, also about 200 lbs. of separator milk per day for about 80 pigs. How much of this feed will they require until August 1, all feed to be ground?

Jackson Co.

E. B.

In making up a ration for pigs, it is economy to make the best use of the skim-milk available. Experiments have proven conclusively that where sufficient skim-milk is available to furnish the protein content of the ration to balance up corn, it is neither necessary or good economy to feed any kind of high protein concentrates to growing pigs. The proper proportion in which to feed skim-milk and corn for best results, is from one to three pounds of the skim-milk to one pound of corn meal, using the larger proportion of milk when the pigs are young, and gradually increasing the amount of corn meal in proportion to milk used. For young pigs, the ration will be very materially benefited by the addition of a liberal portion of middlings, which is a well balanced feed for pigs. It is a difficult matter to estimate the amount of feed which will be required by 80 pigs up to August 1, as very much depends upon the capacity of the pigs to make rapid gains. On good rape or alfalfa pasture, however, not more than 350 to 400 pounds of grain, or its equivalent, should be required for 100 pounds of gain. The value of skim-milk can be reduced to a grain basis by figuring 350 pounds of skim-milk to equal 100 pounds of grain when fed with corn in the proportion above advised. Figuring upon this basis, it will not be difficult to estimate approximately the amount of feed which will be required for the time mentioned.

Feeding a Young Calf.

I have a heifer calf two weeks old which I would like to keep for a cow, but she will not drink more than a pint of fresh milk. Could anyone tell me what to do?

St. Clair Co.

A. W. K.

In cases where a young calf refuses to drink a normal quantity of milk, the only successful method is to cut down the ration just a little below the amount the calf will consume, even though it is a very small quantity. In this way the calf's appetite will be stimulated, and after a short time the quantity can be gradually increased.

The writer once had a calf that had a similar lack of appetite for milk, and even though carefully handled, refused entirely to drink milk after it was a few weeks old. This calf was raised by supplying grain in the form of oil meal and corn meal in very small quantities at first, which it finally learned to eat with relish. On this ration, and with water to drink, the calf lived and finally developed into a fine cow and attained large size. It is, however, very essential not to overfeed a calf which has a capricious appetite.

Tankage vs. Middlings for Fattening Hogs.

Which would be cheapest to buy for finishing hogs to be fed with corn? Common wheat middlings at \$1.60 per cwt., or tankage at about \$3 per cwt., tankage, 60 per cent protein, and what amount of each should be fed to make as near a balanced ration as possible?

Washtenaw Co.

C. D. B.

As a source of protein to balance up the ration of corn for the fattening hogs, tankage at the prices quoted would be the more economical feed. It contains more than four times the protein that would be afforded by wheat middlings, and figured on the cost of this element of nutrition alone,

would be very much the cheaper source from which to obtain it. Middlings constitute a fairly well balanced ration for hogs, but do not contain enough protein to balance up a ration of corn with economy. Where tankage is used for this purpose, not more than 10 per cent of the ration should be made up of this feed for greatest economy of results.

Rye Hay for Horses.

I would like to know if rye hay is a fit feed for horses? A good many say the beards will kill a horse. I am short on hay and have four acres of rye and vetch that I thought of cutting for hay. When is the best time to cut it to get the best out of both?

Antrim Co.

E. A. M.

While rye does not make a first-class hay for horses, and the beards will cause sore mouths, especially in young horses, it can be successfully used as horse hay where necessary. The writer has used it for this purpose without any serious results. It is, however, about the least desirable kind of hay for this purpose. Where grown with vetch the combination makes very much better hay for horses if properly cured. It should be cut as soon as practical after the vetch commences to bloom.

THE TALE OF THE TAILLESS CALF.

One of our calves lost its tail in rather a peculiar manner last winter. It had a bad spell of scours during the fall, owing to being fed seven or eight pounds of milk, when five was all it could use. Owing to the disturbed condition of the bowels, the upper portion of the tail became coated with slime, as is usual in such cases. This dried and remained two months or longer, when we tried to remove it; however, the abnormal excretions, added layer by layer, had hardened like concrete and seemed impervious to soaking, and in an effort to chip it off with an old knife, we gashed the tail and gave it up in disgust, thinking that it would loosen in the spring. But when the coldest weather came the tightness of the band on the growing tail shut off the circulation of the blood and the tail froze as stiff as a poker. Of course, it came off, and took with it half the value of an unusually fine calf.

Moral:—Do as Mr. Lillie advises, and don't over-feed on milk, and if the calves do scour and should retain "bracelets" on their tails, deprive them of their jewelry!

Lenawee Co.

J. H. WINTER.

LIVE STOCK NEWS.

Farmers of northern Wisconsin are going rather extensively into feeding and breeding well-bred mutton sheep, and they have found that flocks thrive on the upland or hilly pastures in that part of the country which are almost useless for cultivation. The aim is to produce mutton, the wool clip being regarded as merely a by-product. Clover is grown successfully, and in many places alfalfa does well, while corn is raised in many sections of northern Wisconsin. With the object of encouraging the breeding of high-class flocks in northern Wisconsin, a "live stock special" has been making a tour of the northern counties exhibiting to the farmers of that region the most desirable types of breeding sheep.

Wool dealers state that the market is in firm condition, with higher prices prevailing than a few weeks ago and not enough wool to go around. During the recent London auction sales wool sold higher than in March.

Edward Green, a widely-known ranchman, owns a ranch in Kansas, that is as large as the state of Rhode Island. He has several hundred acres in crops every year and thousands of acres of grazing land, where there are great numbers of sheep, goats and cattle.

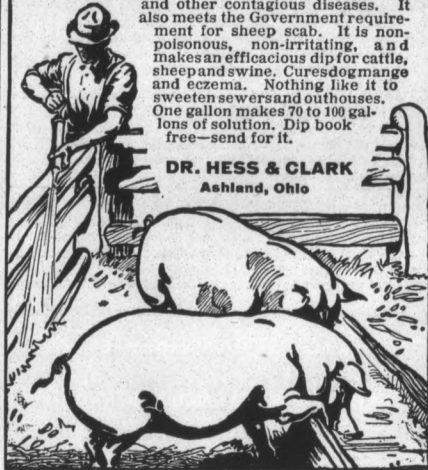
Disinfect Your Pens

HOG profit is absolutely dependent on hog health. You can't market heavyweights from carelessly kept pens. If you would gain the most return for feed and labor spent, keep all premises germ-free and hygienic with occasional applications of Dr. Hess Dip and Disinfectant. This is a guaranteed germ and vermin killer as well as a powerful deodorizer and disinfectant. It reaches down into cracks and crannies where lice and other vermin hide and quickly ends them. But more than this,

Dr. Hess Dip and Disinfectant

sprinkled about the hog pens and sleeping quarters materially lessens the liability of hog cholera and other contagious diseases. It also meets the Government requirement for sheep scab. It is non-poisonous, non-irritating, and makes an efficacious dip for cattle, sheep and swine. Cures dourine and eczema. Nothing like it to sweeten sewers and outhouses. One gallon makes 70 to 100 gallons of solution. Dip book free—send for it.

DR. HESS & CLARK
Ashland, Ohio



Warranted to give satisfaction.



GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and
positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

THE BAUGHMAN CONFORMING HORSE COLLAR



No sweat pad needed. Can be used with any harness. Will outwear several of the old-style collars. Twice the draft surface of the old-style collar. Lighter and stronger than any other collar. Adjustable in one minute to fit any size horse. Prevents sore necks and shoulders; will allow you to work a horse already made sore by the old collar, and cure him at the same time.

Hundreds of testimonials from satisfied customers.

Price \$7.50. Express Prepaid.
THE BAUGHMAN HORSE COLLAR CO.
ALBION, MICHIGAN.

Michigan Livestock Insurance Co.

Capital Stock—\$100,000. Surplus—\$100,000.
Home Office—Charlotte, Michigan.
Only Home Co., in Michigan.
COLON C. LILLIE President.
H. J. WELLS, Secretary-Treasurer.

DEADLY SCOURS

Scientific, Tested, Safe and SURE CURE
FOR 75 CENTS
we will send prepaid bottle to last a year. Money refunded if it fails.
ROUGE MONT FARM REMEDIES, Detroit, Mich.

The Michigan Farmer

Established 1843.

Copyright 1914.

The Lawrence Publishing Co.

Editors and Proprietors.

39 to 45 Congress St. West, Detroit, Michigan

TELEPHONE MAIN 4525.

NEW YORK OFFICE—41 Park Row.

CHICAGO OFFICE—604 Advertising Building.

CLEVELAND OFFICE—1011-1015 Oregon Ave., N. E.

PHILADELPHIA OFFICE—214-218 Twelfth St.

M. J. LAWRENCE.....President
M. L. LAWRENCE.....Vice-President
E. H. HOUGHTON.....Sec.-Treas.I. R. WATERBURY.....Associate
HURT WERMUTH.....Editors
F. A. WILKEN.....
ALTA LAWSON LITTELL.....

E. H. HOUGHTON.....Business Manager

TERMS OF SUBSCRIPTION:

One year, 52 issues.....50 cents
Two years, 104 issues.....\$1.00
Three years, 156 issues.....1.25
Five years 260 issues.....2.00

All sent postpaid.

Canadian subscriptions 50c a year extra for postage.
Always send money by draft, postoffice money order, registered letter or by express. We will not be responsible for money sent in letters. Address all communications to, and make all drafts checks and postoffice orders payable to, The Lawrence Publishing Co.

We never, unless through error, send The Michigan Farmer beyond the date subscribed to—our subscription price being always due in advance, and sample copies always free. No bills will ever be sent should a subscription through error be continued after expiration.

RATES OF ADVERTISING:

40 cents per line agate type measurement, or \$5.60 per inch (14 agate lines per inch) per insertion. No advt inserted for less than \$1.20 each insertion. No objectionable advertisements inserted at any price.

Entered as second class matter at the Detroit, Michigan, postoffice.

DETROIT, JUNE 20, 1914.

CURRENT COMMENT.

The Food Problem. There is a disposition on the part of many farmers to feel that the federal and state governments, commercial associations and others who are active in promoting a betterment in our agriculture are acting wholly in the interest of the consumers of the country, and that as a consequence their work is inimical to the best interests of the farmers as a producing class. This is doubtless more due to the general agitation of the subject of the high cost of living in recent years than to any other cause. It is true that the food problem is at present a rather serious problem to the consumers in many centers of population, but this fact is more largely due to inefficient methods of buying and expensive methods of distribution than to any lack in available foodstuffs. We are just approaching the time when consumption has come sufficiently near to overtaking production to insure a fair price for the products of the farm, a price which will pay the cost of production and leave a very modest profit under normal conditions, but a profit which quickly vanishes with abnormal production along any line. With this fact well in mind, it is little wonder that many farmers get the idea that the activities of the agencies mentioned are intended to stimulate yields to a point which will insure cheaper foodstuffs for the consumer, with no other object in view.

But the fact remains that any educational work which accomplishes the result of increasing production without increasing production cost, any plan which may increase the value of a commodity on the market through bettering its quality by more efficient methods of production and preparation for market, any practice which will eliminate waste anywhere along the line, will prove beneficial to producer and consumer alike and should be fostered and encouraged. And some of the educational campaigns which have been carried on among the farmers of Michigan during the past year have done more than has been above suggested—they have literally made two blades of grass grow where but one grew before. Take, for instance, the alfalfa campaign. Who would undertake to estimate the beneficial effects of the promotion work which has been carried on in Michigan to stimulate the growing of alfalfa on Michigan farms. The results are incalculable, since the object lessons afforded as a direct result of that work are just so many new

centers from which the growing of alfalfa will be stimulated to the unquestionable benefit of Michigan agriculture.

And this is but one of many object lessons which could be cited in proof of the fact that the farmers of the state and country are largely the gainers from the missionary work which is being done in their behalf, even though they may be generally suspicious, and sometimes, it must be admitted, with cause, of the purpose in view by some of their would-be helpers. On the whole, however, there is no question of the sincerity of motive back of private donor, as there can be no doubt regarding the activities of the government along this line. Also, when it is considered that the population of the earth is increasing at the rate of something like 35,000,000 people a year, and that no undeveloped agricultural empires remain, no farmer should be pessimistic enough regarding the future to feel that he or his contemporaries can know too much about the science of production.

The Why of the Cost Account. In another column of this issue will be found an article in which reasons why

the farm cost account is desirable are discussed from the standpoint of a business man who has found that the same general principles apply to the management of a farm business as to the successful conduct of any other business. Accompanying the article is a detailed record of costs, which entered into the production of a potato crop in 1912. This record is kept on a card 9x12 inches in size, and shows all of the several items of cost as well as receipts from a net profit credited to the crop.

The reasons given by the user of this system for the keeping of some such form of cost accounts by every farmer are such as should engage the attention of all Michigan Farmer readers. It is probable that many farmers will not care to go into this proposition in quite the thorough manner here illustrated, but even a simpler system which will give approximate costs of all farm crops will be of great value to any farmer in the planning and management of his business, and it is more than likely that when once interested in the proposition, a more comprehensive system will be developed than that which is used at the start. It is of course true that the keeping of even exact cost systems will not insure the farmer who keeps them any greater net profit at the end of the year, but he will know where profit was made and losses incurred, and will be the better able to so plan his farm campaign in the future as to reduce the cost of production or increase net profits by varying his production of staples as the cost records of previous years may indicate to be desirable.

The Greater Michigan Fair.

The people of the state, as well as of western Michigan are this year being introduced for the first time to the Greater Michigan Fair, the new title assumed by the West Michigan State Fair, as it has heretofore been called. This will be the first of the big fairs held in Michigan this year, the dates being September 2-7, inclusive, and from the enthusiastic work which is being done by the management in preparation for the fair there appears to be no doubt that the merit of the show will justify the new name which has been selected for it.

As might be expected from its location, special emphasis will be placed on the fruit exhibit, which is expected to be the finest that has ever been put up in the middle west. In addition to the full cash premium list in this department, two valuable silver cups have been offered by the Grand Rapids Savings Bank as sweepstake prizes in this division of the show, the same to be awarded to the indi-

vidual exhibitor, county association, or any organization representing a county which makes the best exhibit of fruit. Liberal increases in the premium list have been made to stimulate a large exhibit in the cattle division and this department of the show is expected by the management to be better than ever. New educational and entertainment features of merit have been added. Among the former will be a good roads exhibit and demonstration provided by the federal government, while M. A. C. and some of the state departments will contribute valuable educational exhibits. In the matter of entertainment exhibits the management announces that the attractions secured will be better than anything which has been seen at previous fairs, and that every effort has been made to secure high-class attractions as well as high-class exhibits. The premium list is now in preparation and may be had on application at an early date.

Last week President Two Decades of J. L. Snyder, of M. A. C., tendered his Useful Work.

resignation to the State Board of Agriculture, with the request that it take effect at the close of the school year in June, 1915. In his letter of resignation President Snyder stated that he had for some time contemplated retiring from the strenuous duties incumbent upon the president of M. A. C., and that as the class of 1915 would be the twentieth to be graduated under his administration, he had fixed on that date as an opportune time to turn the work over to another. His resignation was tendered at this time in order that the State Board might have plenty of time in which to select his successor.

The two decades which cover the period of Dr. Snyder's work as executive head of M. A. C., have been years of marked agricultural development and of like growth in this pioneer institution, whose business it is to foster and encourage the application of science to agriculture in all its varied departments. In 1895 there were but two departments at M. A. C., and the institution graduated but 25 students in the class of that year. Since that time there have been added to the original departments of agriculture and engineering those of home economics, forestry and veterinary science, while the agricultural department has been extended to include farm mechanics, poultry, soils, farm crops and agricultural education and extension work. This year a class of 200 will be graduated from M. A. C., which is the largest class in the history of the College. Most of the important buildings on the campus have been erected under President Snyder's administration, and the college extension work has been developed along broad lines during recent years.

For eight years President Snyder was a member of the executive committee of the National Association of Agricultural Colleges and Experiment Stations, during which time the so-called Adams Act and Nelson Amendment, which added \$40,000 per annum to the College revenues, were passed and the original agricultural extension bill, drawn along the lines of the Smith-Lever Bill recently passed by which Michigan will eventually receive \$133,000 per annum from the federal government for this work, was drawn by this committee and was first introduced in Congress by Representative McLaughlin, of Michigan, at President Snyder's request.

Dr. Snyder has also served as president of the National Association of Colleges and Experiment Stations, and is at present a member of the National Council of Education, a select organization of limited membership. In 1908 the University of Michigan conferred upon him the honorary degree of L. L. D. in recognition of his work as president of M. A. C.

Dr. Snyder has been fortunate in

the opportunity afforded him for the accomplishment of useful work during two decades, and the state has been fortunate in that he has so well improved that opportunity, as is attested by the continuous development of the College along advanced agricultural lines during the period of his service.

HAPPENINGS OF THE WEEK.

National.

Last Sunday, four men were killed, eight probably fatally wounded, and nine others seriously injured when a gas main exploded at Columbus, Ohio. The men were repairing the main at the time of the accident.

In recognition of his services at Vera Cruz, Rear Admiral Fletcher, of the United States Navy, is to be promoted to commander of the Atlantic fleet, succeeding Read Admiral Bagger, in a few weeks.

The La Salle Street Trust & Savings Bank, of Chicago, was closed last week by the Illinois state authorities because of alleged violations of the state banking laws. Former United States Senator, William Lorimer, is president of the institution.

After two weeks of activity Mt. Lassen, located in northern California, has developed three craters and is now spouting forth flames of fire that can be seen a hundred miles from the mountain.

