

MICHIGAN FARMER

AND LIVE STOCK JOURNAL.
PUBLISHED WEEKLY. ESTABLISHED 1843.

The Only Weekly Agricultural, Horticultural, and Live Stock Journal in the State.

VOL. CXLI, No. 7.
Whole Number 3656.

DETROIT, MICH., SATURDAY, AUGUST 16, 1913.

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

Township Road Building.

ONE of the most complete and up-to-date outfits for the making of good roads that can be found anywhere in the state, is that which is now in operation in Fayette township, Hillsdale county. The outfit consists of a stone crusher and steam roller. The stone crusher was purchased by the township, last summer, and at the town meeting last spring it was voted to purchase the steam roller also, which the first season was leased by the township, with the understanding that if it proved satisfactory it could be purchased without the payment of rental for its use the previous season. There was no opposition to the acquisition by the township of the steam roller, and the entire outfit is now the property of the township. Last summer a mile of crushed stone road was built and so satisfactory did the work prove to be that three more miles are in the process of construction this season.

In the solution of the good road problem the experience of Fayette township can but prove helpful and of interest. Two years ago the township constructed a mile of gravel road, for which it received \$500 reward money from the state. The gravel road was inspected by a deputy of the state highway department, and one-half of it was pronounced to be the best the inspector had seen anywhere. The cost of this mile of gravel road was \$1,600.

But although the kind of road just mentioned proved fairly satisfactory, the township board wished, if possible, to make the roads still to be constructed even more satisfactory and enduring. Accordingly, arrangements were made for putting into operation a new outfit for making a road bed of solid rock. The rock road, when completed, consists of crushed stone eight inches thick and packed hard by the use of the heavy steam roller. The cost of this rock road figures somewhere between \$2,300 and \$2,500 per mile. But as \$1,000 reward money is received from the state, instead of \$500 as in the case of the gravel road, the expense will not greatly exceed that of the latter.

But while the expense of constructing the rock road is not much more than that of the gravel road, beyond question, the greater durability of the former will make it much more valuable. Of course, the machinery is expensive, but it is belied by the board that the superior durability and quality of the rock road justifies the expense, and that in the long run the crushed stone road is the best and most economical.

In embarking in this comparatively new enterprise, Fayette township has taken a long step in solving the good roads problem in a locality noted for poor roads. Owing to long stretches of deep sand, the roads of Fayette and some of the neighboring townships, have been marked by automobile parties as spots to be avoided if possible. By the use of her new stone crusher and steam roller, Fayette will, in a few years, possess the finest highways in this section.

In considering the ad-

visability of purchasing such an outfit as that mentioned in this article, the abundance of stone in the township would seem to be the main factor. In townships where stone is not abundant the gravel road would, doubtless, be preferable. In Fayette some excellent gravel may be found, but not always in the immediate vicinity of a stretch of poor road. On the other hand, stone are abundant everywhere, and farmers are glad to get rid of them. To haul gravel for a distance of four or five miles would greatly add to the expense and make this kind of road cost as much or more than the rock road constructed of stone in the immediate locality. Let it be borne in mind, too, that the crushed stone road is of direct and lasting benefit to the farmer. Indeed, he is the one most directly concerned. Farmers who have driven heavy loads of grain or other products over these new roads that are level as a floor and hard as rock realize better than anyone else the real value of the newly constructed highways.

One of the stretches of rock road constructed last year obliterated a half-mile stretch of clay that was a dread to everyone forced to use it in an open winter or in early spring. But, as one farmer remarked to the writer during the open weather of last winter, the trip to town can be made much more easily and quick-

ly since the crushed stone road was built. The fact, too, that the steam roller was purchased without opposition after a six months' trial of the new highways, furnishes ample proof that the residents of Fayette township are well pleased with the crushed stone roads. Hillsdale Co. J. A. KAISER.

Preparing for the Wheat.

THE wheat crop is one of the most important crops raised on Michigan farms. In the early days of the country it was the great cash crop of the year, and to lose the crop meant close times for supplies for the family. It was raised quite extensively before, during and after the war of the rebellion, and on account of the good prices that prevailed during those years, many farmers gathered a sufficient amount of money to add to the size of their farms and put them among the stable and substantial business men.

The Summer Fallow.

When wheat was the main market crop

it was quite the general practice to summer fallow, or let the land lay idle during the summer, working it in one way or another to keep the weeds in subjection, and at the same time prepare the ground for sowing the crop during the early part of September.

When the land was new it was considered by some good practice to plow the ground early in June, and let it lay with but little attention, keeping sheep on the field to keep the weeds down and then cross plow in August and work the ground for sowing. As that kind of treatment did not cause the sod to rot well during the summer, the ground could not be put in good condition for sowing, especially in a dry season without a great deal of labor. The practice had the advantage of leaving the vegetable mold on the surface which encouraged a rank growth of the wheat in the fall, and one was pretty sure of getting a catch of clover.

Another way of fallowing which gave good satisfaction was to plow the ground in June and work it at least once in a week or ten days with the harrow and cultivator until time to sow, which kept the weeds down, put the ground in fine condition, packed it well, and at the same time it was mellow at the surface, ready for the reception of the seed. Heavy yields were generally secured by such treatment.

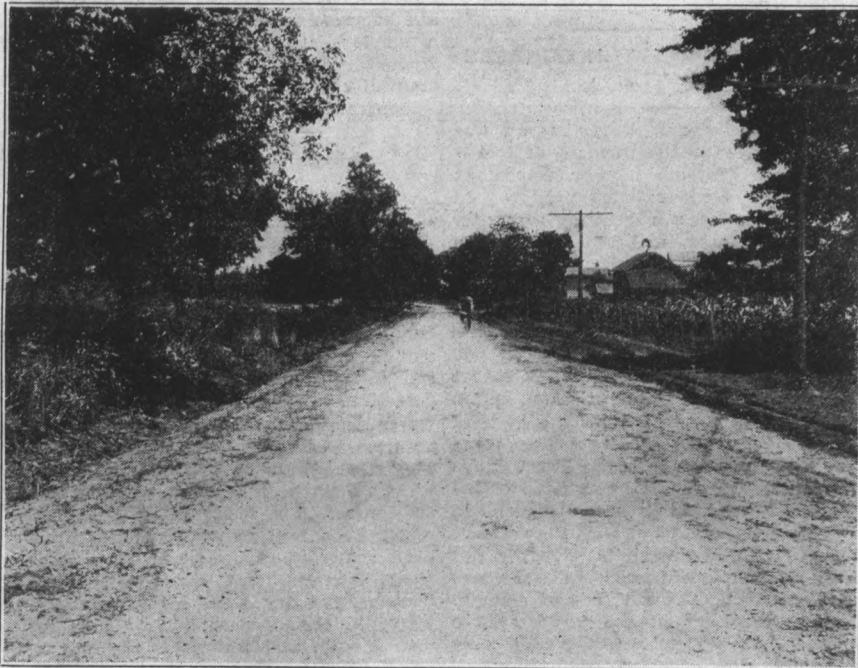
Wheat in the Rotation.

Since the prices for wheat have ruled around and below one dollar per bushel at the market towns in the state, farmers have not considered it worth the while to summer fallow and have trusted to the plan of raising wheat in rotation, making it the one crop to seed to clover with. In fact, the wheat crop has not been given the consideration, and its importance in the rotation, that should have been given it. As far as attention

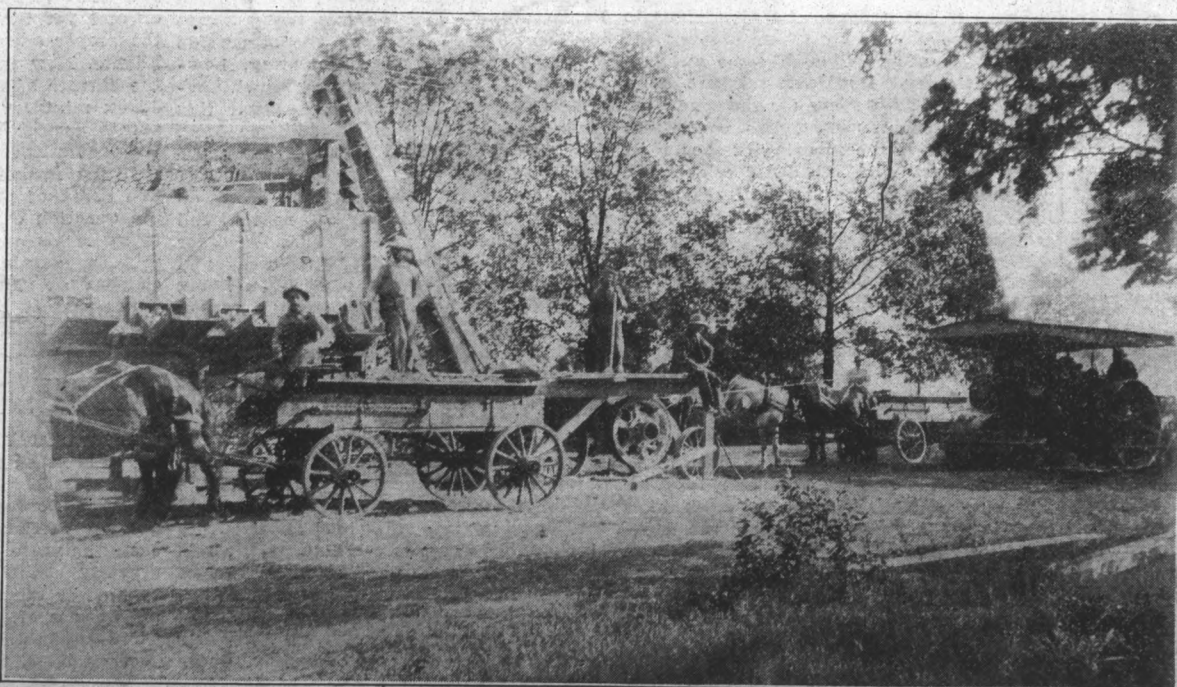
by working the ground and fertility is concerned, the stress has been laid largely on the other crops, corn, oats, barley, potatoes and beans, and wheat has been greatly neglected as far as preparation of the seed bed may help, and what fertility there happens to be left after the other crops have taken all they could, is all that is left for the wheat. In many cases it may as well be classed among the neglected crops.

Preparing the Ground.

When wheat follows potatoes and beans, if those crops have been well cared for, the ground is generally in a condition that does not require a great amount of work to make a good seed bed. Those crops are harvested so late in the season that it is not considered advisable to plow the ground, but by the



A Sample of the State Reward Road Built by Fayette Township, Hillsdale County.

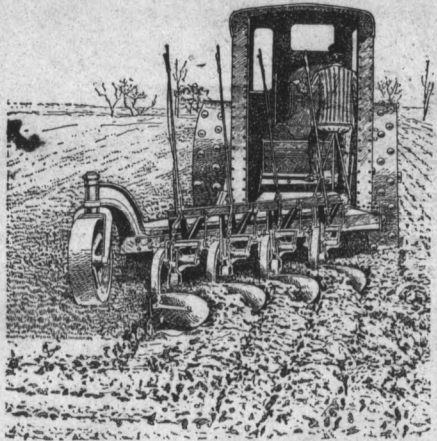


The Up-to-Date Outfit for Building Crushed Stone Road Owned and Operated by Fayette Township.

All Steel Farm Tractor

Kerosene for Fuel.

25 H. P. Weight 8000 lbs.



We have never failed to make good in the field. Our success has been due to the tractor and plows doing all and more than we claimed.

Light Weight.

On account of the light weight of our tractor and plows we can work on soft ground, also on hilly land without any trouble. Light weight means a big draw bar H. P.

Let Kerosene Do Your Plowing.

Three gallons of this cheap fuel will turn over an acre of ground at an expense of 24c. This means when the ground is hard and dry. There is a big difference between plowing with our tractor and with horses—at least 50% in favor of our tractor. A postal card will bring our new catalog immediately.

BATES TRACTOR CO.,

105 Bates St. Lansing, Mich

Let My Pumping Engines Do the Work

Yes, sir. Get a Galloway Pumping Engine Outfit. Put it to a 90-day test on your farm. Use it to run the churn, cream separator, washing machine, pump or any small machine on your place. Then if you don't say it's the best little engine you ever saw in your life, you can ship it back. I'll refund your money and pay the freight both ways. No strings to this offer—is there? Then on top of this wonderfully liberal offer I'll save you \$25 to \$50 on the outfit. Can you beat it? Never. Write me today.

Get My Special Offer and Prices

Do it today. Only \$24.75 for a 1 1/2 h. p. "Boss of the Farm" pumping engine. You can't afford to wait for your windmill to blow down or a calm, hot day when you have to do all the pumping for a lot of stock by hand. Be prepared. Get my special pumping engine catalog. Save \$25 to \$50 on your engine and join my list of over 30,000 satisfied Galloway engine customers. Write me today. Don't put it off. You'll need an engine in the next few weeks. It'll pay for itself the first month. Get my special 1913 offer. Address: Wm. Galloway, Pres.

\$24.75
Up
William Galloway Co.
1856 Galloway St.,
Waterloo, Ia.

WEST MICHIGAN STATE FAIR

At GRAND RAPIDS

5 Days and 5 Evenings. Opens

MONDAY, SEPT. 1st.

CONTESTS—Judging Contest, Spelling Contest,

Baking Contest, BETTER BABIES CONTEST

12 Harness Races. All Purses. \$600.00

Grounds, Buildings and Exhibits Lighted with Electricity.

Aeroplane Flights Every Afternoon.

PAIN'S BATTLE IN THE CLOUDS with \$1000

Fireworks Display Every Evening.

Entries to all classes close Monday, August 25th.

Special Trains for all needs.

One admission entitles you to stay until the gates are closed.

JOSEPH H. BREWER, President.

ORAS. F. KENNEDY, Secretary.

PUMP GRIND SAW Made for

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.

FALL PLANTING IS BEST—Our prices are the

lowest on all kinds

of Apple, Peach, Pear, Cherry, and other Trees

and plants. Send for catalog at once and order for

early fall planting. **Ernst Nurseries, Box 2, Moscow, O.**

SEED WHEAT A hardy, heavy

yielding beardless variety. Send today for circular.

WALLACE BROS., Bay Shore, Michigan.

proper use of the spring-tooth harrow the surface can be mellowed and the wheat sown in a seed bed already warmed by the summer sun, and the ground underneath is firm enough to avoid the danger of heaving during the period of freezing and thawing in the spring. When the ground is plowed it is left loose, not well enough compacted to withstand the freezing and thawing that is likely to follow. Plowing also turns under the warmed dirt that has been well pulverized, aerated and purified by cultivation, and brings to the surface dirt that has not been enlivened by the cultivating during the summer.

It is after such crops as oats and barley, that much labor is required to prepare the seed bed. For reasons already mentioned the ground should be plowed as soon as practicable after the crop has been harvested. Then comes the task of compacting, reducing to a fine tilth the surface and making it a suitable seed bed.

As soon as the ground has been plowed it is well to roll it, or perhaps better to disk it and then roll it. The spring-tooth harrow may be used first and then cross with the spike-tooth harrow. The ground should be worked every week or ten days until sowing time to aerate and warm it, to make the plant food already in the soil available, and at the same time neutralize the poison excreted from the roots of the preceding crops. Working the ground frequently puts it in the best possible condition for the wheat crop, for the small fibrous roots can penetrate the mellow soil and secure the necessary plant foods, but cannot thrive on hard or lumpy ground.

When the time comes for sowing, it is a good plan to go ahead of the drill with a roller to mash the lumps of dirt, if there are any, make an even surface for the drill to go over, and insure a uniform depth at which the seed is sown. It is better to drill north and south, as the prevailing winds in the winter are from the west, and the snow that protects the wheat plant in the drill mark will be retained.

Wayne Co.

N. A. CLAPP.

BEAN ANTHRACNOSE IN GENESEE COUNTY.

Bean anthracnose is becoming an important menace to the farmers of Genesee. Beans are one of our important crops, 344,000 bushels being produced in 1910. The beans are becoming heavier pickers every year, and two causes can be assigned. One is the unfavorable weather conditions, over which we have no control. The other is the inroads of disease, which condition we can control to a certain extent at least.

Realizing this condition the Genesee County Crop Improvement Association has taken up the question with a view of helping the farmers eradicate this trouble. In co-operation with the Farm Crops Department at M. A. C. two trips of inspection of bean fields have been made and the representative of that department reports that the disease is probably not as bad in Genesee county as elsewhere in the state. However, it is bad enough. Also two meetings of the farmers have been held at which he discussed very thoroughly the diseases of beans and their treatment, before the farmers present.

There is not a sure way at present to control the disease by either dipping the seed or spraying, although some authorities recommend Bordeaux mixture as a control, used as a spray for the vines.

We are recommending two courses to pursue. One is the securing of seed from fields in northern Michigan which are pronounced to be free from disease after inspection. The other a plan of plant selection and breeding.

Four things are to be sought after: 1, freedom from disease; 2, uniformity; 3, upstanding plants; 4, heavy yielding, even ripening qualities.

It is possible to select plants free from anthracnose; and at the same time select those which are thrifty, upstanding, with a large number of pods with a maximum number of uniform beans. These selected plants must be threshed by hand, as going through the bean separator may infect them. They are to be sown in a seed plat next year away from the regular bean field. Walking from the bean field into the seed plat may infect them, especially in a wet time.

From the seed plat enough seed can be secured for planting a field in 1915.

While this method may seem to be a lot of trouble, the writer believes that

anyone taking it up will be well repaid in increased yields and beans of a lower picking quality.

All the bean growers of Michigan should look to this phase of bean production.

Let us maintain the reputation of the state in the matter of beans.

Genesee Co.

W. H. PARKER.

EXPERIENCE WITH BINDWEED.

I see what H. J. H., of Mecosta county, says about bindweed, and your reply in the Michigan Farmer of July 26. About eight or nine years ago I had a small patch of it in a garden. Working the garden did not kill it. The next year I let it grow until June. When it was full grown and in bloom I covered it deep with clover chaff and horse manure, expecting to smother it out. In a few days it was up thick through the covering. Then I hoed it down twice a week until cold weather stopped it growing in October. By this time the plants were very few and very weak. During the following years it still kept coming and it took several years more to kill it all out by digging down to each plant and applying brine and salt.

Two years ago I had a single plant in another place. I dug a basin around the plant and applied brine and kerosene oil at different times during the season. Last year it grew up in the same place. Then I decided to dig it out. I dug in the ground 26 inches and broke off the root at that depth and put salt in and covered it up. There were no branches to the root. Now a plant stands right by the side of where the old plant grew. At another place on the farm was a patch of it nearly two rods wide. I gave it no attention until last year, except to not let it produce seed. Last year I planted it to potatoes with other land adjoining it. The bindweed grew thick in the potatoes. I cultivated with double shovel plow two or three times and hoed it down about twice. This year the land was disked and dragged for oats. I did not sow oats on the bindweed patch, intending to cultivate it to death by shovel plowing it all summer, but to my pleasant surprise I have not been able to find a single plant of it up to the first of August. The soil in each case is a substantial clay loam.

Montcalm Co.

S. K. MARSH.

LILLIE FARMSTEAD NOTES.

It seems remarkable that we have got as good crops as we have this season when we take into consideration the small amount of moisture which we have received. As a matter of fact we have not had a good soaking rain since spring opened. There have been two rains of sufficient magnitude to moisten the top soil to meet the moist subsoil, but tile drains have not run or discharged any water since early spring. There has been no time when there was an excess. Running through a portion of my farm is what we might call a wet weather creek. Of course, in a fairly moist season this creek does not go dry, yet there have been many, many years, if I remember them, that it didn't run, and sometimes in excessive dry times every particle of water in the deepest holes almost dried up. A mile above there is running water all the time that comes from a spring, but this evaporates and soaks into the soil before it gets down as far as Lillie Farmstead, so that ours is really a wet weather creek. Down on the other side of the farm this same waterway, however, is fed by another spring which never goes dry. This present season this creek has hardly run all summer long. The two rains that I speak of did cause it to run part way. Even early in May there was very little water in it, when some years it would be nearly full at that time of the year. Just the other day I crossed the bed of this creek and to my surprise saw a woodchuck living in a muskrat hole. Now when a season gets so dry that the woodchucks forsake the knolls and go to the creek bed and live in muskrat holes anyone can get an idea of the scarcity of moisture during that season. The probability is that that woodchuck will go back to the higher ground, but he certainly seems to be enjoying himself there now. He has the bed of the creek for a playground and the opening into the hill towards the creek comes out where ordinarily it would be two feet or three feet under water. Many years we have an excess of water, and much moisture is wasted, it comes in torrents and runs away, but this year practically none has been wasted. Every drop has been utilized, and we have got-

ten along with an exceedingly small amount. It certainly is surprising to know what can be grown with so little rainfall. Of course, we need a good rain at the present time. Corn is just setting, and I fear that the ears will be short and small, that many stalks will never have any ears unless we get rain soon. The oat crop is no more than half as high as it is in normal years, but the heads seem to be just as long as ever, and they are well filled, and the bundles are heavy. It is going to yield splendidly compared to the straw.

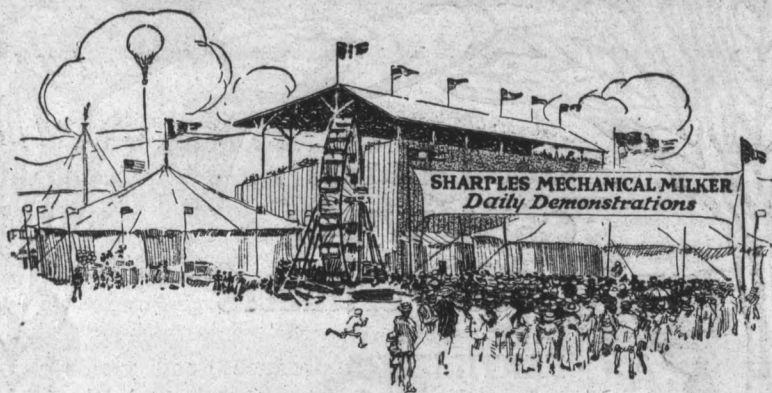
Many times it requires good judgment to decide which of two or three jobs ought to be done first. The farmer meets this proposition very often. In the present season, for instance, when we were haying there came a sudden shower that wet the surface soil and packed it to such an extent on our clay that it formed capillary attraction with the sub-soil. Now I knew just as soon as it dried off that the land ought to be stirred, and the sooner the better, but we were in the midst of haying. The hay ought to have been cut even before. Now the question was, should we stop haying and cultivate? It did not seem to me that it was practical. It would take so long to go over all of our cultivated crops that the hay would suffer very much indeed, and so we kept haying and let the ground dry and the moisture evaporate. As luck would have it, before it got too serious there came another shower, which helped matters out, and the same thing was repeated again. We didn't get the cultivating done as soon as we ought to. The farmer often has to decide which of two jobs he shall do first. Both of them need attention, but he must use good judgment in selecting the one that will be most profitable to him, and do that thing which will cause the least damage. There will be loss—he can't avoid it—and his best judgment is required to make that loss as little as possible. This not only occurs in questions of tillage, but it occurs in very many other things in this great question of farm management.

Second Cutting of Alfalfa.

This year the second cutting of alfalfa is not as large as last. It is of fine quality but there was a lack of moisture and while alfalfa is a deep-rooted plant, it takes moisture as well as any plant, and we haven't nearly as heavy a second cutting as we had last year.

Spraying for Potato Blight.

This question of spraying for potato blight is becoming more and more important. People who have tried it find that they get better tubers, that they get better crops of tubers. It not only prolongs the growing season of the tuber, but this causes a better quality of tubers and it increases the yield. Where one has the proper spraying outfit, that is, a horse sprayer that will spray at least four rows at a time, it is not a difficult job to spray the potatoes for blight. A good horse that has a good walking gait will spray a large field of potatoes in a half day. The question, of course, naturally comes up to the farmer whether he shall try and make his own Bordeaux mixture for spraying potatoes or whether he shall buy the prepared product. So far I have bought the prepared product. For instance, you can buy at retail a preparation at \$1.50 a gallon which can be reduced 100 to one. That is, this gallon of preparation is so condensed that you can dilute it with 100 gallons of water and yet have a solution which is of the proper strength to spray potatoes for blight. Now the question comes up, can the farmer afford to make his own Bordeaux mixture? Perhaps the commercial potato grower can do so where it takes large quantities, but I am sure that the ordinary farmer who raises from one to five acres of potatoes had best consider the question carefully before he attempts to make his own mixture. The prepared mixture certainly works nice. It doesn't clog up the sprayer. It has been so prepared that it all dissolves or mixes with the water in such a way that it doesn't interfere with the nozzle sprayer, and I believe, taking the farmer's time into consideration, that where he wants the Bordeaux mixture in comparatively small quantities that he can better afford to pay this retail price for this concentrated product rather than to attempt to make his own Bordeaux mixture. It is really quite a particular job to make the Bordeaux mixture and get it just right and properly strain it so that there will be no lime or other sediment which will clog the nozzles of the sprayer. But the prepared product is so prepared that there is very little, if any, trouble along this line.



SHARPLES MECHANICAL MILKER

will be demonstrated at the leading Fairs throughout the country this Fall

ONE of the most important exhibits for the farmer and dairyman at many of the big Fairs this year will be the Sharples Milker—the device that is rapidly revolutionizing modern dairying. No man who owns cows can afford to miss this exhibit.

The big feature of the Sharples exhibit will be the *daily demonstrations* of the Milker in actual operation on real dairy cows, under conditions exactly like those in your own dairy.

You Should See these Demonstrations

They will SHOW you, at first hand, how the Sharples Milker fills every requirement better than the best hand milker. How one man can do the work of three with it; how reliable it is—right there on the job every day in the year; excluding all stable air and dirt—absolutely sanitary; gentle, even-tempered and more regular in its action than any hand milker—drawing the milk quickly and thoroughly, and keeping teats and udders in soft, healthy, pliable condition.

Take Your Own Time, Ask All the Questions You Want

The plain-spoken, practical dairymen in charge of these demonstrations will explain to you every detail of the equipment, and will answer every question. We urge you to spend all the time you want in our exhibit, as we want you to become thoroughly acquainted with the wonderful time, labor and money-saving properties of the Sharples Milker.

Special Accommodations, If You Wish

If you want an extra good, long look at the Milker in operation, we can arrange a Special Individual Inspection for you. Write us at West Chester and we will arrange it with the men in charge of the exhibit.

Sharples Exhibits at the Following Fairs:

Oklahoma New State Fair, Muskogee, Okla.	Oct. 6-11	New York State Fair, Syracuse, N.Y.	Sept. 8-13
Texas State Fair, Dallas, Tex.	Oct. 18-Nov. 2	North Carolina State Fair, Raleigh, N.C.	Oct. 20-25
Montana State Fair, Helena, Mont.	Sept. 22-27	Ohio State Fair, Columbus, O.	Sept. 1-5
South Dakota State Fair, Huron, S. Dak.	Sept. 6-12	Pennsylvania, The Allentown Fair, Allentown, Pa.	Sept. 23-26
Minnesota State Fair and Exhibition, Hamline, Minn.	Sept. 1-6	Vermont State Fair, White River Junction, Vt.	Sept. 16-19
Michigan State Fair, West Grand Rapids, Mich.	Sept. 1-6	Virginia State Fair, Richmond, Va.	Oct. 6-11
Wisconsin State Fair, Milwaukee, Wis.	Sept. 8-12	Maryland Inter-State Fair, Hagerstown, Md.	Oct. 14-17
Indiana State Fair, Indianapolis, Ind.	Sept. 8-12	New Jersey-Penna. Inter-State Fair, Trenton	Sept. 29-Oct. 3
Illinois State Fair, Springfield, Ill.	Oct. 3-11	California State Fair, Sacramento, Cal.	Sept. 13-20
Nebraska State Fair, Nebraska	Sept. 1-5	Canadian National Exhibition, Toronto, Can.	Aug. 23-Sept. 8
Iowa State Fair and Exhibition, Des Moines, Ia.	Aug. 20-28	Ottawa	Sept. 5-13
Missouri State Fair, Sedalia, Mo.	Sept. 27-Oct. 3	Quebec	Aug. 23-Sept. 2
Kansas State Fair, Topeka, Kans.	Sept. 8-12	Sherbrooke	Aug. 30-Sept. 6
Georgia State Fair, Macon, Ga.	Oct. 21-31	Fredericton	Sept. 15-20
Kentucky State Fair, Louisville, Ky.	Sept. 9-14	Halifax	Sept. 3-11
Maryland State Fair, Timonium, Md.	Sept. 2-6		

The Sharples Tubular Separator Exhibit

will be more interesting than ever this year. Be sure to make a careful inspection of a Sharples Tubular while at your Fair—it will explain to you why this separator is used exclusively on the leading dairy farms in the country.

Write for our books on *Mechanical Milking and Business Dairying*. Be informed on the progress of dairying. Free on request.

Sharples Separator Company
West Chester, Pa.

Dairy.

CONDUCTED BY COLON C. LILLIE.

DAIRIES IMPROVED THROUGH EDUCATION.

Officials of the dairy division of the Department of Agriculture want it understood by the country at large that thus far no fixed standard for milk has been adopted and no regulations on bacteriological count that can be construed as a standard.

On the other hand, the dairy division is attempting to co-operate with the farmer to better dairying methods and to improve the quality and increase the quantity of milk shipped to consumers in the cities and towns. This work, however, is not done through any policing power, and can only be accomplished through suggestions and convincing the farmers of better methods.

Demonstrators from the Bureau of Animal Industry have helped milk producers, who supply more than 200 cities. In each city the demonstrators co-operate with local health authorities, not only to help them procure evidence or bring prosecutions, but to improve the local system of inspection whereby the inspectors can aid the milk producers of the territory to bring their milk up to the city's own standard without being called upon to make excessive expenditures.

In addition to this the bureau supplies tuberculin for testing cows. The demonstrators have no power to compel the farmer to accept or follow advice; they merely try to show that the measures suggested are for the farmer's own good, and will give them more milk and a minimum of loss.

A simple count of bacteria is not sufficient to determine the safety of milk. The nature of the bacteria, and whether they breed disease, must be known as well as the number. Consequently there is no fixed standard of bacteriological count for the Department.

SURFACING A CONCRETE BLOCK SILO.

I have just built a concrete block silo 12x40 ft. inside, and would like to have you let me know which would be the best to put on, tar, or to wash it with cement. The silo is plastered inside.

Montcalm Co.

J. W.

If this concrete silo was plastered on the inside with rich cement mortar made in the proportion of one part good Portland cement to two parts of good fine sharp sand, I don't think anything else need be done with it this year, and possibly next. This is all I ever do to a latch-and-plastered silo. Then, after a year or two the acid in the silage seems to affect the cement a little bit and we whitewash it with a pure cement whitewash. I would prefer to use the cement whitewash rather than the tar, although if you thin coal tar with gasoline so that it will spread with a brush and go to the pains to paint it and fill all the crevices in the cement with this coal tar, I think it would make a splendid job. By not being in a hurry in dissolving the coal tar with the gasoline you will get a good solution that will spread nicely with a brush. You can put it on with a big whitewash brush and do a fairly good job of painting, and it will make a smooth air tight surface, but as I say, a cement whitewash will do and answer every purpose. If you have a good fine coat of mortar on the surface, however, you won't need to do anything further this year.

REPAIRING A STAVE SILO.

What can be done to a stave silo which has been in use a number of years and has small air places or holes in the side? It is standing firm and solid. In good shape otherwise, and we would like to make it do a while longer.

Livingston Co.

E. A. N.

Not having a more detailed description of the injury to the present silo I feel that it is difficult to offer any advice about repairing it. Sometimes an occasional stave in a silo will rot off at the bottom and one, with a little ingenuity, can take out a portion of a stave and put in a new one, and make it practically as good as ever. Sometimes a poor place in a stave rots and leaves an air hole. Now this can, by taking a chisel and working the hole out in the right shape, be filled with cement, that will make it last a year or two longer,

perhaps longer. Sometimes it might be necessary to nail tin or a piece of board on the outside of the silo and then fill the hole with cement, mixing the cement just as thick as you possibly can and filling the hole and smoothing it down with a trowel. If there are numerous small holes in the silo it might be repaired by lining it on the inside with building paper. Get the first quality of building paper, commence at the bottom and put a tier of paper around, tack it so that there will be no danger of its coming off. Then put another tier on top of that, lapping it as you would clapboard, and so on to the top of the silo. If there are no large holes this would make your silo tight. The paper, of course, would come off, the most of it, when the ensilage was taken out, but next year you could line it with paper again, which would be cheaper than building a new silo. If, however, there are many large holes the paper would not hold and they would have to be stopped up in some way. One could nail pieces of tin over them and put the paper over that, or he could fill them with cement and then line with the building paper. By taking a little pains and using tacks with a large tin head you can make this paper stay on so that it will make your silo efficient from one year to another.

A GREAT DAIRY SCHOOL.

The National Dairy Show is a great educational institution. More practical, useful and valuable information can be obtained in a week at a show of that kind than in any other way. It is a short course for dairymen. The dairy show is now in its eighth year and its patronage is constantly increasing. The one noticeable fact about this attendance is that it is made up of the men from the larger farms. Producers of pure-bred animals and the large milk producers come in large numbers but the men who are only producing a comparatively small amount of milk, the men who are delivering this milk to the creamery or cheese factory and the men who are making butter on the farm apparently do not appreciate the value of the show. The most good will be accomplished when this class of farmers takes advantage of the dairy show. To them there are even more lessons to be learned than for the large producers. The value of meeting the most successful dairymen from various parts of the country and having an opportunity to discuss difficulties and learn new methods can not be over estimated; but besides this there is an opportunity to see the best stock that is in the country; to observe the methods used by the best feeders and breeders and from a direct and visible standpoint there is an opportunity to see every line of equipment from the largest building to the smallest utensil. Building materials, silos of various makes, fences, stable devices, dairy house building and equipment are only a sample of the exhibits that were on display at the last show. Different makes would be seen side by side and therefore easily compared. No doubt many of the visitors more than pay the expense of their trip through a purchase made intelligently after comparing various kinds of equipment.

The dairy meetings especially designed for the dairy farmer, lectures and demonstrations in the handling and caring for animals on the farm, the making of butter and the milking machine in operation are only a few of the attractions.

To the man who only has a few animals the expense of attending the show may be prohibitive. In a case of this kind communities could to advantage arrange to send delegates, providing their expenses, and then at meetings during the winter the various subjects of most interest could be discussed. The dairy show with a following of this kind would be the greatest dairy school in the world.

So writes Prof. C. A. Larsen, of the Pennsylvania State College, of the National Dairy Show to be held this year October 23 to November 1 at Chicago.

MARKET EASY FOR MILKERS AND SPRINGERS.

Dullness has prevailed in the Chicago market for milkers and springers for a month or more, and prices have ruled more or less lower except for occasional offerings of prime Holsteins and Durhams. Backward springers are still the favorite sellers, and many fresh cows, forward springers and low-grade cows have to clear through killing channels. Comparatively few cows have been selling for more than \$70 each, with a sale now and then at \$75 or better, while inferior cows sell down to \$50 or even lower.

TUBERCULOSIS.—(Continued).

BY FLOYD W. ROBISON.

Sanitation.

Dark, dirty, crowded stables are favorable to tuberculosis. Under these conditions the disease spreads rapidly and is only kept out with difficulty.

Clean, airy, well-lighted stables, on the other hand, are unfavorable to the development of the disease. If brought into such a stable it does not spread so rapidly and is not so difficult to get rid of as in the first case.

A well-built, sanitary stable need not be made of expensive material or of elaborate design but should have plenty of light, air and drainage.

Light is very important. Direct sunlight is a great destroyer of germ life. Tubercle bacilli soon die if exposed to sunlight. It is a disinfectant, always ready to work without cost. Sunlight is also necessary to the health of animals. Men deprived of it for any length of time, as prisoners in jail, become pale and lose the appearance of health. Cattle that are constantly confined in dark stables become lowered in vitality and are ready to catch any disease with which they come in contact. For these reasons the cow stables should have plenty of windows, on two or more sides if possible, so that the sunlight can reach every part of the interior some part of the day.

Pure air is also very important. In badly ventilated stables the air is breathed over and over again until it becomes more or less poisonous. Animals kept in such conditions become gradually reduced in vitality. This change may not be noticeable to the observer but becomes apparent if the animal is exposed to disease. It easily contracts disease and does not recover from it readily.

Stables should therefore have plenty of air space for each animal. This requires the ceiling to be high, the stalls roomy, and the passages wide. In addition to this ample air space some way of changing the air in a stable must be provided. This is done by means of suitable openings in the walls and roof and comprises the system of ventilation.

Ventilation to be successful must provide for two things. First, the removal of the foul air from the inside, and second, the bringing in of fresh air from outside the building. No system is good that fails to accomplish these objects without causing unnecessary drafts.

The usual way is to bring in fresh air through open windows, and in cold weather through ventilating shafts, which may be concealed in the walls or beneath the floor. The foul air is removed by open windows and by ventilating shafts from the ceiling to the roof, where they are usually protected by a hood. When both inlets and outlets are proportioned to the size of the building there should be a constant circulation of air and no sensation of closeness should be perceptible in the stable.

Drainage removes the liquid refuse from the stable by suitable gutters and drains. It cannot do this unless the floor is water-tight, and concrete flooring is therefore recommended. Urine leaking through cracks in the floor until the soil beneath is saturated is a frequent source of foul odors and unhealthy stables.

Cleanliness.

Since the manure of tuberculous cattle often contains living tubercle germs in vast numbers, the importance of keeping it well cleaned out of the stable is readily seen. Such manure is not only dangerous to other cattle in the stable but may be the means of conveying the disease to children. Often cows are seen with their flanks incrusts with dry dung. Parts often break off when the cow is milked, and some of it is likely to fall into the milk pail. The larger lumps are strained out but the smaller particles remain, and also the tubercle germs, which are small enough to pass any strainer. These stay in the milk and make it a fruitful cause of the disease in the young.

Stables should be cleaned out often and manure put where it can not be worked over by hogs or cattle. These animals are easily infected in that way. Cleanliness also includes keeping the walls and ceilings free from dirt, dust and cobwebs. These are all good residing places for disease germs.

Whitewashing the interior of the stable at least twice a year is a great aid to cleanliness, and also has a distinct effect in destroying disease germs. In many municipalities dairy stables are required to be whitewashed at regular intervals.

A NINETY-DAY ENSILAGE CORN.

A representative of a seed company is in this locality selling the Improved Red Cob Ensilage Corn, claiming it will ripen in 90 days, and that it will produce as much tonnage as the Eureka, or any other corn grown. Will you kindly state through the columns of your paper the truth or falsity of the claims made for this corn? He shows a very fine specimen of corn, claimed to have been grown near Battle Creek.

Branch Co.

E. W. T.

It is not reasonable, and I don't think it is possible, for any ninety-day variety of corn to yield as much as a larger variety. A corn that will mature in ninety days is about the smallest kind of corn that we grow. It is pony dent or smut nose flint, corn that doesn't grow very large but matures early. Now if we want to get more tons of the corn plant to the acre then we plant a later or a larger variety, and when one says that he has an ensilage corn that will mature in ninety days and yield as large a crop as Eureka ensilage corn, I wouldn't believe him. He would have to show me. Personally I don't think we want the very earliest corn or the very latest corn for ensilage, but that variety of corn which is the latest and largest variety that will properly mature for ensilage in our vicinity. I have stated before in The Farmer that I think that the best variety of ensilage corn is a good dent corn that is grown about 100 miles south. If you go too far south it won't mature, but it will mature enough for ensilage almost every season if the plant is produced not more than 100 miles south of where it is intended to be grown for ensilage, and this will give us the largest number of tons of digestible nutrients to an acre of silage, which is what we are all looking after.

LARGE OR SMALL COWS.

At the Wisconsin Experiment Station it has been found that the large cows return more profit per cow than the small ones. Cows, 900 lbs. and under, returned products worth \$54.20 more than the feed eaten; cows 901 lbs. to 1,000 lbs., \$61.36; cows 1,001 lbs. to 1,100 lbs., \$66.28; cows 1,101 lbs. to 1,200 lbs., \$72.21; cows 1,201 lbs. to 1,300 lbs., \$72.01; cows 1,301 lbs. to 1,400 lbs., \$79.64; cows over 1,400 lbs., \$88.01. Mr. Warren in his book on Farm Management, in commenting on the above says: "The large animals of any breed are much more economical of labor and barn room and usually give as much or more milk for the food eaten." The larger cows used their feed with the same efficiency as the smaller ones. In fact, the largest ones were a trifle more efficient than the small ones.

WEIGHING THE MILK.

It is just as important for a farmer to weigh his milk as it is for the grocer to weigh what he buys and sells instead of going by guess. A. W. Sweeton kept track of the time required to weigh the milk from a herd. He found that it took a half minute to weigh the milk from a cow for one milking, or a minute a day. About six hours a year. Weighing the milk results in finding that some cows do not pay for the feed they eat, to say nothing about the work required in caring for them. Wouldn't it be worth six hours labor a year to know this? It will save many times six hours labor and harder labor than weighing the milk.

North Dakota.

W. C. PALMER.

ULTRA-VIOLET RAYS NOT SATISFACTORY FOR STERILIZING MILK.

The successful use of ultra-violet rays, artificially produced in Europe for sterilizing drinking water led the Department of Agriculture to experiment with these rays as a possible means for sterilizing milk. These experiments show that the rays do not destroy all the organisms in milk produced under commercial conditions. While the experiments show that large numbers of bacteria are killed by the ultra-violet rays, there is always the possibility that some of the pathogenic or disease-producing forms will survive. The rays, it is found, also impart a disagreeable flavor which would render the milk unsalable.

In attempts to sterilize cream, the results were still less satisfactory than with milk, nor could dirty milk bottles be completely sterilized when exposed to the action of the rays. Even if the methods of generating rays are improved it is doubtful if they can ever be used to any extent as a substitute for pasteurizing milk because of the disagreeable flavor they impart.

DE LAVAL
CREAM SEPARATORS

Save Much Time and Labor in Summer

BESIDES greatly increasing the quantity and improving the quality of cream and butter DE LAVAL cream separators save much time and labor.

This great saving of time and labor counts for more in summer than at any other season and often alone saves the cost of a separator, aside from all its other advantages.



As compared with any kind of gravity setting the saving of man's time and labor and usually woman's drudgery with a DE LAVAL is a big item in its favor.

As compared with other separators the DE LAVAL saves much time and labor by its greater capacity, easier running, easier handling, easier cleaning and freedom from need of adjustment or repair.

These are merely some of the advantages which make a DE LAVAL cream separator the best of all summer farm investments, as every DE LAVAL agent will be glad to explain and demonstrate to anyone at all interested.

See the nearest DE LAVAL agent at once or if you do not know him write us direct for any desired information.

THE DE LAVAL SEPARATOR CO.

NEW YORK

CHICAGO

SAN FRANCISCO

SEATTLE

You're Losing
Money Every
Day You Put Off
Trying

Larro-feed

The Ready Ration
For Dairy Cows

The only feed that's guaranteed to produce more milk and keep your cows in better condition.

Here's Our Trial Offer

Go to your dealer (if he can't supply you, write us) and get as many sacks as you want. Feed two sacks (200 lbs.) to any one cow—watch results two weeks, especially the second week. If Larro-feed does not please you, take the unused sacks back. No charge will be made for the two sacks used in the trial. We prove the merit of Larro-feed or no sale. You take no risk. Large Free Sample by parcel post on request.

THE LARROE MILLING COMPANY
821 Gillespie Bldg. DETROIT, MICH.

Michigan White Cedar
FENCE POSTS

GEORGE M. CHANDLER, Onaway, Mich.

Fill Your Silo Pay when Satisfied

Over 63 Years Experience Back of it.



ROSS Machines are fully guaranteed. You take no risk. We want to prove that our machines are a good investment before you give up your money. We know they are so good that we do not feel it a risk to make this offer. Many new features have been added which you should know about before buying a machine. Catalog explains all. It is free. The E. W. Ross Co., Box 114 Springfield, O.

95 AMERICAN
and
Upward
CREAM
SEPARATOR

FREE TRIAL. FULLY GUARANTEED. Easy running. Easily cleaned. Whether dairy is large or small, obtain our handsome free catalog. Address: BOX 1061 AMERICAN SEPARATOR CO. BAINBRIDGE, N. Y.



Gearless Churn and Butter Worker. All sizes. For Farm, Dairy and Creamery. Cream Separators and Engines. Write for free pamphlet to R. B. DISBROW, Dept. 32, Owatonna, Minn.

THE PAPEC



Papec Ensilage Cutters

Cut silage perfectly, and at a very low cost of operation. Papec knives cut smoothly and swiftly. They make a fine, uniform silage that is very palatable and nutritious. The combined throwing and blowing force that lifts the silage is generated from one fifth less power than is required by any other blower doing the same work.

Mechanical perfection and high quality of material mean long life, no loss of power and low cost of operation. Our new illustrated catalog gives facts showing how "The Wonderful Papec" will save time and money at cutting time. Send for copy today. PAPEC MACHINE CO. Box 50 SHORTSVILLE, N. Y. 20 Distributing Points in the U. S.

More and Better Work in Less Time

Harris Automatic Feed and Litter Carriers make mean barn work easier. Easy to operate, with many unique features. Substantially built, roller bearing, self-cleaning, indestructible. Read all about them in our large, free catalog.

Harris Patented Stalls and Stanchions

Are easily kept clean, require no repairs, make barn chores a pleasure. Stanchions never get out of order, last a lifetime, make cows more comfortable.

Write for Large, Illustrated Catalog—It's FREE

Its chapters on certified milk, stable ventilation, sanitary equipments, etc., are worth any careful dairyman's time. Tells all about labor saving barn devices. Sent free on request. The Harris Mfg. Co., Box 450 Salem, Ohio



OHIO STATE FAIR.

COLUMBUS, SEPT. 1-5

OHIO

The world is in gear. Competition is at double-quick. Publicity puts profits in pockets of those who have good things to sell. Display and intelligent advertising, is the game which men play to get upstairs in business.

Live Stock Entries Close Saturday, August 16.

Ohio Blue Ribbons are pass-ports into the land of Pleasure and Profit. He who cannot show quality and merit, should fly a white flag and stay away.

The lone fact that an exhibitor dares enter the arena and battle ground at Ohio State Fair, gives prestige to his exhibits and wins for himself applause from the public. His blood is red.

Ohio State Fair exhibitors are made out of Top-Notch and King-Row material. They can get home from third. They can pitch a ringer. Those who do not come are afraid or not qualified for the fight.

Ohio is at the head of the class and leading. Our battle line is widely flung. From Texas and Vermont exhibits are already entered.

Ohio excels. Two Million Dollars have made grounds and buildings more magnificent than any others. In 1913 all records in attendance and entries will be broken. Entries close Saturday, August 16, in live stock classes.

A. P. SANDLES, Secretary, Columbus, Ohio.



You Can Get An INDIANA SILO QUICK

We have all our Silo stock under cover, and its thoroughly seasoned ready to make your Silos.

Write, telephone or wire us, and we will make delivery quick.

Let us send you our Silo Book Free.

INDIANA SILO COMPANY
The largest makers of Silos in the world. Direct nearest factory:
682 Union Bldg., Anderson, Ind.
682 Indiana Bldg., Des Moines, Ia.
682 Silo Bldg., Kansas City, Mo.

"OHIO" 1913 Model

The Silo Filler With the Direct Drive
Wonderful improvements of 1913 "Ohio" eclipse anything ever before produced. One lever controls all movements—reverses by wood friction at finger pressure. Self-feeder—with famous "Bull 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 15 h. p. 30-year durability. "Ohio-cut" silage famous—cuts all crops. Used by Experiment Stations everywhere. Guaranteed. Many big new features this year.

Write for free catalogue, also send 10c for 264-page book, "Modern Silage Methods."
THE SILVER MFG. CO.
Salem, Ohio

WRITE FOR BOOK

Kalamazoo SILOS Last!

Construction is right, material is right. Only silo made with full-length, structural steel door frame heavily galvanized after the riveting. Not a crevice exposed to rust. Choice of seven kinds of wood. Inflexible guarantee. We prepay freight. Catalog shows many more fine points, write for it today. Address Dept. 30.
KALAMAZOO TANK & SILO CO.
Kalamazoo, Mich.
Minneapolis, Minn.
No. Ft. Worth, Texas

KENDALL'S SPAVIN CURE

The old, reliable remedy you can depend on for Spavin, Curb, Splint, Ringbone or lameness. Thousands have proved it invaluable. Get a bottle from your druggist. Price per bottle \$1.00 for \$5. "Treatise on the Horse" Free at druggist or from Dr. B. J. KENDALL CO., Keosauqua Falls, Vt., U. S. A.

MINERAL HEAVE CURES HEAVES

Best Conditioner
Rich Expeller
Death to Heaves
Guaranteed or Money Back.
Coughs, Distemper, Indigestion.
NEWTON'S Large for Heaves.
At druggists or sent postpaid.
THE NEWTON REMEDY CO., TOLEDO, OHIO



Healthy Stock
is assured to the wise farmer and stock raiser who guards against all parasitical and skin diseases by occasional dippings and sprayings. You should always use Dr. Hess Dip and Disinfectant for two important reasons—its effectiveness and its uniform strength. Its cheapness permits of its free general use everywhere.

DR. HESS DIP and Disinfectant
is a guaranteed preventive. It contains elements harmless to animal life, but deadly to parasitic and germ life. Little trouble to use it. For sheep, or when contagious diseases are suspected, a dipping tank is best. One gallon of dip makes 100 gallons of solution.

Write for Dip Booklet.
DR. HESS & CLARK, Ashland, Ohio.

DR. HESS DIP and Disinfectant
is a guaranteed preventive. It contains elements harmless to animal life, but deadly to parasitic and germ life. Little trouble to use it. For sheep, or when contagious diseases are suspected, a dipping tank is best. One gallon of dip makes 100 gallons of solution.

Write for Dip Booklet.
DR. HESS & CLARK, Ashland, Ohio.

3 Free Books
About Silage and Silo Filling
(1) "Why Silage Pays"—a valuable book for your farm library. (2) 1913 Catalog about the **BLIZZARD** Ensilage Cutter
A 40-year success. Big capacity, small power. Elevates any height. Simplest, safest. Steady worker. Self-feed table. Almost runs itself. Knives adjustable while cutter is running. Guaranteed.
(3) "What Users Say"—a book containing scores of letters from users of the Blizzard.
Write for these books today
The Jos. Dick Manufacturing Co.
1439 Tuscarawas St., Canton, O.

When writing advertisers please mention The Michigan Farmer.

Live Stock.

PIGS AND PUSLEY.

I was well aware that pigs were very fond of pusley, or purslane, but never regarded it as an economic food. But this summer I have had a practical demonstration of its excellent food value on a bunch of young hogs. These pigs were confined in a pen and, grain being high priced, they have been rationed exclusively on pusley and separated milk as a drink and food as well. Opposite their pen we have a corn field, clean, except for pusley, which at the last moment came very thick in spots. Presumably this had seeded here before we acquired the place, as it is the only spot that had been farmed when we bought. At any rate, it grew rank and fast and the boys have had a merry race with it and being near the hog pen, basket after basket of the weed has been given to those pigs and how they grow; really getting fat upon it and are always eager for it at their mealtime thrice daily. A few minutes' work fills a bushel crate and they make way with about two crates full at a meal. You should see them go at it.

I would really like to know its real economic value as a hog food. I have never seen an analysis of it, nor noticed it classed as a food for stock. Who knows? At any rate, under the circumstances I am not real sorry that it should have grown in this particular field this season, as in about two weeks at the present rate this will be cleaned up and sweet corn will take its place. Of course, we could hoe and pull this out in a half day's time if we desired, but this is one of the evils that sometimes can be put to practical use upon the farm, so we will tolerate it until gone, well knowing two birds are being hit with one stone, i. e., benefiting the corn and ground by pulling it, and the hogs as a summer feed, which with milk, is hard to beat.

Gladwin Co.

G. A. RANDALL.

INSPECTORS ARE SENT TO FOREIGN COUNTRIES TO STUDY MEAT.

As a result of a misunderstanding created by press dispatches announcing that Doctors A. D. Melvin and Edward C. Joss of the Bureau of Animal Industry, have been dispatched to South American countries and Australia to investigate meat production, the Secretary of the U. S. Department of Agriculture has received many letters from farmers and others protesting that the department should encourage domestic production of meat instead of encouraging foreign shippers to bring their product into competition with the local product.

David F. Houston, Secretary of Agriculture, has replied to these letters that the primary object of sending these inspectors abroad is neither to encourage nor to discourage the export of meat to the United States but to make certain that the Department of Agriculture understand fully the conditions under which meat offered for entry into the United States is produced, slaughtered, packed and shipped. The data gained by these foreign inspectors will be directly useful to the government in seeing that meat offered for admission to the country conforms not only to the Meat Inspection Act but also to the Food and Drugs Act, which has recently been held to have jurisdiction in interstate commerce over meat and meat food products. Armed with this information, the department can co-operate effectively with the Secretary of the Treasury in keeping out of the United States all meat produced from diseased cattle, all meats slaughtered in unsanitary establishments or improperly refrigerated, packed and shipped and all meat products prepared under conditions that would not be permitted in the federally inspected establishments of the United States.

The secondary object of the trip, as explained in the letter of instruction to these inspectors is to look into the general condition of the live stock industry in the foreign countries, the growth of that industry, the countries to which they are now exporting live stock and meat and the probability of future shipments into the United States. The inspectors also are required to study the transportation facilities possessed by the foreign packers and exporters of meat and meat products and to give particular attention to their method of refrigerating and storing.

ticular attention to their method of refrigerating and storing.

This foreign inspection of meat has become very necessary irrespective of changes in the tariff on meat for the reason that since 1906 the total domestic production of cattle has been 30 per cent below the actual demand. In other words, this means that the production of cattle has fallen off while the population has been increasing. The department is trying to meet this domestic situation by carrying on extensive campaigns for the eradication of the tick, which more than anything else has prevented the southern states from supplying the normal yield of meat stock. Similar campaigns are being waged against tuberculosis, foot and mouth diseases, scabbies and other plagues which are reducing the cattle output of other sections. The dairy division, through field workers and demonstrators, is carrying on an extensive propaganda to induce farmers to replace scrub cattle with good meat breeds and to convince farmers of the importance of not selling their good cows for slaughter.