The Michigan railway commission has ordered the Michigan State and the Citizens' Telephone at Traverse City to establish physical connection between the two exchanges. This is the first time the telephone companies have been arbitrarily compelled to establish connections in this state. The action of the commission is based upon the authority of the Bayliss law passed by the last legislature.

It is estimated that fully 80,000 additional laborers than are now present will be required to harvest the wheat crop in the western states.

The balloon contest of the American Aero Club, which started at Portland, Oregon, June 11, resulted in a disaster, with the possible exception of one of the balloons. Four airships started out and three of them are known to have been wrecked in a storm in which they were enveloped shortly after leaving the earth, and the third has not been heard from since it was last seen in the midst of the storm.

The assistant keeper of the zoo at Wallbridge Park, Toledo, was killed Sunday by an elephant. He was arranging a box on the animal's back for children to ride in, when the beast turned upon and crushed him.

When diplomas are given out to the 200 members of the senior class of June 23, the Michigan Agricultural College will have graduated the largest class since it was founded in 1857. The number, which is four times as great as the class graduated ten years ago, is made up of 77 graduates in agriculture, 59 in engineering, 50 in home economics, 12 in forestry and two in veterinary medicine. Nearly all these young men and women are from Michigan, although 13 other states and two foreign countries are represented.

The district attorney's office of New York City continues to find irregularities in the recent election returns, now being investigated. In one precinct containing a hospital, there were found on the election rolls the names of men who are marked "voted," that are shown by the records of the hospital to have died long before the date of the election.

Foreign.

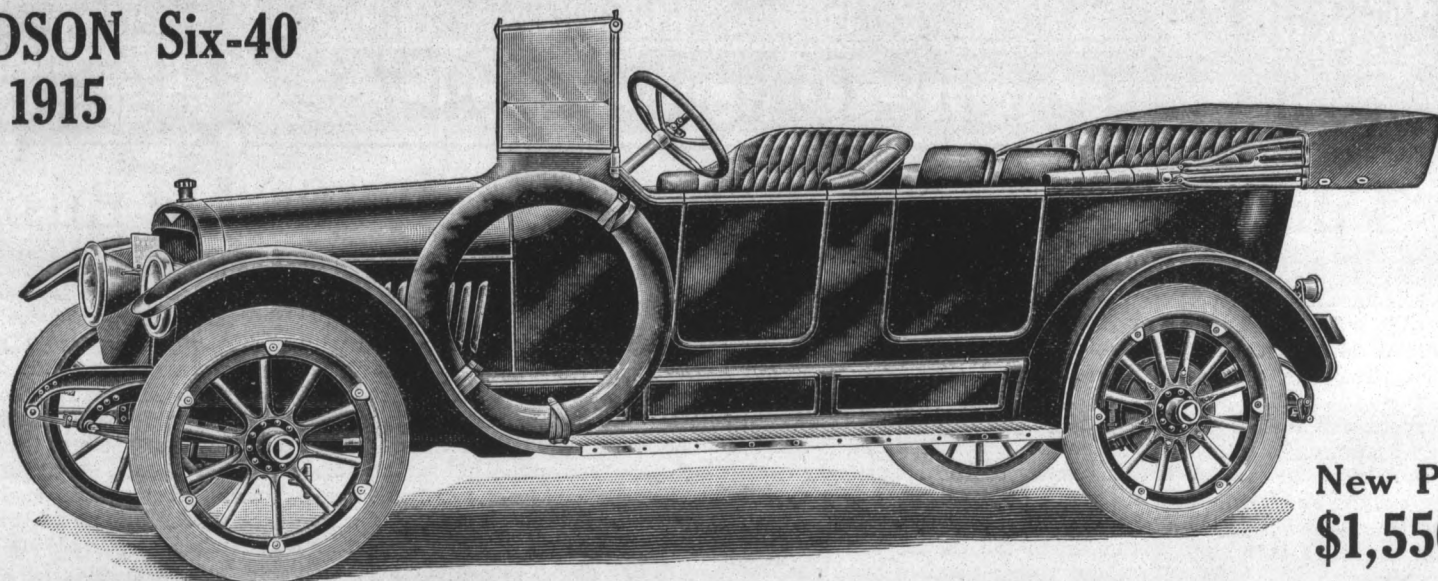
Col. Theodore Roosevelt is in England this week and will speak before the geological society there regarding his expedition through South America.

The English polo team won the international polo contest from the American team at Meadowbrook Farm, Long Island, last week.

The mediators at Niagara Falls, Canada, are getting on but slowly with their work. Chief among the efforts is the inclusion of rebel representatives in the deliberations, but thus far the attempts have failed, except that the rebel chief has sent a representative to Washington, which act it is hoped will ultimately lead to his men appearing before the mediators. Another difficulty lies in the selection of an executive for the country that will be satisfactory to the different factions.

The Mexican rebels are reported to have met with repulses before Zacatecas where the federals are strongly entrenched. Gen. Villa is now moving 20,000 soldiers to the battlefield and will take charge of the campaign to capture the city. Gen. Natera who has had charge of the attack thus far is being criticized for making a premature move upon the place.

HUDSON Six-40 For 1915



**New Price
\$1,550**

The Thoroughbred

We submit this new model of the HUDSON Six-40 as the typical modern car. It reveals the latest refinements in Motor car building. In any group of high-grade cars it will seem the thoroughbred. No other car in so many ways meets present-day ideals.

Our Crowning Effort

The first HUDSON Six-40 came out last year. Our 48 engineers, headed by Howard E. Coffin, had devoted three years to the model. Their effort was to embody here the final conception of an ideal car.

They established new standards in Sixes. They brought quality Sixes, for the first time, into the price field of Fours.

They brought the weight under 3,000 pounds—for a roomy car with extra tonneau seats. That was 1,000 pounds less than average former weights on cars of like capacity. They did this by skilful designing and better materials, without sacrificing strength.

They reduced operative cost, for a car of this power, by from 15 to 30 per cent. They did this by employing a new-type motor and by building a light-weight car.

They made this car one of the handsomest, one of the best-equipped cars in the world. Then we fixed the price at \$1,750—the lowest price that had ever been quoted on any type of quality car.

Last Year's Record 3,000 Oversold

That car was the year's sensation. Men flocked by the thousands to it. With the largest output in HUDSON history, the end of the season left us 3,000 unfilled orders. Men were offering premiums—as high as \$200—for options on this HUDSON Six-40.

In a mechanical way the car proved itself the greatest of HUDSON successes. It has run for a season in thousands of hands,

under all road conditions. And not a single shortcoming developed. So our whole engineering corps, during all last year, worked on nothing but refinements.

Now a New Model

Now comes a new model with all these refinements. There are 31 new features in comfort, convenience and beauty.

And there comes a new price—\$1,550. This is due to the fact that the car's popularity has compelled us to treble our output. This trebled output reduces our cost about \$200 per car.

Look back three years, when every Six cost over \$3,000. When high-grade cars of any type cost around \$2,000. Then look at this HUDSON Six-40—a better Six than men dreamed of then—priced at \$1,550. You will realize then what HUDSON engineers have accomplished for motor car buyers.

This is just the car that tens of thousands want. It is a smooth-running Six, and men want that. In size and power it marks the sane medium. In quality, beauty, finish and equipment it reveals the best that's possible. In price, weight and operative cost it marks the bottom limit for this-class car.

As an ideal combination—as a typical modern, high-grade car—you will not find a rival in sight of it. Most men will concede this—all things considered—the top place in the motor car field.

Hudson dealers everywhere now have these new cars on show. Our new catalog on request.

31 New Features Price \$200 Less

Go see the new features—the 31 refinements—which our engineers have added in the past 12 months. Then note that, with all these, the price this year is \$200 less—all because of our trebled output. These are some of the attractions which you will find embodied in this new model HUDSON Six-40. And some of the best of them are not yet found in any other car.

- A distinguished streamline body.
- All hinges concealed.
- Gasoline tank in dash.
- Extra tires ahead of front door.
- Seats for up to 7 passengers.
- Extra tonneau seats, disappearing.
- Hand-buffed leather upholstery.
- 20-coat finish on body.
- 123-inch wheelbase.
- Wider seats—higher backs.
- More room for the driver.
- "One-Man" top, with quick adjusting curtains attached.
- Integral rain-vision windshield.
- Dimming searchlights.
- Simplified Delco starting, lighting and ignition system.
- Simplified wiring in metal conduits.
- Lock on ignition and lighting switch.
- Far better carburetion.
- Speedometer drives from transmission.
- Automatic spark advance.
- Tubular propeller shaft.
- All instruments and gauges within reach of the driver.
- Trunk rack on back.
- Still less weight—2,900 pounds.

**New price, \$1,550 f. o. b. Detroit.
Standard Roadster, same price.**

Our Larger Six-54

The HUDSON Six-54—built on the same lines, with 135-inch wheel base and greater power—sells for \$2,350. It is for men who want a big, impressive car.

HUDSON MOTOR CAR COMPANY, 8013 Jefferson Ave., Detroit, Mich.



How "Turtlers" Carry on a Queer but Profitable Business.

By ISAAC MOTES.

THERE are many ways of making money, and sometimes queer, out-of-the-ordinary businesses yield better financial returns than a commonplace occupation followed by the millions. Few people realize how much money is spent for turtles by the great hotels, restaurants, clubs and cafes of the civilized world. These turtles are caught and shipped to buyers by turtle hunters, called "turtlers." Catching turtles is a regular business with a great many people.

It is necessary to catch turtles alive, for they must sometimes be kept a few days, weeks or a month or more before they are sold, for it might not be convenient to ship to market until a carload has been caught, or the price might be too low. For this reason turtles cannot be caught with hook and line, as fish are caught, as a turtle swallows its food whole, and it is practically impossible to get a hook out of a turtle's stomach without killing the turtle. So they must be caught in other ways.

Fresh water or snapping turtles are often caught in the following manner: The "turtler" takes a piece of raw beef as large as your thumb and ties it tightly to the end of a piece of strong fishing line. He ties it about the middle of the piece of beef, and casts it into the water, where it sinks to the bottom. The other end of the line is fastened to a stake or the root of a tree on shore. Twenty, thirty or more of these baits can be set out close together along the shore of a creek, slough, lake or pond where turtles are known to be.

The lines must be looked at at least once every twelve hours, for if the beef is left too long in the turtle's stomach it will digest, and when you come to catch them the line will come from their mouth. When you go to look at your lines you take hold of the line and pull gently, and if a turtle is on it you can easily lead him to shore. But if you pull with a jerk you will pull the bait from his mouth. When you get him on shore you put your foot on his back, take hold of the line and pull, and the bait comes from his stomach.

Another way to catch these turtles is to go into the water after them, for they feed at night, and the large ones sleep in day time, in muskrat holes, under drift piles and similar places. They lie so the water will just wash their backs, and leave their heads out of the water. The hunter reaches in under drift piles, old logs and muskrat holes, and if there are turtles in the water he always finds them lying in such places. He doubles up his fist and feel around, and when he gets his hand on a turtle he knows it by the round, oval back. He presses down on the turtle, and it tries to move away. He extends his thumb and finger around the edges of the shell until he feels where the shell is scalloped. A snapping turtle's shell is always scalloped where its tail is. Then the hunter takes hold of its tail and pulls it out.

It might seem that this would be dangerous, but old "turtlers" say a snapping turtle never bites under water. People have hunted turtles in this way for fifteen years and have never been bitten.

Many turtle hunters hunt them in cold weather with a long handled hook. The hunter feels around on the muddy bottom of places where turtles

stay in winter, and when he feels one he gets the hook under it and pulls it into the boat. Turtles hibernate on the muddy bottom of streams, lakes and ponds in cold weather, are sluggish and much indisposed to move, and are easily caught. Turtle hunting is therefore best after the waters become cold in the late autumn. The hunter drags the turtles out with his hook and places them in gunny sacks, and when this is full he ties them in and places them under water until he has a carload. Then they are put into barrels and shipped to New York and Philadelphia, where they are regarded as delicacies of the highest order, and good prices are received by hunters who are acquainted with the market and experienced in catching large turtles.

These fresh water or snapping turtles are found in sloughs, lakes, ponds, creeks and shallow, muddy, slow-running rivers of the United States. The prices received are generally about seven cents a pound wholesale, and ten cents a pound retail. They are never as large as the green, deep sea or salt water turtles, sometimes called marine turtles. As a rule, fresh water turtles average about twenty pounds in weight.

Marine turtles reach large size and a great age. They are found principally in torrid seas, but in following schools of fish they sometimes come as far north as the coasts of Oregon and Massachusetts. They feed on a kind of sea grass or sea wreck on the bottom of shallow reefs, bays and inlets. They also eat fish when they can catch them. Marine turtles have been found which were seven feet long and weighed 800 pounds. Such turtles are said to be from 200 to 500 years old. These turtles have been used for food from time immemorial, not only by gourmets and epicures who frequent the dining rooms of great hotels, clubs and safes, but by half-civilized natives and islanders all over the world, and many strange methods have been employed by these people in tropical regions for catching them.

One of these methods is to make use of that strange sucking fish known as the remora. They make fast a cord to a small ring passed around the tail of the remora. The fish is then allowed to swim out to sea. The cord is tied to a tree or held by the fisherman, and as soon as the remora sees a turtle swimming along, it makes for and sinks under him. The fish then attaches itself to the bottom of the turtle, and by the pull or feel of the line the native can tell when it has a bite. He then hauls in the line bringing both fish and turtle to the beach, where by pushing the remora forward it is made to let go. If the native tries to pull it off it will be torn apart before letting go. This method is still in use by the natives on the east coast of Africa, by Chinese fishermen, and possibly along the coasts of Cuba.

A peculiar plan for catching turtles is followed by native Indians along the Gulf of California, where marine turtles are large and numerous. In the northwestern part of the gulf these big turtles crawl out on moonlight nights on the sandy beach to lay their eggs. They come out by hundreds, great sea monsters the size of barrels, the moon shining on their wet shells like dull mirrors, while the head and long, snaky necks moving

from side to side as the turtles crawl about on the sand, digging holes with their front flippers. In these holes the eggs are laid, then covered and left for the sun to hatch.

The Indians along the shore of the gulf get thousands of small poles, limbs, etc., sharpen one end and weave them into fences or wickers, something like a panel of picket fence. The panels are about three feet high, and twenty-five to fifty feet long. About every ten feet a larger stake or pole is woven in, so as to be planted deep in the sand, to act as a post when the fence is set up.

Then some moonlight night when a great many turtles are out on the sandy bank, some distance from the water, twenty-five or thirty of the Indians, maybe more, each having a panel of this fence, slip silently down along the beach near the water, and fence in the whole bunch of turtles. Then with yells and whoops they go in and kill them with clubs as they scramble down the sandy bank, in the effort to reach the water. Many of them get their heads or flippers caught in the wicker fence, and while held fast they are easy to kill. Then the Indians have a great feast on turtle meat.

In the waters along some of the coasts of South America the Indians shoot these turtles with bow and arrows. But as an arrow, or even a rifle ball will not have much effect on a turtle's thick shell when striking it in a glancing direction, the Indians put out to sea in a dugout canoe, and as soon as a turtle is sighted one Indian in the boat stands up, looks intently at it, to judge the distance, then pointing his heavy arrow upward he shoots it into the air. In falling the point comes down vertically, and if it hits squarely on the turtle's back it sinks into it. But it takes much skill to hit a turtle in this way. The arrow has a long shaft. When hit the turtle dives into the water, but not very deep, and as the arrow is long the end of the shaft is sure to come into view pretty soon, as the turtle rises near the surface. Then all the Indian has to do is to follow up and secure his prize, for the arrow is fastened well in the turtle's shell.

In the West Indies these green sea

turtles grow to a great size. Here along the coral reefs and shallow bays the turtle schooners cruise and catch them by putting tangle nets or string nets from rock to rock. Once the turtle feels itself fast it struggles wildly, only to get more tangled up. The crew of the schooner then follow along in small boats, using a sea glass or water glass which enables them to look to the bottom of the shallow sea, and when they find turtles caught in the nets it is easy to pull them into the boats. Then they are placed in the schooner's hold and later sent to some large port and from there shipped by steamer to New York, London and elsewhere.

Another variety of turtle is the diamond back, or salt marsh turtle or terrapin. It is also highly prized by epicures. It is found along the Atlantic coast south of New York, and also along the Gulf of Mexico coast in our southern states. It is especially good for making soup, but it doesn't grow as large or live as long as the marine turtle. More diamond back turtles are consumed in the United States than of any other variety. So great is the demand for them that they are raised in breeding plants or artificially constructed and heated tanks, in the United States. In order to force or stimulate rapid growth and get the turtles ready for market early the eggs are secured and put in water which is kept at a temperature that experience has proven is best for hastening the growth of the turtles.

A man near New Orleans has built up a highly profitable business by raising these turtles, which he ships to northern markets, principally New York City. He hatches the eggs in warm water, and forces the growth of the turtles for about six months. This is the age at which they are best for food. Then he ships them north, about 50,000 at a time, in tank cars filled with filtered cistern water, putting in the necessary food for them on the trip. This man has one of the largest turtle breeding plants in the world, and his business is quite profitable, though unusual, as the demand for turtles is strong, and his principal difficulty is that he has so many orders that to fill them he must ship the turtles before they are six months old, the age at which they bring top prices.

The Last of the Light Brigade.

By PEARLE WHITE McCOWAN.

IT'S a far cry from Michigan to the Crimean War, but the death on April 21, of George S. Wilson, a resident of Mason, Michigan, who fought in that war, and who was an eye witness, almost you might say, a participator in that Immortal Charge of The Light Brigade, brings to mind some interesting facts as told by that gentleman. Mr. Wilson was undoubtedly the last of the survivors of that time, in this country, at least.