The work for tick eradication in single states of the south has increased the annual value of cattle output over \$2,000,000 for a few counties alone. It is hoped that when greater headway has been made against these plagues that the deficiency in cattle production will be overcome and an actual increase to meet the population secured. In the meanwhile, however, with the demand for meat greater than the domestic supply, it is only a question of time when economic law will cause foreign shippers to seek a market in the United States. The Department of Agriculture, therefore, considers it highly important to have full information about the actual condition of meat production in the countries most likely to ship to the United States in order that it may join with the treasury department in excluding all diseased, filthy and undesirable meat offered for entry.—Office of Information, U. S. Dept. of Agriculture.

LIVE STOCK NEWS.

Farmers living in parts of the country where there is good pasture are extremely desirous to own enough good feeder cattle to eat it up, and those who have not stocked their pastures yet are investigating the stocker and feeder market in Chicago and elsewhere with a view of making selections either personally or through a first-class live stock commission firm, which is the better policy. The high prices prevailing for such stock are quite an obstacle to their purchase, although some farmers take the position in buying that feeder cattle bought now and placed in pasture to be kept there up to the first of September, have a good opportunity to grow themselves out of high cost, even if their valuation when they will have gained 200 pounds or more per head is no greater than present cost. Scarcely any owners who have the feed will part with their thin cattle at the present time, and many farmers are beginning to breed beef cattle, while others are going through farming districts of various states in search of desirable stock for finishing. The shortage in the country's supply of cattle of the beef class is startling, the recent bulletin of the Department of Agriculture reporting a decline of over 30 per cent in the number in the United States in the last six years.

The recent great advance in prices for prime light-weight live veal calves was based upon materially reduced offerings at a period when demand was better than usual, the best selling for \$11.50 per 100 lbs. Dressed calves have arrived in many cases in bad order, and this has stimulated the demand for live ones. To a remarkable degree calves are being retained on the farms and dairies of the country, those with beef blood for rearing to maturity as beefs, and females of dairy breeds for raising as milk cows, for it has become difficult to buy good cows either from other dairies or from farmers, while the offerings on the markets of the country embrace scarcely any fancy cows.

The marked falling off in the receipts, of cows, heifers and calves in the Chicago and other markets of the country indicate that farmers are going into breeding beef cattle more generally and that beef calves are to be matured instead of sent to the slaughter house.

Prof. H. P. Rusk, of the Illinois Agricultural College, was in Chicago a short time ago with a shipment of yearling cattle fed on the University farm in Urbana for 210 days, which demonstrated the value of certain methods of feeding. One bunch of 42 head brought \$8.75, while 33 head sold at \$8.65. The cheapest gains, Prof. Rusk said, were made on cattle fed shelled corn, cottonseed meal and silage. The most rapid gains were made on steers given the same feed, with alfalfa as part of the roughage in addition. These cattle were the fattest and sold the highest.

Horticulture.

THE PEACH YELLOWS.

The "Yellows" is one of the chief causes of the blues of the peach grower and of the dissipated appearance of the peach tree. It is an unknown destroyer of peaches and peace whose results only we can see. It has helped to make peach growing a sort of gamble.

The yellows is one of the diseases we know little of. We know it is a disease and that is about all. The fact that we know or understand so little of it makes it the peach man's worry. It is another case of where knowledge would be power.

The scientists have been able to learn little of this trouble. The whole thing is a matter of theory. We are quite sure that the trouble is contagious, although some doubt of it, and we are also quite sure that the best methods of control are to uproot and burn up the affected trees. Experience has taught us that this is the best method we can use with our present knowledge of the trouble.

It is generally accepted that the disease is caused by bacteria. Some think that mal-nutrition is the fundamental cause. They believe that the disease may be likened to the bacterial troubles of mankind, and that the germs are present all the time but that they do not take effect until the tree becomes weak and non-resistant to them.

It was thought that the lack of potash in the soil was a cause, but heavy fertilization with a potash fertilizer failed to give results. The application of nitrogenous fertilizers would make the trees more healthy and vigorous but it only masks the true state of affairs for a short time.

A description of the yellows is hard to give because there are many conditions of foliage and tree which are so similar to the symptoms of yellows that they often confuse those acquainted with the disease.

If the tree is in bearing peaches the first noticeable symptom will undoubtedly be premature ripening of the fruit. It may ripen several weeks or only a few days before the normal time. There are other causes for premature ripening but the yellows peaches can be distinguished by the measles-like red blotches on the skin and the red streaks running through the flesh, often to the pit. The fruit is generally high colored but in flavor it is insipid and somewhat unpleasant.

The foliage of the yellows tree is of a light green, verging on a yellow. The leaves are longer and narrower than the normal leaf and droop considerably, the characteristic boat shape of the healthy leaf being absent. The foliage on diseased limbs and twigs ripens earlier in the autumn than the healthy ones. The buds are also larger and bloom earlier in the spring than the healthy buds.

The twigs grow thinner and more wiry than normal ones and the foliage comes in clusters on them. A reliable symptom is the pushing out of newly formed buds on the ends of apparently healthy twigs, or thin, wiry water sprouts with sickly yellow foliage appear. Dormant buds on the trunk often form into feeble broom-like shoots.

The disease may manifest itself on a limb or two or on the entire tree. It may show itself in newly set trees or in old bearing ones.

Winter injury and injury by mice, rabbits, peach borers, cultivators and other causes will often cause yellow foliage which should not be mistaken for the yellows. Sour soil, hard pan and the lack of plant food, or moisture, will cause foliage conditions which are sometimes taken for the yellows.

Regardless of what our ideas are in regard to this disease we should follow the dictates of the law when we find the trouble in our orchard. We should unhesitatingly follow the instructions of the township yellows commissioners unless we are absolutely sure that they are wrong and then we should make appeal to the state inspector to get his final decision in the matter. If the decision is made in favor of the commissioners the one who made the appeal will have to pay the expenses of the state inspector.

If there are no yellows commissioners in your township and there is enough fruit grown there to warrant the township having them, appeal to the township

board for their appointment and urge the appointment of those who are well acquainted with the various fruit insects and diseases. The yellows commissioners are to enforce the law in regard to all dangerous insects and contagious fruit diseases.

And, please remember that the yellows commissioner's job is anything but a soft snap, so do everything you can to help them. About the best thing you can do for them is to follow their orders and urge others to do the same.

Van Buren Co. FRANK A. WILKEN.

DIFFERENT KINDS OF STRAWBERRY MULCH.

About the latter part of August the farmer who has a small or large patch of strawberries to hold over winter begins to wonder what he will use to protect the plants during winter. The reason he wants to do this is to keep the crop of berries clean for the next year's picking, and to keep the action of thawing and freezing every few days from heaving the plants out of the soil.

Straw, chaff, manure, oats, and corn-stalks are some of the different materials that we have used for this work. We think that oat straw makes the best mulch. It is spread over the patch during the winter when the ground is solid enough to bear up the wagon. The whole patch is covered, no attention being paid to rows. Chaff is about the same. Clover chaff has the objection of having weed seeds in it. Though clover is not harmful at all, yet we sometimes want it where we wish it.

Straw manure is good. We think it is better if the immediate row is covered with the manure while the space between rows is covered with straw. It saves manure this way and also allows the seeping to leach down exactly over the row. Oats are mighty satisfactory if we are able to judge about when the frost will come in the autumn. We sow at the rate of four bushels between the rows during the middle of August. This grows exceedingly fast in this warm weather and dies down as soon as a regular frost comes. The objection being that a late frost allows the oats to get too big before killing them down. Corn-stalks are good protection but they are not easy to handle nor are they as good preventers of dirt getting on the berries in summer.

Ohio. R. E. ROGERS.

FIGHTING PEAR THRIPS.

Excellent results are said to have been obtained in fighting pear thrips by the application of a spray of whitewash, consisting of from 75 to 100 pounds of lime to each 100 gallons of water. It is stated that the cost of the spray should not exceed more than one cent a gallon of prepared material. Care should be taken to secure first-class lime and to see that it is well slaked. The spray should be applied just as the buds begin to separate and the entire surface of the tree should be covered, one application being sufficient. In a Missouri experiment eight times as many pears were obtained from trees sprayed in this way as from unsprayed trees.

A REMEDY FOR CUCUMBER BEETLES.

In the issue of June 28 I saw an article from F. D. Wells, of Oakland county, in regard to cucumber beetles. Several years ago I learned a recipe for destroying these beetles and I have yet to find a time when it has not done all it is said to do.

The recipe is one-half gallon of air-slaked lime, one gallon of wood ashes, one-half gallon of flour and one ounce of turpentine. Put this, well mixed, in an old gunnysack and dust on the plants while the dew is on. The result of this treatment is magical; kills all the bugs and does not injure the plants. One must use care to keep it on the vines all the time while they are small. I have used this remedy with success on watermelon vines, also pumpkin and squash. I am using it now on tomato plants with good success.

Lenawee Co. J. A. PIERCE.



Wheat and Clover

Many farmers stick to wheat raising mainly because clover follows it in the rotation. But why not get the best possible out of both crops? No crop returns better profit for the right fertilizer than wheat. What is the right fertilizer? That depends on the soil and on what fertilizer you have used on it. The longer you have used phosphate the sooner it will pay you to balance it with

POTASH

Insist on your wheat fertilizer containing 6 to 8 per cent. of Potash. Potash Pays on both wheat and clover.

If your dealer does not carry Potash, write us for prices, naming quantity needed, and ask for our free book, "Fall Fertilizers." It will show you how to save money and increase profits.

German Kali Works, Inc.

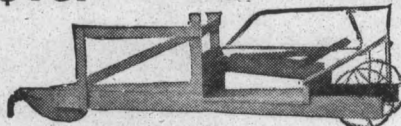
42 Broadway, New York

McCormick Block, Chicago Bank & Trust Bldg., Savannah
Whitney Central Bank Bldg., New Orleans
25 California St., San Francisco
Empire Bldg., Atlanta

The PERFECT CORN HARVESTER

SOLD DIRECT TO THE FARMERS

\$18.00---Freight Prepaid



Send for Booklet and circulars telling all about this labor saving machine.

LOVE MANUFACTURING COMPANY - DEPT. 2, LINCOLN, ILL.

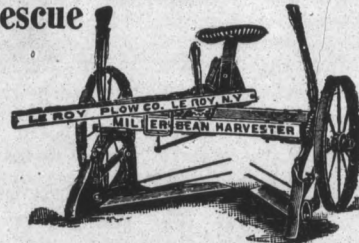
The Cheapest and Easiest way Possible to Cut your Corn for Shock or Silo.

Oregon, Ill., Oct. 26, 1912.

Gentlemen—After giving the Perfect Corn Harvester a thorough working test in all conditions of corn in the cornfield, we write you that it has adjustment for a great variety of conditions in cutting high, medium or low. We are very much pleased at its light draft and steadiness in following the center of the row. We consider it the very best one-horse corn cutter that the experimental station has ever had an opportunity to demonstrate, and we commend it to the corn cutting farmer.

Very truly, Samuel Ray.

Beans again to the Farmers Rescue



The Old Reliable and Genuine "Miller Bean Harvester" has harvested more beans for Michigan Farmers for 30 years than all other makes combined. They do good work under all circumstances and cost no more than the "imitations." Leave your order with your dealer now and be ready for that Bumper Crop.

LE ROY PLOW COMPANY,
Le Roy, N. Y.

Tile Your Farm!

Don't put it off any longer. You are losing hundreds of dollars every year by farming land that is not thoroughly tiled. Hundreds of farmers are using Cyclone Tile Ditchers to dig tile trenches. Work in any soil. The price is within reach of any farmer having 20 acres or more to tile. Write for full information.

The Jeschke Mfg. Co. Box 111 Bellevue, Ohio

New LEHR BEAN HARVESTERS

If you are in need of a Bean Harvester now is the time to buy. Get a Lehr and you will be well pleased. It is well built. Easy to operate and fully adjustable.

Don't wait, but write today for prices. Address THE LEHR AGRICULTURAL CO., Dept. M, FREMONT OHIO.

Winter Spelt or Emmer—Cleaned and ready to sow at \$1 per bu. f. o. b. here. Bags extra. Yielded 50 bu. per acre this year. 15% protein. takes place of bran in the dairy ration. G. H. REDFIELD, Edwardsburg, Mich.

WINTER SEED WHEAT

Yield guaranteed. Write for catalog and circular, describing the most wonderful variety ever introduced in the U.S. BERRY'S IMPROVED KHARKOV. Just imported direct from Russia. Has no equal. Largest yielder known and withstands the severest winters. Have improved Turkey Red, other varieties and Mammoth White Rye. Large stock Alfalfa, Timothy and all Grass Seed. Write for circular, free samples, special low prices.

A. A. Berry Seed Co., Box 131, Clarinda, Iowa

SEED WHEAT

GOING WHEAT. A hardy variety of bearded red wheat. Stiff straw. Never lodges. Very productive. I have grown it for years. Write for sample and price. COLON C. LILLIE, Coopersville, Mich.

Seed Wheat—Niagara, a hardy, bearded red wheat. Very heavy and productive. Going, a bearded red wheat, stiff straw and a good yielder. Write for sample and prices. E. H. & J. A. COLLAR, Coopersville, Mich.

Pulverized Lime Rock

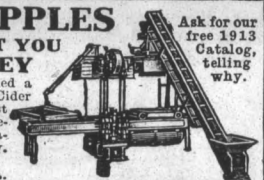
We can ship in carload lots in two days after order is received from Muskegon and Benton Harbor. Write for prices direct to you.

LAKE SHORE STONE CO., Milwaukee, Wis.

YOUR APPLES

WILL NET YOU MORE MONEY

After you have installed a Monarch Hydraulic Cider Press. We are the largest mfrs. of presses, apple-butter cookers, evaporators, etc., in the country. A. B. Farquhar Co., Ltd. Box 108, York Pa.



CORN HARVESTER

That beats them all. One horse cuts two rows. Carries to the shock. Worked by 1, 2 or 3 men. No danger. No twine. Free Trial. We also make Stump Puller, and Tile Ditchers. Catalog Free. Agents Wanted. C. G. BENNETT & CO., Westerville, Ohio.

BINDER ATTACHMENT

with corn harvester cuts and throws in piles on harvest or in winrow. Man and horse cut and shock equal with a corn binder. Sold in every state. Price only \$20.00 with fodder binder. J. D. Borne, Haswell, Colo., writes: "Your corn harvester is all you claim for it; cut, did and shocked 65 acres molo, cane and corn last year." Testimonials and catalog free, showing pictures of harvester. Address PROCESS MFG. CO., Dept. 44, Salina, Kans.

DOWDEN PERFECT POTATO DIGGER

Saves Half the Cost of Harvest

Simple, strong durable, always in order. Works in all soils at various depths., hillside and level.

Does not cut the potatoes—misses none—leaves the potatoes clean on the ground. Vines do not interfere with the working of the Dowden Digger.

The Dowden Digger is fully guaranteed—fast, clean and durable. Thousands in use all over the world. It's the Digger that meets every demand.

Catalog sent free Write us today



DOWDEN MFG. CO.
1373 Elm Street, Prairie City, Ia.

The Michigan Farmer

Established 1843.

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.M. J. LAWRENCE.....President
M. L. LAWRENCE.....Vice-President
E. H. HOUGHTON.....Sec. Treas.I. R. WATERBURY.....Associate
O. E. YOUNG.....Editors.
BURT WERMUTH.....
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 re-
sponsible for money sent in letters. Address all com-
munications to, and make all drafts checks and post-
office orders payable to, the Lawrence Publishing Co.

RATES OF ADVERTISING:

40 cents per line agate-measurement, or \$5.60 per
inch, each insertion. No adv't inserted for less than
\$1.20 per insertion.No lottery, quack doctor or swindling advertise-
ments inserted at any price.
Entered as second class matter at the Detroit, Mich-
igan, postoffice.

COPYRIGHT 1913

by the Lawrence Pub. Co. All persons are warned
against reprinting any portion of the contents of
this issue without our written permission.

DETROIT, AUGUST 16, 1913.

CURRENT COMMENT.

Quite often when country people are urged to exert influence in government affairs by writing letters to legislators, congressmen, or executives they fail to respond to such requests for the reason that they fear that it would result in no benefit—that letters or personal appeals are effective only when they come from well known men who are much in the public eye.

This, however, is a great mistake. As a case in point we will refer to an explanation appearing in the Live Stock department of this issue, in which it is set forth at some length that a previously published report, which, however, did not receive wide circulation, to the effect that representatives of the Department of Agriculture were being sent to South America to investigate meat production was an erroneous report.

This effort to call public attention to the fact that the investigation is for an entirely different purpose and may, as a result, tend to limit rather than promote such importation, is due entirely to the fact that a considerable number of letters were received by the head of this department from interested farmers and stock feeders protesting against the government policy of promoting the importation of foreign food products rather than fostering home production.

The effect that a considerable number of letters had in this case is the effect which a like expression of opinion upon any public question will have. The influence of thinking farmers is just as potent as that of any other class of people and if they would develop to a greater extent the habit of expressing their ideas upon important public questions to the men who are their representatives, in state and national capitals, they would often times have less cause to complain of the action of their representatives upon public questions.

An appeal has been made to Michigan Farmer readers to exercise their influence in opposition to a proposed amendment of the parcel post law and the above illustration is given simply as a means of showing the reader the effectiveness of concerted action of this kind from interested citizens.

Recent developments at Washington indicate our prediction to

the effect that the administration currency and banking reform bill would be amended in many particulars, before it passed through the committee and was reported out for general consideration, was correct. This prediction was based upon the idea that, unlike the tariff bill which is a strictly party measure, an effort would be made to have the proposed currency and banking reform bill made acceptable to both bankers and business interests, so far as possible, in order to insure its favorable consideration by the present Congress. That this will be the course pursued is evidenced by the fact that of some 175 amendments made to the bill in the House committee the most important were adopted on the recom-

mendations of the currency and banking committee of the Chamber of Commerce of the United States, which last month met in Washington and issued a criticism of the Glass-Owen bill, as the currency bill is known in Congress, and recommended 20 definite amendments. Of these 20 amendments, 10, which are considered the most important, have been adopted by the house committee practically as suggested, three others have been adopted in part, while seven have been either rejected or not yet acted upon.

Briefly summarized, the amendments recommended by the organization above mentioned which have been incorporated in the bill are as follows: The establishment of an advisory council of practical bankers to consult with the federal reserve board; the removal of the limit of \$500,000,000 from the issue of federal reserve notes; identification of notes issued by each federal reserve bank so that one bank cannot pay out the notes of another; specifying the powers and duties of federal reserve agents; requiring weekly statements from federal reserve banks; apportionment of profits of reserve banks permitting member banks a return of more than five per cent in dividends and placing the balance in a sinking fund to pay off the national debt instead of turning it into the federal treasury; providing for deposit and discount by one federal reserve bank with another; eliminating "acceptances" as deposits permitted in reserve banks; permitting reserve banks to buy and sell in open market other than bankers' bills; taking promissory notes secured by bonds out of the class of commercial paper.

Other of the proposed amendments partly acted upon include the making of notes issued by the federal reserve banks obligations of said banks instead of the United States treasury; the apportionment of government deposits among reserve banks by direction of the federal reserve board instead of by the secretary of the treasury, and the more clear definition of "short time" obligations.

Most of the 175 amendments were minor changes in language and diction to make the wording more clear and do not alter fundamental ideas to any extent. The tendency of the amendments may be said to materially reduce the very broad powers of the federal reserve board as proposed in the original bill and to make its provisions more liberal toward banks, without impairing its value to the business interests of the country. It is claimed by the administration that the bill as amended will be acceptable to the smaller banks and will be strenuously opposed by only a few large financial institutions. This, however, remains to be determined.

The above summary of amendments made to this bill in the committee are given with a view of familiarizing the reader with its terms and inciting him to a study of banking problems which will give him a more desirable degree of familiarity with and knowledge of this important factor of our country's prosperity.

TO EARN A PROFIT, MONEY MUST CIRCULATE.

Money that stands still makes no profit; it must be kept moving to pay a dividend.

Bank interest is simply a part of what someone is making by using the money. No one is in a better position to realize this truth than the farmer.

He invests in thoroughbred stock, better seed, more land and more machinery and equipment, and increases his year's profits.

Still, mere circulation does not make a profit; money must be wisely invested.

It's a good idea to watch the advertising in the Michigan Farmer; the practice will help you to circulate money to better advantage.

HAPPENINGS OF THE WEEK.

National.

Three persons were killed and two injured by the ditching of an automobile west of Detroit last Sunday night.

Governor Ferris, of Michigan, has sent Judge Alfred J. Murphy, of Detroit, to the copper mining district as the special representative of the executive office for the purpose of investigating the differences between the miners and the operators. This action of the governor is generally interpreted as the prelude to an attempt, if necessary, to compel the factions to meet. The news seems to be welcomed by the strikers, while the operators are apparently dissatisfied.

The New York assembly by a vote of 65 to 35 adopted the Frawley committee report which virtually demands the impeachment of Gov. Sulzer for making a

false report as to his campaign expenses, for engaging in stock market speculations at a time when he was governor and was vigorously pressing legislation against the New York stock exchange, for converting to his own use funds contributed for campaign purposes, for obstructing investigations into campaign contributions and for other matters.

The employees of the Detroit United Railway declare that they will go out on strike Saturday of this week unless the company meets their demand for increased wages. An effort is being made to arbitrate the differences and two arbitrators have been selected but these have failed thus far to agree on a third member of the board.

After much agitation by the public the common council of Detroit has finally agreed to the expenditure of \$200,000 for a hospital for the city's insane.

The new president of the Detroit board of education will inaugurate a class in sex hygiene for parents next winter and if the work meets with approval it will be extended to the public schools.

Disastrous storms were prevalent over the country last week. At several points in Michigan much damage was done to property by wind and lightning and a few lives were lost. At Philadelphia a terrific wind swept over the city, killing three and injuring 50 persons and destroying much property.

Congress continues its work on the tariff bill, lobby investigations and the currency plan. This week the Senate will consider the sugar and agricultural products schedules, and the democratic House will take up the currency reform measure.

The Fraternal Order of Knights Templars are holding their thirty-second triennial convocation at Denver, Colorado, this week.

According to the federal internal revenue figures the number of saloons in the country has decreased 21,554, as compared with last year, the number for this year being 194,590. Wholesale liquor dealers numbered 6,452, a decrease of 600 within the past year.

A new high record was made by freight shipments through the Soo canals during the month of July of this year. The shipments aggregate a total tonnage of 12,279,124 tons, which exceeds the shipments of any whole season previous to 1894, and exceeds former high months' record made during June of this year by 164,511 tons. The amount of ore moved from the head of the lakes from the first of the year to August 1, exceeds the shipments for any previous year and is fully 3,000,000 tons ahead of the shipments during the same period a year ago.

Foreign.

Conditions in China are improving and it appears now that the revolution recently started has proven a failure.

As the result of a panic in a crowded moving picture show at Grandia, Spain, caused by a fire, 49 persons were seriously hurt, 14 of whom are believed to be dying.

Destructive floods are reported in India. The river Damodar has overflowed its banks and flooded miles of country around Burdwan to the northwest of Calcutta. Hundreds of people have been drowned, thousands are homeless, traffic is suspended and the loss of property is enormous.

Relations between this government and Mexico are being put to a test but it is the hope of the administration that differences may be adjusted in a peaceful manner. England, France and Germany have recognized the present provisional government of Mexico and representations were made at Washington for a similar approval by the American government, but the state department refused to recognize the Huerta administration even upon the advice of Ambassador Wilson, who has represented the American government at Mexico City during the continued uprisings of the past few years. Last week President Wilson appointed former Governor Lind, of Minnesota, as a special envoy to investigate conditions and suggest to this government a course of procedure. He is now at the Mexican capital beginning his work of collecting information on conditions. This much of the attitude of the state department at Washington has been made public, that after an election the American government will recognize the officials legally elected by the people of Mexico. It has developed during the past few days that an organized effort was about to be made to force the two countries into war but it is believed that such a result is more remote than it appeared a week ago.

The Balkan states have signed the peace treaty and everything would probably be put in order soon but for the menacing situation caused by the presence in Thrace of a large Turkish army. The Turks also declare now that they do not intend to release Adrianople.

MICHIGAN CROP REPORT.

Wheat.—The average estimated yield per acre in the state is 15.05; in the southern counties 14.99, in the central counties 14.81, in the northern counties 14.77 and in the upper peninsula 18.88 bushels. Crop correspondents, quite generally, report wheat of fairly good quality. The estimates at present indicate that the state yield will be very close to 12,000,000 bushels. The per cent of plowing done for wheat in the state is 18, in the southern counties 16, in the central counties 20 and in the northern counties 19.

Rye.—The average estimated yield per acre in the state is 13.62, in the southern counties 13.13, in the central counties 13.54, in the northern counties 13.72 and in the upper peninsula 18.74 bushels.

Corn.—The condition of corn as compared with an average is 87 in the state,

83 in the southern counties, 92 in the central counties, 96 in the northern counties and 89 in the upper peninsula. The condition one year ago was 70 in the state and northern counties, 74 in the southern counties, 62 in the central counties and 72 in the upper peninsula.

Oats.—The estimated average yield in the state is 23.20, in the southern counties 25.57, in the central counties 32.10, in the northern counties 31.56, and in the upper peninsula 38.10 bushels per acre.

Potatoes.—The condition as compared with an average is 80 in the state, 71 in the southern counties, 86 in the central counties, 90 in the northern counties and 95 in the upper peninsula. The condition one year ago was 85 in the state and upper peninsula, 88 in the southern counties, 79 in the central counties and 86 in the northern counties.

Beans.—The condition of beans compared with an average per cent is 87 in the state, 81 in the southern counties, 94 in the central counties, 90 in the northern counties and 96 in the upper peninsula. The condition one year ago was 82 in the state, 85 in the southern counties, 74 in the central counties, 87 in the northern counties and 78 in the upper peninsula.

Sugar Beets.—The condition of sugar beets as compared with an average is 89 in the state, 87 in the southern and northern counties, 90 in the central counties and 97 in the upper peninsula. The condition one year ago was 82 in the state and southern counties, 79 in the central counties, 86 in the northern counties and 91 in the upper peninsula.

Hay and Forage.—The yield per acre of hay and forage in tons is 0.93 in the state, 0.95 in the southern counties, 0.94 in the central counties, 0.97 in the northern counties and 1.41 in the upper peninsula.

Pasture.—The condition of pasture as compared with an average is 73 in the state, 64 in the southern counties, 77 in the central counties, 84 in the northern counties and 98 in the upper peninsula. One year ago the condition was 92 in the state and southern counties, 94 in the central counties, 91 in the northern counties and 93 in the upper peninsula.

Apples.—The weather this season has been rather unfavorable for apples, early in the season heavy frosts did considerable damage and the long continued drouth caused a very heavy June drop and also caused the fruit to be smaller in size than usual, especially in unsprayed orchards. The prospect for an average crop is 58 in the state, 47 in the southern counties, 61 in the central counties, 59 in the northern counties and 91 in the upper peninsula. The winter varieties that promise best, are in their order: Northern Spy, Baldwin, Greening, Ben Davis, Wagener, Russet, Tolman Sweet and Tompkins King. Of the early sorts the most promising are Duchess, Wealthy, Red Astrachan, Yellow Transparent, Maiden Blush, Fameuse, Early Harvest and Fall Pippin.

Peaches.—The prospect for an average crop of peaches in the Michigan Fruit Belt is 54 per cent and in the state 53. One year ago the prospect was 18 and 11 respectively. The varieties that promise best, are in their order: Elberta, Crawford, Hill's Chilli, New Prolific, Kalamaford, Gold Drop, Barnard and Crosby.

NATIONAL CROP REPORT.

Corn.—Condition, Aug. 1, 75.9 per cent of normal as compared with 86.9 on July 1, 80 on Aug. 1, 1912, and an average of 82.2. The estimated total acreage is 106,884,000 acres or 99.8 of last year's acreage. The estimated total product is 2,672,000,000 bushels as compared with the final estimate of 3,125,000,000 in 1912.

Wheat.—The estimated average yield of winter wheat is 16.5 bushels per acre, as compared with 15.1 bushels last year. The estimated average yield of all wheat is 15 bushels per acre, as compared with 15.9 last year and 14.5 the average yield from 1908 to 1912. The estimated acreage of all wheat is 49,601,000 acres, or 108.3 per cent of last year's acreage. The total estimated production is 744,000,000 bushels, as compared with 730,000,000 bushels the final estimate for 1912. The quality of the winter wheat is 93.7 as compared with 90.7 last year and 91.0 the six-year average.

Oats.—The estimated average condition of oats on Aug. 1, was 73.7 as compared with 76.3 on July 1, 90.3 on Aug. 1 of last year, and 81.5 the ten year average on Aug. 1. The estimated acreage of oats is 38,341,000 acres, or 101.1 of last year's acreage. The estimated average yield is 26.8 bushels per acre, compared with 37.4 last year and 29.7 the four-year average. The total production is estimated at 1,028,000,000 bushels, compared with 1,418,000,000 last year and 922,000,000 in 1911. The amount of oats remaining on farms August 1 was estimated at 7.3 of last year's crop, or about 103,900,000 bushels as compared with 34,872,000 bushels on Aug. 1, 1912, and 67,793,000 bushels on Aug. 1, 1911.

Barley.—The condition of barley on Aug. 1 was 74.9, as compared with 76.6 on July 1, 89.1 on Aug. 1 last year and 83 the ten-year average. The estimated acreage is 7,255,000 acres, which is 96.3 per cent of last year's acreage. The estimated average yield is 23.1 bushels, as compared with 29.7 bushels last year and 24.5 bushels the average for the four preceding years. The total production is estimated at 168,000,000 bushels, as compared with 224,000,000 in 1912 and 160,000,000 in 1911.

Rye.—The estimated yield per acre is 16.3, the estimated number of acres 2,134,000, which is 100.8 per cent of last year's acreage. The total production is estimated at 35,000,000 bushels, as compared with 36,000,000 bushels last year and 33,000,000 bushels in 1911.

Buckwheat.—Condition on Aug. 1 was 85.5, as compared with 88.4 on Aug. 1 last year and a ten-year average of 89.9. (Continued on page 138).

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

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

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

Harking Back to Days of the Pioneer.

Novel Doings of an Old-Time Harvest Club.

By J. L. GRAFF.

One of the oddest farm organizations in the Middle West is the "Old-time Harvest Club," which has proclaimed its function to be the harvesting of wheat and other grain by the use of all the implements that ever have been in use, from the days of the sickle down to the era of the modern harvester and thresher.

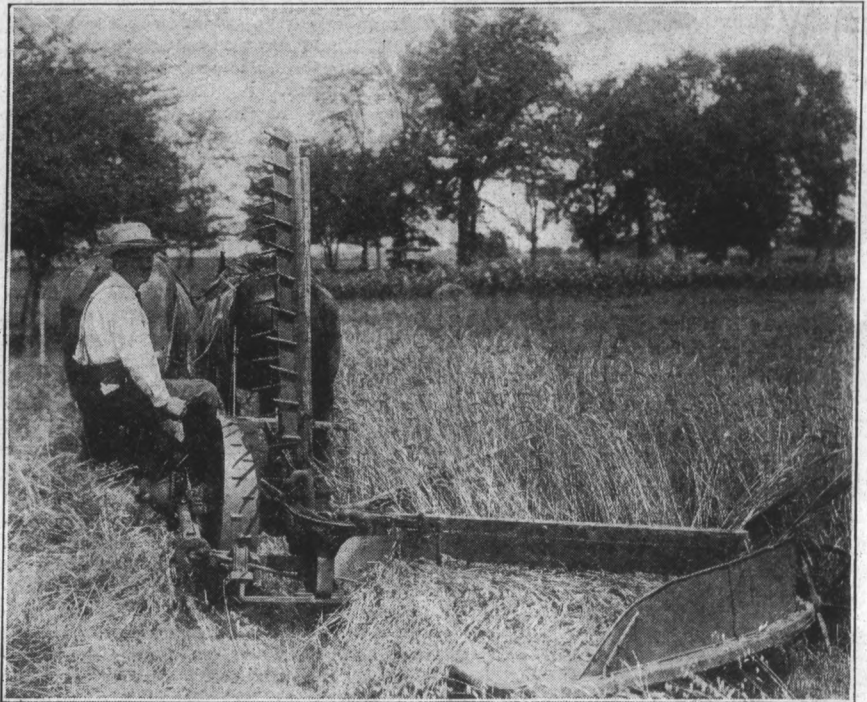
Really the moving cause of the organization of old-time harvest men into this association was the fact that the original reaper was invented in the neighborhood in which these novel harvests are conducted, which is near Sycamore, DeKalb county, Illinois. This original machine was known as the Marsh reaper and by several years, so it is claimed, ante-dated the McCormick or any other grain cutter. One of the original Marsh reapers still is in existence in this county.

Two years ago two or three old-timers got together and conceived the idea of cutting ten acres of wheat, growing near the county seat, using all of the types of implements known in the history of grain harvests. Some of the wheat would be cut by sickle, some by the cradle, some by the Marsh harvester, the first crude reaper, and so on down the line to the highly perfected harvesters and binders now found upon almost every farm.

There would be some other methods of the olden day, and there would be a threshing floor on which some of the grain would be flailed out and cleaned by hand power. The first harvest was held two years ago.

As may be imagined there is a great deal of social intercourse in connection with one of these events. The entire crop is harvested all too quickly and put away in the shock or stack. It is within the range of possibility that very soon a modern reaper and thresher will be allowed to show off at this queer harvest, and that some of the wheat will be ground by hand and made to produce biscuits for the big feast that always is a feature of the event.

Old-time harvest men get together, out under the shade of the apple tree, and tell wonderful stories as to how they made other cradlers take to the shade; and rakers and binders will relate how, in the hottest days of the olden wheat harvest, they stuck close to the cradle and bound so many dozen in such wonderful time. School superintendents, county functionaries and others are induced to make speeches, and the whole day is spent in carrying out the program of this novel meeting of old and new harvesters.



An Old-time Hand-rake Reaper, used in the Novel Harvests Conducted by the Sycamore, (Ill.), Old-time Harvest Club.

The Passing of the Old Turnpike Hotel.—By R. G. KIRBY.

One of the last reminders of early Michigan history to disappear into oblivion is the old turnpike hotel, and while driving through an early settled community it is not unusual to see these old-fashioned buildings that were once the fashionable stopping places on the main highway. Their value as hotel property has long since passed away and they are now serving the farmer, for the turnpike hotel, in spite of its weather-beaten appearance, makes a very spacious dwelling and will shelter a good-sized family.

Some of these hotels are now desolate and their appearance unkempt and unhomelike. They present the wild, rough, harsh characteristics of the wild life in which they were so intimately associated. Nearly every one contained a bar, and

it is said that many early Michigan statesmen had to travel rapidly across the state after election to avoid treating every backwoodsman and Indian along the road. The old hotel was the center of the life of the community, and many are the weird stories that could be told of stormy nights and harrowing experiences while traveling across the state and depending upon the kind attention of these landlords for sustenance and protection.

The trader and the trapper came to the turnpike hotel after their long weary journey through the woods, and there were told the hair-raising experiences of encounters with Indians and wild animals. The statesman depended upon these hotels for a home while making trips from

one little city to another, and many the political scheme that was hatched by mutual political friends under the shelter of the old hotel at the bend of the road. Many of the greatest men in American history have made long tours through the wilderness, and the registers of these old inns bear the names of many men who have held important positions at the helm of government. These old registers are a history in themselves and would be a great source of pleasure to the autograph collector who could pore over their contents, searching for the name of some man who was prominent in the early history of this state.

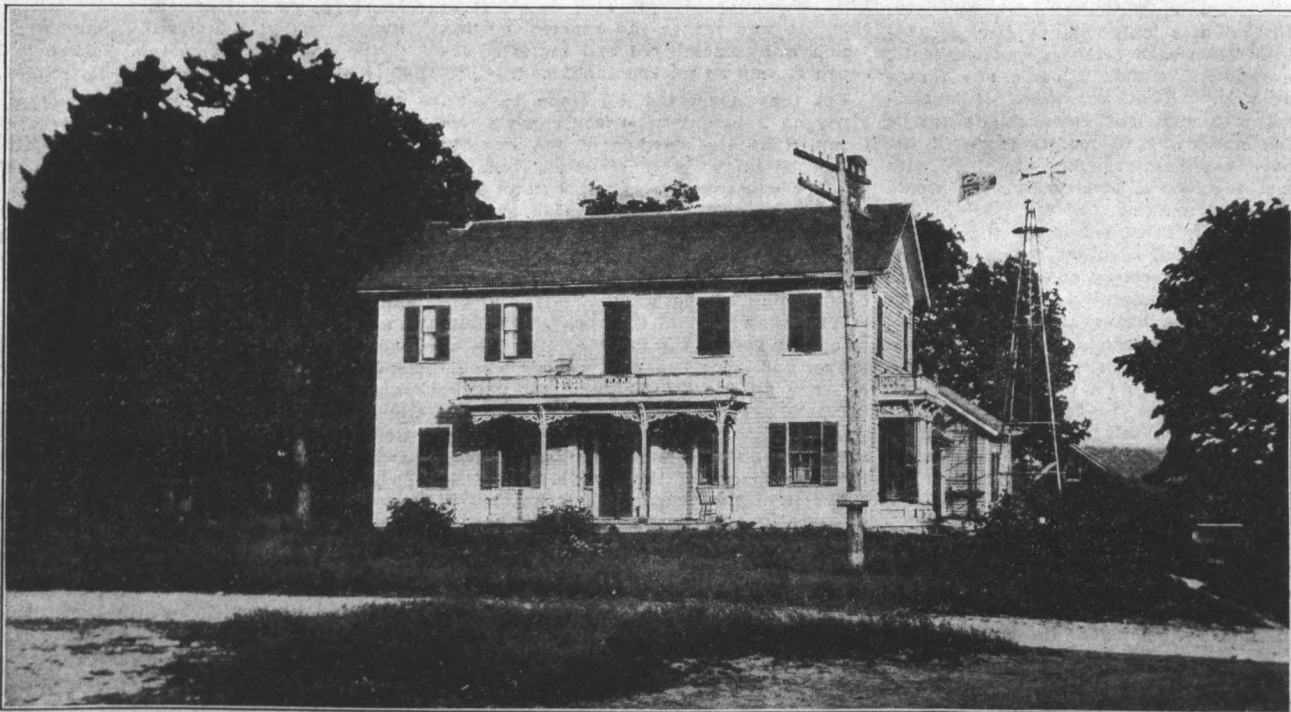
The old turnpike hotel has passed away, with all the other remnants of our past civilization. The time is coming when

modern development will demand better farm houses; then the hotel structures still remaining will be entirely destroyed, and soon the old turnpike hotel will pass entirely from the minds of the people. There can be no more pioneers in Michigan, and the past few years have witnessed a great transformation which is bringing in the new era of progress and wiping out the old landmarks of our state's infant development.

It is well to take one passing glance at these old buildings which were so prominent in the early history of our state, as also it is well to remember the hardships that were endured by our best citizens at the beginning of Michigan's development. When we see the old dingy building, with the broken blinds, the decaying veranda and its fantastic woodwork, we only pause to say, "What a desolate and bare looking place for a home?" When we realize that the old building in question may have sheltered the first governor of Michigan, or have been the usual stopping place for our great national statesmen, we realize the short distance that our generation has been removed from the primitive accommodations of our forefathers. When we see the shaky porch and think that Lewis Cass or Zachariah Chandler sat there in the evening and thought of plans for the future development of this state, then we can respect the old turnpike hotel and forgive its faded look that has come from exposure to the storms of many years.

The meals at the old hotels would keep the modern cook working overtime to excel. Guests were supplied with the finest game from the forests, and the best home cooking available appeared upon the table. Plenty of good wholesome food was the only requisite for pleasing the man with the backwoods appetite and for filling up the traveler who gained a starvation appearance from jostling over the rough turnpike.

The old turnpike hotels are rapidly passing away and in a few years the old-fashioned home at the cross-roads will be no more. Then one of the last reminders of old Michigan history will have passed away forever.



One of the Turnpike Hotels of Michigan's Early Days, since Converted into a Plain, but Spacious, Comfortable Farm House.

The Michigan Farmer

Established 1843.

The Lawrence Publishing Co.

Editors and Proprietors.

39 to 45 Congress St. West, Detroit, Michigan.

TELEPHONE MAIN 4325.

NEW YORK OFFICE—41 Park Row.

CHICAGO OFFICE—604 Advertising Building.

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

M. J. LAWRENCE.....President
M. L. LAWRENCE.....Vice-President
E. H. HOUGHTON.....Sec. Treas.I. R. WATERBURY.....Associate Editors.
O. E. YOUNG.....
BURT WERMUTH.....
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.

RATES OF ADVERTISING:

40 cents per line agate-measurement, or \$5.60 per inch, each insertion. No adv't inserted for less than \$1.20 per insertion.
7-10 No lottery, quack, doctor or swindling advertisements inserted at any price.
Entered as second class matter at the Detroit, Michigan, postoffice.

COPYRIGHT 1913

by the Lawrence Pub. Co. All persons are warned against reprinting any portion of the contents of this issue without our written permission.

DETROIT, AUGUST 16, 1913.

CURRENT COMMENT.

Quite often when country people are urged to exert influence in governmental affairs by writing letters to legislators, congressmen, or executives they fail to respond to such requests for the reason that they fear that it would result in no benefit—that letters or personal appeals are effective only when they come from well known men who are much in the public eye.

This, however, is a great mistake. As a case in point we will refer to an explanation appearing in the Live Stock department of this issue, in which it is set forth at some length that a previously published report, which, however, did not receive wide circulation, to the effect that representatives of the Department of Agriculture were being sent to South America to investigate meat production was an erroneous report.

This effort to call public attention to the fact that the investigation is for an entirely different purpose and may, as a result, tend to limit rather than promote such importation, is due entirely to the fact that a considerable number of letters were received by the head of this department from interested farmers and stock feeders protesting against the government policy of promoting the importation of foreign food products rather than fostering home production.

The effect that a considerable number of letters had in this case is the effect which a like expression of opinion upon any public question will have. The influence of thinking farmers is just as potent as that of any other class of people and if they would develop to a greater extent the habit of expressing their ideas upon important public questions to the men who are their representatives, in state and national capitols, they would often times have less cause to complain of the action of their representatives upon public questions.

An appeal has been made to Michigan Farmer readers to exercise their influence in opposition to a proposed amendment of the parcel post law and the above illustration is given simply as a means of showing the reader the effectiveness of concerted action of this kind from interested citizens.

Recent developments at Washington indicate our prediction to

the effect that the administration currency and banking reform bill would be amended in many particulars, before it passed through the committee and was reported out for general consideration, was correct. This prediction was based upon the idea that, unlike the tariff bill which is a strictly party measure, an effort would be made to have the proposed currency and banking reform bill made acceptable to both bankers and business interests, so far as possible, in order to insure its favorable consideration by the present Congress. That this will be the course pursued is evidenced by the fact that of some 175 amendments made to the bill in the House committee the most important were adopted on the recom-

mendations of the currency and banking committee of the Chamber of Commerce of the United States, which last month met in Washington and issued a criticism of the Glass-Owen bill, as the currency bill is known in Congress, and recommended 20 definite amendments. Of these 20 amendments, 10, which are considered the most important, have been adopted by the house committee practically as suggested, three others have been adopted in part, while seven have been either rejected or not yet acted upon.

Briefly summarized, the amendments recommended by the organization above mentioned which have been incorporated in the bill are as follows: The establishment of an advisory council of practical bankers to control the federal reserve board; limitation of the limit of \$500,000,000 for the issue of federal reserve notes; modification of notes issued by each federal reserve bank so that one bank cannot pay out the notes of another; specifying the powers and duties of federal reserve agents; requiring weekly statements from federal reserve banks; apportionment of profits of reserve banks permitting member banks a return of more than five per cent in dividends and placing the balance in a sinking fund to pay off the national debt instead of turning it into the federal treasury; providing for deposit and discount by one federal reserve bank with another; eliminating "acceptances" as deposits permitted in reserve banks; permitting reserve banks to buy and sell in open market other than bankers' bills; taking promissory notes secured by bonds out of the class of commercial paper.

Other of the proposed amendments partly acted upon include the making of notes issued by the federal reserve banks obligations of said banks instead of the United States treasury; the apportionment of government deposits among reserve banks by direction of the federal reserve board instead of by the secretary of the treasury, and the more clear definition of "short time" obligations.

Most of the 175 amendments were minor changes in language and diction to make the wording more clear and do not alter fundamental ideas to any extent. The tendency of the amendments may be said to materially reduce the very broad powers of the federal reserve board as proposed in the original bill and to make its provisions more liberal toward banks, without impairing its value to the business interests of the country. It is claimed by the administration that the bill as amended will be acceptable to the smaller banks and will be strenuously opposed by only a few large financial institutions. This, however, remains to be determined.

The above summary of amendments made to this bill in the committee are given with a view of familiarizing the reader with its terms and inciting him to a study of banking problems which will give him a more desirable degree of familiarity with and knowledge of this important factor of our country's prosperity.

TO EARN A PROFIT, MONEY MUST CIRCULATE.

Money that stands still makes no profit; it must be kept moving to pay a dividend.

Bank interest is simply a part of what someone is making by using the money.

No one is in a better position to realize this truth than the farmer.

He invests in thoroughbred stock, better seed, more land and more machinery and equipment, and increases his year's profits.

Still, mere circulation does not make a profit; money must be wisely invested.

It's a good idea to watch the advertising in the Michigan Farmer; the practice will help you to circulate money to better advantage.

HAPPENINGS OF THE WEEK.

National.

Three persons were killed and two injured by the ditching of an automobile west of Detroit last Sunday night.

Governor Ferris, of Michigan, has sent Judge Alfred J. Murphy, of Detroit, to the copper mining district as the special representative of the executive office for the purpose of investigating the differences between the miners and the operators. This action of the governor is generally interpreted as the prelude to an attempt, if necessary, to compel the factions to meet. The news seems to be welcomed by the strikers, while the operators are apparently dissatisfied.

The New York assembly by a vote of 65 to 35 adopted the Frawley committee report which virtually demands the impeachment of Gov. Sulzer for making a

false report as to his campaign expenses, for engaging in stock market speculations at a time when he was governor and was vigorously pressing legislation against the New York stock exchange, for converting to his own use funds contributed for campaign purposes, for obstructing investigations into campaign contributions and for other matters.

The employees of the Detroit United Railway declare that they will go out on strike Saturday of this week unless the company meets their demand for increased wages. An effort is being made to arbitrate the differences and two arbitrators have been selected but these have failed thus far to agree on a third member of the board.

After much agitation by the public the common council of Detroit has finally agreed to the expenditure of \$200,000 for a hospital for the city's insane.

The new president of the Detroit board of education will inaugurate a class in sex hygiene for parents next winter and if the work meets with approval it will be extended to the public schools.

Disastrous storms were prevalent over the country last week. At several points in Michigan much damage was done to property by wind and lightning and a few lives were lost. At Philadelphia a terrific wind swept over the city, killing three and injuring 50 persons and destroying much property.

Congress continues its work on the tariff bill, lobby investigations and the currency plan. This week the Senate will consider the sugar and agricultural products schedules, and the democratic House will take up the currency reform measure.

The Fraternal Order of Knights Templars are holding their thirty-second triennial convocation at Denver, Colorado, this week.

According to the federal internal revenue figures the number of saloons in the country has decreased 21,554, as compared with last year, the number for this year being 194,590. Wholesale liquor dealers numbered 6,452, a decrease of 600 within the past year.

A new high record was made by freight shipments through the Soo canals during the month of July of this year. The shipments aggregate a total tonnage of 12,279,124 tons, which exceeds the shipments of any whole season previous to 1894, and exceeds former high months' record made during June of this year by 164,511 tons. The amount of ore moved from the head of the lakes from the first of the year to August 1, exceeds the shipments for any previous year and is fully 3,000,000 tons ahead of the shipments during the same period a year ago.

Foreign.

Conditions in China are improving and it appears now that the revolution recently started has proven a failure.

As the result of a panic in a crowded moving picture show at Grandia, Spain, caused by a fire, 49 persons were seriously hurt, 14 of whom are believed to be dying.

Destructive floods are reported in India. The river Damodar has overflowed its banks and flooded miles of country around Burdwan to the northwest of Calcutta. Hundreds of people have been drowned, thousands are homeless, traffic is suspended and the loss of property is enormous.

Relations between this government and Mexico are being put to a test but it is the hope of the administration that differences may be adjusted in a peaceful manner. England, France and Germany have recognized the present provisional government of Mexico and representations were made at Washington for a similar approval by the American government, but the state department refused to recognize the Huerta administration even upon the advice of Ambassador Wilson, who has represented the American government at Mexico City during the continued uprisings of the past few years. Last week President Wilson appointed former Governor Lind, of Minnesota, as a special envoy to investigate conditions and suggest to this government a course of procedure. He is now at the Mexican capitol beginning his work of collecting information on conditions. This much of the attitude of the state department at Washington has been made public, that after an election the American government will recognize the officials legally elected by the people of Mexico. It has developed during the past few days that an organized effort was about to be made to force the two countries into war but it is believed that such a result is more remote than it appeared a week ago.

The Balkan states have signed the peace treaty and everything would probably be put in order soon but for the menacing situation caused by the presence in Thrace of a large Turkish army. The Turks also declare now that they do not intend to release Adrianople.

MICHIGAN CROP REPORT.

Wheat.—The average estimated yield per acre in the state is 15.05; in the southern counties 14.99, in the central counties 14.81, in the northern counties 14.77 and in the upper peninsula 18.88 bushels. Crop correspondents, quite generally, report wheat of fairly good quality. The estimates at present indicate that the state yield will be very close to 12,000,000 bushels. The per cent of plowing done for wheat in the state is 18, in the southern counties 16, in the central counties 20 and in the northern counties 19.

Rye.—The average estimated yield per acre in the state is 13.62, in the southern counties 13.13, in the central counties 13.54, in the northern counties 13.72 and in the upper peninsula 18.74 bushels.

Corn.—The condition of corn as compared with an average is 87 in the state,

83 in the southern counties, 92 in the central counties, 90 in the northern counties and 89 in the upper peninsula. The condition one year ago was 70 in the state and northern counties, 74 in the southern counties, 62 in the central counties and 72 in the upper peninsula.

Oats.—The estimated average yield in the state is 29.20, in the southern counties 25.57, in the central counties 32.10, in the northern counties 31.56, and in the upper peninsula 38.10 bushels per acre.

Potatoes.—The condition as compared with an average is 80 in the state, 71 in the southern counties, 86 in the central counties, 90 in the northern counties and 95 in the upper peninsula. The condition one year ago was 85 in the state and upper peninsula, 88 in the southern counties, 79 in the central counties and 86 in the northern counties.

Beans.—The condition of beans compared with an average per cent is 87 in the state, 81 in the southern counties, 94 in the central counties, 90 in the northern counties and 96 in the upper peninsula. The condition one year ago was 82 in the state, 85 in the southern counties, 74 in the central counties, 87 in the northern counties and 78 in the upper peninsula.

Sugar Beets.—The condition of sugar beets as compared with an average is 89 in the state, 87 in the southern and northern counties, 90 in the central counties and 97 in the upper peninsula. The condition one year ago was 82 in the state and southern counties, 79 in the central counties, 86 in the northern counties and 91 in the upper peninsula.

Hay and Forage.—The yield per acre of hay and forage in tons is 0.98 in the state, 0.95 in the southern counties, 0.94 in the central counties, 0.97 in the northern counties and 1.41 in the upper peninsula.

Pasture.—The condition of pasture as compared with an average is 73 in the state, 64 in the southern counties, 77 in the central counties, 84 in the northern counties and 98 in the upper peninsula. One year ago the condition was 92 in the state and southern counties, 94 in the central counties, 91 in the northern counties and 93 in the upper peninsula.

Apples.—The weather this season has been rather unfavorable for apples, early in the season heavy frosts did considerable damage and the long continued drouth caused a very heavy June drop and also caused the fruit to be smaller in size than usual, especially in unsprayed orchards. The prospect for an average crop is 58 in the state, 47 in the southern counties, 61 in the central counties, 59 in the northern counties and 91 in the upper peninsula. The winter varieties that promise best, are in their order: Northern Spy, Baldwin, Greening, Ben Davis, Wagener, Russet, Tolman Sweet and Tompkins King. Of the early sorts the most promising are Duchess, Wealthy, Red Astrachan, Yellow Transparent, Maiden Blush, Fameuse, Early Harvest and Fall Pippin.

Peaches.—The prospect for an average crop of peaches in the Michigan Fruit Belt is 54 per cent and in the state 53. One year ago the prospect was 18 and 11 respectively. The varieties that promise best, are in their order: Elberta, Crawford, Hill's Chilli, New Prolific, Kalamazoo, Gold Drop, Barnard and Crosby.

NATIONAL CROP REPORT.

Corn.—Condition, Aug. 1, 75.8 per cent of normal as compared with 86.9 on July 1, 80 on Aug. 1, 1912, and an average of 82.2. The estimated total acreage is 106,884,000 acres or 99.8 of last year's acreage. The estimated total product is 2,672,000,000 bushels as compared with the final estimate of 3,125,000,000 in 1912.

Wheat.—The estimated average yield of winter wheat is 16.5 bushels per acre, as compared with 15.1 bushels last year. The estimated average yield of all wheat is 15 bushels per acre, as compared with 15.9 last year and 14.5 the average yield from 1908 to 1912. The estimated acreage of all wheat is 49,601,000 acres, or 108.3 per cent of last year's acreage. The total estimated production is 744,000,000 bushels, as compared with 730,000,000 bushels the final estimate for 1912. The quality of the winter wheat is 93.7 as compared with 90.7 last year and 91.0 the six-year average.

Oats.—The estimated average condition of oats on Aug. 1, was 73.7 as compared with 76.3 on July 1, 90.3 on Aug. 1 of last year, and 81.5 the ten year average on Aug. 1. The estimated acreage of oats is 38,341,000 acres, or 101.1 of last year's acreage. The estimated average yield is 26.8 bushels per acre, compared with 37.4 last year and 29.7 the four-year average. The total production is estimated at 1,028,000,000 bushels, compared with 1,418,000,000 last year and 922,000,000 in 1911. The amount of oats remaining on farms August 1 was estimated at 7.3 of last year's crop, or about 103,900,000 bushels as compared with 34,872,000 bushels on Aug. 1, 1912, and 67,793,000 bushels on Aug. 1, 1911.