He had joined the army when a lad of sixteen, enlisting in the Thirteenth Light Infantry, of which Prince Albert was then colonel. Three years' later his regiment was ordered to Crimea, but at Gibraltar their boat became unseaworthy and was laid up for repairs, this causing a delay of some months, during which time the city was undergoing one of those terrible sieges of cholera which sometimes attacked European countries. Com-

rades died about him on every side, and Mr. Wilson himself had the disease, but lightly. Finally they reached the seat of war.

At the time of the charge of the six hundred, his company had been detailed to duty on the skirmish line. He and his companions were lying low within the grass, or seeking the shelter of some friendly tree whilst they took aim. Mr. Wilson was near enough to see Colonel Campbell when he received the message from Lord Ragland, and to note how, after reading it the Colonel turned to his company and shouted, "Boys, Life or Death?" and to hear the "Aye, Aye, Sir," that came from those six hundred throats.

There were in reality six hundred and forty-seven in the Brigade, Mr. Wilson has said, and they cut their way through the lines of Russians and Cossacks and back again in twen-

Delivered TO FREE on Approval and 30 days Trial



SEND NO MONEY but write today for our big 1914 catalog of "Ranger" bicycles, tires and sundries at prices so low they will astonish you. Also particulars of our great new offer to deliver you a Ranger Bicycle on one month's free trial without a cent expense to you.

BOYS you can make money taking orders for bicycles, tires, lamps, sundries, etc., from our big handsome catalog. It's free. It contains "combination offers" for re-fitting your old bicycle like new at very low cost. Also much useful bicycle information. Send for it.

LOW FACTORY PRICES direct to you. No one else can offer such values and such without first learning what we can offer you. Write now.

MEAD CYCLE CO., Dept. D-77, CHICAGO, ILL.

LEGGETT'S DUSTERS UP-TO-DATE BUG KILLER NO WATER TO HAUL



THE CHAMPION OR LITTLE GIANT

Dusts one or two rows of potatoes, tomatoes or tobacco as fast as you walk.

THE BEETLE

Potato Duster (Horse Power) dusts four rows. Save time, labor and crops. Ask your dealer for them. Send us postal to-day for free booklets.

LEGGETT & BRO. 301 Pearl St. New York

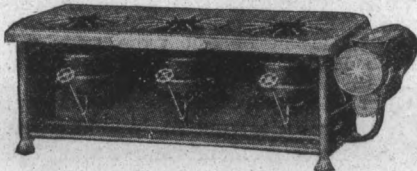
5¢ A ROLL AND UP

Wall Paper

Our big special Wall Paper book shows new rich, up-to-date designs—actual samples—at prices that will surprise you. It gives valuable information on papering—how to make paste—how to measure, etc. You need this book. Our big general catalogue will save you money on everything you buy. Ask for Wall Paper Book No. D. S. 11. Write today to

Montgomery Ward & Co.
New York Chicago Kansas City

FOR HOT WEATHER



SUN GASOLINE AND OIL STOVES

Any Size High or Low, Guaranteed the Best Made. Are Economical, Odorless, Reliable, Durable, Simple, Handsome. Essential burner parts are brass, no rust, no leaks. Automatic oil feed, can't overflow. Bakes and broils perfectly. The Highest grade, the lowest price. Illustrated and descriptive catalog free.

Address, DETROIT FOUNDRY & MFG. CO.,
Detroit, Michigan.

U-NEED-IT OUTFIT

Hot water for all purposes. Requires no water pressure nor plumbing expense. "City" convenience in farm and suburban homes. Steel bath tubs, heavily enameled, \$5.40 and up. Rapid water heater, \$7.95. Direct from our factory. Send postal for descriptive circular.

WM. J. SERLIN CO., 811 Woodward Ave., Detroit, Michigan.

YOUR MONEY WILL NET 5%

if invested with this Society. Interest paid semi-annually. Let us have your name and address and we will tell you of the advantages offered by this Society which has been doing business for over twenty years.

The Industrial Savings Society,
219 Hammond Bldg., Detroit, Mich.
L. ROY WATERBURY, Pres. AUSTIN N. KIMMIS, Secy.

LIGHTNING RODS 9c PER FOOT

Best Quality Copper—Extra Heavy Cable System guaranteed satisfactory or your money back. Just write a postal for our Proposition and FREE Catalog which makes everything plain.

The J. A. Scott Company
Dept. 3 Detroit, Mich.

Will Pay Reliable Man or Woman \$12.50 to distribute 100 FREE packages Perfumed Borax Soap Powder among friends. No money required.
L. WARD COMPANY, 214 Institute Pl., Chicago.

Just Say "Saw your ad. in the Michigan Farmer" when writing advertisers

ty minutes. But out of the six hundred and forty-seven men, two hundred and forty-three were ruthlessly slain, to say nothing at all of the maimed and wounded. A sturdy company of Scotchmen they were, according to Mr. Wilson, and the Colonel who led them, and who it is supposed must have misinterpreted his order, was the first man killed. This was at Balaklava, on October 25, 1854. It was a terrible mistake but who does not thrill at the heroism of it. Small wonder that the youth of the town, as well as an older man or woman, loved to hear Mr. Wilson relate his experiences.

Ten days later Mr. Wilson marched ten miles in the early morning, with a fifty-pound knapsack and one hundred and fifty rounds of ammunition upon his back, to fight upon the historic field of Inkerman. Here he was wounded and taken to the hospital, where Miss Florence Nightingale dressed his wounds. She visited the place daily, and was dubbed by the soldiers their "Angel of Mercy." "My, but she was a fine looking woman, and a splendid one too," was Mr. Wilson's frequent tribute.

While Mr. Wilson lay ill in this hospital, some one of the patients composed a hymn to Miss Nightingale, and one morning when she entered the building she was greeted by it. "There were over two hundred of us there," Mr. Wilson would say, his eyes shining, "all wounded, some crying and some even dying, but we made that old place ring just the same." It was sung to the tune of "The Old Water Wheel," and these are the first two verses as Mr. Wilson himself often sang them:

"T'was a dark and cheerless night on Crimea's cheerless shore,
Where had been a fearful battle only just the day before,
Cries of help from men was heard but their cries were all in vain,
'Till God sent a human Angel to assuage their awful pain.

CHORUS:

So it's forward my lads, let your hearts never fail,
For you're cheered by the presence of a sweet Nightingale.

Oh, her heart it is good and no bounty she'll take
But offered her life for the poor soldiers' sake.
She prays for the dying, gives peace to the brave
For she feels that a soldier has a soul she may save.

CHORUS:

So it's forward, my lads, let your hearts never fail,
One of Heaven's best gifts is Miss Nightingale.

Later, Miss Nightingale asked each man in the service to contribute just one day's pay toward the building of a hospital for soldiers in London. "Just one day's pay was all she'd take," said Mr. Wilson. "I'd have given her a month's and given it gladly if she'd have taken it." And one day's pay in those days was just four pence in English money, or eight cents as we reckon it here in America. This however, was increased to six pence when on board ship or in active field duty.

Mr. Wilson came of a military family, his grandfather having served with Wellington at Waterloo, and each of his two brothers saw twenty-one years of service in the heavy artillery and passed through the great Indian mutiny. His grandfather possessed no less than fourteen medals that had been presented to him for bravery at various battles in which he had fought, and Mr. Wilson himself had received two medals and two clasps as rewards for his own bravery and efficiency.

After leaving the army he came to America, landing at New York City, on New Year's Day, 1860, with just twenty-four cents in his pocket.

To be sure, eyes are not so common as people think, or poets would be plentier.—Lowell.

The actual problem to be solved is not what to teach, but how to teach.—Eliot.

A FAMOUS FACTORY.

BY ALONZO RICE.

At Gobain, France, is located one of the most famous factories in the world that has for its main purpose the casting of the rough disks of glass for the mirrors of telescopes. As well as being the most famous, it is also the most ancient.

Among some of its best work in recent years is the casting of two nearly perfect disks sixty inches in diameter and eight inches thick, weighing two thousand pounds each. Of late, they have been engaged in making a disk one hundred inches in diameter and fourteen inches thick, weighing ten thousand pounds, for the Hooker telescope.

The same kind of large fire-clay melting pots which are used for melting and pouring plate glass are used in the manufacture of disks up to sixty inches in diameter. The one hundred inch glass proves to be too large to be poured from the ordinary pots, and a special furnace is required. It has a melting tank capable of holding forty thousand pounds of molten glass constructed for it. Many precautions must be taken to avoid the presence of air bubbles or pouring marks that disfigure the disks.

When a disk has been successfully cast and before it has been taken out of the mould, it is placed in an annealing oven, where disks up to three or four feet in diameter are annealed by being slowly and uniformly cooled for a period ranging from several days to several weeks, the time depending upon their size. The method by which the sixty-inch and the one hundred-inch disks are annealed was brought about by long experimenting. One hundred days is required for the annealing of the latter.

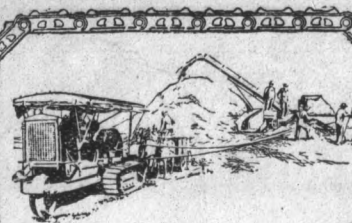
In the optical room the grinding and polishing of the glasses take place. This room must be so constructed that it can be entirely free of dust and the temperature regulated to the desired degree. To show how close to perfection this work approaches, it is said that the glasses are ground to less than one one-hundred-thousandth part of an inch. The abrading material used between the tools and the glass may be sand, emery or carborundum. Of these materials, the latter grinds most rapidly. But all must be mixed with an abundance of water.

After grinding comes the process of polishing. To accomplish this, iron grindings are used with finer and finer grades of carborundum powder with the usual accompaniment of water.

The polishing tools or plates are very different from the grinding plates. The basis of their construction being aluminum or wood. One face is coated with small squares of soft resin or pitch, to this is applied a thin layer of beeswax. Soft red optical rouge mixed with an abundance of clean water constitute the polishing powder. The same machine with which the grinding is done also furnishes the power for the polishing process. To obtain a glass free from scratches, the utmost care and cleanliness are required, and sometimes eight or ten hours' work is required to obtain a satisfactory result.

As the polishing process proceeds, the glass is closely and severely scrutinized several times during the operation. The stroke of the polishing tools is so directed or modified as to bring the surface more nearly to the exact form desired. This operation is termed figuring the surface. The glass is polished, figured and tested all at the same time. The finest grinding tools would be too crude for the polishing process, beside to be tested successfully, the surface must be a polished one.

All that is purchasable in the capitals of the world is not to be weighed in comparison with the simple enjoyment that may be crowded into one hour of sunshine.—Higginson.



Steady Motor for Stationary Work

You can use the Caterpillar for threshing, sawing, pumping, shelling, grinding, filling silos and for all sorts of stationary farm work. It has a steady, powerful four cylinder motor. Every part is made to resist heavy strains.

CATERPILLAR

Reg. U. S. Pat. Off.

All this stationary work is in addition to your regular hauling, plowing and cultivating that is done with the Caterpillar. No other tractor can rank with the Caterpillar for field work. It is because of the long, wide Caterpillar tracks—they get a sure grip on the ground and transfer more motor power into pulling power than round wheel tractors can. It's the big tracks, too, that enable the Caterpillar to work on soft, wet ground where other tractors can't.

The Caterpillar is not a new or untried machine. We have made tractors since 1894, specializing on the Caterpillar during the past ten years—after its advantages over our own round wheel machines became so apparent.

We make the Caterpillar in three sizes. Write today for Catalog E-F-44 and find out more about them.

The Holt Manufacturing Co.

Incorporated

Peoria, Ill. Stockton, Cal.
New York, N. Y. Spokane, Wash.

20 MULE TEAM



BORAX

The Marvelous Aid to Soap Purifies and Disinfects

Used with Soap Wherever Soap is Used

For Sale by All Grocers and Druggists

In convenient 10c, 15c and 50c packages. If your retailer does not supply you promptly, your choice of a 10c, 15c or 50c package will be mailed to you by Parcels Post, delivery charges paid, on receipt of the regular retail price.

The Pacific Coast Borax Co.,
1561 McCormick Bldg., Chicago, Ill.

Try Before You Buy



A post card request will bring this sweeper to you—charges prepaid. Test it in your own home. If you like it, show it to your neighbors. Sell two at \$7.50 each and get your Original "Dust Vac" FREE. Well built, easy to operate and guaranteed to please. This combination sweeper and vacuum cleaner cuts disagreeable house work in half. Ask for descriptive circular. Fully illustrates "Dust Vac" Sweepers. Agents wanted everywhere—Liberal commissions.

THE LACE OMEETER CO.
Adrain, Michigan.

DAISY FLY KILLER



placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by Dealers at 6c sent prepaid for \$1.

HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.

Government Farmer's Wanted—Make \$125 monthly. Free living quarters. Write Ozment, 17 F. St. Louis, Mo.



Anty Drudge—"My goodness, Mrs. Careless, have you got neuralgia again? That's just what I told you would happen, washing the old way, with hot water. You have to rub the clothes so hard you get all overheated, and then you will fill your kitchen with hot, sudsy steam while you boil your wash. No wonder you take cold, coming right out in the air. I haven't had a cold nor neuralgia since I started using Fels-Naptha Soap and cool or lukewarm water for my washing and all my housework."

Lots of women don't know how to do their work easily, quickly and better than it was ever done before—but there is a way.

It's the Fels-Naptha way.

Fels-Naptha Soap, in cool or lukewarm water, without hard rubbing or boiling, makes the dirtiest clothes clean and white. It's just as good for all kinds of housework and in the milkroom, and it's the pleasant way to do disagreeable work.

Buy it by the box or carton and follow the directions on the Red and Green Wrapper.

Fels & Co., Philadelphia.



Woman and Her Needs At Home and Elsewhere

How Much of Your Work Is "Made?"

A LONG time ago, when the world was new, some wise person said: "Man works from sun to sun, but woman's work is never done." The saying made an instantaneous hit with martyred women and it has lived until the present time, though it long ago lost all its significance.

Time was, perhaps, when woman had to work unceasingly, and then was always behind. That was in the days when woman must spin and weave, knit and sew, make candles, cook in a caldron over a fireplace and look after a family of from six to a dozen children. In these days of ready-to-wear garments, sewing machines, electricity, gasoline and prepared breakfast foods, the woman whose work is never done is doing made work. That is, she is doing work which is not essential to the health and happiness of herself or family, but is done simply because "everybody does it" and "folks will talk" if she doesn't.

Why, for instance, should a woman alone on a farm, as with the scarcity of help most women are now, feel that she must piece quilts and comfortables, when she can buy summer weight blankets for \$1.25, and winter weight ones for double that. She is not only saving time and strength by not making the quilts, but the blankets are much easier kept clean, a still greater saving of labor, which, in these days of intensive living means money.

Why should that same woman have a parlor to be kept clean, with silk draped windows, rugs and polished borders? Why, indeed, except to satisfy her pride at the expense of strength and temper and give her

something more to worry and fret over?

Why should the busy woman make her own work dresses, aprons and children's clothes, when for a few cents more than the cost of the cloth she can buy the garments all ready to wear? And, again, why should the woman who moans because her work is never done spend the precious moments in which she might rest, in making impossible sofa cushions and other dust catchers popularly called fancy work?

Mind you, I am not decrying any of these occupations for the woman who has time and strength to do them. But those women are not the ones who lament because they are overworked. It is the frail woman who can scarcely do the essential things, that always insists on tacking on the non-essentials, and then cries because she never gets caught up with her work. It seems as if those women are afraid they will be considered inferior if they do not do just a little more than the woman with twice their physical strength.

My idea of a sane home for the woman without a helper, is one where every unnecessary thing is eliminated. Plain white curtains for the windows, curtains which can be laundered without starch; white iron beds, like the hospital beds; a concrete floor in the kitchen, if you can't have tile, with hose and drain to wash it off instead of scrubbing; carpets and a vacuum cleaner, instead of that modern nightmare, hardwood borders, to eternally show dust, these, with all "made" dishes for the table eliminated, would surely cut down work.

Such a home would, not be artistic, but at least it would be easy to take care of.

DEBORAH.

A TEXAS WOMAN'S WEEKLY PLAN.

My plan for simplifying housework in family of six, four children under 11 years, doing family sewing, caring for chickens and occasionally helping in the garden, is somewhat as follows:

Monday.—Straighten down stairs, bake anything necessary to tide over wash day, change beds, turn mattresses, air bedding and clean room, sort clothes and put first white clothes to soak in clear water. In afternoon if there is time, I try to cut out, or plan out, garments to be made during the week.

Tuesday.—Wash, scrub floors, sort and fold clothes; sheets, towels, underwear, stockings and nightgowns folded neatly and put away.

Wednesday.—As my ironings are large I sprinkle about half the amount to be ironed, and usually bake bread and beans, or anything requiring long cooking, and can do the half of ironing during morning. In afternoon I mend any article that needs a stitch.

Thursday is very much like Wednesday, only less baking, consequently more time for reading or sewing, or, as I plan to do when possible, go to missionary meeting from 3:00 to 4:00 p. m.

Friday.—Clean rugs, silver or any other job that needs the looking after. Sometimes it's the refrigerator, and sometimes the chicken coops, if the good man has been unusually busy.

Saturday.—Clean the kitchen and porches, baking for Sunday. I usually get everything planned for Sunday as

all go to church. I like to have the afternoon to finish up odd jobs, so as to have "orderly feeling" on Sunday morning.