Barley.—The condition of barley on Aug. 1 was 74.9, as compared with 76.6 on July 1, 89.1 on Aug. 1 last year and 83 the ten-year average. The estimated acreage is 7,255,000 acres, which is 96.3 per cent of last year's acreage. The estimated average yield is 23.1 bushels, as compared with 29.7 bushels last year and 24.5 bushels the average for the four preceding years. The total production is estimated at 168,000,000 bushels, as compared with 224,000,000 in 1912 and 160,000,000 in 1911.

Rye.—The estimated yield per acre is 16.3, the estimated number of acres 2,134,000, which is 100.8 per cent of last year's acreage. The total production is estimated at 35,000,000 bushels, as compared with 36,000,000 bushels last year and 33,000,000 bushels in 1911.

Buckwheat.—Condition on Aug. 1 was 85.5, as compared with 88.4 on Aug. 1 last year and a ten-year average of 89.9. (Continued on page 138).

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

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

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

Harking Back to Days of the Pioneer.

Novel Doings of an Old-Time Harvest Club.

By J. L. GRAFF.

One of the oddest farm organizations in the Middle West is the "Old-time Harvest Club," which has proclaimed its function to be the harvesting of wheat and other grain by the use of all the implements that ever have been in use, from the days of the sickle down to the era of the modern harvester and thresher.

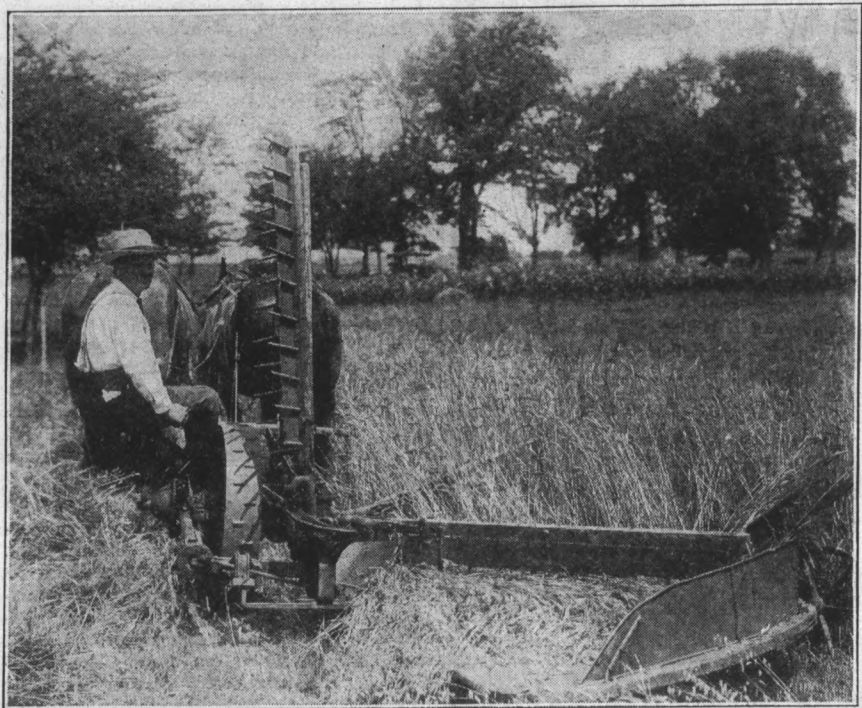
Really the moving cause of the organization of old-time harvest men into this association was the fact that the original reaper was invented in the neighborhood in which these novel harvests are conducted, which is near Sycamore, DeKalb county, Illinois. This original machine was known as the Marsh reaper and by several years, so it is claimed, ante-dated the McCormick or any other grain cutter. One of the original Marsh reapers still is in existence in this county.

Two years ago two or three old-timers got together and conceived the idea of cutting ten acres of wheat, growing near the county seat, using all of the types of implements known in the history of grain harvests. Some of the wheat would be cut by sickle, some by the cradle, some by the Marsh harvester, the first crude reaper, and so on down the line to the highly perfected harvesters and binders now found upon almost every farm.

There would be some other methods of the olden day, and there would be a threshing floor on which some of the grain would be flailed out and cleaned by hand power. The first harvest was held two years ago.

As may be imagined there is a great deal of social intercourse in connection with one of these events. The entire crop is harvested all too quickly and put away in the shock or stack. It is within the range of possibility that very soon a modern reaper and thresher will be allowed to show off at this queer harvest, and that some of the wheat will be ground by hand and made to produce biscuits for the big feast that always is a feature of the event.

Old-time harvest men get together, out under the shade of the apple tree, and tell wonderful stories as to how they made other cradlers take to the shade; and rakers and binders will relate how, in the hottest days of the olden wheat harvest, they stuck close to the cradle and bound so many dozen in such wonderful time. School superintendents, county functionaries and others are induced to make speeches, and the whole day is spent in carrying out the program of this novel meeting of old and new harvesters.



An Old-time Hand-rake Reaper, used in the Novel Harvests Conducted by the Sycamore, (Ill.), Old-time Harvest Club

The Passing of the Old Turnpike Hotel.—By R. G. KIRBY.

One of the last reminders of early Michigan history to disappear into oblivion is the old turnpike hotel, and while driving through an early settled community it is not unusual to see these old-fashioned buildings that were once the fashionable stopping places on the main highway. Their value as hotel property has long since passed away and they are now serving the farmer, for the turnpike hotel, in spite of its weather-beaten appearance, makes a very spacious dwelling and will shelter a good-sized family.

Some of these hotels are now desolate and their appearance unkempt and unhomelike. They present the wild, rough, harsh characteristics of the wild life in which they were so intimately associated. Nearly every one contained a bar, and

it is said that many early Michigan statesmen had to travel rapidly across the state after election to avoid treating every backwoodsman and Indian along the road. The old hotel was the center of the life of the community, and many are the weird stories that could be told of stormy nights and harrowing experiences while traveling across the state and depending upon the kind attention of these landlords for sustenance and protection.

The trader and the trapper came to the turnpike hotel after their long weary journey through the woods, and there were told the hair-raising experiences of encounters with Indians and wild animals. The statesman depended upon these hotels for a home while making trips from

one little city to another, and many the political scheme that was hatched by mutual political friends under the shelter of the old hotel at the bend of the road. Many of the greatest men in American history have made long tours through the wilderness, and the registers of these old inns bear the names of many men who have held important positions at the helm of government. These old registers are a history in themselves and would be a great source of pleasure to the autograph collector who could pore over their contents, searching for the name of some man who was prominent in the early history of this state.

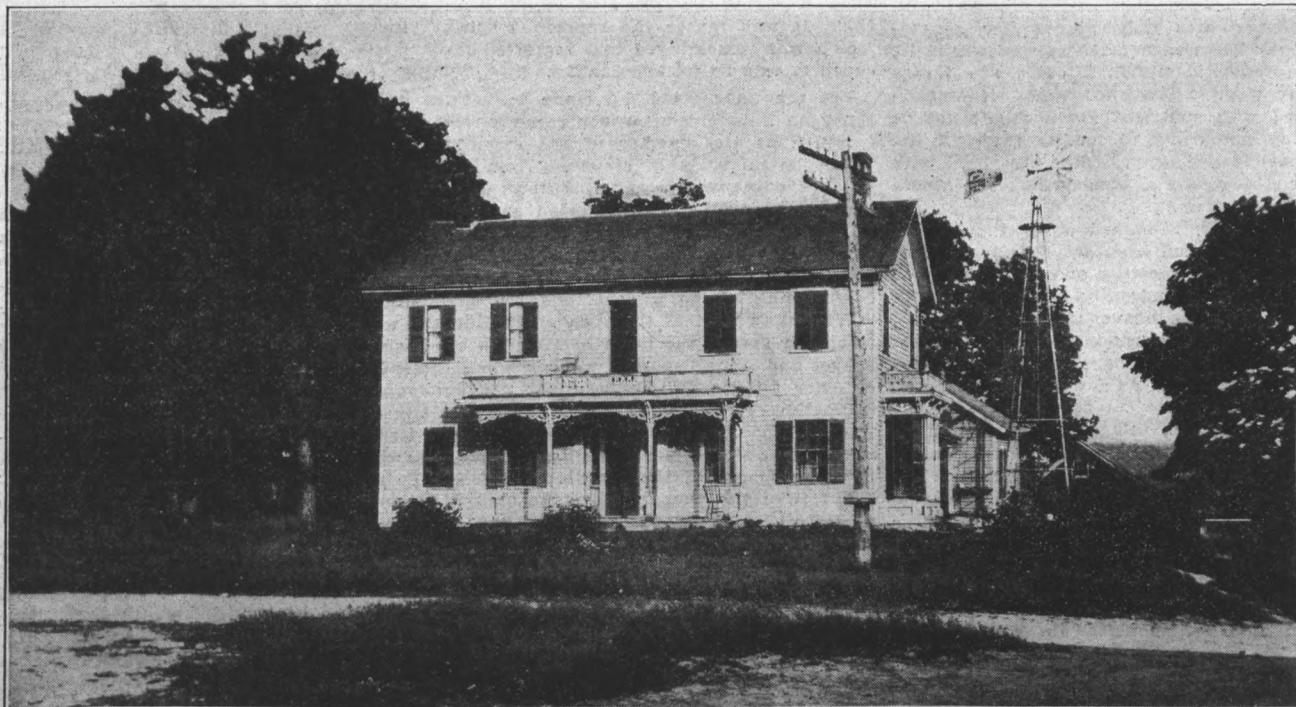
The old turnpike hotel has passed away, with all the other remnants of our past civilization. The time is coming when

modern development will demand better farm houses; then the hotel structures still remaining will be entirely destroyed, and soon the old turnpike hotel will pass entirely from the minds of the people. There can be no more pioneers in Michigan, and the past few years have witnessed a great transformation which is bringing in the new era of progress and wiping out the old landmarks of our state's infant development.

It is well to take one passing glance at these old buildings which were so prominent in the early history of our state, as also it is well to remember the hardships that were endured by our best citizens at the beginning of Michigan's development. When we see the old dingy building, with the broken blinds, the decaying veranda and its fantastic woodwork, we only pause to say, "What a desolate and bare looking place for a home?" When we realize that the old building in question may have sheltered the first governor of Michigan, or have been the usual stopping place for our great national statesmen, we realize the short distance that our generation has been removed from the primitive accommodations of our forefathers. When we see the shaky porch and think that Lewis Cass or Zachariah Chandler sat there in the evening and thought of plans for the future development of this state, then we can respect the old turnpike hotel and forgive its faded look that has come from exposure to the storms of many years.

The meals at the old hotels would keep the modern cook working overtime to excel. Guests were supplied with the finest game from the forests, and the best home cooking available appeared upon the table. Plenty of good wholesome food was the only requisite for pleasing the man with the backwoods appetite and for filling up the traveler who gained a starvation appearance from jostling over the rough turnpike.

The old turnpike hotels are rapidly passing away and in a few years the old-fashioned home at the cross-roads will be no more. Then one of the last reminders of old Michigan history will have passed away forever.



One of the Turnpike Hotels of Michigan's Early Days, since Converted into a Plain, but Spacious, Comfortable Farm House.



Mrs. Bigfarm—"Well, well, well! Come in, Anty Drudge, and let me thank you for telling me about Fels-Naptha Soap. I'm a different woman since I started using it. All the work gets done so easily, and I'm so rested and happy—and we're saving money by not having to hire extra help all the time. We'll soon have enough to buy that piece of woodland."

Anty Drudge—"Just think of that! I'm certainly glad to hear that Fels-Naptha Soap has proved to be such a help to you."

There's Nothing you use soap and water for that can't be done better and easier with Fels-Naptha Soap and cool or lukewarm water.

For washing fine laces or heavy gingham, greasy pots and pans, mud-tracked floors, dirty windows, Fels-Naptha Soap is the best thing to use. It saves your strength, because it works for you. It dissolves grease, makes stains and dirt disappear.

The Red and Green Wrapper will tell you how to use it for hundreds of things about your home.

Fels & Co., Philadelphia.



The Sword of Prayer.

By CHARLOTTE BIRD.

Dunkirk was in a state of excitement; in fact, it had not been so stirred since the people had risen up and voted out the seven saloons. Opinion, however, was not unanimous and discussion was marked by strong and often ill-advised expression. Mrs. Watts, in particular, a woman of irreproachable conservatism, deplored the present trend.

This unwonted condition all came out of an announcement in the local paper—a tiny notice in an obscure corner—declared the leaders, with all the pith extracted. But what better could one expect from a biased editor and prejudiced reporters? The notice stated that on the following Thursday evening in the Methodist church a free lecture on woman's suffrage would be given; in any case, the public would understand that the fight for the enfranchisement of women was on in Dunkirk.

The Methodist church had not been selected because it especially favored the fight, but because it was the largest church in town. The woman's suffrage club, composed of exemplary church members, being used to meetings in the churches, saw no impropriety in using the sacred edifice to help further such an important race problem as the advancement of women. The securing of ample space, however, was merely provisional; the chief regret of the handful of leaders was that Dunkirk was so indifferent to the most vital question of the hour. They might congratulate themselves, if all their efforts to attract, drew out more than a corporal's guard of an audience.

That the place where she worshipped should have been selected for such disgraceful proceedings, as a woman, Mrs. Watts was shamed; as a Methodist in good and regular standing, she was outraged. She would have made any sacrifice to stop the desecration. But what could she do with Mrs. Soule, the president of the missionary society, heading the affair and Mrs. Jennings, secretary of the woman's aid, helping her! Why, even the pastor could scarcely oppose it.

Yet Mrs. Watts might launch forth against it in her characteristic vigorous way and she was fully determined that all who came within range of her voice, should know where she stood. "If the women would only stay at home and mind their own business," she declared with fervor, "they would have their hands full. But now they want to get to be men and help them run their business."

And Mrs. Crump, who never read the papers and always agreed with everybody, acquiesced now with Mrs. Watts.

"Next the women will expect the husbands to stay at home and take care of the baby, while they go to the polls and vote," she stated next to quiet, scholarly Mrs. Lane who had never allied herself with the movement. This remark was uttered with withering sarcasm.

"Not so bad," laughed Mrs. Lane with charming good humor. "A woman's vote is as good as a man's. And for a long time women have been staying at home and taking care of the baby, while their husbands went to the polls and voted."

Mrs. Watts only stared her amazement. Then with feathers somewhat laid, she replied: "Well, I can't see things that way." That her views, if emphasized with sufficient vigor, might not be going noticeably to modify those of the whole community, came to her with something like a shock. But she would never give up.

One thing remained sure; the Methodist church had been secured for a woman's suffrage meeting and to the worried Mrs. Watts apparently nothing short of the fall of the heavens could prevent it. But in every perplexity she had found one resource. Yes, she would now resort to prayer, use it as a weapon strong and mighty to strike, to scourge, to annihilate. Surely in this exigency, though all the hosts of Satan were arrayed against Him, God would hear and protect His own.

Early on Wednesday evening, according to her long habit, Mrs. Watts went early to prayer meeting. She walked up the aisle and took her customary front seat. This evening she carried her head high and her shoulders thrown back and all her movements had an impressive decision. On her finely chiseled face was a set look which was concentrated around the firm mouth. In short, she bore herself like one charged with a high mission

and consciously sustained by a peculiar favor with the celestial powers.

Others came in and took their places and the pastor stood behind the desk. There were several hymns, a prayer or two, the reading and expounding of the scripture by the leader. Then the pastor gave the customary opportunity to the congregation to offer their testimonies or lead in a word of prayer, and he glanced a bit anxiously over his audience to see who was likely to respond.

There was a short, expectant pause, followed by the low rustle of a woman's garments. Then Mrs. Watts was seen standing with closed eyes and head reverently bowed. In the mental disturbance of the moment her hat had become tipped over towards one ear but the absorbed woman never noticed it. There she stood a ludicrously pathetic figure.

Her prayer began with a preliminary circumlocution, uttered in a low, scarcely distinct tone. Then, as her feelings surged up, she raised her voice to a shrillness almost like a shriek and directed it squarely to the matter in hand. She asked the Lord to forgive those who were about to profane His holy house by turning it into a den of sin and mockery. Yet would He not circumvent these plans of the unseemly, the immodest? Would He not in some way prevent this unholy meeting; in some way prevent the arrival of the speaker; send storm, fire, yes, even death, that in His sight His holy house might not be defiled?

She raged and issued her commands. Her mood was of a fiery character, encouraged by neither holy writ nor by Christian experience. She prayed with a vehemence which brooked no difference of opinion even in the powers above and with a rancor which knew not human kindness. Doubtlessly to herself she was imbued with righteous indignation.

She finished and sat down in a silence which was felt; the congregation sat shocked to paralysis. And after such a torrential outpouring of emotion what could anybody say which would not fall flat with its own tameness! Mrs. Watts herself broke the silence with, "I shall continue daily in my closet thus to approach the Throne of Grace. And the Lord will hear!" This last was uttered with an air of absolute conviction as if she had already received a telegram of assurance.

Realizing that the prayer meeting had been killed, the pastor fidgeted, looked appealingly at each of the old standbys and then announced a hymn. But even that failed to resuscitate enthusiasm. So ten minutes before time he dismissed the meeting.

On the way home some laughed a little but others shook their heads seriously and regretted that Mrs. Watts had allowed herself to become so worked up over a comparatively small matter—as if one meeting could put the ballot into the hands of the women. Then they were all used to prayers which even those making them had never expected to shake the foundations of society. So nobody expected any palpable result from this. It was rather the rancorous spirit which was remembered and regretted because it was so unchristianlike.

Yet the unexpected did come to pass. Early on Thursday afternoon came a telegram that the speaker of the evening would be unavoidably hindered from filling her engagement. At this news Mrs. Watts was frankly elated. Had she not all along reminded her neighbors that something was going to happen? Did not the prayer of the righteous avail in the confounding of the wicked?

With the report of the speaker's failure to appear spread the news of Mrs. Watts' prayer and some began to wonder whether after all the two facts might not be intimately connected. Yet Mrs. Watts was hardly showing the sweet, docile, reverent spirit of one breathing in daily the atmosphere of the Divine.

Far from the woman's suffrage club to fly into the face of Providence but to them the obstacle to the speaker's arrival might, nevertheless, have been due to altogether mundane causes. To their judgment, therefore, it seemed no sacrifice to arrange another meeting and this time, to insure success, to engage two speakers. And to this even the more timorous hesitatingly agreed.

Again the report went forth that Mrs. Watts was praying and clearly with the

old unabated spirit. Instead of being subdued and chastened by the softening effect of love for her fellows, she was plainly lifted up and seeking out other evils that she might continue her regulation of the community. By now all Dunkirk was noticing and public attention was scorchingly concentrated on what they had all come to look upon as a contest.

Every sympathizer with the cause was going to turn out; in this fiery hour of trial all were determined to stand loyally by their guns. The lukewarm would all go and see for what the club stood, while the indifferent and even the scoffing would see the fun. The meeting would open at half-past seven. A little after seven there was a fair audience of the prudent who would assure themselves good seats. By half-past seven people were lining up against the walls and presently thronging the vestibule and even the pavement in front.

In her best silk gown the president sat regally between the two speakers on the platform. In her introductory remarks she could not refrain from congratulating the club on the respectability of the audience, both in size and social standing of the individuals. Then she introduced the first speaker, a motherly, white-haired woman, very prettily dressed. The speaker gave a plain, straightforward statement of the things for which she stood. She betrayed no hysteria. As she pleaded for better labor conditions, for pure food and attractive and sanitary dwelling places, equal pay for equal work, a reduction of living expenses, for the abolition of the saloons and clean politics, even those who had come to laugh, remained to listen and ponder.

The other speaker, a young college woman, made her appeal chiefly to the younger part of the audience. She also proved herself well able to handle a strong argument. She lacked none of the fine womanliness of the elder speaker.

In short, it was a most satisfactory beginning so that the woman's suffrage club in Dunkirk glowed over their fine prospects. As the president walked out beside her secretary, someone overheard her remark: "The meeting could not possibly have been better advertised."

"No, not possibly," was the enthusiastic reply.

A DAY'S RAMBLE ON THE CHICKAMAUGA.

(Concluded from last week.)

About this time I crossed the stream and moved a little farther down. Its beauty increased and I never failed to take notice of it. The squirrels multiplied along the banks and frequently turned their heads down a tree, allowing their bushy tails to tapestry their heads, and barked for hours at me while I struggled with a stubborn mule in the field about them.

While I was plowing the melon patch a youngster came across the field. He had a proposition. It was glowing. To me it was like the story of the diamond fields of Africa. I stopped my horse. The boy was exhausted. "I," said he, "have been trying to lift my fish basket below, and have not succeeded. I need help right now and it will be to your interest to lend me your assistance."

"What is it?" I inquired.

"Join me in raising this basket and half the contents are yours," he replied. The horse was left standing and we were off. In a few moments we were at the stream's bank. I knew it was deep, but, ah, those fish which were surely mine!

In a few moments we were out in an old wooden boat. I had a long pole with a limb on one end for a hook. My guide was standing in the rear end of the boat, with one hand anchored to a dead limb. It was an easy matter to locate the fish basket but, in lifting it up with my long slender pole, just the moment it was drawn to the surface of the water off it would slip into the creek again. Three attempts were made with the same unsuccessful result. Sinking my pole into the creek again, I made a desperate attempt to fasten it into the basket so nothing could disturb it. I seemed to have succeeded, but just as the basket was nearing the water's surface my host allowed the dead limb to break off and we had no anchor. When the limb snapped the boat was hurled from under me, and in an instant I discovered that I was having a pretty hard time raising myself from the water. The water was deep, as before stated. I went under, hat and all. Pretty soon I came to the sur-

Slit this Whip from Cracker to Butt

A Red Rawhide Center Whip free to you if it does not have a continuous red rawhide center from cracker through butt. Red Centers are made by us from East Indian Water Buffalo hides after being treated by our secret process which makes them moisture-resisting, springy, durable, and the only center suited to durable whip construction.

Red Rawhide Center Whips are made in the largest, most complete factory in the country, and are handled by dealers everywhere. Ask yours first. If he does not have them, write us. It will pay you.

UNITED STATES WHIP CO.
Westfield, Mass.



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.
I. ROY WATERBURY, Pres. AUSTIN N. KIMMIS, Secy.

WANTED FOR U. S. ARMY—Able-bodied, unmarried men between ages 18 and 35; citizens of U. S. or have first papers; of good character and temperate habits, who can speak, read and write the English language; good pay, food, lodging, clothing and medical attendance free. For information apply at Recruiting Station, 212 Griswold St., Detroit, Mich. Heavenrich Block, Saginaw, Mich. 144 W. Main St., Jackson, Mich. 1st & Saginaw Sts., Flint, Mich. Huron & Quay Sts., Port Huron, Mich. 28 N. Saginaw St., Pontiac, Michigan.

FREE TUITION For 36 Weeks.
Board and room \$2.60 a week. Books rented. Opens October 7th.
HUMBOLDT COLLEGE, Humboldt, Iowa.

WANTED—Men and women for Government Positions. Examination soon. I conducted Government Examination. Trial Examination Free. Write, Ozment, 17, R. St. Louis.

A Watch To Be Proud Of For Every Boy Who Wants One.



Boys, here is the best chance that ever was offered to get a good time-keeping watch without it costing you a cent. Read this over and then get busy, if you haven't got the watch as good as in your pocket in a couple of hours, it's because you don't want it bad enough.

The watch is the real thing, 16-size, nickel case, stem-wind and set, second hand, fine watch movement, and keeps absolutely correct time. It's fully guaranteed and if you don't hammer tacks with it or take it apart, in fact, if you will treat it as the friend it will prove to you, the manufacturer will keep it in repair for one year without charge. That's fair, isn't it?

Go to three of your neighbors who are not subscribers to The Michigan Farmer, or whose time has run out, tell them that you will have sent to them the Michigan Farmer (the best farm paper in America), every week for a year (52 copies) for only 50 cents. Collect 50 cents from the three of them and send us the \$1.50 you collect, together with the three names and addresses, and the watch will be sent to you at once, post paid.

Easiest thing you ever did. The Michigan Farmer used to be \$1.00 a year and now you only charge 50 cents, (less than one cent a week), and by telling the neighbors that you are after a watch you will likely get the first three you ask.

Start right away, the sooner you start the sooner you have the watch ticking in your pocket and telling you at a glance the hour, the minute, and the second of the day.

THE MICHIGAN FARMER, Detroit, Mich.

face, snorting like a wild beast, in an effort to drain my nostrils. I swam ashore, said "goodbye," as I looked back, to the young man, and in five minutes I was plowing, though every thread of my clothes were drenched.

Our long-eared, long-legged, yellow dog, old "Tramp"—for that was his name—was used every day as a convenience. We had but one jug in which to carry drinking water. It often became necessary to divide our working force, putting some in a field on one side of the stream and some in the corn field on the other. It happened that such was the arrangement one afternoon in the warm month of June. It was three o'clock and our hired men on the other side of the creek had not had water since noon. They were thirsty and we had the water supply on our side of the creek. It was up to us to devise, immediately, some way to transport this across. About this time old "Tramp" came flying by in chase of a rabbit. I nailed him fast as he was passing. The jug was tied around his neck. I ushered him into the creek, and pretty soon he was seen on the opposite bank, climbing out with a jug of pure water tied around his neck. It was a fine scheme. When they had quenched their thirst the jug was re-tied about the dog's neck and he was started back on his perilous journey. It was a trying trip for him. The jug floated and the current was pulling hard against the neck. He was strong and managed to make the trip successfully until he came to a long log lying inundated; in attempting to climb over this long log the jug got lodged on one side and there the dog was permanently hitched. The father of new schemes must work them out of distress. In an instant I had swam out to the log, had the dog's neck released and in a moment he was again chasing the rabbits as before.

About that time my father said, "How would you like to go fetch a load of logs which I have purchased, fourteen miles away?" "All right," my brother and I exclaimed, simultaneously. Couldn't be any more difficult than what we were doing every moment. The large wagon was soon rigged up. The side-boards were placed on the bed and a frame, made of four-inch strips, was placed on the top for a cover to hold the hogs in. Our sister did not fail to put the oil can in to be refilled as we passed the country store on our return. The little old Spitz dog insisted on going, so we placed him on the top of the wagon frame. He never failed to bark at every passing object, either animate or inanimate. His criterion was if an object was moving, and of course trees and everything moved to him. Consequently they all received attention.

We were two hours getting to our destination, and two hours getting our hogs loaded into the wagon. We were sure that we would be benighted on that trip. The hogs were placed in—a half dozen big black sturdy fellows—and then the corners of the frame were wired down tightly. The hogs could only see out from above. We could constantly hear them snapping their teeth and shoving each other about underneath the frame. The little dog didn't approve of this arrangement at all, as his feet were constantly in danger. The hogs would poke their sharp noses through the cracks and snap at him, which kept him constantly on the watch. He barked and stood the hogs away until he was hoarse. They all seemed to delight in teasing the little fellow. He took it seriously. About dusk he was much exhausted, having hardly risked taking his eyes from the hogs below, although he was continually walking over the covering, they following every step, snapping their teeth, and grunting.

The dog was exceedingly fond of nabbing branches of trees that passed over the wagon. We passed under a tree and it was tempting. He forgot himself. When he released the limb he happened to be over one of the openings and went "soo-eup" suowre upop suppuer "ysnoirp. They all rushed upon him. He was small, but could put up a good bluff. The hogs got him up in one corner and, with bristles raised, one would judge from their looks that they were going to eat him alive. He barked and showed his teeth, and none made further attacks, although they did not take their eyes off of him. There was no way to get him out. They chased the little fellow up to the front of the wagon, just beneath our feet. He was snapping constantly. The hogs were doing the same, but more slowly.