After Monday morning the ten-year-old daughter takes charge of upstairs and her pride is to have it "fit for inspection."

We have no gasoline engine so "the man" has harnessed the grindstone to the churn and each morning son treads pedal and brings the butter.

On Tuesday the children wash the dishes and do what sweeping and dusting is necessary. They seem to think dishwashing a very disagreeable job so, as I can remember when I felt the same way about it, I let them do other tasks which are equally helpful and cheerfully accomplished. What is sweeter to a mother's ear than a child singing at his task?

This plan does not fill any day so full but that a ride can be taken or an outing, without serious inconvenience; all hands soon dispatch necessary part, and then what fun!—N. M. K., Texas.

BOX CONSERVATION.

BY MRS. JEFF. DAVIS.

In the attic, or some out of the way place, keep one large box to be especially used for storing other boxes. Put in this, small and larger of all kinds, from pill and powder boxes to shoe boxes. Always air thoroughly before storing, as otherwise there might be a disagreeable smell clinging to them. Candy boxes come in handy when making candy for gifts, and if the contents are emptied into

another box, or dish, after receiving, or buying, the boxes are as good as new. The tin biscuit, or wafer box, is also nice to use for home-made candy, and is especially convenient for picnic lunches. Powder boxes, if well made and strong, can be used for sending small gifts. Cracker boxes come in handy for school lunches. In fact, there is always a great demand for boxes, especially at picnic and Christmas time. Keep this box well covered so the contents will always be clean and ready for use.

HOME QUERIES.

Household Editor:—Will you please tell me what to do for constipation for a child two years old? He is a bottle baby and I give him cows' milk. He doesn't care for much beside the milk.—Mrs. W.

The child needs other food besides milk. Feed him soft boiled or poached egg, graham crackers, a very little baked potato, baked apple, orange juice in the morning, beginning with a tablespoonful and increasing gradually; well-cooked farina and oatmeal. It would be well to put oatmeal water in the milk he drinks. Cook one tablespoonful of oatmeal in one pint of water one hour in the double boiler and add enough water when done so that there will be one pint. Use a quarter of this to the whole day's feeding of milk to begin with. If he has had little but milk so far do not make any sudden, radical changes in his diet. Start with the oatmeal water and add other things as you see he can digest them. Do not make the mistake of letting him decide for himself what he will eat. Your judgment should be better than his in that matter.

Household Editor:—We would like to see explained the disease, "Ophthalmia." It was mentioned in the article, "Catching Diseases," in the issue of February 28, 1914. We have received much benefit from your paper so do not wish to lose any copies.

—L. P.
Ophthalmia, or Egyptian trachoma, is a chronic destructive inflammation of the mucous membrane lining the eyelid and covering the front of the eyeball. It is associated with dirty conditions and is most common among the lower classes of immigrants, especially those coming from the orient. As it is contagious strict watch is kept at our ports of entry to turn back foreigners suffering from this disease. It is important that all persons suffering from it should be isolated.

Household Editor:—Will you insert this in the Home Query column of the Michigan Farmer? Please state a write-up about small weddings in next week's issue.—G. S.

Your question is so indefinite it is hard to answer. Do you mean a home wedding or one in the church? Are you to have bridesmaids? Are the bride's parents living? Is she a widow or a young girl? Is the wedding to take place in the country or in a city? Is it a morning, afternoon or evening affair? Is there to be music? Can the parties afford decorations, a caterer, etc.? It is impossible to tell how to conduct a wedding, unless you have some idea of circumstances.

Reader:—For dandelion wine take two quarts of blossoms, four quarts of cold water, let stand 24 hours. Put on stove and let stand 24 hours. Take off, stand until cool, strain, put in two and one-half pounds of sugar, one-half of yeast cake, two lemons, sliced, one handful of raisins, and two oranges, sliced if desired.

Poultry.

KEEP THE FOWLS HEALTHY.

Farmers are constantly complaining of the loss of some of their birds during all parts of the year. The cause of the loss can be attributed to a great many reasons. Fowls are liable to be affected by a considerable number of diseases, some of which spread rapidly through the flock and kill a large part of the birds. They may also be infected by various kinds of parasites, some of which live on the surface of the body and others in the crop, stomach or intestines. These parasites are injurious because they take a part of the nourishment which should be used by the bird to put on flesh or to produce eggs, and also because by their movements and their biting, they cause irritation and inflammation of the parts which they attack.

Do Not Crowd Hens.

Too many farmers crowd their birds in a small place and expect them to thrive. The greater the number of birds which are kept together upon the farm, and the more they are crowded into one small house, the greater is the danger from contagion and parasites. If you want to prevent disease, start right in the beginning. In talking with a farmer a few days ago I asked how he kept his birds looking so healthy. He said: "Oh, that is an easy matter. I never gave them a chance to become otherwise. Start the flock with birds that are free from contagion and parasites and put such birds upon ground which is likewise free from these causes of disease. The best way to accomplish this is to get eggs from a flock which has shown no indications of contagious disease for at least a year. Avoid putting these eggs in any packing, such as chaff or cut straw, which may be moldy or musty. Wipe the eggs with a cloth wet with diluted alcohol before they are made ready for inoculation. In nine cases out of ten the young chicks will be free from parasites and injurious germs of all kinds. Keep them in this condition by placing them in new and clean brooders and permit them to run only upon ground where poultry has not been previously kept or which has not been used for poultry for several years."

Disinfecting the Poultry Yard Soil.

These directions cannot always be followed in every respect. If all the available ground has been recently used for poultry, remove the fowls from that part which is to be used for the new flock. Apply a good coating of freshly slaked lime to the entire surface of the ground and plow it a few days later. Cultivate it three or four times with intervals of four or five days, and finally sow it to oats or rye. In a few months the greater part of the germs will be destroyed, but it is best to leave the ground unoccupied by fowls until a winter is passed. The freezing and thawing of fall and spring is more effective than either the continued cold or warm weather.

Both incubators and the hen are used on the farm to raise the little chicks. There is not as much danger from the spread of disease from the incubator as there is from the hen. The hens that are to be used for hatching must be selected from a flock that is known to be free from other diseases. Select individual birds that are lively, vigorous and free from lice and mites. Dust the hen with a good lice powder before giving her a setting of eggs and supply the nest with perfectly clean soft hay or straw. Place a box of road dust or sifted ashes under cover, where they can dust themselves whenever they come from the nest. Carefully examine the

young chicks for lice when they are taken from the nest, for these parasites usually accumulate under the throat and upon the top and back of the head. If any are found, rub pure lard or vaseline, with the finger, over the parts where the lice are located. This kills the lice by obstructing their breathing pores and does not harm the chicks.

Good Disinfectants to Use.

With careful working, a flock can be obtained which is free from disease germs and parasites, but in order to keep it in this condition the premises must be frequently cleaned and disinfected. A properly applied disinfectant kills the germs of contagious diseases, lice and the embryo of intestinal worm. Disinfect the feeding and watering troughs by pouring boiling water into them and then drying them in the hot sunshine. Make a lime-wash by adding water to some freshly slaked lime and then adding several drops of crude carbolic to the contents of the wash. Apply this by means of a spray pump or a brush, for this is a very easy way of getting the wash entirely over the house. Thoroughly apply the spray to the interior of the house, work it into all the cracks and crevices, spread it over the ceiling and floor, the roosts, dropping boards and the nest boxes. The compound solution of cresol is a good disinfectant and can be purchased ready for use. It contains 50 per cent of cresol, and one pint of it added to ten quarts of water makes a solution of the proper strength to apply to the houses or to spray over the ground.

Indiana.

T. W. HARVEY.

LEG WEAKNESS.

What makes goslings unable to walk for a few minutes and then be all right in appearance, may be, for a day, or sometimes a week?

Shiawassee Co.

E. H. E.

Some of our chickens are a month old, some two weeks, and some are younger. They first act as though they were hurt, run away, sit down, get up, tumble over, eat sitting down, go just a little, and then go down again. Have lost several and noticed more this morning. The second or third day they can't get out of the way of each other. They have free range, fresh water, milk, screenings, ground feed and are cared for if it rains. Can you suggest the trouble and a remedy for it?

Van Buren Co.

Mrs. R. C. V.

The above troubles are undoubtedly what is called leg weakness, and which attacks poultry from two weeks to six months old. It is said to be more common among cockerels than pullets and more frequent among the heavier breeds than the light ones.

The chief cause of the trouble is too rapid growth, due to over-feeding. The weight then increases faster than the strength. It is sometimes also ascribed to other causes, such as over-crowding, over-heating, and close, ill-ventilated quarters. Too much bottom heat in brooders is said to be a frequent cause.

The trouble is indicated by an unsteady gait which, as it gets worse, makes it such that the bird can not stand alone. The bird is often seen sitting while eating, and is little inclined to walk. At first nothing but the unsteady gait is apparent, the comb is red, and other things indicate health, but later the bird gets thin, feathers out poorly and is a distressed object.

The treatment is to reduce the amount of fat-producing foods, using bran, wheat and oatmeal in place of corn and corn meal. Skim-milk should be given in place of water, if possible, and it is best to give the foods in dry for instead of in wet mash. Be sure that the birds get all of the green food they want, as that is an important feature of the treatment. Rubbing the legs with tincture of arnica and adding half a teaspoonful of tincture of nux vomica to each quart of drinking water will aid greatly in the curative measures.

New Perfection Oil Cook-stove.



No Heat, Dirt or Trouble

No Smoke
No Odor
Clean
Convenient
Money-Saving

Cook With Oil and Keep Cool

Don't put up with your coal range another hot summer when a NEW PERFECTION Wick Blue Flame Cook Stove will keep the kitchen cool and make the heavy summer cooking easy.

Has a cabinet top, with warming shelves, a splendid portable oven, while the special odorless broiler broils on both sides at once. Does everything a coal range can, without its suffocating heat. A blessing on washing and ironing days. No coal or ashes to carry. A million NEW PERFECTIONS are now in use in comfortable Middle West kitchens, many all the year 'round. And the number increases, each season, by scores of thousands. Your dealer can show you the different sizes—two, three and four burner and explain their exclusive features. Ask about the newest PERFECTION with Thermos oven. See him before the first warm day, no need to endure an hour's discomfort.

72-Page Cook Book Free for 5 Cents to Cover Mailing

The Standard Oil Co., Chicago, Ill.
(AN INDIANA CORPORATION) [182]

GO TO WESTERN CANADA NOW

The opportunity of securing free homesteads of 160 acres each, and the low priced lands of Manitoba, Saskatchewan and Alberta, will soon have passed.

Canada offers a hearty welcome to the Settler, to the man with a family looking for a home; to the farmers son, to the renter, to all who wish to live under better conditions.

Canada's grain yield in 1913 is the talk of the world. Luxuriant Grasses give cheap fodder for large herds; cost of raising and fattening for market is a trifle.

The sum realized for Beef, Butter, Milk and Cheese will pay fifty per cent on the investment.

Write for literature and particulars as to reduced railway rates to Superintendent of Immigration, Ottawa, Canada, or to Canadian Government Agent.

M. V. MacInnes,
176 Jefferson Avenue,
Detroit, Mich.



ROOFING

A FREE BOOK

that will interest every building owner. It pictures, lists and fully describes roofing and roofing material of every kind. Our guaranteed roofing not only saves you money on the first cost but on its wearing qualities. We return money if not satisfactory. Save money by sending for Book No. E. S. 11.

Montgomery Ward & Company
New York Chicago Kansas City

BOOK ON Dog Diseases AND HOW TO FEED

Mailed Free to any address by the author
H. CLAY GLOVER, V. S.
118 West 31st Street New York

BEE HIVES, SECTIONS, Comb Foundation.

etc. We sell everything for the bees. Also Bees and Queens. Catalog free. Beeswax Wanted.

M. H. HUNT & SON, Box 525 LANSING, MICH.

95 cents

5 YEAR GUARANTEE

POULTRY.

EGGS From pure bred White Wyandottes, Light Brahmas, \$1.25 per 15, \$2.00 per 30. MRS. E. D. BISHOP, Lake Odessa, Michigan.

Pine Crest White Orpingtons—Bargain sale of breeding stock. Eggs one half price after June 1st. MRS. WILLIS HOUGH, Pine Crest Farm, Royal Oak, Michigan.

PLYMOUTH Rock cockerels 5 to 11 lbs., according to age, hens 5 to 8 lbs., 15 eggs \$1. Mammoth Bronze Tom Turkeys 8 to 35 lbs., according to age. Price \$3 to \$25. 10 eggs \$3. A. E. ORAMTON, Vassar, Mich.

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

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

LILLIE FARMSTEAD POULTRY
B. P. Rocks, R. I. Reds, and S. C. W. Leghorn eggs for sale, 15 for \$1.25; 30 for \$2.50; 50 for \$4.00. COLON C. LILLIE, Coopersville, Mich.

BARRED PLYMOUTH ROCKS—Cockerels all sold. Have some nice pullets and yearling hens. Eggs for hatching. OSTRANDER BROS., Morley, 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.

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

SILVER, White and Golden Wyandottes. Eggs from Whites \$1.50 per 15, \$2.50 per 30. Silvers & Golden at catalog prices. Browning's Wyandotte Farm, Portland, Michigan.

White Wyandottes—Eggs from best pens \$2 per 15; \$6 per 50; \$10 per 100; from 3 pens 75¢ per 15. David Ray, 202 Forest Ave., Ypsilanti, Mich.

Barred Rocks—All prize winners and breeding stock, at half price. Won 20 prizes last winter. W. C. COFFMAN, R. No. 6, Benton Harbor, Mich.

DOGS.

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, Shetland Pony Mares Skunk and Rabbits. Send 2c stamp. W. E. LECKY, Holmesville, Ohio.

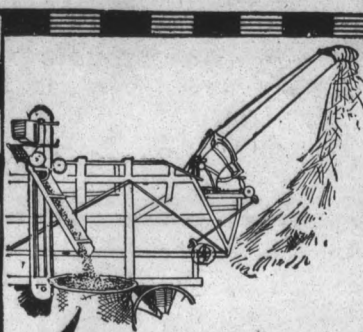
FOR SALE—Collie Pups—Sable and White, Pedigreed Heel drivers \$5 each. BUSSEL MYERS, Hillsdale, Mich.

BERRY BASKETS and CRATES.

Send for price list. We sell 200 Wax-lined Paper Berry Baskets for \$1 post paid.

Railroad Watch

To advertise our business, make new friends and introduce our catalogue of Watch bargains we will send this elegant Railroad watch by mail post paid for ONLY 95 CENTS. Gentlemen's size, full nickel silver plated case, locomotive on dial, lever escapement, stem wind and stem set, a perfect timekeeper and fully guaranteed for 5 years. Send this advertisement to us with 95 CENTS and watch will be sent by return mail post paid. Satisfaction guaranteed or money refunded. Send 95c today. Address R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.



Here's The Place For The Grain— Not In The Stack

Keep your grain out of the straw stack. Use the threshing machine that has the only correct method for getting all of the grain.

Hire A Red River Special And Save Your Thresh Bill

This threshing machine operates unlike any other. Instead of expecting the grain to drop out, the Red River Special beats out the grain just as you would beat it by hand with a pitchfork. R. N. Wilson and three other farmers of Wellington, Ohio, say: "Your Red River Special with Clover Attachment hulled our clover seed and saved it in good, clean shape. We want to recommend it." Hire a Red River Special for your work this year. Write for "Threshing Facts."

Nichols & Shepard Company
(In continuous business since 1848)
Builders of Threshers, Wind Stacker
Feeders, Steam Engines and
Oil-Gas Tractors
Battle Creek, Michigan

NIAGARA to the SEA
Richelieu and Ontario Division

**Richelieu and Ontario
Route**

**Most Pictur-
esque Water
Route in the
World.**

A voyage of never ceasing interest, through a country famed for its traditions and cool, invigorating climate.

A charming panorama of lofty cliffs, beautiful bays and quaint French settlements.

The trip begins at Niagara Falls, then through Lake Ontario and the Thousand Islands, down the Rapids of the St. Lawrence River and up the Saguenay River Canyon past those towering capes, Trinity and Eternity.

Stops at principal points enroute, including Toronto, Montreal, Quebec, Murray Bay and Tadoussac.

For particulars apply at any ticket or tourist office, or send 6 cents postage for illustrated guide. Address

Canada Steamship Lines, Limited
Passenger Dep't, Montreal

PUMP GRIND SAW Made for Hard Use

Wood Mills are Best. Engines are Simple

Feed Grinders, Saw
Frames, Steel Tanks

CATALOGUES FREE
AGENTS WANTED

Perkins Wind Mill &
Engine Co. Est. 1860
135 MAIN ST.
Mishawaka, Ind.

FREE

**Grocery
Bargain Book**

Hundreds of grocery bargains and SPECIALS from the finest and largest grocery store in the U.S. Prices much less on fresh whole-some, cleanly packaged pure foods. Every purchase guaranteed money back if not satisfactory. Lay in a supply now from our big cost cutting Grocery Book. It's free. Ask or Book No. B. S. 11.

Montgomery Ward & Co.
New York Chicago Kansas City

Farm Commerce.

MARKET METHODS IN MICHIGAN.

Total receipts at the city market of Grand Rapids reached about \$9,000 this year, or enough to pay the salaries of attendants, the interest on bonds floated to pay for the market site, and a profit for the city besides. The usual fee paid by farmers for a stall annually is \$25. The market opens at 4:00 a. m., with grocers, hucksters and commission men as the principal buyers, and business is practically over by 7:00 a. m. The number of households represented, with purchases in a retail way, is relatively small, but seems to be slowly increasing. It is essentially a wholesale market with stuff bought to be resold once, and in the case of brokers and commission houses two or more times. A market rule prohibits reselling of stuff on or near the market space, a practice that hucksters have been known to indulge in. Hay, straw, wood and other supplies are also sold on this market later in the day. In the fruit season loads are often brought in by growers living 10 to 15 miles away.