This was all taking place when we passed the country store. It was now dark. The can of oil was placed upon the wagon, with a potato sticking on the

spout. It was set at our feet, directly over the dog and hogs. In three-quarters of an hour we were driving in at our father's home. We passed by the house and drove to the hog lot. Lifting the end gate, we ushered the hogs and dog out from the rear. Each struck the ground with a thud. Smelling coal oil as the hogs passed out, we became a bit suspicious that something had happened, and when the wagon had been unloaded we examined the oil can. It was empty. The potato was missing and the can upset. It had turned over just above the hogs and dog, had run out on them and the entire bottom of the wagon bed was saturated with oil.

The team was placed in the barn and fed. Our next problem was to devise some means to rid the bed of that coal oil. We were not sure how our father would pass upon this accident, which might have been prevented. Fearing that we would be held to strict account, we decided the wisest thing was to touch the bed with a lighted match, allow it to burn off the oil and then extinguish the flames. This we did. In thirty seconds the entire wagon was a mass of flames. It was dark and made a big bonfire. It looked like a hopeless task to save that wagon. It was a new one, too, costing about \$75. We soon discovered that we had a more complex problem now to solve than ever before. It must be done and done quickly. We realized that. Every moment the blaze was growing bigger and the wagon bed was actually cracking under the heat. "Off with your coat," I shouted. In an instant both coats were off our backs, rolled up lengthwise, and in an instant two youngsters had turned from hog transporters to fire fighters. We fought for life, we fought to save. At first we could get but seemingly poor results. But not one moment was lost. We fought fire and did our thinking at the same time. At every stroke of the coats the fire would blaze up around us and we had to dodge the flames in order to keep our bodies and other clothing safe. There was room in the rear of the wagon for just two to stand. We were abreast and, in a moment or two, we were able to move forward three inches and thus advance that much on the growing and growing flames. We did not cease, for in our two-minute effort we had driven back the hungry flames three inches. We had recovered that much territory. In another minute we advanced six inches farther. We took heart but were becoming much exhausted. In five minutes more we had succeeded in entirely subduing the wild flames. Our coats were ruined, but in three-quarters of an hour we were sleeping away as soundly as if nothing had ever come over our pathway to break the tranquility of the day.

Twenty long years have passed away since the last incident related occurred. Thirty-five long years have passed away since the first was recorded. That constitutes my day's ramble on the old Chickamauga. It has been but one day's ramble to me. I go over the old farm home again. The water chuckles as it did of yore. I see the same soil that our young feet trod, the same spring that lavishly threw out her nectar to us in time of heat; I see the old threshold where brother, sister, and a fond mother were once so happily and congenially located. I view these old relics that remind me of all the by-gone days. It was a happy childhood. The waters sing the same tune, but it sounds differently in my ears. The birds sing just as sweetly and look the same, but they do not seem to be so near and so dear to me as they did in childhood. I see the travelers pass the same old trail, yet they do not seem as gentle and interesting as they did of yore. The same sun shoots his glorious beams, and the same dew falls at eventide. All nature I presume is the same, but then, this does not satisfy. In spite of all these attempts of nature to appease the mind of him who has wandered far from the old homestead, there is something lacking. It will never be satisfied on earth. We visit the old homes of our childhood. Thousands of objects and sounds bring back a flood of memories, sweet, but now buried in the past. But last of all, what is this great giant that brings one's heart into the uppermost parts of the throat when the old childhood home is visited? It is easy to answer. We all have the same experience. If you haven't, you will some day if you live. Ah, those voices that are silent; the faces of loving friends we see no more! These voices we hear imaginarily, as we retrace our childhood footsteps, but they are sepulchral. And we seek in vain to satisfy this craving for a return of the good old days.

THE "BLUES"

A Lady Finds Help from Simple Food.

Civilization brings blessings and also responsibilities.

The more highly organized we become the more need there is for regularity and natural simplicity in the food we eat.

The laws of body nutrition should be carefully obeyed, and the finer more highly developed brain and nervous system not hampered by a complicated, unwholesome dietary.

A lady of high nervous tension says:

"For fifteen years I was a sufferer from dyspepsia. I confess that an improperly regulated diet was the chief cause of my suffering. Finally, nothing that I ate seemed to agree with my stomach, and life, at times, did not seem worth living."

"I began to take a pessimistic view of everything and see life through dark blue glass, so to speak. My head became affected with a heavy creeping sensation and I feared paralysis."

"Palpitation of the heart caused me to fear that I might die suddenly. Two years ago, hearing Grape-Nuts so highly spoken of by some estimable friends of mine, I determined to try it."

"The change in my condition was little less than miraculous. In a short time the palpitation, bad feeling in head and body began to disappear and the improvement has continued until at the present time I find myself in better health than I have ever enjoyed."

"My weight has increased 20 lbs. in the last year and life looks bright and sunny to me as it did when I was a child."

Name given by the Postum Co., Battle Creek, Mich.

"There's a Reason," and it is explained in the little book, "The Road to Wellville," in pkgs.

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

THE COAST LINE TO MACKINAC
DETROIT, CLEVELAND, BUFFALO, NIAGARA FALLS, TOLEDO, PT. HURON, GODERICH, ALPENA, ST. IGNACE

THE CHARMS OF SUMMER SEAS

Spend your vacation on the Great Lakes, the most economical and enjoyable outing in America. Daily service is operated between Detroit and Cleveland, Detroit and Buffalo; four trips weekly between Toledo, Detroit, Mackinac Island and way ports; daily service between Toledo, Cleveland and Put-In-Bay.

A Cleveland to Mackinac special steamer will be operated two trips weekly from June 15th to September 10th, stopping only at Detroit every trip and Goderich, Ont., every Monday up bound, Saturday down bound.—Special Day Trips Between Detroit and Cleveland, During July and August.—Railroad Tickets Available on Steamers. Send 2 cent stamp for Illustrated Pamphlet and Great Lakes Map. Address: L. G. Lewis, G. P. A., Detroit, Mich. Philip H. McMillan, Pres. A. A. Schantz, Vice Pres. & Gen'l Mgr.

Detroit & Cleveland Navigation Co.

Farms and Farm Lands For Sale

FOR THE BEST FARMS, best locations and best bargains in Michigan, write E. N. PASSAGE, Plymouth, Mich.

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.

Fortile Farms and unimproved lands in Delaware, diversified farming, live stock, delicious fruits and ideal homes. For information address, State Board of Agriculture, Dover, Delaware.

FARMS WANTED—We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property FREE. American Investment Association, 3 Palace Bldg., Minneapolis, Minn.

CASH FOR YOUR FARM

I bring buyers and sellers together. Write me if you want to buy, sell or trade. Established 1881. Frank P. Cleveland, 948 Adams Express Bldg., Chicago, Ill.

BUY NEW YORK FARMS NOW. Best lands, best crops, barns. Finest schools, churches and roads. For list, address McBurney & Co., 703 Fisher Bldg., Chicago, Ill.

Write for our big 96-page catalogue of VIRGINIA Farms and Estates FREE. Good Virginia Farms can be bought at surprisingly low prices and there is no better farming country in the world. Long growing season and short winters enable two and three crops a year. Abundant rainfall, good transportation facilities, big markets nearby; cheap and plentiful labor. Farming, stock raising and fruit growing equally successful and profitable. The Realty Company of Virginia Dept. B, Blackstone, Va.



Woman and Her Needs

At Home and Elsewhere



The Girl Who Can't Go Back.

ARE you the Girl Who Can't go Back? The college has closed its doors with the usual round of jollities, reunions, fetes, balls, moonlight strolls and the particular event peculiar to your school. Excitement and happiness have been the portion of all but one, the Girl who Can't Come Back to finish up her course. Are you that girl? If you are this preachlet is for you.

Just now a college diploma is the one thing most important and desirable and altogether lovely and necessary to you. Without it life stretches ahead, a dreary void of unhappiness and failure. So you think. You have set your heart on obtaining that precious parchment and it is like parting a mother from her babe to deprive you of it.

But after all, that diploma will neither make or break you if you have the elements of success. The training for which it stands may make success come more easily and more quickly, but success is bound to come anyway if you deserve it.

If you are willing to work when others play, to work when you see no prospect of reward, to work when friends call you a fool; if you never know when you are beaten, but work right on in spite of apparent failure and defeat; if you work at seeming loss today because you see greater gain tomorrow, then you will be a success. If you are not of this sort you will be a failure though you have diplomas from a dozen schools. There is no great virtue in luck or superior opportunity.

There is an opportunity in every job for her who has eyes to see. One Girl who Couldn't go Back found hers in a publishing house, where she had to begin at addressing wrappers for \$3.00 a week. Imagine that beginning for a girl who had planned to be nothing less than a professor of mathematics at the start and dean of women at the state university as a glorious wind-up before marrying a college president!

There were 40 girls in that office writing names and addresses on wrappers, but our girl was the only one who saw opportunity. She learned what the rest all knew, that the firm wanted more girls to operate typewriters, but couldn't afford to pay standard wages. Thirty-nine girls said with one voice, "If they would pay me what it is worth I would learn to run a machine." This girl quietly asked the manager for permission to practice on a machine during the noon hour and began bringing a sandwich for lunch in order to devote every possible minute to the new work.

The other girls jeered. "Don't you think you'll get anything from these tight-wads," said they. "You don't catch me giving up my noon hour unless I can see something in it."

But the girl kept on. It wasn't easy to see the rest troop out for an hour in the fresh air every day at noon. Neither was it easy to hear them tell of the fine young men they met at noon and the numerous sodas they consumed on hot days. This girl was still young enough to be interested in young men and to like to dally over the soda counter. And she didn't know the city well enough to know that the young men the girls met weren't exactly in a class with the young men she had known in college.

But she had the ability of working when others play, or a strain of obstinacy which made her bound to do what everyone told her not to attempt. I don't know which. Anyhow she kept right on. In a short time she was given circulars to copy and then the manager took to dictating simple letters to her at the machine when his stenographer was rushed. Then she was moved into his office and her salary went up a bit.

In a few months the editor of the magazine, which by this time began to consider itself a success, became aware of her existence. He gave her some stories

to read nights and in due course of time she found herself a sub-editor with a really livable salary, work which she most thoroughly enjoyed, and a chance to go as high as her ability would take her.

It wasn't her original dream of an academic life. But it was a life that was filled to the brim with broadening influences and gave ever opportunity for the best sort of education, the study of mankind. Today that girl is glad she didn't go back.

Who knows how you may feel in five years?

HOME PRESERVING VS. STORE PRODUCTS.

BY MRS. F. NISEWANGER.

I think all will agree that a home-canned product is far superior to the best factory-canned, and from a financial point of view, taking the same fruits and vegetables into consideration, I think it is always economy to put up one's supply of such things at home rather than to buy them. Of course, one might make something by selling strawberries at two dollars or more a crate and filling their place on the fruit shelves with factory canned apples or some such cheaper fruit.

Conditions are similar the country over and the fruit business is conducted under such a system that the effect of either a full crop or a short crop is felt pretty accurately wherever you are, so that the home canner will almost invariably be fairly compensated for her time and labor, and also lay aside something for profit. Factory prices are not governed so much by the fact that they buy in wholesale quantities as by the general shortage or abundance of the crop, so if you can dispose of your fruit at a good price, you may be very sure that you will pay your dealer a good price, with a margin for profit, for this same or a similar fruit when you want to buy it for your table.

Besides, as I have said, I have yet to see the factory product that is as good as the home-made. It looks nice enough but lacks the flavor and richness that careful home canning brings out. The unsweetened fruits are watery and tasteless unless heated up with the necessary sugar added, and sometimes even then, even those goods advertised "in heavy syrup" lack something. And there is absolutely no comparison to be made between home and factory canned vegetables, considering the much greater excellence of flavor of those put up at home.

Experienced housekeepers know that it is economy to sweeten canned fruit just before it is done rather than as soon as it is placed on the range to cook, nothing being lost by evaporation and the natural sugar of the fruit being brought out by the cooking. But they also know that it is an extravagance to can the fruit unsweetened. More sugar being required to sweeten the cold fruit, and it is never quite so good.

Ours is not much of a grape country and this fruit is usually so high, 25 or 30 cents for a small basket, that the most of us buy a few baskets to use fresh but do not put up many. Our grape jelly and jam are made of wild grapes and apples, resulting so satisfactorily that we defy anyone to tell them from the tame product.

Other fruits run about like this from year to year. Cherries, \$2 a bushel; pears, \$2 a bushel; apples and plums 50 cents to a dollar a bushel; strawberries, raspberries and blackberries \$2.50 a crate; peaches, 75 cents to a dollar for a one-layer crate.

Cherries waste about one-half in stems and pits, but when a No. 2 can of them costs 30 cents it is easy to see that one can pay for sugar and make a nice profit besides. This holds good in a slightly varying degree, with the other fruits. The

\$2 worth of pears will make 24 quarts of canned fruit that would cost 30 cents each at the store. The strawberries, raspberries and blackberries will make about 15 quarts of canned fruit from each crate if they are not over-shrunken from too long cooking and at the store you would pay 25 or 30 cents for a much smaller can of them. A bushel of plums or apples will easily can 24 quarts and make a dozen glasses of jelly from the extra juice. And so it goes, every time, I think. Economy and satisfaction at home.

DEBORAH.

SOME SIMPLE HOME REMEDIES.

BY CHARLOTTE BIRD.

A child had shoved a bean up into its nose. The young mother tried frantically to get it out but only made matters worse. Then her good sense reasserted itself; she went to the telephone and called up a friend, the experienced mother of a large family. "What in the world can a person do for a bean up a child's nose?" she asked.

"Try pepper," the confident answer was wafted back.

"Pepper! But—"

"Rub it on her upper lip and she will sneeze the bean out of her nose. I have done it more than once."

Full of gratitude, the young mother followed directions and in a few minutes all the trouble was removed.

And almost always there is a simple remedy for the little common troubles which are often happening in a family and which may lead to serious things with the calling in of the family physician.

For instance, a child sometimes gets a fly or other foreign substance in its ear. The feeling is agonizing, almost enough so, if long continued, to throw the child into spasms. If one knows no home remedy for this distress, the physician must be called in. And yet nothing is simpler than the cure for this trouble. Simply tip the child's head to one side and fill the ear with sweet oil or olive oil. The oil will cause no pain whatever, but will drown the insect and cause it to float to the surface where it may be easily removed.

With a lead pencil or a soft piece of silk, rolled to a point, any foreign substance may easily be removed from the eye. All previous rubbing should be avoided, because this is highly irritating to this delicate organ and may cause the foreign substance to become imbedded in the soft eye coverings. With children it is difficult to secure the self-control which will insure a forbearance of all rubbing.

Sometimes one is seized with persistent vomiting which it seems as if nothing would relieve. This may have different causes. It is said that the salty water poured off of soaking codfish will settle a sick stomach. Sometimes a continual wetting of the face with cold water will serve the same end. If the cause is an acid condition of the stomach and bowels, about a tablespoonful of lime water in half a cup of milk ought to relieve it. From time to time through several hours, if necessary, the treatment may be repeated.

Whenever for any reason a child holds its breath, the remedy is a dash of cold water in the face. Sometimes this holding of a child's breath becomes quite alarming and the child turns black in the face. But the shock of the dash of cold water will cause him to gasp for breath, however stubborn he may hitherto have appeared.

A general rule for remaining well is to keep the body clean, both inside and out. The bath will do the one and fresh air go a long way toward accomplishing the other. Chill of body will cause one to catch cold, but unless a draught is strong and cold enough to chill the body, it need not be feared. Instead of being a danger to health, a draught should be looked upon as health-giving, because it is always changing the quality of the air by carrying off the bad and bringing the good. Fresh air unassisted has been known to cure dangerous and well-advanced cases of pneumonia. But the patient must lie practically out of doors. For these reasons the present fad of sleeping out of doors or on porches, is founded on a respect for the laws of health.

The health is affected strongly, also, by the quality of one's thoughts. This is coming today more and more to be recognized by our best physicians. We cannot live by bread alone and life in all its departments is largely ruled by spirit. Of this, spirit is the very life principle which helps us to conquer disease and then keeps us well. All the most skillful doctor can do, is to help this life principle. So we must avoid fear and worry and think kindly of our fellow men. A fretting over life's little things will effectually blot out all the pleasures of existence, while gratitude for our blessings and a bright faith in the future will keep us not only well but happy. In this is the true riches of life, not the wealth which may be gathered into banks.

And so life's greatest blessings are the simple things which may be cherished in the plainest homes by the most unassuming people.

Hurrying the Young Folks Off the Farm.

By HILDA RICHMOND.

"Why do you build up with one hand and tear down with the other?" asked a shrewd city man while visiting some country relatives and hearing them lament about the dearth of young people in their community and every other farm community. "You, yourselves, are responsible for the exodus from the farms more than anyone else or anything else."

Of course they rose up in wrath and pointed to the beautiful homes, the long hours of leisure in all but the very busy summer season, the automobiles, buggies and pianos with which parents vainly sought to stem the tide from the farms, the opportunities for good times within the reach of country young people, the chances to make money, the desirability from the standpoint of health of country life, and all the other advantages they daily and hourly heap up to their boys and girls, and then they reproached him for blaming them in the slightest degree for their own unfortunate condition without children and without helpers of any kind.

"I'll admit every word you say," said the city man without excitement, "but still I stick to my original proposition.

You build up with one hand and tear down with the other." Then he proceeded to prove to them conclusively that what he said was true and offered to let them prove it to themselves next day. They did so and were amazed to find out how much they had helped to hurry the young people off the farm. In that one day the mistress of the farm house caught herself 17 times in the very act of saying things derogatory to the farm and in praise of the city, while her husband was just a little behind with 13 to his account. And that when they were partially on guard, too! What might have been the count if they had not been warned, they did not like to think about.

And what did they say? Well, things said in every farm house of the land many times weekly. "No, daughter, it isn't worth while to put on the best china for the Sunday dinner. The old dishes are good enough for farmers," when the remaining young lady wanted to make the dining table look nice for the Sunday meal. Then when something was said about pretty clothes the mother remarked that women in the country soon ruined their clothes getting in and out of bug-

gies. "Now, town women can take good care of their things because they never have to struggle with mud and dust," she observed, until she caught her relative's little smile, when she wished she hadn't said it. Then the master of the house said severely that town women had nothing to do but dress up and look nice on their front porches, so they might as well put in the time that way as in anything else. Hardly had this unfortunate remark died away when the mistress of the house commented on an item in the daily paper speaking of a vacation one of her relatives was enjoying and wound up with, "I'd like to visit Cousin Sally, too, but I'm so tied down with the chickens and everything that there is no use talking of getting away for a few days."

The list might be continued indefinitely, but anyone who has had any dealings at all with country people can fill it out at length. Over and over, summer and winter, wet and dry, the same old unconscious teaching is kept up from infancy until the boys and girls joyfully turn their feet toward the promised land—the land of little work, plenty of money and fine clothes—the ideal place described by their parents since they can remember anything at all. And all this time the parents are drumming it in, on the other hand, that the country is the best and only place to live. It is certainly curious that they never catch themselves in the act of destroying the effect of their own teaching, but they remain unconscious to the last. If country men and women would honestly make a record of the number of times they disparage the country and praise the city in a single week they would be amazed. It is "here a little and there a little" until you could not hire the young folks to consider a gilt edged farm proposition of any sort. Why, they would be foolish if they didn't leave the farm. In the city the women had time to sit from morning till night on porches and look nice, while the men, in good clothes, went to work about nine in the morning, in a bank or office and finished everything by four in the afternoon, and both women and men had many opportunities for enjoyment every evening of their lives.

One of the most surprised young men who ever lived was a country lad who was taken into a bank partly because he was a bright and capable young fellow, and partly because his father was a stock holder, when bank president, cashier and every last official remained there until the small hours of the night looking for a missing five dollars in their accounts. "I thought working till after dark in the harvest field and doing the chores afterwards was the limit, but I found out my mistake," said the boy. "I had an engagement to take a girl to a lecture that night but I didn't dare mention it to the worried president. I stood around and did what they told me to and smothered my yawns. The folks at home always said bankers got through by four every afternoon so I thought it would be a snap."

And then there is another point fathers and mothers bring out most forcibly and that is that town people "look down upon" country folks. A thousand times have I heard that statement in country houses but never once in town. Of course, when young people are brought up with the idea that town people consider them—the country folks—as coarser clay they naturally conclude that there must be some reason for the difference in social status.

"You are just as good as town folks for all they think they are so much," was the oft-repeated statement of the mother in one farm home. And actually her sons and daughters grew up with such a desire for town life and an inclination to get away from people who were inferior, that no inducements could hold them on the farm. The father and mother thought they were laying the foundation for a wholesome contempt of town and town ways by such talk but they only succeeded in turning their children away from the farm.

It isn't necessary to send agents into the country to describe in glowing terms the advantages of the town over the city. The country fathers and mothers attend to that little duty themselves and work at their tasks 365 days in the year. It isn't necessary to send out little booklets inviting the brightest and best of the country young men and women to leave the farms, for from childhood they have heard that doctrine. When country people stop educating the boys and girls away from the farm the young folks will stay on the farms, and that is the literal truth. When the joys and advantages

and blessings of the farm are exalted above those of the city, and particularly when people talk about the farm encouragingly and do not mention the city so much, then the problem of keeping the bright, able young folks in the country will be solved, and not until then.

HOME QUERIES.

Household Editor:—Can you give me some general rule for making ices.—Mrs. M. K.

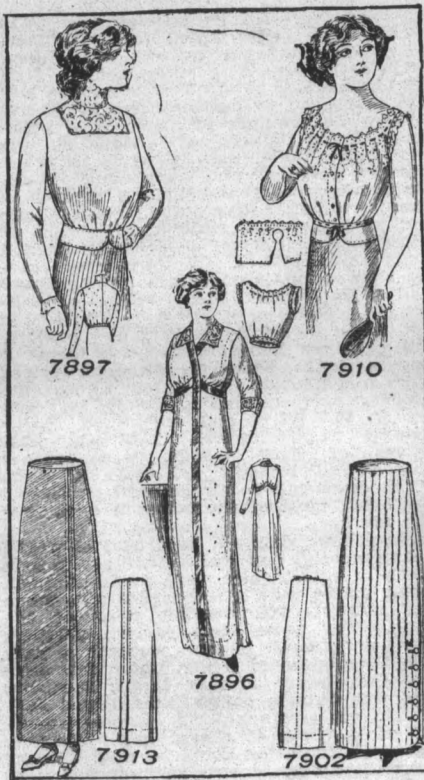
To make the foundation syrup boil one pound of sugar with one quart of water 20 minutes. This is the proportion to use, but of course, the quantity will be decided by the size of your family and freezer. To this quantity of syrup add one cup of lemon juice or two cups of any other fruit juice you may have. If you have gelatine, add, before freezing, one teaspoonful which has been softened in cold water and then melted over hot water as you do chocolate. If you have no gelatine add the beaten whites of two eggs when the mixture is half frozen.

Household Editor:—Could you please tell me through the Michigan Farmer how to fry potatoes so that the slices are nice and whole, as in hotels? What is a nice filling for a layer cake?—H. L.

Paré the potatoes and slice in even slices, or in eighths lengthwise, and let stand a half-hour in cold water. Drain and dry between a towel and fry in hot fat, as you would doughnuts. You can do a better job if you have a wire basket made especially for this purpose, but if you have not the basket, you can fall back on a fork to dip them out of the fat. Do not have the fat too hot. Fry a few pieces at a time and drain on clean paper, after which salt to taste and serve at once. A cake filling which is rich and easy to make is made as follows: Chop fine one cup of raisins and nut meats, any kind. Put in stew pan and add one cup of medium brown sugar and a quarter cup of water. Put on the stove and cook slowly until the mixture begins to thicken. Then remove and stir until it is of right consistency to spread.

FASHIONS BY MAY MANTON.

Our large Fashion Book—containing 92 pages illustrating over 700 of the season's latest styles, and devoting several pages to embroidery designs, will be sent to any address on receipt of 10 cents.



No. 7897—Plain guimpe or blouse for misses and small women, 14, 16 and 18 years. Perforated for deep and shallow yoke facings in round or square outlines and for round and square necks, to be made in half or full length, with or without sleeves that can be made in elbow or full length, with or without peplum.

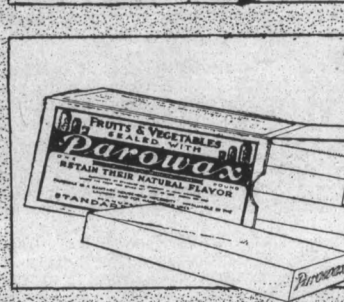
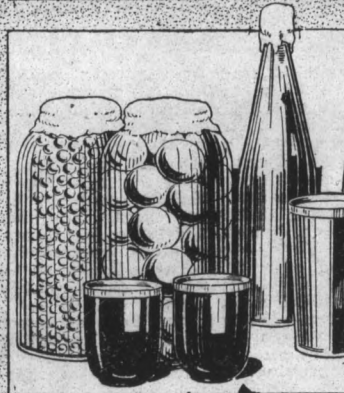
No. 7910—One-piece corset cover for misses and small women, 14, 16 and 18 years. To be made with or without peplum.

No. 7896—House gown in Empire style, 34 to 44 bust. With four-piece skirt, three-quarter or long sleeves, in walking or round length.

No. 7913—Four-piece skirt for misses and small women, 14, 16 and 18 years. With two plaits at left of front and left of back, with high or natural waist line.

No. 7902—Three-piece skirt, 22 to 34 waist. With high or natural waist line, with tuck or seam at back, with or without openings in side seams.

The above patterns will be mailed to any address by the Fashion Department of the Michigan Farmer on receipt of 10 cents for each.



Just as Easy!

Preserving is now a pleasure—thanks to Parowax! For fruits, vegetable, jellies, catsup and chow-chow, when sealed with Parowax, indefinitely retain their natural flavor. And their sealing is as simple as can be.

Dip the tops of jars and catsup bottles in melted Parowax. Or pour this pure paraffine directly on top of contents of each jelly glass. Result—a perfect air-tight, mould-proof seal.

It is even simpler than it sounds. It is as cheap as it is easy. Not even paper covers need be used.

Parowax

is pure, refined paraffine—tasteless and odorless. It has many valued household uses. In the laundry, for instance, it is invaluable. In the wash boiler, it cleans and whitens clothes. A bit of Parowax in the starch imparts a beautiful finish in the ironing. Parowax cannot injure the most delicate of fabrics or colors.

Remember to order from your dealer today.

Preserve and Jelly Recipes by Mrs. Rorer

A collection of prized recipes by this celebrated culinary expert cheerfully sent upon request.

Standard Oil Company
(AN INDIANA CORPORATION)
CHICAGO, ILL.

Here's Walter Johnson

Washington "Nationals" (American League) one of the speediest pitchers of either of the big leagues—he

Drinks
Coca-Cola

He's got the head, the arm, the ginger and the endurance. Coca-Cola didn't give him them; but he says it's the one best beverage for the athlete in training—

The Successful Thirst-Quencher
For Ball Players—and YOU

Send for Free Booklet. 54-A

THE COCA-COLA COMPANY, Atlanta, Ga.