Without a doubt farmers can get more money for their stuff by dealing directly with city consumers on the market, and the consumers also profit by this deal. This problem will no doubt be fully worked out some day, but meantime toll must be paid to the middlemen. It is up to Grand Rapids and other cities to provide the retail buyers at the markets in sufficient numbers so that the producers may dispose of their loads promptly. The farmer is a business man and his time should be as valuable as the banker's.

Battle Creek is taking first steps toward a city market. The market at Jackson continues to thrive, largely because the city officials are pushing it. At a recent meeting of the Summit Farmers' Club, of Jackson county, two of the officials of the Jackson market were present and explained that they were trying to cater to the farmers and to secure their co-operation. After discussion the Club endorsed the market and offered its assistance in making the enterprise a success. The market master of Jackson also attended the recent meeting of the Napoleon Farmers' Club and assurances were made of co-operation on the part of members.

Speaking of the possibilities of co-operation on the part of the farmers of any community, the editor of the Jackson Patriot says: "Designate one member to bring to the market on certain days such articles as the men or the women may have for sale. This man will look after the entire transaction and make his returns to the different parties having part in the venture. This would be true economy of time and effort, and without doubt the organization would soon establish a reputation among patrons of the market that would make the sale of their products a certain and quick process." The cheese makers, the creamery people, the fruit growers and others are finding great advantage in co-operative efforts. Why not the farmers?"

Kent Co.

ALMOND GRIFFEN.

FEDERAL REPORT ON THE CEREAL CROPS.

Wheat.

From the condition of the wheat crop, including both winter and spring wheats, as reported by the government crop reporters, it is estimated that there will be harvested in this country this year 900,000,000 bushels. These figures exceed the yield of 1913 by 183,000,000 bushels, and the average for five years from 1909 to 1913 by 214,000,000 bushels. These figures taken together with those gathered from private sources, show the wheat

crop to be in an unusually promising condition and indicate that with conditions continuing normal from now on the yield will establish a new high record for the country.

The winter wheat is more promising than the spring wheat, the condition on June 1 being 11.9 points above the ten-year average, while the condition of the spring wheat is but 2.9 points above the average for the past ten years. The yield of winter wheat is put at 638,000,000 bushels and of spring wheat at 262,000,000 bushels. In 1913 the yield of winter wheat was 523,000,000 bushels and of spring wheat there were 240,000,000 bushels. Missouri, Virginia and North Carolina are the only states where the condition is put below 90 points. The condition of Michigan's crop is given at 92 as compared with 88 for the ten-year average. Her crop for this year promises to be over a million bushels greater than it was in 1913. Missouri is the only important wheat growing state where the ten-year average is above the present estimated condition.

Oats.

According to the government reports the acreage of oats for 1914 is the same as it was in 1913. The condition on June 1, however, was 2.5 points above the condition on June 1 of 1913, but only 0.9 points above the ten-year average mark. The yield promises, therefore, to be 94,000,000 bushels greater than for last year and 85,000,000 bushels above the ten-year average. Michigan's crop is reported five points better than the average for ten years and her acreage is one per cent above that of 1913. This gives her promise of a crop of 50,200,000 as compared with an average crop of 47,021,000 bushels for the year from 1909 to 1913.

Barley.

The acreage of barley for the country is estimated at 0.4 per cent above the amount sown in 1913 and the condition is 8.4 per cent higher than a year ago and 5.4 per cent better than the ten-year average. This gives a prospective crop of 206,000,000 bushels against a yield of 178,000,000 bushels a year ago, and a five-year average of 182,000,000 bushels.

Rye.

The condition of rye on June 1 was 93.6 compared with 90.9 on June 1, 1913, and 89.7 as an average for the ten years ending 1913.

Hay.

The condition of hay for the country is 89.8 for June 1 as compared with 87.5 for June 1 of 1913, and 87.4 for the six-year average ending 1913.

It would appear from the above review of the government figures that the outlook for the principal farm crops for this coming year is the best in the history of America. Since the first of June a few reports of damage have come to hand, but the general situation is most promising.

Crop and Market Notes.

Michigan.

Ottawa Co., June 8.—On account of frequent heavy rains, about 40 per cent of the corn is not planted at this date, June 8, and much of the corn that was planted had to be replanted, because of rotting. So the prospect for a good crop in this section is not very promising. Some fields of oats were injured by the wet weather and wireworms. The prospect for a heavy crop of hay and wheat was never better. There will not be as much clover as usual because last year's seeding was badly winter-killed. Farmers are increasing the acreage of alfalfa, and some fine fields can now be seen in some neighborhoods, which will soon be ready to cut. A large acreage of peas was sown this spring for the canning factory at Coopersville. As peas have to be harvested in haying time, and wheat will be fit to cut earlier than usual, it is going to make farmers hustle some in this vicinity if they find much time to cultivate corn when it ought to be done, because this crop had to be planted so late.

S. E. Mecosta Co., June 4.—A full acreage crop of corn is being planted but it is later than usual; some are just finishing now, June 4. More potatoes will be planted but less beans than common. Probably less pickles will be raised this year than last. Heads showing a little in clover meadows. Rye is headed and looks good, as does wheat. A full average amount of oats were sown this spring. New seeding is starting out fine. No spraying been done around here but

weather has favored plums as it was too cold for insect enemies early in the spring. Apple bloom heavy; cherries fair; strawberries fair; briars were hurt by winter, as were the peaches.

Southern Hillsdale Co., June 4.

Wheat, oats and grass are all in prime condition and promise a heavy crop. A large acreage of corn is being planted, some being cultivated, and much more to plant. But few potatoes going in as this is not a good potato country. The weather is ideal. Fruit trees badly affected by scale. Orchards most all dead or dying. Small fruit also badly affected. But little spraying being done; but little after blossoming, if any. All farm crops bringing good prices. Eggs 18c; butter 20@30c; cows from \$35@150, according to quality. Hogs 8c; oats 38c.

Washtenaw Co., June 6.

At this date farmers are still planting corn. A large acreage is being put out. Corn is by far the most important farm crop here. A large per cent is up and the stand is extra good. About the average amount of potatoes are being planted, most farmers putting out from one to ten acres. Oats are coming along fine. Wheat and rye promise more than an average yield. Hay prospects not as good, the drought of last summer put the old meadows in bad shape. I think about 75 per cent of an average yield. Fruit prospects are good. Strawberries are turning, and a large crop of them. Almost every orchard is being thoroughly sprayed. Wool 18c; eggs 17c; butter 28c; potatoes 75c. The last of the hay is being hauled to market at \$12 @13 per ton. The ground is full of moisture and crops growing fast.

Mecosta Co., June 5.—June has been an exceptionally good month. Hay and rye will soon be out. Indications point towards a good fruit crop. The usual acreage of spring crops has been put in. Everything looking well. Potatoes 60c; wool 20c; butter-fat 24c; eggs 18c; veal 8c; hogs 7½c; cows \$40@65; horses \$100@250. A large number of automobiles are being sold to farmers.

Monroe Co., June 8.—Corn planting delayed by rain. Much yet to go in. Some oats did not come up, but those that did, and wheat and grass, are making good growth. Hay will be a good crop. Hogs are being marketed. Strawberries are ripening. Not much fruit sprayed, especially after blossoming. Milk at farmers' stand \$1 per cwt; butter 27@28c; dairy 25c; eggs 20c; potatoes \$2.50 per 150 lb. sack; pork 10½@11c; fowls, alive, 15c; do. dressed 20@22c; timothy hay \$14@15 per ton; clover \$11@12.

New York.

Columbia Co., June 9.—Corn not all planted, oats are late, pastures are fair and meadows poor. Rye looks well; apples good; pears are dropping off badly and there are no peaches. The tent caterpillar is injuring many apple trees. Hay \$20; rye straw \$17; eggs 24c; butter 32c.

Pennsylvania.

Lancaster Co., June 8.—Crops are promising here. Peaches are a failure; plums good and apples scarce. Not much spraying done. Eggs 18c; butter 30c; calves 9c; steers 8½c; chickens 12c; ducks 14c; spring chickens 25c per lb.

Ohio.

Greene Co., June 8.—May was a dry month for us. Usual amount of corn planted, but fewer potatoes. Not much spraying being done and very little blossoms except on the early varieties. Wool has advanced in price. Hogs are down a little. Our wheat fields are infected with the Hessian fly quite badly.

Drake Co., June 8.—Tobacco planting has begun and there is much complaint that the plants are rotting. Rains have relieved the lack of moisture and corn is growing nicely. Wheat will be only a medium crop. The acreage of potatoes will be about the same as last year. Fruit promises to be a scarce crop here. Eggs 17c; butter 25c; hogs 8c; cattle 6c.

Shelby Co., June 5.—Fine weather at present with a little scarcity of rain for meadows and wheat. A large acreage of corn is planted and has started fine. Potatoes are slow in starting. Fruit was all frozen in this section. No spraying done after blossoming as the frost killed the blossoms. Eggs 17c; butter-fat 23c; corn 96c per cwt; wheat 90c; oats 37c; potatoes \$1; hogs \$7.80 per cwt.

Wayne Co., June 8.—Have had fine growing weather past three weeks, with a hard rain on June 4, causing some damage to trees and property. Wheat prospects fair. Corn is fine. Meadows are fair, while oats are looking good. Usual acreage of potatoes planted. Cherries plentiful; apples fair, but not many peaches. Not much spraying done. Locusts are here in plenty. Potatoes 75c; butter 20c; eggs 18c.

(Continued on page 630).

Farmers' Clubs

CLUB DISCUSSIONS.

Discuss Cash Value Assessments.—The May meeting of the Assyria Farmers' Club was held at the pleasant home of Mr. and Mrs. A. T. Shepard. Owing to the busy season the crowd was slow in gathering, but about 100 sat down to the dinner. President Hartom called the meeting to order after dinner and the program was opened by two songs by the Young People's Chorus which were greatly enjoyed. Following opening exercises and a good musical and literary program, which included an appropriate Memorial Day selection, the discussions for the day were opened. As Mr. Gibson was not able to be present with his address, Louis Norton was called upon and made a few general remarks in regard to growing old. County Treasurer Reams being called upon, followed with a few remarks along the same line, saying in part that a man who is no older than he feels. He then introduced the subject of the new method of assessing which is causing so much argument this year. This brought forth discussions from L. Norton, A. T. Shepard, Mrs. C. Cox and others. Mr. A. T. Shepard then brought forward the Decoration Day thought and asked that while we decorate the graves of our departed soldiers, we forget not the handful that are living. This was followed by a few remarks by I. W. Cargo. The "Road Bee" question was then brought up and President Hartom authorized to call a meeting at the town hall to discuss the subject in this township. The Club sang America and adjourned to hold its June meeting with Mr. and Mrs. C. Fruin.—Alige G. Thomas, Reporter.

Observe Memorial Day.—The Memorial services of the Marion Farmers' Club were well attended. The exercises were held in the Lake schoolhouse and from there the children led the march to the cemetery where the graves of the soldiers were decorated with flags and flowers. Rev. L. S. Brooks gave the Memorial address which was much enjoyed by all. Mrs. H. H. Hall read a very interesting poem comparing the battles of war with the battles of life. Recitations were also given by Clara Pfau, Irene Smith and Myrtle Beach. The Club enjoyed the presence of several visitors. The next meeting will be held on June 25 at the home of Mr. and Mrs. Irving W. Hart.

Question Box an Important Feature.—Another very interesting and profitable meeting of the Howell Farmers' Club was held at the home of Mr. and Mrs. Arthur Smith, Thursday, June 4, with President S. M. Yerkes in the chair. Following a good program the Question Box, which contained twelve live questions, received the attention of the members, including the following: "What time would you turn pigs in peas and oats?" On this question there was a difference of opinion. Some said when you needed the feed; others, when they were podding; others, when they were just right for table use. "Is the farmer duty-bound to increase the production of his acres in order to decrease the high cost of living?" On this question there was quite a difference of opinion. Some thought that if all farmers should double the quantity per acre, the price would go down, and they would have to handle the extra amount and not receive any more profit than upon a smaller yield, while others thought there was not any danger of raising a surplus. "Does it pay to raise a great many little chicks if you have to buy the feed?" This question led to quite a discussion of purchasing feed for all kinds of stock. Some thought it would not pay, while others thought it was the same as cash if you fed the grain you raised upon the farm. Still others could not see any difference between buying feed for hens and chickens or hogs and Holstein cattle. While the men generally practiced the latter, they did not seem to think it profitable to buy for the former. To some this reasoning seemed quite illogical. However, they thought that in the last analysis the real reason would be that generally speaking, the men pocketed the proceeds from the hogs and cattle, while the women claimed the egg money. "Would you deem it advisable to return to the old method of constructing roads under the pathmaster system?" This question was thoroughly discussed. There was some dissatisfaction with the new law, and still it was not thought advisable to return to the old system, but rather a return in the new law.

Grange.

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

AMONG THE LIVE GRANGES.

A Penny Social.—A good meeting is what they all said who were present at the first June meeting of Nunica Grange. After the business session, all returned to the lower hall to enjoy themselves with a penny social which was given by the Grange. Several attractive booths were arranged among which were a fish pond, candy booth, refreshment stand, fortune telling, and a police station booth. Several arrests were made but the offenders, however, were fined only one cent each. At the next meeting this Grange will decide whether it will buy the hall or not.

Charlotte Grange held its regular meeting Wednesday evening, June 3, and aside from a few matters of minor importance the greater part of the time was taken up in committee meetings in preparation for the big Grange rally June 13. Mrs. Willis Miller was appointed chairman of the committee to look after the selection of materials for the Grange exhibit at the fair next fall. The program was in charge of Miss Lulu Hudson, and that young lady furnished a splendid evening's entertainment. The first number on the program was a song by Mrs. Ford and daughter, and so well was the number rendered that the audience demanded an encore, which was in keeping with the first number. Little Miss Agnes Martin gave a recitation which made a decided hit, and a reading by Mrs. Volney Palmer was well received. The Misses Adelaide Hart, Florence Cole and Catherine Satter rendered some fine music, including a violin duet, vocal solo and violin solo, with piano accompaniment. Mrs. Klais gave a fine talk on flowers and demonstrated the fact that she had her subject at her finger ends. Little Hughy Stall brought down the house with a recitation and added greatly to the reputation he has already established as a clever little entertainer. Mr. Henry Zander gave a splendid talk on the "Social Center of the Grange."

New Grange Entertains Pomona.—Ionia County Pomona Grange met with Belding Grange, May 28. Belding is the newest Grange in Ionia county and the only one organized in an incorporated city. This was a booster meeting, as Belding Grange is only 35 days old. And it can well feel proud of the good will shown them by the surrounding Granges. There were 43 visiting members from 18 different Granges present, who enjoyed interesting and instructive talks by Hon. Thos. McNaughton and Master J. C. Ketcham. Bro. McNaughton spoke of the work in the Legislature, and recommended a legislative committee for each subordinate Grange to circulate initiative petitions, in order to secure some much needed legislation. Master Ketcham boosted Michigan as a Grange state. Thirty-two states in the Union have subordinate Granges and Michigan ranks third in membership, and has more Granges than any other state. There are subordinate Granges in 82 of the 83 counties in Michigan, Keewenaw being the only county without a Grange. He recommended the passage of the Torrens system of land transfer bill, in the Legislature. Also the Bathrick bill by Congress. The lecturer had a fine program, consisting of songs and recitations. The Pomona Grange gives a pennant to subordinate Grange in the county having the largest delegation of visitors present at a Pomona meeting. Banner Grange won the pennant. After singing the following song the members departed for their homes, wishing Belding Grange the very best of success.

What's the matter with Belding,
She's all right,
What's the matter with Belding,
She's all right,
Her Grangers are all a jolly band,
They give Pomona the warm, glad hand,
What's the matter with Belding,
She's all right,
What's the matter with Belding,
She's all right,
What's the matter with Belding,
She's all right,
She welcomes us with face so gay,
We all of us say, as we go away,
What's the matter with Belding,
She's all right.

COMING EVENTS.

Genesee County Pomona Grange meets with Burton Grange on Friday, June 26, 1914.

Registered Percherons, BROOD MARES, FILLIES AND YOUNG STALLIONS at prices that will surprise you. L. C. HUNT & CO., Eaton Rapids, Michigan.

FOR SALE—Registered Black Percheron Stallion, wt. 1850 lb., would take span young mares in part payment. Write for particulars. Box 576, E. Lansing, Mich.

BREEDERS' DIRECTORY.

CATTLE.

Angus Cattle For Sale

On account of other business requiring additional time and capital, we will sell half or entire interest in 30 head registered Angus cattle. Bull calves for three years sold at an average of \$174.50. Will sell on easy terms to right party. Come help harvest alfalfa and will pay expenses here, and show you an opening at \$2000.00 per year, profits if you buy.

GEO. B. SMITH & CO.
Addison, Michigan.

ABERDEEN-ANGUS

HERD FOUNDED IN 1900.

Strains represented consist of Trojan, Erica, Blackbirds and Prides, only. Black Quality Itto, a bull of rare individuality and merit, heads the herd.

WOODCOTE STOCK FARM, Ionia, Mich.

FOR SALE—2 Reg. Guernsey bulls 2 and 4 years old 2 bull calves best breeding. Pedigree off spring show. Berkshire swine either sex.
JOHN EBELS, R. R. 10, Holland Michigan.