DAISY FLY KILLER



HAROLD SOMERS, 160 DeKalb Ave., Brooklyn, N. Y.

The Michigan Farmer one year, The New York (3-a-week) World, one year, both only \$1.20

The New York World comes to you three times each week thus giving you practically a New York daily. The New York World is unexcelled as a newspaper and will keep you posted on the news of the world. Send all orders to THE MICHIGAN FARMER, Detroit, Mich.

WANTED!

At once a few men, who are hustlers, for soliciting. No experience necessary. Good salary guaranteed and expenses paid. The work is dignified, healthful and instructive. In writing give references and also state whether you have a horse and buggy of your own. Address BOX J. F., Care Michigan Farmer, Detroit.



H. C. PHELPS
President
Mail Postal
Today For
178 Page
Catalog

Phelps' Storm Buggy—Everybody's Favorite!

PHELPS really broke the record when he designed this Storm Buggy. It's the easiest riding, the classiest, and the most comfortable buggy that any man ever rode in.

Most Surprising Offer Phelps Ever Made—You Can Save \$25 to \$40

Send your name on a postal quickly for full proposition. Ask for the big buggy book showing over 278 photographs. Auto seats, Runabouts, Surreys, Phaetons—all kinds and a big display of harness. Every buggy guaranteed for 2 years—over 167,000 now in use. Mail postal today. Address H. C. Phelps, Pres.

The Ohio Carriage Mfg. Co., Station 32, Columbus, O.



30 Days' Road-Test Free

Markets.

GRAINS AND SEEDS.

August 13, 1913.

Wheat.—Speculative trading in wheat has been dominated by the interest of traders in the corn proposition during the past week. With reports of favorable rains at different points in the corn belt it looked for a time as though this crop might recover somewhat from the damage done it by the severe drought, and this feeling was reflected in the wheat market by heavy short sales. Later reports from the southwest indicated that this improvement was by no means universal and as the timid dealers took alarm wheat advanced to a higher point than the market had held during the past week. The cash market is firm and millers are active purchasers of winter wheat. One year ago No. 2 red wheat sold in this market for \$1.06 1/4. Quotations for the week are:

	No. 2	No. 1		
	Red.	White.	Sept.	Dec.
Thursday	88 1/2	87	88 1/2	92 1/2
Friday	88 1/2	87	88 1/2	92 1/2
Saturday	87 1/2	86 1/2	88 1/2	92
Monday	87 1/2	86 1/2	88 1/2	92 1/2
Tuesday	88 1/2	87 1/2	89	93
Wednesday	88 1/2	87 1/2	89 1/2	93 1/2

Chicago, (Aug. 12).—No. 2 red wheat, new, 86 1/2@87 1/2; No. 3 red, new, 85 1/2@86 1/2; Sept., 86 1/2; Dec., 89 1/2.

Corn.—Rains over the northern portion of the corn belt made the outlook for the coming corn crop more hopeful, but with the rains light in many places and with no relief from heat or drought in the southern portion many close observers believe the bulk of the growing crop is in as bad shape as ever. This makes buying strong as recent liquidations have been heavy. The government report lends no encouragement to the situation and the future of the market is considered to be in strong hands. One year ago No. 3 corn sold in this market for 87 1/2¢ per bu. Quotations for the week are:

	No. 3	No. 3		
	Corn.	Yellow.		
Thursday	71	73		
Friday	71	73		
Saturday	72	74		
Monday	71 1/2	73 1/2		
Tuesday	72 1/2	74 1/2		
Wednesday	73	75		

Chicago, (Aug. 12).—No. 2 corn, 72 1/2@73 1/2; No. 3, 72 1/2@73¢; Sept., 72 1/2; Dec. 67 1/2.

Oats.—This market has retained its strength during the past week as a result of the friendly influence of corn, liberal cash receipts being easily absorbed. One year ago standard oats sold in this market at 33 1/2¢ per bu. Quotations for the week are:

	No. 3		
	Standard.	White.	
Thursday	43 1/2	43	
Friday	43 1/2	43	
Saturday	43 1/2	43	
Monday	43 1/2	43	
Tuesday	43 1/2	43	
Wednesday	42 1/2	42	

Chicago, (Aug. 12).—No. 2, new, 39 1/2@40¢; standard, new, 42@42 1/2; Sept., 42¢; Dec., 44 1/2.

Beans.—Favorable weather for the growth of the new crop has resulted in another decline in this market. The present quotations are: For immediate shipment, \$1.75; Oct., \$1.80.

Chicago, (Aug. 12).—Pea beans, hand-picked, choice, \$1.90@1.95 per bu; red kidneys, \$1.65@1.80.

Rye.—There has been a slight reaction from last week's decline in this market. Cash No. 2 is now selling at 63¢ per bu. At Chicago No. 2 rye is quoted at 62 1/2@63 1/2.

Barley.—This market has advanced for the better grades during the past week. At Chicago quotations are 50@70¢ per bu; at Milwaukee, malting grades, 60@68¢.

Clover Seed.—Prime October and December seed was marked down 25¢ per bu. during the past week, owing to more favorable outlook for the new crop. Present quotations on these futures \$8.40; October alsike, \$11. At Toledo October clover seed is quoted at \$8.40; December, \$8.35; October and December alsike, \$11.35.

Timothy Seed.—This market remains unchanged from last week, with prime seed selling at \$2.50 per bu.

FLOUR AND FEEDS.

Flour.—Jobbing lots in 1/4 paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent, \$5.50; second, \$5.20; straight, \$5; spring patent, \$5.10; rye flour, \$4.60 per bbl.

Feed.—In 100-lb. sacks, jobbing lots: Bran, \$23; coarse middlings, \$24; fine middlings, \$26; cracked corn and coarse corn meal, \$26; corn and oat chop, \$25.50 per ton.

Hay.—Prices have enjoyed another advance. Carlots on the track at Detroit are: No. 1 timothy, \$16@16.50; No. 2, \$12.50@13.50; light mixed, \$14.50@15; No. 1 mixed, \$12@12.50.

New York.—Higher. Large baled, No. 1 timothy, \$21@21.50; standard, \$20@20.50; light clover mixed, \$19@20; heavy mixed, \$16@17 per ton.

Straw.—Detroit.—Steady. Rye, \$8@9; wheat and oat straw, \$7@7.50 per ton. New York.—Easy. New, rye straw, \$17 per ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Although the market holds steady and firm with the advanced trade

of a week ago the deal is somewhat obstructed by an unexpected increase in the holdings of warehousemen which amounted to a 1,000,000-lb. gain for July and makes the aggregate over 9,000,000 lbs. greater than the holdings of August 1, 1912. Quotations here unchanged. Extra creamery, 26 1/2¢ per lb; firsts, 25¢; dairy, 21¢; packing stock, 19¢.

Elgin.—Market steady at 26 1/2¢. Chicago.—The advance reported at other points last week did not occur on this market this week and values are now advanced on nearly all grades. Quotations are: Extra creamery, 26 1/2@27¢; extra firsts, 25 1/2@26¢; firsts, 24 1/2@25¢; seconds, 23 1/2@24¢; dairy extras, 26¢; firsts, 23 1/2¢; seconds, 22¢; packing stock, 21@21 1/2¢ as to quality.

New York.—Creameries and packing stock are up while dairies rule steady. Creamery extras, 27@27 1/2¢; firsts, 25 1/2@26 1/2¢; seconds, 24@25¢; state dairy, finest, 25 1/2@26¢; good to prime, 24@25¢; common to fair, 22@23 1/2¢; packing, 20 1/2@22¢ as to quality.

Eggs.—Another advance of a cent follows last week's higher quotations and the trade is firm at the new quotations because of a falling off in the supply. Current offerings, candled, quoted at 20¢ per dozen.

Chicago.—A general improvement is noted in prices with the quality of the goods covering a wider number of grades. Current receipts, 15@18¢; ordinary firsts, 18¢; firsts, 19@19 1/2¢; extra, 22¢; checks, 11@12 1/2¢; dirties, 13@13 1/2¢ per dozen.

New York.—Good stock commands an advance of a full cent. Fresh gathered extras, 26@28¢; extra firsts, 24@25¢; firsts, 22@23¢ per dozen.

Poultry.—Market firm here at lower to steady values for all grades except broilers where an advance is noted. Receipts are improving. Quotations are: Live.—Broilers, 18@18 1/2¢; hens, 15@15 1/2¢; No. 2 hens, 11@12¢; old roosters, 10@11¢; turkeys, 17@18¢; geese, 10@11¢; ducks, 14@15¢ per lb.

Chicago.—No changes except a 1/4¢ advance for fowls. Quotations on live are: Turkeys, good weight, 18¢; others, 12¢; fowls, good, 14¢; spring chickens, 17¢; ducks, 13¢; geese, 10¢; guinea hens, 4¢ per dozen.

New York.—Dressed poultry dull and irregular. Fresh dressed western chickens, 17@23¢; fowls, 16 1/2@19 1/2¢; turkeys, 18@19¢.

Cheese.—Easy. Wholesale lots, Michigan flats, 13 1/2@14¢; New York flats, 15@15 1/2¢; brick cream, 15@15 1/2¢; limburger, 15 1/2@16¢.

FRUITS AND VEGETABLES.

Apples.—Supply is increasing rather slowly, but market shows easier tone. Now being quoted at \$1.25 per bu., and \$3.25@3.50 per bbl.

Huckleberries.—Steady. Quoted at \$4.25@4.50 per bushel.

Currants.—Steady. Ordinary, \$3.75@4 per bushel.

Raspberries.—The red kind are firm at \$4@4.25 per 24-qt. case.

Blackberries.—Selling at \$2@2.25 per 16-qt. case.

Cherries.—\$3.75@4 per bbl. and \$2 per 16-qt. case.

Potatoes.—Trade is steady and active. On the markets here the offerings are bringing around \$1 per bu. Imported tubers are quoted at \$2.65@2.75 per 2 1/2 bu. sack.

Tomatoes.—Home-grown, \$2.50@2.75 per bushel.

Cabbage.—\$2.50@2.75 per bbl.

GRAND RAPIDS.

An attendance of 610 people and 400 loads of fruit and produce was Tuesday morning's record on the city market. Fruit sold as follows: Peaches, \$2@2.50; apples, 40@75¢; blackberries, \$1.25@1.60; plums, \$1@2. Potatoes still have a wide range owing to size, selling from 25@90¢. Green corn is worth 10¢ per doz; fresh eggs are bringing 18@18 1/2¢ this week. Dressed hogs are higher, selling for 11 1/2@12¢. In live poultry, fowls are quoted at 12¢; broilers, 14¢; grain prices paid at the mills are as follows: Wheat, 81@82¢; oats, 50¢; rye, 50¢; corn, 73¢; beans, \$1.50.

DETROIT RETAIL PRICES.

Eastern Market.—There was an active market Wednesday morning with offerings selling readily at good prices. Fruits are scarce. Some peaches of ordinary quality were selling at \$1.50 per bu; plums, \$1.50; huckleberries, \$5.50; potatoes were in fair supply and quoted at 60¢@\$1 per bu; lettuce, 50¢; onions, \$1.20@1.50; butter beans, \$1; tomatoes, \$2.25@2.75; large cucumbers, \$1; corn, 75¢@80¢ per 10 doz. bag. Beans, 28@30¢; hay, loose, is firmer at \$13@16 per ton.

THE LIVE STOCK MARKETS.

Buffalo.

August 11, 1913.

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

Receipts of stock here today as follows: Cattle, 165 cars; hogs, 45 double decks; sheep and lambs, 22 double decks; calves 850 head.

With 165 cars of cattle on the market here today, our market on all cattle weighing 1,200 lbs. or over is 15@25¢ per cwt. lower than last Monday. All handy weight butchering cattle, female stuff showing any quality and light stockers sold from 10@15¢ higher than last Monday; good feeders sold full steady. The market was active on all handy weight butchering cattle, but very dull on extremely heavy cattle.

We quote: Best 1350 to 1450-lb. steers, \$8.50@8.75; best 1200 to 1300-lb. steers, \$8@8.50; best 1100 to 1200-lb. steers, \$7.75@8; coarse and plain heavy steers, \$7.50

7.85; choice handy steers, 7.75@8; fair to good 1000 to 1100-lb. steers, \$7.25@7.60; grassy 800 to 1000-lb. steers, \$6.50@7; best cows, \$6.50@6.75; butcher cows, \$5@5.50; cutters, \$4.25@4.50; trimmers, \$3.50@3.75; best heifers, \$7.25@7.50; medium butcher heifers, \$6.25@6.75; stock heifers \$5.40@5.75; best feeding steers, \$6.75@7; fair to good do., \$6.25@6.50; common light stockers, \$5.25@5.50; best butcher bulls, \$6@7; best bolagna bulls, \$5.25@5.75; stock bulls, \$5@5.50; best milkers and springers, \$7@8; common to good do., \$5@6.

Our receipts of hogs today were very light and market considerably higher, especially heavy weights. Hogs weighing from 250 and upwards sold from \$9.25@9.50; light mixed, \$9.55@9.65; yorkers, \$9.80@9.90; pigs, \$9.90@10; very few at latter price; roughs, \$8@8.25; stags, \$7.50@7.75; market closed strong on all grades but a little slow on heavy hogs.

The sheep and lamb market was active today, with prices about the same as the close of last week; most of the choice lambs selling from \$7.85@8; yearlings, \$5.50@6.50; look for about steady prices the balance of the week.

We quote: Choice lambs, \$7.75@8; cull to fair do., \$6@7.50; yearlings, \$5.50@6.50; bucks, \$2.50@3.25; wethers, \$5@5.35; handy ewes, \$4.25@4.50; heavy ewes, \$3.90@4; cull sheep, \$2.50@3.50; veals, choice to extra, \$10.75@11; fair to good, \$9.50@10.50; heavy calves, \$5.50@7.

Chicago.

August 11, 1913.

Cattle. Hogs. Sheep. Received today15,000 40,000 35,000 Same day last year..20,001 27,804 30,173 Received last week..36,962 122,728 93,077 Same week last year..58,966 106,824 122,997

For the second time in two weeks the Monday run of cattle is extremely small, while receipts at Kansas City are reported as but 15,000 head, or half the number reported Monday a week ago. The market is as active here as the supply will permit, with prices for butcher stock, as well as steers largely 10@15¢ higher, and prime heavy steers brought \$9.20, or 20¢ higher than at any time last week. Hogs are active and a shade higher, with an early reported \$9.37 1/2 top. Hogs received last week averaged 235 lbs., compared with 238 lbs. a week earlier, 241 lbs. a year ago, 237 lbs. two years ago, 254 lbs. three years ago and 231 lbs. four years ago. Sheep are slower today, and buyers are bidding 10@15¢ lower, without much trading up to a late hour, but lambs are active at last week's advance.

Cattle were marketed much less freely last week than heretofore, recent sharp declines in prices tending to lessen the receipts in a marked degree, and while the general demand was not perceptibly better, sellers were able to obtain 15@25¢ better prices for the rank and file of the offerings. The bulk of the steer sales took place at a range of \$7.75@8.75, the choicer class of heavy steers going readily at \$8.75@9 and the poorer class of grass-fed light-weights at \$7.10@7.85. The latter failed to sell higher, being discriminated against by killers. Plain and warmed-up steers sold at \$7.90@8.15, medium to good steers at \$8.20@8.45 and good to choice steers at \$8.50@8.70, while common to prime little yearlings found buyers at \$7.80@9.10, the best being taken in preference to prime heavy weights and outselling them. Butchering cows and heifers shared in the prevailing activity and firmness, going at \$4.90@8.80, while cutters sold at \$4.30@4.85, canners at \$3.35@4.25 and bulls at \$4.75@7.65. Western range cattle showed up in moderate numbers and had a good outlet, steers selling at \$6.35@7.45, according to quality. There was not much doing in stockers and feeders, the offerings being limited and demand not much to boast of, although prices were much lower than a few weeks ago. Stockers were salable at \$5.30@7.25, feeders at \$6.75@7.75 and stock and feeder heifers at \$5.25@6.25. Desirable veal calves of light weight were rather scarce and brought \$10.25@11.50, while milch cows had a fair demand at \$50@75 per head, most of the common ones selling for beef.

Hogs have shown a good deal of weakness recently, and while some rallies took place at times, sales were made at much lower prices than a few weeks ago, when the market was soaring most of the time. For some time eastern shippers were very small buyers, whereas a year ago they operated freely, but a few days ago they began to take larger numbers, and this outside competition helped sellers to get advances. The average quality of the hogs marketed has undergone great deterioration recently, due in great part to rapidly increasing proportions of grass-fed, heavy sows, these being strongly discriminated against by slaughterers, who refuse to take them except on liberal discounts from prices paid for good hogs. The best prices continue to be paid for prime light weights, and the spread in quotations between these and rough, heavy lots has widened out enormously of late. The fresh pork trade is very large, and there is a good cash trade in cured meats, despite the high prices, which are much higher than a year ago. On August 1 stocks of provisions in the five leading western markets aggregated 266,106,199 lbs., compared with 272,144,996 lbs. a month ago and 293,527,600 lbs. a year ago. A late sharp advance in hogs left them selling at the close of the week at \$7.80@9.30 for the poorest to the best, compared with \$8.10@9.22 1/2 a week earlier. Pigs closed at \$6@8.75, and throwout packing sows brought \$6.35@7.80.

Sheep and lambs were advanced last week after the Monday decline, due to large receipts that day, later arrivals being much smaller. The season for bringing in southern lambs direct to the big Chicago packing plants is near a close, and this is, of course, favorable for sell-

ers on the open Chicago market. The Idaho, Montana, Oregon and Washington ranges are marketing flocks in increasing numbers, Idaho leading off in lamb shipments, while native lambs and native ewes are numerous. Most of the range lambs are fat, and intending buyers of feeders find very few for sale. At the week's close prices for lambs were 25@40¢ higher than a week earlier and sheep 15@25¢ higher, lambs selling at \$5.50@7.55, with feeder lambs at \$6.50@6.90. Yearlings sold at \$5@6.15, wethers at \$4.25@5.10, ewes at \$2.50@5 and bucks at \$3@3.75.

NATIONAL CROP REPORT.

(Continued from page 132).

The estimated acreage is 841,000 acres, which is the same as last year. The total production is estimated at 17,000,000 bushels as compared with 19,000,000 bushels last year and 18,000,000 in 1911.

Potatoes.—Condition on Aug. 1 was 78 per cent of normal, as compared with 86.2 on July 1 and 87.8 on Aug. 1 of last year and a ten-year average on Aug. 1 of 84.1. The total estimated acreage is 3,685,000 acres or 99.3 per cent of last year's acreage. The estimated total yield from present conditions is 339,000,000 bushels, as compared with 421,000,000 bushels last year and 293,000,000 bushels in 1911.

Hay.—The total acreage of hay is estimated at 48,293,000 acres, or 97.5 per cent of last year's acreage. The estimated yield per acre is 1.33 tons, as compared with 1.47 tons in 1912. The total estimated production is 64,000,000 tons, as compared with 73,000,000 tons in 1912 and 55,000,000 tons in 1911.

Apples.—Condition on Aug. 1, 52.2, compared with 59.4 on July 1, 65.8 on Aug. 1, 1912, and a five-year average of 54.5 on Aug. 1.

CROP AND MARKET NOTES.

Hillsdale Co., Aug. 9.—This county has suffered from the most destructive drought that has been experienced in many years. No rain heavy enough to benefit pasture has fallen since the last week in May, except light showers in the last few days. Many farmers are compelled to feed their stock on dry feed as in winter, and the conditions are discouraging to say the least. No crop of any kind has been heavy, and the total yield of farm products for the county will be the smallest in a long time. The general average for wheat is about 10 bu. per acre. Owing to the drought, the oat crop is probably the lightest ever grown in this section. According to reports from threshers, the yield for oats is from 10 to 20 bushels per acre, and the grain is of poor quality. So short was the straw that, in many cases, it was impossible to cut the oats with a binder. Corn which was for a time a promising crop, has already been injured beyond help, and the entire crop is on the verge of ruin. Unless heavy rains come soon, there will be a potato famine in this section. Potatoes from Virginia are being sold in the local market at \$1.20 per bushel, the early potato crop here being a failure. In townships where tomatoes and cabbage are grown extensively, the same discouraging conditions prevail, and these products are at a standstill as a result of the prolonged drought. Late crops like buckwheat and beans, have made little progress and stand little show of yielding paying returns. In general, these conditions prevail throughout the entire county, although local showers have relieved the strain somewhat, over small areas. The recent light showers have benefited cultivated crops somewhat, but the drought is by no means broken, and no rain has fallen heavy enough to benefit pasture fields.

Lapeer Co., Aug. 13.—The long drought has been broken by heavy rains that began on the night of the 8th, and it is still raining. Ponds in potato and bean fields, also some corn standing in water. Hay and grains, with but few exceptions, nearly all secured. Potato crop will be greatly benefited and bean crop in a measure redeemed. Some fields of corn are quite forward and promise well, while in other fields the crop is behind time. Pastures were pretty well done for and dried up before this rain, which may now revive and push forth feed. Grain threshing is well under way. Rye at some places has yielded around 20 bu. per acre. Not much oats threshed as yet. Wheat fine, plump quality, but not a very heavy yield. Little preparation as yet can be noticed for fall wheat. Prices for live stock rule high. Quite a lot of alfalfa in this part of the county.

Ohio. Carroll Co., Aug. 11.—We had very dry, hot weather until yesterday, when we had a nice little shower. The hay harvest is about over. The threshing machines started out last week. The hay crop was very light. Most of the oats are very short. Wheat and rye are not turning out very well, but we have a pretty good stand of corn, which is needing a good steady rain. The fruit crop is very poor.

FOOD AND HEALTH SPECIAL TRAIN.

The Michigan State Board of Health and the State Dairy and Food Department are running a special educational exhibit train over Michigan railroads during August schedule for the week follows:

Grayling, Aug. 18, 7:30 to 10:00 a. m.
West Branch, Aug. 18, 11:15 a. m. to 12:15 p. m.
Standish, Aug. 18, 1:00 to 2:00 p. m.
Pinconning, Aug. 18, 2:20 to 6:00 p. m.
Bay City, Aug. 19, all forenoon.
Saginaw, Aug. 19, all forenoon.
Flint, Aug. 20, all forenoon.
Holly, Aug. 20, all forenoon.
Plymouth, Aug. 21, 8:00 to 10:00 a. m.
Detroit, Aug. 21-24, till Sunday night.

THIS IS THE LAST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.
August 14, 1913.

Cattle.
Receipts, 1110. Market active at Wednesday's prices on all grades. No dry-ford on sale.

We quote: Steers and heifers, 1000 to 1200, \$7.50@8; do. 800 to 1000, \$6.50@7.50; grass steers and heifers that are fat, 800 to 1000, \$6.50@7.50; do. 500 to 700, \$6@6.50; choice fat cows, \$6; good do., \$5.25@5.50; common do., \$4.50@5; canners, \$3@4; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.75@6.25; stock bulls, \$4.50@5; choice feeding steers, 800 to 1000, \$6.50@7; fair do., 800 to 1000, \$6.25@6.75; choice stockers, 500 to 700, \$6@6.50; fair do., 500 to 700, \$5.75@6.25; stock heifers, \$5.25@5.75; milkers, large, young, medium age, \$65@75; common milkers, \$35@50.

Bishop, B. & H. sold Kendall 22 stockers av 564 at \$6.25; to Parker, W. & Co. 1 bull weighing 830 at \$5.50, 2 do av 905 at \$6, 1 do weighing 1180 at \$6, 2 do av 1190 at \$6.25, 1 do weighing 730 at \$5.30, 4 cows av 1005 at \$5.35, 2 do av 1050 at \$5.50, 2 heifers av 750 at \$6, 3 do av 666 at \$6.35, 5 bulls av 950 at \$5, 1 do weighing 820 at \$6; to Breitenbeck 3 cows av 963 at \$4.75, 9 butchers av 666 at \$6.20; to Sullivan P. Co. 4 cows av 1080 at \$6, 5 do av 1000 at \$5.50, 1 bull weighing 550 at \$4.75, 1 steer weighing 880 at \$7, 14 butchers av 662 at \$6.25, 1 bull weighing 850 at \$6, 1 do weighing 1800 at \$6.50, 2 cows av 1015 at \$5.25; to Kendall 3 stockers av 647 at \$6.10; to Mich. B. Co. 1 cow weighing 990 at \$6; to Kamman B. Co. 1 steer weighing 790 at \$7; to Austin 2 oxen av 1515 at \$6.15; to Johnson 2 feeders av 910 at \$7; to Kull 3 steers av 587 at \$6, 2 do av 825 at \$7; to Schumaker 1 stocker weighing 570 at \$5, 9 do av 509 at \$5.75; to Bray 2 cows av 975 at \$4.25; to Hammond, S. & Co. 3 bulls av 1060 at \$6.25, 2 cows av 850 at \$4.50, 6 butchers av 440 at \$4.90; to Parker, W. & Co. 8 do av 827 at \$6.90, 4 bulls av 992 at \$6, 3 cows av 1010 at \$5, 10 butchers av 691 at \$6.40.

Spicer & R. sold Mason B. Co. 1 cow weighing 1050 at \$5.25, 1 do weighing 980 at \$5.50, 11 butchers av 634 at \$6.25, 18 do av 523 at \$5.25; to Kamman B. Co. 6 steers av 820 at \$6.70; to Schumaker 2 heifers av 300 at \$5, 4 stockers av 500 at \$5.50; to Lampkin 12 stockers av 460 at \$5.50; to Bresnahan 4 do av 455 at \$5.50; to Kull 10 butchers av 860 at \$7.25, 8 do av 550 at \$6.50; to Heinrich 23 do av 864 at \$7.30; to Wyness 7 cows av 880 at \$5.75; to Bresnahan 6 heifers av 533 at \$5.50, 2 steers av 825 at \$7, 4 do av 592 at \$5.50; to Hammond, S. & Co. 3 canners av 800 at \$4.

Haley & M. sold Newton B. Co. 1 cow weighing 1020 at \$4.25, 9 steers av 930 at \$7.50, 2 butchers av 875 at \$5.85, 7 do av 840 at \$5.75, 3 cows av 910 at \$5.40, 7 heifers av 781 at \$6.65, 2 cows av 980 at \$5.85, 2 bulls av 985 at \$5.50, 4 do av 830 at \$5, 5 butchers av 962 at \$6.75, 1 cow weighing 960 at \$4; to Snow 21 stockers av 513 at \$6.15, 3 do av 517 at \$6.25, 11 do av 480 at \$5.85, 7 do av 595 at \$6; to Sullivan P. Co. 6 cows av 960 at \$5.50, 2 do av 1075 at \$5.25, 1 do weighing 900 at \$4.50, 4 do av 962 at \$5.40; to Schumaker 5 stockers av 488 at \$5.75, 2 do av 675 at \$6.30, 9 do av 452 at \$5.50; to Johnson 10 feeders av 812 at \$7.25; to Mason B. Co. 9 butchers av 728 at \$6.75, 8 do av 655 at \$6.85; to Breitenbeck 6 bulls av 800 at \$5.65; to Mich. B. Co. 1 cow weighing 990 at \$6, 6 steers av 645 at \$6.75, 2 do av 565 at \$5.25; to Rattkowsky 4 butchers av 445 at \$5.50, 4 do av 430 at \$5.30; to Hammond, S. & Co. 3 cows av 757 at \$4; to Marx 7 butchers av 736 at \$6.85, 4 do av 970 at \$5.65, 10 do av 732 at \$6.90; to Mich. B. Co. 7 do av 550 at \$5.25; to Hammond, S. & Co. 4 cows av 762 at \$4.