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

GUERNSEY BULL CALF For Sale, dropped breeding dam under A. R. Test, class E. 112 lbs. fat in 72 days. Low price if taken at once.
J. K. BLATCHFORD, Auditorium Tower, Chicago, Ill.

GUERNSEY BULL—Coyne No. 27390: Heifer at a bargain. G. A. WIGENT, Watervliet, Mich.

For Sale—2 Guernsey Bulls, 2 and 1 month old, eligible to registry, pedigree and price on application.
JOSEPH WYATT, R. No. 3, Standish, Michigan.

We have for sale a number of pure Guernsey cows, heifers and bulls, also Berkshire hogs.
VILLAGE FARM, Grass Lake, Michigan.

Ypsilanti Herd—Offer bull calves, choice A. R. O. breeding, \$100 and up.
COLE BROTHERS COMPANY, Ypsilanti, Michigan.

HOLSTEINS & BERKSHIRES—Stock guaranteed reasonable. B. B. REAVEY, Akron, Mich.

\$75 Buys large, nicely marked 9 months registered Holstein Bull, sired by \$300 son of John Hengerveld Lad and from A. R. O. Dam.
RIVERVIEW FARM, R. No. 8, Vassar, Mich.

THE THREE BEST HOLSTEIN CATTLE
Poland China Hogs and S. O. White Leghorns.
FOREST SIDE STOCK FARM
M. H. Chamberlain Jr. Prop., Romeo, Mich.

\$25 DELIVERED—Holstein bull calf, two-thirds white. By 25 lb. butter bull; out of 14000 milk cow. Thoroughbred, but not eligible to registry. Large and handsome.
ROUGEMONT FARMS, Detroit, Michigan.

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

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

ESPANORE FARM,
LANSING, MICH.

Register'd Holsteins

Bull Calves \$50 to \$200.

An absolute guarantee with each purchase.
CHASE S. OSBORN, Owners, L. M. HATCH, ADAM E. FERGUSON, Supt.

Holsteins—11 High Grade Holstein heifers from Heavy Milkers. Also Registered Bull. Price for the bunch \$1000 F. O. B. J. C. BARNEY, Coldwater, Mich.

BIGELOW'S HOLSTEIN FARMS
Breedsville, Michigan.
Breeder of high class

Registered Holsteins.

"Top-Notch" Holsteins.

Choice bull calves from 2 to 8 mo. old, of fashionable breeding and from dams with official milk and butter records for sale at reasonable prices.
MOPHERSON FARMS CO., Howell, Michigan.

A. R. O. HOLSTEIN COWS FOR SALE.
6 very fine A. R. O. cows, bred to Johanna Concordia Champion, and Duke Ormsby Pieterje DeKol. Price \$1850. Service bulls and bull calves. Kindly write me just what you want.
L. E. CONNELL, Fayette, Ohio.

Holstein Bull—30 lbs. dam. 125 lbs. in 30 days. 2 yrs. old, mostly white and a beauty. Write for photo, etc., or come and see him. **HOBART W. FAX, Mason, Michigan.**

For Sale—Eight choice registered Holstein yearling heifers, some are bred. Also four cows.
E. A. BLACK, R. No. 6, Lakeview, Michigan.

MICHIGAN HOME AND TRAINING SCHOOL
LAPEER, MICHIGAN.
Breeder of High Grade Holstein Cattle. Lists and prices upon application.

A FEW CHOICE Holstein Friesian Bull Calves for Sale. A. R. O. Stock.
GREGORY & BORDEN, Howell, Michigan.

SIX Choice Holstein Friesian bull calves from one to twelve months old for sale. **MICHIGAN FARM COLONY FOR EPILEPTICS, Caro, Michigan.**

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 28.47 lbs. No stock for sale. W. B. Reader, Howell, Mich.

Purebred Registered HOLSTEIN CATTLE
The Greatest Dairy Breed
Send for FREE Illustrated Booklets
Holstein-Friesian, Assn., Box 164, Brattleboro, Vt.

JERSEYS—Bull calves nearly ready for service. Sired by Jacoba's Fairy Emanon 107111.
SMITH & PARKER, Howell, Michigan.

MAPLE Lane Register of Merit Jersey Herd—Tuberculin tested by U. S. Government. Bull calves from cows in R. of M. test. Heifer calves whose dams, grand-dams, and great grand-dams are in the Register of Merit.
IRVIN FOX, Allegan, Michigan.

Grade Up

Buy a Thoroughbred Jersey Bull

You can buy cows of high producing value you may develop them. The bull is the most important factor in development. A thoroughbred Jersey bull pays big returns on his cost every year. Let us send you some Jersey facts.

The American Jersey Cattle Club
324 West 23d Street, New York City

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.
COLON C. LILLIE, Coopersville, Mich.

Jersey Bulls Yearling and two-year-old. Eligible to register. Splendid breeding. Price right. Address **LEWIS RILEY, Metamora, Mich.**

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

BUTTER BRED JERSEY BULLS
CRYSTAL SPRING STOCK FARM.
Silver Creek, Allegan County, Michigan.

FOR SALE—14 Polled Durham & Shorthorn Bulls from 4 to 24 months old. C. CARLSON, LeRoy, Mich.

Shorthorn Bulls For Sale—One roan 3-yr-old weighing a ton. Price \$250. Also 3 calves 6 mo. old, from good milking cows. M. A. BRAY, Okemos, Mich.

DAIRY BRED SHORTHORNS of best Bates strains, 26 yrs. a Breeder. Bulls all sold. J. B. HUMMEL, Mason, Michigan.

Shorthorns \$500 buys two cows three and four yrs. one yearling heifer and two calves 1 month. A. A. PATTULLO, Deckerville, Michigan.

Shorthorns—Bulls and females, all ages. Tell just what you want. Also P. C. Hogs, Oxford Sheep, C. W. Crum, Sec. Cent. Mich. Shorthorn Ass'n. McBrides, Mich.

SHORTHORN CATTLE
W. W. KNAPP, Howell, Michigan.

SHEEP.

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS "The Shepherds of the East." I sell and ship everywhere and pay express charges. Write for club offer and price list. Oxfords, Shropshires and Polled-Dorsets.
PARSONS, GrandLedge, Mich. R. 1.

Leicesters—Yearling and ram lambs from Champion flock of Thubm of Mich. Also select Berkshire swine. **Elmhurst Stock Farm, Almont, Mich.**

HOGS.

Ducks & Victorias—A few extra Sept. Boars and bunch of Gilts for 1st of April farrow.
M. T. STORY, Lowell, Mich., Citizens Phone 55.

BERKSHIRE—Choice fall Boars and Gilts of select breeding, also spring pigs. Priced to sell.
WHITE OAK FARM, R. No. 4, Brown City, Mich.

Chester Whites—Reg. Bred Gilts—Orders taken for spring pigs and Colbie pigs. Holstein Bulls at Bargains. **FAY B. PARHAM, Bronson, Mich.**

CHESTER WHITES—The long type, prolific kind. A nice lot of spring pigs.
MEADOW VIEW STOCK FARM, Holland, Michigan.

O. I. C's—Spring pigs, get my price before you buy elsewhere. **CLOVER LEAF STOCK FARM, R. No. 1, Monroe, Michigan.**

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

O. I. C.—Take orders for spring pigs. One 8 mo. fine type Jersey Bull. Price reasonable.
N. H. Weber, Oak View Farm, Royal Oak, Michigan.

O. I. C.—Choice pigs, two to four mos., the long bodied kind. One choice gilt bred for August. **ALVIN V. HATT, Grass Lake, Michigan.**

O. I. C.—Sows bred for June farrow. We are also taking orders for spring pigs.
JOHN BERNER & SON, Grand Ledge, Mich.

O. I. C.—Bred sows and spring pigs, large and growthy. Pairs and trios, not akin. Write your wants.
GLENWOOD STOCK FARM, Zeeland, Mich.

O. I. C.—gilts bred for June and July farrow. Also Spring pigs. Serviceable boars all sold. I pay express. **G. F. ANDREWS, Dansville, Mich.**

O. I. C's All sold. Would be pleased to book your order for spring pigs.
C. J. THOMPSON, Rockford, Michigan.

O. I. C.—Three September Boars, four September Gilts. Am also taking orders for spring pigs, they are extra good ones.
NEWMAN'S STOCK FARM, R. No. 1, Mariette, Mich.

O. I. C's—Large boned, shipped on approval, pairs not akin, registered free.
J. W. HOWELL, Elsie, Michigan.

O. I. C's—Spring pigs, pairs and trios, not akin, from state fair winners.
AVONDALE STOCK FARM, Wayne, Michigan.

O. I. C.—Boars six months old, spring pigs, gilts. Satisfaction guaranteed.
A. R. GRAHAM, Flint, Michigan.

O. I. C. Swine—May I have the pleasure of receiving your order for a pair or trio, not akin, of April and May farrow. They are bred right. Satisfaction guaranteed. **A. J. GORDEN, R. No. 2, Dor, Mich.**

DUROC JERSEYS—Fall gilts of the large, heavy boned type, bred for Aug. and Sept. farrow. Also spring pigs, not akin. **F. J. Drott, R. 1, Monroe, Mich.**

DUROCS—A good growthy fall pig immuned and bred for August farrow will make you money. Give me your order now for May shipment. Also fall boars ready for service.
KOFE KON FARM, Kinderhook, Michigan.

DUROC PIGS—10 weeks old. Large, growthy, and from big litters. \$10 to \$15 each, registered in purchaser's name. We guarantee satisfaction. **Kenwahl Farm, Swanton, Ohio.**

FOR SALE DUREC JERSEYS—College Boy 138557 farrowed Sept. 7, 1911. Spring pigs after June 1, 1914. **J. H. BANGHART, Lansing, Michigan.**

Fancy bred Duroc Jerseys—Boars & Gilts of spring & summer farrow. Good individuals at reasonable prices. **John McNicoll, Station A. R. 4, Bay City, Mich.**

KORN-EL STOCK FARM now offer Duroc Jersey pigs of either sex at reasonable prices.
E. R. CORNELL, Howell, Michigan.

DUROC JERSEYS—Spring pigs either sex at reasonable prices. S. O. STAHLMAN, Cherry Lawn Farm, R. 2, Shepherd, Mich.

Breeders' Directory continued on page 631.

Markets.

GRAINS AND SEEDS.

June 16, 1914.

Wheat.—The approach of a bumper crop of wheat has had a depressing effect upon prices, which show a gradual tendency downward. Weather conditions have favored the crop right along and it will take changes of unusual character to cut into the supply to an extent that will get values above the present basis. Europe is still buying and there is a considerable volume of orders waiting for prices to recede a little more. A year ago the price was \$1.05 per bushel. Quotations for the week are:

	No. 2	No. 1	July
Wednesday	95	94½	86¾
Thursday	94	93½	85¾
Friday	93	92½	85½
Saturday	93	92½	85¾
Monday	92½	92	85½
Tuesday	92	91½	84¾

Chicago, (June 16).—No. 2 red wheat 91½c; July 83¼c; Sept., 81½c.

Corn.—Values have been well maintained considering the bearish influence of wheat and the favorable weather prevailing over the corn belt. The shortage of supplies and failure of Argentine shipments to measure up to expectations aided the bulls. Last year's price was 62c for No. 3 corn. Quotations for the past week:

	No. 2	No. 2
	Mixed.	Yellow.
Wednesday	74	75½
Thursday	74	75½
Friday	73½	75
Saturday	73½	75
Monday	73½	75
Tuesday	73½	75

Chicago, (June 16).—July corn 70¾c per bu; Sept., 67¾c; Dec., 57¾c.

Oats.—Market holds about steady. Crop is suffering in some sections for lack of moisture. A year ago the price for standard was 44¼c per bu. Quotations for the past week:

	Standard.	No. 3
	White.	White.
Wednesday	43½	44
Thursday	43½	43
Friday	43½	43
Saturday	43½	43
Monday	43	42½
Tuesday	42½	42

Chicago, (June 16).—July oats 39¼c; Sept., 37¾c; Dec., 57¾c.

Beans.—Dull and lower. Quotations: Immediate and prompt shipment at \$1.95; June \$1.97 per bu. Chicago reports quiet trade. Pea beans, hand-picked, choice, are steady at \$2.20@2.23; common \$2@2.15; red kidneys choice \$3.20@3.25.

Rye.—This cereal is steady. No. 2 is quoted at 66c per bushel.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent \$5.30; second \$4.90; straight \$4.50; spring patent \$5.10; rye flour \$4.40 per bbl.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$28; standard middlings \$28; fine middlings \$32; coarse middlings \$31; cracked corn \$32; corn and oat chop \$28.50 per ton.

Hay.—Market is higher; offerings limited. Carlots on track at Detroit are: No. 1 timothy \$17@17.50; standard \$16@16.50; No. 2, \$15.50@16; light mixed \$16@16.50; No. 1 mixed \$13.50@14; No. 1 clover \$13@13.50.

New York.—Market steady. No. 1 timothy \$22.50; No. 3 to No. 2 \$17.50@21.

Chicago.—Market is easier. Choice timothy quoted at \$17@17.50 per ton; No. 1, \$14.50@15.50; No. 2, \$12.50.

Straw.—Steady. Rye \$8@8.50; oat straw \$7@7.50; wheat straw \$7@7.50 per ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Market is firm with prices 1c higher. Extra creamery 26½c per lb; firsts 25½c; dairy 18c; packing stock 16c.

Chicago.—Market easy, with prices higher. Extra creamery 26¾@27c; extra firsts 25½@26c; firsts 22@24c; seconds 20@21½c; packing stock 17½@18c.

Elgin.—Market is firm at 27½c per lb., which is ¾c higher than last week.

New York.—The market is steady. Prices 1c higher. Creamery extras 27½@27¾c; firsts 25@27c; seconds 23@24½c; packing stock 17@17½c.

Eggs.—Market is active, with fresh stock selling at 19½c per dozen.

Chicago.—Market steady at prices averaging ¼c lower than last week. The demand is better and the supply not as great. Miscellaneous lots,

cases included 16@18c per dozen; ordinary firsts 17@17½c; firsts 17½@18¼c.

New York.—Market is easy. Prices unchanged. Fresh gathered extras 23@24c; firsts 20@21½c per dozen.

Poultry.—Market is firm with prices higher for broilers. Live—Broilers, 30@32c per lb; hens 14c; geese 10c; ducks 14@15c.

FRUITS AND VEGETABLES.

Potatoes.—Old potatoes easy with prices slightly lower than last week. Quotations: In sacks, 85@87c per bu. At Chicago prices were lower but good stock found a waiting demand. Good Michigan round white quoted at 75@80c per bu.

Strawberries.—In good demand; Michigan 16-qt. cases quoted at \$1@1.25. At Chicago berries are meeting with fair sale. Many of the berries are poor and have to be sold to canneries. Prices unchanged. Ordinary to good Michigan berries \$1@1.50 per 16-qt. case.

WOOL.

Unusual strength prevails and prices are advancing, due chiefly to the realization on the part of manufacturers that the supply is short and that if they are to get raw material to fill current orders they must buy now or pay higher. Fleeces are now going forward and are selling in Boston at 27@28½c for delaine and quarter-bloods. Michigan quotations there range from 26@27c for unwashed delaines; 26@29c for unwashed combing and 23@26c for unwashed clothing.

DETROIT EASTERN MARKET.

Trade is increasing in volume. Strawberries are coming in freely and on Tuesday the price ranged from \$2.25@3 per 24-qt. case; lettuce was selling from 10@25c per basket; beets 7@10c per bunch; asparagus 5c per bunch; radishes 3@4c; green peas \$1.50@2.25 per bu; loose hay \$17@20 per ton.

THE LIVE STOCK MARKETS.

Buffalo.

June 15, 1914.

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

Receipts of stock here today as follows: Cattle 172 cars; hogs 130 d. d.; sheep and lambs 12 d. d.; calves 1700 head.

With 172 cars of cattle on the market here today, weather warm, and 19,000 and lower reported in Chicago, with the exception of a few strictly prime heavy weight cattle that sold here early this morning at about steady prices, the balance of the heavy weight cattle, and especially those that lacked quality and finish all sold from 20@30c per cwt. lower. However, the best female stuff sold about steady, especially the dry-fed kind. The grass cattle sold mostly from 25@50c per cwt. below the dry-fed kind. Heavy dry-fed bulls 25c lower. Light and common bulls 25@50c lower. Dairy cows dull and \$3@5 off again. At the close there are about 20 loads of cattle yet unsold.

We had the heaviest run of hogs of the season here today, about 130 double decks, and generally a bad market all around. While the trade was active, prices were a dime lower and our market at the present time looks a little too low compared with other points, but had entirely too many hogs, and in order to dispose of them had to put the price down where it looked attractive. All good grades sold at \$8.40; pigs \$8.10; roughs \$6.75@7.25; stags from \$6@6.75. Trade closed active and we look for stronger market balance of week.

The market was active today on lambs and sheep. Prices steady with the close of last week. Choice handy clips selling mostly at \$8.50@8.75. We look for steady prices last of the week, with moderate receipts.

We quote: Spring lambs \$9.50@10; cull to fair \$8.50@9.25; yearlings \$8@8.75; bucks \$3.50@4; handy ewes \$5.25@5.50; heavy ewes \$4.35@4.50; wethers \$6@6.50; cull sheep \$3@4; veals choice to extra \$10.50@10.75; fair to good \$8.50@10.25; heavy calves \$5.50@7.

Chicago.

June 15, 1914.

Cattle. Hogs. Sheep. Receipts today..20,000 40,000 17,000 Same day 1913..18,277 47,006 18,895 Last week ..42,509 142,527 76,879 Same wk 1913..42,950 148,170 90,127

The usual Monday slow opening in the cattle trade was seen today, although as the weather was cool and cattle did not drink heavily, there was no reason why buyers should hold back. Early sales were at steady prices, but no one could tell how the market would close. Hogs were active at firm prices. Those marketed

last week averaged 233 lbs. The sheep and lamb market was called about steady for clipped flocks, although there were no early sales of prime lambs. Packers were bidding refusing to pay over \$9.25 for prime spring lambs, but outsiders made a few purchases early at \$9.40@9.50.

Cattle met with a very moderate general demand nearly all the time, because of the dearthness of beef everywhere, and summer trade runs very strongly in favor of handy fat steers and butcher stock, while only a few choice heavy beefs are needed. However, most of the long-fed cattle have been marketed already, and sales last week of prime beefs at \$8.85@9.30 comprised but a small number. Steers sold mainly at \$7.85@8.80, with the best cattle 5c higher than a week earlier. Common to fair light steers went at \$7.35@8, medium grade steers at \$8.10@8.45, good lots at \$8.50@8.80, and yearlings at \$8.50@9.10 for good to prime and at \$7.85 and upwards for commoner kinds. The market for butcher stock suffered a decline for the week of 15@25c, cows and heifers going at \$5.15@8.50, while cutters sold at \$4.55@5.10, canners at \$3.50@4.50 and bulls at \$5.25@7.70. Trade in stockers and feeders was only moderate, although there were further reductions in prices that left them 50@75c lower than at the high time a few weeks ago. Sales ranged at \$5.90@8.25, with a few prime heavy feeders at \$8.10. Calves at the best time of the week brought \$5@8.25 for heavy kinds and \$9@10.50 for light vealers, with the late top \$10.25. Stock steer calves brought \$7.50@8.25, and stock and feeding cows and heifers brought \$5.50@7.45. A larger business was accomplished in milkers and springers at \$6@95 per head.

Hogs are slower to advance nowadays after declines in prices than earlier in the year. Cured meats are as active as could be expected, considering their dearthness in the retail markets. Buyers continue to discriminate against poor to fair "big packers," and reject them from loads. They also discriminate against grassy mixed lots. Despite much increased receipts last week, hogs rallied after the best had sold at \$8.12½, with sales Saturday at \$7.80@8.30, comparing with \$7.90@8.35, a week earlier. The bulk sold at \$8.10@8.25, pigs bringing \$6.75@7.80.

Sheep and lambs sold last week very irregularly. Many ewes comprised a large share of the receipts, and a liberal proportion came direct from Louisville consigned to the packers. Prime springs showed more firmness than anything else in the live mutton line, and numerous heavy ewes sold at a big discount. After early sales of prime spring lambs at \$10, prices broke all along the line, with sales at \$6.50@9.55 for culls to the best. Other declines left clipped stock selling as follows: Lambs \$5.50@8.60; wethers \$5.65@6.35; ewes \$2.25@5.35; bucks \$3@4.

MICHIGAN CROP REPORT FOR JUNE.

Wheat.—The average condition of wheat is 93 in the state and southern counties, 97 in the central counties, 89 in the northern counties and 98 in the upper peninsula. The present condition of wheat is approximately the same as reported on May 1. The condition one year ago was 83 in the state and southern counties, 81 in the central counties, 85 in the northern counties and 92 in the upper peninsula. The per cent of wheat sown that will be plowed up because winter-killed or otherwise destroyed is 2 in the state and southern counties, 1 in the central counties and 4 in the northern counties. The damage by Hessian fly is 6 per cent in the state, 10 in the southern counties and 1 in the central and northern counties. The total number of bushels of wheat marketed by farmers in May at 64 mills was 58,262 and at 65 elevators and to grain dealers 35,843 or a total of 94,105 bushels. Of this amount 63,757 bushels were marketed in the southern four tiers of counties, 28,297 in the central counties and 2,051 in the northern counties and upper peninsula. The estimated total number of bushels of wheat marketed in the ten months, August-May, is 8,321,500. Ninety-four mills, elevators and grain dealers report no wheat marketed in May.

Rye.—The condition of rye in the state and central counties is 94, in the southern counties 95, in the northern counties 92 and in the upper peninsula 98. One year ago the condition was 88 in the state and southern counties, 86 in the central counties, 90 in the northern counties and 94 in the upper peninsula.

Corn.—The acreage of corn planted as compared with last year is 101 in the state, 100 in the southern and central counties, 102 in the northern counties and 105 in the upper peninsula. The condition of corn as compared with an average is 99 in the

state and southern counties, 98 in the central counties and upper peninsula and 97 in the northern counties.

Oats.—The condition of oats as compared with an average is 94 in the state and central counties, 92 in the southern counties, 95 in the northern counties and 102 in the upper peninsula. The condition one year ago was 90 in the state, central and northern counties, 89 in the southern counties and 97 in the upper peninsula.

Barley.—The acreage of barley sown or that will be sown as compared with last year is 94 in the state, 89 in the southern counties, 113 in the central counties, 90 in the northern counties and 97 in the upper peninsula.

Potatoes.—The acreage planted or to be planted as compared with last year is 100 in the state, 96 in the southern counties, 109 in the central counties, 99 in the northern counties and 106 in the upper peninsula. The condition as compared with an average is 94 in the state, 92 in the southern counties, 96 in the central counties, 97 in the northern counties and 100 in the upper peninsula.

Sugar Beets.—The acreage of sugar beets planted or to be planted as compared with last year is 83 in the state, central counties and upper peninsula, 81 in the southern counties and 97 in the northern counties.

Colts and Calves.—The number of colts as compared with last year is 94 per cent in the state, 93 in the southern counties, 91 in the central counties and 96 in the northern counties and upper peninsula. The number of calves as compared with last year is 97 in the state and northern counties, 98 in the southern counties, 96 in the central counties and 102 in the upper peninsula.

Fruit.—The following table will show the prospect at the present time for a crop of the various kinds of fruit in the state and different sections:

	State.	Sou.	Co.s.	Cent.	Co.s.	Upper
Apples	88	86	87	93	90	90
Pears	80	78	79	85	100	100
Peaches	42	43	33	46
Plums	73	68	71	83	92	92
Cherries	85	84	79	92	96	96
Strawberries ..	90	88	91	94	93	93

CROP AND MARKET NOTES.

Carroll Co., June 8.—Farmers are just starting to plow corn, and have a pretty good stand. Wheat and rye look good. The hay crop will be a little short. We had a big rain on June 4 which washed many corn and oat fields badly. Had a nice shower last Sunday.

Hardie Co., June 4.—Dry ground has delayed corn planting. Much yet to plant. Not much spraying done since the blossoms fell. Oats and hay are looking very well. Wool is bringing around 22c and the supply is short through here. Eggs 17c; cream 23c.

Sandusky Co., June 5.—Had a terrible hail and wind storm yesterday, blowing down fruit trees and small buildings. Most farmers have corn to plant yet. Oats look well. Wheat not over 50 per cent of a crop. Spring seeding is not very promising. Not much fruit this year, but little spraying being done. Wool selling around 24c; corn 95c per cwt; oats 38c; eggs 17c; butter 18c. The production of eggs is declining.

Indiana.

Daviess Co., June 8.—Very dry; seven weeks' drouth; no prospects of rain; half crop of hay; wheat badly damaged; potatoes and oats a failure. Pastures failing; water scarce. Large acreage of all crops; corn doing badly; poor stand; insects working overtime. Plenty of fruit in most sections. Second summer spray largely neglected. Wool 20c; chickens 10@25c lb; eggs 16c; butter 20c; hay \$18; corn 80c a bushel.

Noble Co., June 8.—The weather is warm and there is plenty of moisture. Crops are looking good. Corn is planted and few late potatoes are in. Hay promises well. First crop of alfalfa will be cut in a few days. Strawberries are being marketed. Crop is large and berries are of fine quality. Butter 20c; eggs 18c; corn 75c; strawberries 12c.

Illinois.

Champaign Co., June 8.—A normal acreage of crops were put in. Early potatoes are poor. Weather has been dry. Meadows short. Considerable millet sown where oats and corn were drowned out by the rain of May 12. Oats and hay cut short 30 per cent for lack of moisture since. Wheat not damaged. Thermometer stands between 95 and 100.

Nebraska.

Dodge Co., June 5.—We had a heavy rain today. Farmers are busy cultivating corn. The average farmer has from 75 to 100 acres of corn, 30 to 40 acres of wheat and 40 to 50 acres of oats. Prospects are good for all kinds (Continued on next page).

THIS IS THE LAST 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.
June 18, 1914.

Cattle.

Receipts 1387. Good grades 25c lower; others 25@50c lower than last week; quality common; mostly grassers; milch cows \$5 per head lower.

We quote: Best heavy steers \$8@8.50; best handy weight butchers steers \$7.50@8; mixed steers and heifers \$7@7.50; handy light butchers \$6.50@7.25; light butchers \$6@6.75; best cows \$6@6.40; butcher cows \$5.25@5.50; common cows \$4.25@5; canners \$3@4.25; best heavy bulls \$6.25@6.75; bologna bulls \$6@6.25; stock bulls \$5.50@6.25; feeders \$7@7.75; stockers \$6@7; milkers and springers \$35@70.

Roe Com. Co. sold Mason B. Co. 3 steers av 890 at \$7.45, 2 cows av 1070 at \$6.50; to Breitenbeck 5 do av 912 at \$5.80, 3 do av 927 at \$6; to Kull 26 steers av 883 at \$7.90; to Rattkowsky 1 bull wgh 810 at \$6.50; to Parker, W. & Co. 2 cows av 650 at \$4.25; to Mich. B. Co. 5 steers av 816 at \$7.35, 19 do av 900 at \$7.50, 3 do av 1210 at \$7.50, 7 do av 893 at \$7, 2 do av 830 at \$6, 5 bulls av 1210 at \$6.40; to Kammon B. Co. 14 steers av 1040 at \$7.75; to Mich. B. Co. 6 butchers av 773 at \$7.25; to Sullivan P. Co. 11 do av 970 at \$7.65, 1 bull wgh 1380 at \$6.50; to Rattkowsky 3 cows av 1000 at \$5.50, 2 do av 1065 at \$6.

Spicer & R. sold Mich. B. Co. 16 steers av 861 at \$7.50, 1 heifer wgh 740 at \$6, 8 butchers av 845 at \$7.35; to Grant 10 cows av 910 at \$5.25; to Rattkowsky 2 do av 1100 at \$6; to Mich. B. Co. 2 do av 1090 at \$5.75, 2 heifers av 760 at \$7, 1 cow wgh 650 at \$4, 1 do wgh 1200 at \$6.50; to Hammond, S. & Co. 3 bulls av 983 at \$6.25, 1 do wgh 2110 at \$6.50, 1 do wgh 900 at \$5.25, 2 do av 1185 at \$5.25, 2 do av 1165 at \$6; to Grant 3 cows av 483 at \$5.25, 3 do av 1003 at \$6; to Breitenbeck 8 steers av 981 at \$7.90, 1 cow wgh 1140 at \$6; to Kull 5 heifers av 794 at \$7.25, 1 bull wgh 900 at \$6.50, 1 do wgh 540 at \$5.25; to Newton B. Co. 1 do wgh 1310 at \$7; to Nolte 29 stockers av 686 at \$7.

Haley & M. sold Heinrich 26 steers av 875 at \$8, 9 do av 735 at \$7.15; to Thompson Bros. 5 cows av 936 at \$5.90; to Rattkowsky 2 do av 1050 at \$5.25; to Haddrell 14 stockers av 625 at \$7.15, 3 do av 697 at \$7.15; to Schlischer 3 do av 733 at \$7.25; to Rohnert 17 stockers av 511 at \$8.10; to Breitenbeck 21 steers av 850 at \$7.15; to Rohnert 5 cows av 1064 at \$5.90; to Souder 30 do av 860 at \$5.50.

Veal Calves.

Receipts 1089. Market steady at opening, closing 25@50c lower; bulk sales at \$10. Best \$10@10.25; others \$7@9.50.

Bishop, B. & H. sold Mich. B. Co. 9 av 150 at \$10, 3 av 170 at \$10.50, 4 av 185 at \$10, 6 av 145 at \$10.50; to Newton B. Co. 11 av 180 at \$10.50, 22 av 160 at \$10.50; to Sullivan P. Co. 16 av 155 at \$10, 17 av 150 at \$10.25, 5 av 155 at \$10.50, 2 av 170 at \$8.50; to Applebaum 6 av 165 at \$10; to Parker, W. & Co. 2 av 150 at \$10.25, 14 av 175 at \$9.50, 30 av 155 at \$10, 4 av 185 at \$7.50, 15 av 200 at \$10.50; to Thompson Bros. 14 av 145 at \$9.40; to Ratner 21 av 160 at \$10.25; to Nagle P. Co. 9 av 165 at \$10; to McGuire 16 av 160 at \$10.25, 22 av 155 at \$10; to Sullivan P. Co. 27 av 150 at \$10, 17 av 165 at \$10.25.

Sheep and Lambs.

Receipts 1020. Market steady. Best lambs \$9.50; fair do \$8@9; light to common do \$6@8; yearlings \$8; fair to good sheep \$4.50@5; culls and common \$2.50@3.50; heavy sheep \$4@4.25.

Roe Com. Co. sold Sullivan P. Co. 12 lambs av 48 at \$6.50, 3 sheep av 115 at \$4.50.

Hogs.

Receipts 7199. Market 5c higher; pigs \$8.25; others \$8.30.

Roe Com. Co. sold Sullivan P. Co. 425 av 190 at \$8.30, 240 av 880 at \$8.25.

Bishop, B. & H. sold Hammond, S. & Co. 3000 av 195 at \$8.30. Spicer & R. sold Parker, W. & Co. 410 av 190 at \$8.30.

Haley & M. sold same 525 av 190 at \$8.30.

Yardage Charges at Detroit Stock Yards.

Cattle, per head	10c
Calves, per head	8c
Sheep, per head	2c
Hogs, per head	3c
Hay, per cwt.	1.50
Corn, per bushel	1.50
Commission Charges.	
Cattle, per car	\$10.00
Double deck hogs and sheep, per car	10.00
Single deck, hogs and sheep	6.00

(Continued from preceding page).

of crops. Wheat is now headed out and the first crop of alfalfa is cut. Fruit prospects are good. About two sprayings are usually done after blossoming. Wheat 82c; corn 64c; oats 35c; butter 23c; eggs 18c; spring chickens, over two pounds, 19c.

Foster Co., June 4.—Have had a two days' rain besides a heavy one ten days ago. Crops are in fine shape. Hay and grass are fine. Grain seeding is all done. Not as much wheat sown as usual, but there is a large increase in the acreage of corn and potatoes. Hogs 7c; wool 16@18c; butter and eggs steady at 20c and 15c respectively.

Scotts Bluff Co., June 6.—Very little corn planted and about the usual amount of potatoes. Sugar beets are slow. Help scarce. Alfalfa haying will be on in about ten days. Pastures and wild hay are good. Fruit promises well but trees are too young to bear much. Plenty of water for irrigation. Eggs 20c; cream 20c.

Pierce Co., June 5.—Corn looks fine and oats are growing well, having an unusually good color. There will be plenty of cherries and late but har, Colorado.

Kit Carson Co., June 6.—Weather has been fine, with plenty of rain. A good acreage of corn, potatoes, cane, millet and other green forage crops are being put in. But little fruit here. Hogs \$8; corn 85c; wheat 80c; oats 65c; potatoes \$1; chickens 16c per lb.

Veterinary.

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

Apoplexy.—Pig two months old died showing peculiar symptoms; when first taken sick he ran backwards with head turned to right and would soon fall, breathing very rapidly and only lived 12 hours. What caused his death? J. J. P., Saginaw, W. S., Mich.—Very likely a small blood vessel opened in brain, which caused his death.

Chronic Diarrhea.—Worms.—I have a cat that is very thin; bowels very loose, passes white worms quite frequently and the only remedy I have given him is sulphur. He is a pet and a very good hunter, therefore, I would like to save him. W. P., Fenton, Mich.—Give your cat 1 gr. of areca nut to each pound of his weight three times a week for two weeks; also give 2 grs. of subnitrate of bismuth and 1 drop tincture opium at a dose three times a day until bowel trouble is corrected. Feed cat some fish.

Bruised Hock.—I have a mare that was kicked on outside of hock, causing bunch to fill, giving the leg the appearance of being affected with thoroughpin. A blister failed to remove or reduce this bunch. F. H., Memphis, Mich.—Apply one part iodine and ten parts fresh lard to bunch every day or two and give 2 drs. of potassium iodide at a dose in feed night and morning.

A. J. S., Monroeville, Mich.—Your cow is incurable, and I would advise you to either fatten her, or sell her to someone who is raising beef cattle.

Sore Shoulder.—two years ago my horse was driven in new leather collar during a rain storm and his shoulder was either scalded or poisoned; since then his shoulder has been tender and inclined to itch. N. M. C., Blissfield, Mich.—Dissolve 1/4 lb. acetate of lead, 3 ozs. sulphate zinc, 2 ozs. of powdered alum and 2 ozs. of carbolic acid in a gallon of water and wet shoulder and neck three times a day. Give dessertspoonful of hypo-sulphite soda at a dose in feed or water three times a day.

Free Farms

The Canadian Government gives you your choice of 125,000 free fertile farms, splendidly adapted for mixed farming, along or near the Canadian Northern Ry. We will help you select your wheat dairy or stock farm.

Canadian

Even if you have already selected your farm, travel over the Canadian Northern Ry. and have the advantage of seeing 2500 miles of richest farming country in Western Canada. Low rates—stop-over privileges.

Northern

Write today for free books—"Western Canada, Has a Home for You," "Homemaker's Guide" and "The Peace River Country."

R. P. BELL, General Agent
66 W. Adams Street, Chicago, Ill.

Railway

A FREE Book of Harness Bargains

Shows hundreds of money-saving harness values from one of the largest and finest Harness Shops—famous for its materials, skilled workmanship, long experience. Shows immense variety to suit all road and field service, to suit every taste, at the lowest possible prices. SPECIALS in entire outfit, collars, bridles, saddles, robes and a BIG COST CUTTING LIST OF ACCESSORIES. ONE-FIFTH TO ONE-THIRD SAVING ON EVERY PURCHASE. Money-back guarantee. Every horse owner should send now for FREE HARNESS BARGAIN BOOK No. A.S. 11.

SEND FOR OUR BIG GENERAL CATALOG No. 83 ITS FREE

MONTGOMERY WARD & CO.
New York
Chicago
Kansas City

BINDER TWINE

Foster's Quality Brand
Standard Twine, \$8.70 per cwt.

Made from pure high grade long fibre Sisal, GUARANTEED insect proof; free from all adulterations; to average 500 feet to the pound, to run even and smooth, and work satisfactory in any binder or money back. Made by skilled labor, where men are paid for their work, and care and skill required. Shipped in unbroken bales of 50 lb. each. Can be shipped from Allegan, Michigan, or Dayton, Ohio, whichever gives lowest delivery cost. General Price List free.

A. H. FOSTER,
Wholesale Distributor Farm Necessities,
ALLEGAN, MICH.

Get All Your Potatoes

The Farquhar Elevator Potato Digger does the work of a crew of men. It frees all the potatoes from the soil and puts them on top ready for sacking. If you raise potatoes for profit, it will pay you to send immediately for new illustrated catalogue explaining all about the different Farquhar Diggers.

A. B. FARQUHAR CO., Ltd.
Box 212, York, Pa.

We also manufacture Engines, Saw-mills, Threshers, Drills and Cider Presses.

Severe Duty—does not phase the steadiness of Heer Double Opposed Engine. Most economical engine on the market—fuel, oil and upkeep considered. Always ready to work, and work hard too. Write today for catalog.

Heer Engine Co., 45 E. St., Portsmouth, O.

The Grand Rapids VETERINARY COLLEGE

Offers a three years course in Veterinary Science. Complying with all the requirements of the U. S. Bureau of Animal Industry. Established 1897. Incorporated under State law. Governed by Board of Trustees. Write for Free Catalog.

152 and 154 Louis St., Grand Rapids, Michigan.

LIVE POULTRY, BROILERS, FRUITS, POTATOES, ONIONS, ETC.

Let us handle your poultry, fruits, farm products. Our 25 years in the same store assures your satisfactory results.

CHAS. W. RUDD & SON,
Detroit, Michigan.

ALFALFA

Now is the time to get ready to sow alfalfa. July and August good months. Get our book, Alfalfa, The Wonder Crop, Free. Full information on how to successfully grow alfalfa. How to prepare the ground, protect and harvest. Earn 75¢ net on \$1,000 an acre. Also tells about "NITRAGEN," the famous inoculator. Write today.

Galloway Bros.-Bowman Co., 185 Galloway Station, Waterloo Iowa

HAY

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

WHOLESALE FEED

Save your money. Ask for price list. Everything in Feed. THE BARTLETT CO., 100 Mill St., Jackson, Mich.

Griggs, Fuller & Co., Wholesale Commission House, Detroit. Want your apples, potatoes, poultry and rabbits. Quick returns.

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

Do You Need Farm Help? We have many able-bodied young men, mostly with farming experience, who wish to work on farms. If you need a good, steady, sober and willing worker write for an order blank. Ours is a philanthropic organization, and we make no charge to employer or employee. Our object is to encourage farming among the Jews. The Jewish Agricultural Society, 714 W. 12th St., Chicago, Illinois.

Farms and Farm Lands For Sale

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

FOR SALE, whole or part, 320-acre Southern Michigan farm, 65 a fine looking wheat. Immediate possession. Otto S. Schairer, 214 Dewey Ave., Swissvale, Pa.

FARM 60 ACRES, \$20 ACRE
1/2 mile to one of largest strawberry shipping points in world. 50 acres under plow, orchards, good building. Views on request. Terms right.
WALLER & WALSON CO., SALISBURY, MD.

A PLEASANT SUMMER FARM HOME
Of 45 acres for sale at Public Auction on Monday June 29th, 1914, at 1 o'clock sharp. 1/2 mile North of Breedsville, Mich. station. Terms 1/4 cash, time on balance. Four health of owner cause of sale. Good buildings; water and fences, with fruit for family, and in high state of cultivation. F. J. Harrison, Owner.

Stock and Tools Included With 103 Acres, \$2800

A good horse, 5 cows, 2 wagons, valuable farm machinery, tools, etc., go to quick buyer as owner can no longer care for this farm; 73 acres in productive fields, 30 acres woodland; only a mile to market for all dairy products; good 10-room house, 2 good barns, other buildings; nice orchard; conveniently reached from Elmira, Binghamton and other points; a working farm for you to take hold of immediately at only \$2800, part cash; see photograph, read details and secure traveling directions, page 29, "Strout's Farm Catalogue 37," just out, copy free. E. A. STROUT FARM AGENCY, Station 101, Union Bank Bldg., Pittsburgh, Pa.

Executor Must Sacrifice to close an estate at once. Liston to this 114 acres: 7-room house, two stories and porch; barn 40x48; granary; milk house; apples, cherries; 4 miles to railroad town. Building insured for \$1800. Price \$1500, part cash. Catalogue No. 36. Hall's Farm Agency, Owego, Tioga Co., New York.

FOR SALE FARM and Fruit Lands, also large tracts for stock grazing and ranch purposes. Clay loam soil, lime rock subsoil, near market and railroad. Address R. MITCHELL, Agent for Thad B. Preston, Onaway, Michigan.

MICHIGAN FARMING LANDS

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

Breeders' Directory—Continued from page 629

DUROC JERSEYS—A few fall pigs of both sexes for sale. CAREY U. EDMONDS, Hastings, Michigan.

Duroc-Jerseys—Spring boars from prize-winning strains. Sows all ages. Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

LARGE TYPE P. C.—Largest in Mich. Fall pigs all sold, order a spring pig bred by the largest boar in the U. S., weight 900 lbs. 24 months old. Come and see. Expenses paid if not as represented. W. E. LIVINGSTON, Parma, Mich.

POLAND CHINAS—Both Western and Home Bred. Either sex, all ages. Prices right. W. J. HAGELSHAW, Augusta, Mich.

Poland China Boar; Sows Bred, All of the Big Type.
A. A. WOOD & SON, Salline, Michigan.

MY OH MY! What an Opportunity.

Starting May 1st, we are going to give to the farmers and breeders an opportunity to get started right in the breeding industry. We are going to give you a chance to get hold of foundation stock that will give you a nucleus for one of the finest and best herds in your community. We are going to show you as we have others, that you will have greater success with our big type.

POLAND CHINAS

than with any other breed. We want to place at least one pig, or a pair in every community, to advertise our herd. We will give agency, if not already taken. If interested, write for our plan and prices.

HILLCREST FARM, KALAMAZOO, MICH.

POLAND CHINA PIGS—From large Prolific stock. Shorthorn Bull Calves. Eggs \$1 per 15 from choice Barred Rocks. ROBERT NEVE, Pierson, Michigan.

FOR SALE—A choice bunch of March and April boar pigs, a few herd headers. Prices reasonable. Satisfaction guaranteed. R. W. Mills, Salline, Mich.

BUTLER'S Big Bred Prolific Poland Chinas. Grow big, keep easy, mature early, ready for market at 6 months. Why? Because we've bred them that way for more than 20 years. We have 25 big boned sows for fall farrow. Buy one and make more money on your hogs. You can't get any better at any price. P. C. History Free. J. C. BUTLER, Portland, Mich.

30 Poland China Fall Pigs—Good ones from immune sows \$10 and \$15 each, while they last. Bred sows sale Feb. 27th, send your name for catalog if you want to buy Big Types with Quality. Wm. Waffle, Coldwater, Mich.

Mule Foot Bred sows, bred gilts and boar pigs, not related, for sale. Satisfaction guaranteed. G. C. KREGLOW, Ada, Ohio

Yorkshires—Spring Pigs Of Excellent Quality.
GUY J. DOTY, R. 2, Monroe, Michigan.

YORKSHIRE Swine—March & Apr. pigs ready to ship. Pairs not akin. College Princess and Ooks Bacon foundation stock. Geo. S. McMullen, Grand Ledge, Mich.

Yorkshires Guaranteed to not die of Cholera. Prolific, long deep and well fleshed. Pigs ready for delivery. Not akin. Cribbs Bros., Watervliet, Mich.

YORKSHIRES

The large, long-bodied, prolific kind. Gilts bred for July, August and September farrow. A choice lot of spring pigs, pairs and trios, not akin. Prices reasonable. W. C. COOK, R. 42, Ada, Michigan.

Lillie Farmstead Yorkshires

Open gilts and gilts bred for September farrow. Spring pigs either sex, pairs and trios not akin. Satisfaction guaranteed.

COLON C. LILLIE, Coopersville, Michigan.

THE WORK OF THE PRACTICAL SCIENCE LABORATORIES.

(Continued from page 618).

tion for analysis in the laboratory we should like to impress upon our readers that the most essential matter to be observed is the care with which the sample is taken. There are probably more discrepancies in the results of a laboratory analysis through inadequate methods of sampling than in any other way. The work of these laboratories is done entirely in duplicate so, therefore, first of all, a sufficiently large sample should be sent us, so that duplicate determinations may be made. In the case of milk or cream, we prefer a bottle of approximately four ounces full of milk so that there will be ample for satisfactory analysis in the laboratory. The milk should be very thoroughly mixed before the sample is put into the bottle, for the only service a laboratory can give is to assist in finding the truth. The dairyman wants to know the truth regarding his query, whether in the answering of his question it shows his cow to be a good one or a poor one. Strange as it may seem, many dairymen have not gotten to the point where they are prepared to hear the exact truth about the butter-producing powers of their cows, but if one is not prepared to receive this kind of information the laboratory is not the place to send the product.

Again, in taking samples it must be remembered that we cannot adjudicate a difference between the creameryman and the individual dairyman unless an accurate sample of the milk has been sent to us.

We like to have the bottle full of milk or nearly so, so that in being transported through the mails the butter-fat will not become churned in the bottle, for this procedure makes impossible the accurate testing of the milk.

There are a number of things which influence and cause a variation in the fat content of milk and cream. The main ones were discussed in our paper of last week.

In order to make more certain the sending of samples in the proper condition the Michigan Farmer secured a number of four-ounce bottles and mailing cases to go with them, so that they would pass through the mails without damage. These have been sent to the farmer for the exact cost and will then be returned again if the dairyman will forward the postage at the time he sends the sample so that they may be returned.

In this Work we Seek the Truth.

Our experience has shown that most all of the unsatisfactory and damaged samples come in cases that the sender has improvised and packed in a more or less insecure fashion. It does not matter, of course, to the department or to the Michigan Farmer how these samples are sent in. In the interest of truth we simply ask that they be representative samples taken with care and that they be packed and transported in such a way that when they arrive at these laboratories they are in a satisfactory condition for analysis.

Following these precautions and others which may suggest themselves to the farmer, there is no reason why the results obtained should not be satisfactory and of great value to the farmer. It is this service which we feel is of the utmost value and conducted in the way it is we see no reason why it should not become important information to every subscriber to this paper. The freedom with which particularly the milk testing feature has been adopted by dairymen has fully proven that a practical laboratory can be of real service to farmers.

Texas grass cattle are moving freely to southwestern markets. It is estimated that 100,000 of these cattle have been marketed, and the same number remain to be unloaded before July 1.

Take No Chances!



make SURE of a
GOOD CROP
of WHEAT

SOME cannot understand why a few hundred pounds of our fertilizer, mixed with the 1000 tons of surface soil that is cultivated to the acre, makes such a wonderful difference in the quality and the quantity of the yield. The effect of the fertilizer is similar to that "pinch of salt."

How would your food taste without it?

Use A.A.C. Fertilizers

The fertilizer is not a soil stimulant nor patent soil medicine. Absolutely no. It is the most nourishing food for the plant. It will re-enforce the natural fertility in the soil and make it more available, and will enhance its power of productiveness.

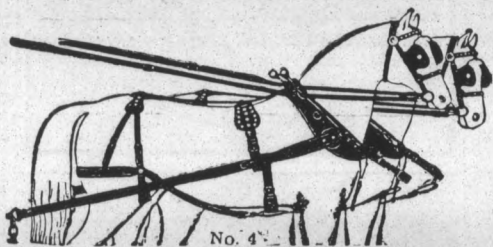
If all farmers knew A. A. C. Co. Fertilizers as they ought to know them, not enough could be manufactured to supply the demand.

Take notice of our special wheat fertilizers, Banner Dissolved Bone, 34% available phosphoric acid, or our Banner Bone Fertilizer with Potash, 20% available, 24% total, phosphoric acid, and 4% actual Potash. Grain Fertilizer, 2-12-3 analysis.

We want agents for unoccupied territory under our consignment contract. Write us today for further information.

The American Agricultural Chemical Co.

Detroit Sales Department, Detroit, Michigan.



HARNESS HORSE COLLARS

Ask Your dealer for the Label

Made and Warranted by

ARMSTRONG & GRAHAM

WHOLESALE ONLY.

DETROIT.

ESTABLISHED 1880.



Nearly
200,000
Sold

Save
\$25.00 to
\$40.00

Take
30 Days
Free
— Trial

Also
a Two-Year
Guarantee

Split Hickory Vehicles

Phelps

Genuine Split Hickory Vehicles 30 Days' Free Road Test Guaranteed for Two Years.

Try your buggy before you buy. Don't think of buying a buggy (or harness) until you have seen my fine, color-illustrated catalog of Split Hickory Vehicles. I send you this book absolutely free of cost—and I even pay the postage. Why? Because I know you'll want nothing but a Split Hickory Vehicle. For 14 long years I've been making Split Hickory Vehicles and all told I've sold nearly 200,000 farmers the best buggy they ever rode in! I sell only on the direct-to-you-plan—and there's not a single dealer or middleman's profit that you have to pay. I can actually save you \$25 to \$40. That's why Nearly 200,000 Men Have Bought Buggies From Me—My, Big Illustrated Free Book and My Low, Factory-Direct Prices Sold Them—Why Don't You Write Me Today? Do it now!

I show you more styles to choose from than your local dealer could put into a building ten times the size of his—and I quote you prices lower than he would pay for the same quality in carloads. My low prices are only for the actual user. Write for free book.



Get This Big 1914 Book
150 Photographs — Phelps
Pays the Postage — Send Your Name

H. C. Phelps, Pres.
THE OHIO CAR-
RIAGE MFG.
COMPANY
Station 32
Columbus, Ohio



Shows where big money-savings can be made in building homes, bungalows, country dwellings, town houses, etc. Plans extremely practical, drawn by expert architects. Backed by immense supplies of lumber, all materials and accessories needed at the lowest prices.

Free plan book gives big cost cutting list. Write for Book No. C. S. 11.

Montgomery Ward & Co. New York Chicago Kansas City

FOR SALE, CHEAP

One 16 H. P. latest
style Buffalo Pitts

STEAM ENGINE

Guaranteed in First-class Condition.

Will take 15 H. P. Gas Engine as part payment.

Lock Box 275, Lansing, Mich.

Fastest Hay Press 2 1/2 Tons Per Hour

Greater capacity is guaranteed in all Spencer Presses. The guarantee with our Alligator Press says "22 tons in 10 hours or no pay." Large feed capacity—smooth and compact bales, uniform in size. Load full weight into cars. All Spencer Presses are biggest money makers because they give greatest capacity at smallest operating and repair cost. Write today for Free Illustrated catalog—describing full line.

J. A. SPENCER

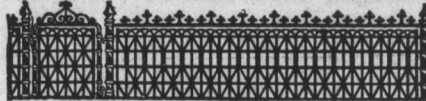
12 William St., Dwight, Ill.

MASON'S LAWN FENCE

6¢ PER FT.

Lawn Gates only \$2.25. Close weave 48 in. Stock and Poultry Fence 27¢ a rod. Heavy 42 in. Field Fence 34¢ a rod. Hog Fence 14¢ a rod. Barb Wire \$1.40 a spool. 60 days' trial. We not only lead on prices but on quality as well. Our great FREE Catalog proves it. Write for it today. It saves you money. The Mason Fence Co., Box 68 Leesburg, O.

Why Pay Two Prices For Fences?



Buy direct from our factory. Hundreds of exclusive styles. Wire and Ornamental Iron guaranteed Fences for every purpose; Gates, etc. Write for Free Catalog, First Order and Early Buyer's Offer! Ward Fence Mfg. Co., 168 Penn St., Decatur, Ind.

Michigan White Cedar FENCE POSTS

GEORGE M. CHANDLER, Onaway, Mich.

FREE booklet—how to master the Auto Trade—spare times—at home. Let us start you as a Chauffeur or Mechanician—we've started hundreds. Send now for proofs and free book. WEBB DYKE MOTOR SCHOOL, 4632 Walnut Street Dept. D, Philadelphia