Roe Com. Co. sold Hammond, S. & Co. 2 cows av 840 at \$4, 1 canner weighing 770 at \$4, 4 butchers av 480 at \$5.50, 1 bull weighing 410 at \$5, 4 do av 630 at \$5.25; to Mich. B. Co. 9 cows av 1020 at \$5; to Sullivan P. Co. 4 butchers av 777 at \$6; to Heinrich 2 do av 765 at \$6.75, 44 do av 990 at \$8.10; to Goose 2 do av 775 at \$4.75; to Parker, W. & Co. 2 bulls av 815 at \$5.50; to Johnson 2 feeders av 835 at \$7, 12 stockers av 610 at \$6.50; to Sullivan P. Co. 2 cows av 970 at \$5.50, 1 do weighing 800 at \$4, 1 bull weighing 1050 at \$6; to Mich. B. Co. 15 butchers av 697 at \$6.50, 2 do av 895 at \$6; to Fromm 3 do av 517 at \$5.75.

Veal Calves.

Receipts, 560. Market strong at Wednesday's prices; few choice 25c higher. Best, \$10@11; others, \$8@9.50.

Bishop, B. & H. sold Sullivan P. Co. 4 av 155 at \$7.50, 4 av 125 at \$10, 5 av 150 at \$11, 3 av 160 at \$8; to Parker, W. & Co. 11 av 185 at \$11, 11 av 150 at \$11, 7 av 180 at \$10.75; to Mich. B. Co. 2 av 205 at \$11, 2 av 430 at \$6, 3 av 130 at \$11, 4 av 155 at \$10; to Thompson Bros. 15 av 150 at \$11; to Hammond, S. & Co. 4 av 155 at \$11, 3 av 105 at \$11.25; to Mich. B. Co. 1 weighing 150 at \$11, 1 weighing 400 at \$9; to Sullivan P. Co. 9 av 145 at \$11, 1 weighing 200 at \$9, 4 av 155 at \$11.50, 1 weighing 140 at \$9, 6 av 150 at \$11.25, 3 av 170 at \$11; to Parker, W. & Co. 12 av 160 at \$11.25; to McGuire 2 av 275 at \$6, 2 av 125 at \$9, 4 av 185 at \$11.50, 11 av 175 at \$11.25; to Kull 12 av

155 at \$11.50; to Burnstine 5 av 160 at \$11.50, 4 av 140 at \$11.25, 5 av 200 at \$7.25, 9 av 140 at \$9.50; to Hammond, S. & Co. 10 av 167 at \$11.

Spicer & R. sold Burnstine 3 av 215 at \$8, 8 av 155 at \$11.25; to Parker, W. & Co. 4 av 155 at \$10.50, 2 av 260 at \$7.25, 4 av 190 at \$8, 15 av 160 at \$11; to Sullivan P. Co. 4 av 150 at \$11.

Roe Com. Co. sold Newton B. Co. 8 av 155 at \$11, 1 weighing 150 at \$9, 4 av 155 at \$11.25; to Goose 8 av 150 at \$11, 7 av 175 at \$11; to Barlage 5 av 155 at \$10.

Haley & M. sold Parker, W. & Co. 4 av 155 at \$11, 6 av 225 at \$10.50, 8 av 150 at \$11, 2 av 170 at \$10, 2 av 130 at \$11, 6 av 165 at \$10.75, 15 av 230 at \$8.50, 5 av 150 at \$10.50, 5 av 165 at \$11; to Mich. B. Co. 3 av 125 at \$10; to Sullivan P. Co. 3 av 170 at \$11; to Hammond, S. & Co. 20 av 160 at \$11, 7 av 185 at \$11; to Newton B. Co. 8 av 180 at \$10; to Goose 7 av 150 at \$11; to Newton B. Co. 3 av 170 at \$10.50, 6 av 155 at \$11.

Sheep and Lambs.

Receipts, 3185. Lambs 50c higher than last week, but 25c lower than on Wednesday; sheep steady. Best lambs, \$7; fair to good lambs, \$6.25@6.75; light to common lambs, \$5@6; yearlings, \$5@6; fair to good sheep, \$4@4.50; culls and common, \$2.75@3.

Bishop, B. & H. sold Hammond, S. & Co. 7 lambs av 60 at \$6, 14 do av 73 at \$7, 2 sheep av 130 at \$4; to Sullivan P. Co. 33 sheep av 120 at \$4, 14 lambs av 60 at \$5.50, 16 do av 65 at \$7; to Parker, W. & Co. 11 lambs av 67 at \$7.25, 78 do av 70 at \$7.25, 47 do av 75 at \$7.35, 16 do av 57 at \$5.50, 7 sheep av 125 at \$4; to Nagle P. Co. 6 do av 120 at \$4, 7 do av 105 at \$3.50, 58 lambs av 18 at \$7.25, 10 do av 67 at \$7.10, 19 sheep av 115 at \$4.25, 38 lambs av 62 at \$7; to Hayes 11 do av 65 at \$6.75; to Sullivan P. Co. 11 do av 50 at \$5.50, 27 do av 70 at \$7, 1 sheep weighing 170 at \$4; to Thompson Bros. 19 do av 100 at \$4.25, 10 do av 101 at \$4, 18 do av 90 at \$3, 34 lambs av 67 at \$6.75; to Hammond, S. & Co. 82 do av 63 at \$6.85; to Hayes 13 do av 65 at \$4.50; to Fitzpatrick Bros. 46 do av 75 at \$7, 7 do av 80 at \$6.75; to Sullivan P. Co. 130 do av 75 at \$7; to Barlage 45 do av 70 at \$6.50; to Eschrich 19 do av 50 at \$6; to Nagle P. Co. 41 sheep av 120 at \$3.75; to Hammond, S. & Co. 64 lambs av 75 at \$7.

Haley & M. sold Sullivan P. Co. 17 lambs av 70 at \$7.25, 7 yearlings av 77 at \$5, 32 sheep av 120 at \$4.25; to Mich. B. Co. 32 sheep av 125 at \$4, 13 do av 130 at \$3.50, 116 lambs av 73 at \$7, 32 do av 75 at \$7, 50 sheep av 105 at \$4; to Parker, W. & Co. 10 sheep av 104 at \$3.75, 15 lambs av 80 at \$7.25; to Newton B. Co. 116 lambs av 75 at \$7.20; to Hammond, S. & Co. 28 do av 75 at \$7; to Sullivan P. Co. 34 do av 67 at \$7; to Thompson Bros. 10 do av 49 at \$6, 24 do av 80 at \$7; to Hammond, S. & Co. 51 do av 70 at \$7, 15 sheep av 78 at \$4.50; to Parker, W. & Co. 91 lambs av 60 at \$7.15; to Newton B. Co. 33 do av 55 at \$6.50.

Spicer & R. sold Sullivan P. Co. 19 lambs av 60 at \$6.50, 23 sheep av 90 at \$3.75, 21 lambs av 55 at \$6; to Parker, W. & Co. 49 do av 67 at \$7.10; to Hayes 60 yearlings av 70 at \$5.50.

Roe Com. Co. sold Newton B. Co. 25 lambs av 55 at \$6.50, 42 sheep av 70 at \$3.75; to Hayes 22 lambs av 60 at \$6.75; to Mich. B. Co. 14 lambs av 65 at \$6.50, 7 sheep av 120 at \$4, 5 lambs av 70 at \$5.50, 13 do av 57 at \$6.50, 71 sheep av 105 at \$4, 9 do av 140 at \$4, 83 lambs av 75 at \$7; to Barlage 19 sheep av 95 at \$4.25.

Hogs.

Receipts, 2114. Market 20c lower than on Wednesday.

Range of prices: Light to good butchers, \$8.80; pigs, \$8.80; mixed, \$8.75@8.80; heavy, \$8.50@8.75; stags one-third off.

Bishop, B. & H. sold Hammond, S. & Co. 1017 av 190 at \$8.80.

Roe Com. Co. sold Sullivan P. Co. 175 av 190 at \$8.80.

Haley & M. sold Parker, W. & Co. 45 av 185 at \$8.80.

Spicer & R. sold same 250 av 190 at \$8.80.

Friday's Market.

August 8, 1913.

Cattle.

Received this week, 1152; last week, 1782. Market steady. Dry-fed steers, \$8@8.50; steers and heifers, 1000 to 1200, \$7@7.50; do. 800 to 1000, \$6.50@7.25; grass steers and heifers that are fat, 800 to 1000, \$6.50@7.25; do. 500 to 700, \$5.50@6.25; choice fat cows, \$5.50@6; good do., \$5@5.25; common cows, \$4.25@4.50; canners, \$3@4; choice heavy bulls, \$6; fair to good bolognas, bulls, \$5.50@5.75; stock bulls, \$4@5; choice feeding steers, 800 to 1000, \$6.50@6.75; fair do., 800 to 1000, \$6.25@6.50; choice stockers, 500 to 700, \$6@6.25; fair stockers, 500 to 700, \$5.50@6; milkers, large, young, medium age, \$60@80; common milkers, \$35@50.

Veal Calves.

Receipts this week, 531; last week, 787. Market steady. Best, \$10@11; others, \$7@9.50.

Sheep and Lambs.

Receipts this week, 2830; last week, 3726; market 15@25c higher. Best lambs, \$7; fair do., \$6.25@6.75; light to common lambs, \$5@6; yearlings, \$5.50@6; fair to good sheep, \$4.25@4.50; culls and common, \$2.50@3.

Hogs.

Receipts this week, 1942; last week, 2293; market steady. Light to good butchers, \$9.15; pigs, \$9.15; light mixed, \$9.50; stags one-third off.

The foreign trade in our live stock has become a very small affair, and exports of cattle from this country for the fiscal year ending with June foot up only 5,982 head, compared with 90,105 for the preceding year. Exports of sheep for the year aggregated but 88,134 head, compared with 107,611 for the previous year.

Veterinary.

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

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

Exostosis.—I have a valuable Belgian mare four years old that has a hard bunch on coronet near heel on left fore foot, about the size of a small hen egg, and just lately I noticed a similar bunch forming on inside of opposite foot. Can anything be done to remove them or prevent further growth without disfiguring the mare? She is not lame and I have only recently noticed them, but as I do not drive her these bunches might have escaped my notice. W. S. Uby, Mich.—Apply one part red iodide mercury and six parts lard to bunches every few days and it will soon check their growth and somewhat reduce bunch.

Barren Mare.—I bought a nine-year-old mare last spring which fails to come in heat, but seems to be in perfect health. C. C. O., Fowlerville, Mich.—It is possible that your mare has suffered from disease of the ovaries and will never come in heat. However, you may try giving her 1 dr. ground nux vomica and 2 drs. ground capsicum at a dose in feed three times a day. Opening the neck of womb gently with the hand or a sound or a forced service, might perhaps have the desired effect of bringing her in heat.

Malignant Fungus in Wound.—My three-year-old colt broke through stable floor, bruising and cutting hind leg, which has never healed. Considerable proud flesh has grown in wound and notwithstanding I have applied coppers and alum without much effect. She met with this injury six weeks ago. W. F. Isabella, Mich.—Apply finely powdered sulphate of copper occasionally or burn fungus with a red hot iron as often as necessary. Also apply one part iodoform and six parts boracic acid to wound twice a day, covering the sore with oakum and a light bandage. Kindly understand, the animal should be kept in a clean place.

Collar Galls.—Have horse with collar galls on shoulder which are about the size of a hand. Will medicine reduce these bunches or will they have to be cut out? H. S. Buck Run, Mich.—It is not very good practice to cut out collar galls or sitfasts in hot summer weather. Dissolve ¼ lb. sugar lead, ¼ lb. sulphate of zinc and 2 ozs. tannic acid in a gallon of water and apply to shoulder freely four or five times a day. The collar should be kept clean and thoroughly wet with one part bichloride mercury and 10 parts water every evening.

Swollen Tendons.—I have a stallion five years old that has been troubled with swollen tendons ever since last winter, but is not lame. All the treatment that I have given him has failed to make an impression. C. P., Traverse City, Mich.—Give him a dessertspoonful of powdered nitrate of potash at a dose in feed night and morning until his kidneys act free, then give him this medicine occasionally. Dissolve 6 ozs. acetate of lead in a gallon of water and wet his legs several times a day. It is needless for me to say that he should have exercise every day.

Bog Spavin.—Thoroughpin.—I have a yearling colt that weighs about 1,200 lbs. that has a soft puffy swelling in hock joint. I applied an ointment composed of 1 dr. red iodide mercury, mixed in 1 oz. vaseline. M. S., Rosebush, Mich.—Apply equal parts tincture iodide and spirits of camphor to bunch twice a week and if the swelling does not reduce, blister joint with one part cantharides and five parts fresh lard, commencing November 1.

Spinal Paralysis.—For the past 30 days my cow has appeared to be weak in hind parts and when walking her hind parts do not follow in straight line. Her appetite is good and she shows no symptoms of sickness so far as I can tell. I. A. P., Howell, Mich.—Your cow may have injured back, causing this partial loss of power, or she may have functional spinal paralysis setting in. Try giving her 1 dr. ground nux vomica and 2 drs. potassium iodide at a dose in feed two or three times a day. Also apply equal parts aqua ammonia, turpentine and raw linseed oil to back three times a week.

Indigestion.—Have a heifer three years old that freshened June 29; gave a good flow of milk for about two weeks, then suddenly failed in milk yield, giving only a pint, and this milk is of very poor quality. M. A. M., Goodrich, Mich.—Your cow, having lost her appetite, and not eating enough feed, must fail to give much milk. Give her ¼ lb. epsom salts at a dose to loosen bowels, also give her 1 oz. ground gentian, ½ oz. ground ginger, 1 oz. bicarbonate soda at a dose, either in feed or as a drench three times a day.

Eversion of Uterus.—Some time before my cow calved she had protruding vagina and after she calved uterus came out, then it would return, her hind feet raised and one week later she was allowed her freedom. But since then I notice she is about same as before calving. I bred her and presume she is in calf, but would like to know if there is danger of her having similar trouble when (Continued on page 141).



IT'S CHEAP
IT'S STRONG
IT'S DURABLE
IT'S SANITARY
IT'S COMFORTABLE
IT'S BIG VALUE FOR
LITTLE MONEY

BUY IT OF YOUR
DEALER OR WRITE
US.

SEND FOR OUR
CATALOG—YOU NEED
IT AND IT'S FREE

LOUDEN-MACHINERY CO.
231 Broadway, Fairfield Iowa.

Horse Owners Should Use

GOMBAULT'S CAUSTIC BALSAM

The Great French Veterinary Remedy.
A SAFE, SPEEDY & POSITIVE CURE.

Prepared exclusively
by J. E. Gombault, ex-
Veterinary Surgeon to
the French Government
Stud.



SUPERSEDES ALL CAUTERY OR FIRING.

Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. WE GUARANTEE that one table-spoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. 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.

We Want HAY & STRAW

We get the top price on consignments, make liberal advances and prompt remittances.

Daniel McCaffrey's Sons Co.
PITTSBURG, PA.

Reference, Washington Trust Company, or any bank in City

HAY Ship your carload lots to us, THE E. L. RICHMOND CO., Detroit, Michigan.

FARMERS—We are paying 5c 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.

A VALUABLE REFERENCE.

In connection with the veterinary advice given in the Michigan Farmer, every reader can use to excellent advantage one of the Michigan Farmer Anatomical Charts. This chart illustrates the horse, cow, sheep, hog and fowl, the perfect animal, the bones, the muscles, the blood system and the internal organs, also giving the name and location of each bone, muscle, and vital organ. Dr. Fair, our veterinarian, recommends the use of this chart and believes it will help you greatly to make your questions better understood and also enable you to better understand the answers.

This chart is only one of the features of our six-page collection of charts which also contain maps of Michigan, the United States and the world, and many other valuable features. The entire collection will be sent postpaid, for only 30c. The Michigan Farmer, Detroit, Mich.—Adv.

HOG FEED CHEAP. ASK BARTLETT CO., JACKSON, MICH.**FOR SALE OR TRADE**

(What you get.) Registered Percheron Stallion, black, 17½ hands high, weighs 1800 lbs. This horse is sound, good style and a colt getter. No use for him. He will make you good money. Come quick. J. C. BUTLER, Portland, Michigan. Bell Phone.

BREEDERS' DIRECTORY.**CATTLE.****Aberdeen-Angus.**

Herd, consisting of Trojan, Erica, Blackbirds and Princes, only, is headed by Egerton W. the GRAND CHAMPION bull at the State, West Michigan and Bay City Fairs of 1912 and the sire of winners at these fairs and at THE INTERNATIONAL, Chicago, of 1912. WOODCOTE STOCK FARM, Ionia, Mich.

Guernsey Bull Calf—Rich in A. R. breeding. Fit to head any herd. A Gee Dandy. G. A. WIGENT, Watervliet, Mich.

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

HEREFORD BULLS FOR SALE Also Poland China Hogs. ALLEN BROS., Paw Paw, Michigan.

CHOICE Bull Calves from A. R. O. dams. Sired by our herd sire whose dam and sire's dam each made over 30 lbs. in 7 days. E. R. CORNELL, Howell, Mich.

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

Buy A World Record Holstein Bull NEXT TIME. We have 2 with 75% same blood of 3 world record cows. Great bargains at \$250 each. LONG BEACH FARMS, Augusta, (Kalamazoo Co.,) Mich.

"Top-Notch" Holsteins.

Choice bull calves from 6 to 10 mo. old, of fashionable breeding and from dams with official milk and butter records for sale at reasonable prices. McPHERSON FARMS CO., Howell, Michigan.

The Reason Why!

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS, "the sheep man of the east." I sell and ship everywhere and pay express charges. I will start one man in each twp. Write for club offer and descriptive Oxfords, lets & Polled-Delaines. Kingsville, O. July 17, 1913.

Mr. R. C. Parsons, Grand Lodge, Mich.
Dear Sir: I received Oxford Sheep yesterday in good shape and will say he is a peach. When I got home with sheep a couple of my neighbors came over and looked him over. They said he was the biggest sheep they ever saw and the best around here. I will keep the crate. I paid the express agent \$2 for it. Thanking you for your prompt delivery, I remain, Yours truly, Arthur L. Peck.

At one time men drove many miles in search of Rams: nowadays PURE BRED Sheep are ordered by letter of

"The Sheep Man of the East"

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

Bigelow's Holstein Farms
Breedsville, Mich.

Have for sale several fine young bulls out of cows with high official butter and milk records.
Send for circular.

DISPERSION SALE

Over 40 head Registered Holstein cows & heifers of choicest breeding. Describe what you want or come and see them. C. D. WOODBURY, Lansing, Mich.

Holstein Friesian Cattle. A couple of young bulls for sale. We boast of quality not quantity. W. B. JONES, Oak Grove, Mich.

FOR SALE—On Cornwell Farm, Clare, Mich. Holstein new milk cows. Also 400 yearling steers. Also good Dairyman wanted. Enquire of ERNEST PIETZ.

For Sale—reasonable prices, choice registered HOLSTEIN SIKES, ready for service. HATCH HERD, Ypsilanti, Mich.

Holstein Bull—month old. Sire has 10 A. R. O. daughters, his sire 97, 4 above 30 lbs. Dam A. R. O. 7 days 12.5 lbs., 30 days 51 lbs. at 22 months old, \$50, the \$100 kind. Hobart W. Fay, Mason, Mich.

For Sale—2-yr.-old Jersey Bull—Dam's 3-yr.-old record 10651 lbs. milk, 513 lbs. fat, 604 lbs. butter. Sires dam's record—12397 lbs. milk; 600 lbs. fat, 706 lbs. butter. 2-yr.-old full sister's record—8810 lbs. milk, 435 lbs. fat, 513 lbs. butter. All authenticated, kind, sound, sure. Waterman & Waterman, Ann Arbor, Mich.

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.

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

For Sale—4 Reg. Holstein cows bred to Sir Kornel Pieterie Hengerveld, No. 55929. Also 2 bull calves and 3 heifers. E. A. BLACK, R. 6, Lakeview, Mich.

For Sale—Registered Jersey Cattle, tuberculin tested; bulls and bull calves; heifer and heifer calves; cows with Register of Merit and Cow Testing Association records. IRVIN FOX, Allegan, Mich.

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

Notton Farm, Grass Lake, Mich.
A few young Jersey Bull Calves at \$25 to \$45 each.

RED POLLED COWS AND HEIFERS—For sale, of good milking strains. John Berner & Son, Grand Lodge, Mich. Route 4.

DAIRY BRED SHORTHORNS—Bates bred bull 7-mo. old for sale. Price \$100.
J. B. HUMMEL, Mason, Michigan.

Dairy Shorthorns—Large Cattle—Heavy Milkers. No stock for sale at present.
W. W. KNAPP, R. No. 4, Watervliet, Mich.

SHORTHORN CATTLE—A few yearling and 2-year-old heifers for sale. Also Shropshire rams and ewes. M. A. BRAY, Okemos, Mich.

SHEEP.

SHEEP FOR SALE IN CARLOAD LOTS.
PARKHURST BROS., Reed City, Michigan.

The Ingleside Farm is offering more and better Shropshire Sheep than ever before. All stock recorded. Write us what you want HERBERT E. POWELL, Ionia, Mich. Citizen's Phone.

Leicesters—Yearling and ram lambs from Champion flock of Thumb of Mich. Also select Berk shire swine. Elmhurst Stock Farm, Almont, Mich.

Shropshire Rams—Good ones cheap. Write before Aug. 15th for special proposition. KOPE KON FARM, Kinderhook, Michigan.

SHROPSHIRE rams 1 and 2 years old, and some extra good lamb rams, wool and mutton type. GEO. P. ANDREWS, Dansville, Ingham Co., Mich.

The Maples Shropshires
We have to offer extra good yearling and two year old rams. Also a few ewes for sale. E. E. Leland & Son, Ann Arbor, Mich. R. R. No. 3, Phone 741 one ring.

Reg. Rambouillet Sheep, Pure Bred Poland China HOGS and PERCHERON HORSES. 2½ miles E. Morrice, on G. T. R. R. and M. U. R. J. Q. A. COOK.

HOGS.

Durocs & Victorias—A Desirable Bunch of Sows of M. T. Story, R. R. 48 Lowell, Mich. City Phone 55.

A Yearling Sow—bred for July farrowing, also a choice lot of Spring Pigs for sale. Either sex. A. A. PATTULLO, R. No. 1, Deckerville, Mich.

Chester Whites—Spring and summer pigs, write us your wants. Price and quality right. Meadow View Stock Farm, R. F. D. No. 5, Holland, Mich.

O. I. C.—Big growthy type, last fall gilts and this spring farrow to offer. Very good stock. Scott No. 1 head of herd. Farm ½ mile west of depot, OTTO B. SCHULZE, Nashville, Mich.

O. I. C.—MARCH and APRIL PIGS, the long growthy kind, with plenty of bone. No cholera ever on or near farm. Satisfaction guaranteed. A. NEWMAN, R. 1, Marlette, Mich.

O. I. C's—all sold. Orders booked for April and May pigs of the choicest breeding. C. J. THOMPSON, Rockford, Michigan.

O. I. C's—Bred sows, March pigs pairs and trios. Bull Rock Joss \$150 per 15. FRED NICKEL R. 1, Monroe, Michigan.

O. I. C's—All ages, growthy and large. Males ready, 100 to select from. Attractive prices on young stock. H. H. JUMP, Munith, Mich.

THIS
O. I. C.
SOW WEIGHED 932 LBS.
AT 23 MONTHS OLD
IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN, R. No. 10, Portland, Mich.

O. I. C's—We make a specialty of O. I. C. hogs on our farm. Stock all registered in O. I. C. Ass'n. J. R. WAY, Pompeii, Mich.

O. I. C. SWINE—I am offering 200-lb. gilts, bred due to farrow the latter part of August and fore part of September. All who are interested write me. A. J. GORDON, R. No. 2, Dorr, Mich.

DUROC-JERSEYS—Fall and Spring boars from prize-winning strains. Sows all ages. SPECIAL BARGAIN in summer pigs. Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

Duroc Jerseys—Nothing But Spring Pigs For Sale. CAREY U. EDMONDS, Hastings, Michigan.

Duroc Jerseys—Gilts all sold. Spring pigs of the large and heavy boned type. Pairs not akin. Satisfaction guaranteed. F. J. DRODT, R. No. 1, Monroe, Mich.

Duroc Jerseys For Sale—Three fall boars, also spring pigs, either sex, of finest breeding and individual quality. John McNeill, Station A, R. 4, Bay City, Mich.

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

LARGE STYLED POLAND CHINA SPRING PIGS. L Sows bred for fall farrow, also Shorthorn Bull calves at close prices. Robert Neve, Pierson, Mich.

POLAND CHINAS—Either sex, all ages. Something good at a low price. P. D. LONG, R. No. 8, Grand Rapids, Michigan.

P. C. MARCH and APRIL PIGS—The long bodied to please. R. W. MILLS, Saline, Michigan

LARGE TYPE P. C. FALL PIGS all sold. Have the greatest bunch of spring pigs I ever raised. Eight sows farrowed 86. Come or write. Expenses paid if not satisfied. Free livery from Parma. W. E. LIVINGSTON, Parma, Mich.

P. C. BOARS AND SOWS—large type, sired by Expansion. A. A. WOOD & SON, Saline, Michigan.

350 BIG TYPE MULE FOOT HOGS—All ages for sale. Prolific and hardy. Best bred for Michigan. Also Pones. J. DUNLAP, Box M, Williamsport, Ohio

LARGE Yorkshires—Choice breeding stock, all ages, not akin, from State Fair prize-winners. Pedigrees furnished. W. C. COOK, R. 42 Box 22, Ada, Mich.

YORKSHIRE Swine—We have some nice spring pigs now ready for sale. Write for description and prices. OSTRANDER BROS., Morley, Mich.

Lillie Farmstead YORKSHIRES
Spring bred gilts all sold. Gilts bred for next August farrow. September pigs either sex, pairs and trios not akin. Orders booked for spring pigs.
COLON C. LILLIE, Coopersville, Mich

When writing to advertisers please mention The Michigan Farmer.

Farm Commerce.

WILL ENFORCE NEW WEIGHTS AND MEASURES LAW.

The last legislature passed a new weights and measures law, placing the operation of the same in charge of the State Dairy and Food Department. This law takes effect on August 15. Under the law the State Dairy and Food Commissioner becomes Superintendent of Weights and Measures for the state and his deputies become inspectors of weights and measures. He is also given authority by the law to prescribe rules and regulations for weights and measures in the state. One of the greatest abuses in the state is the so-called bottomless peck measure. This measure is about the size of a stove pipe in diameter and the ostensible object of this small diameter is so that it can be slipped into a paper bag and the commodities measured will be in the bag on the withdrawal of the measure. This measure contains the same number of cubic inches that the ordinary flat peck measure contains but owing to its peculiar shape, in the measuring of commodities like apples or potatoes, it is impossible to get a peck of those commodities in this measure. A bushel of potatoes under the Michigan law weighs 60 lbs. and a peck of potatoes should therefore weigh 15 lbs., but in the bottomless peck measure only 12 lbs. of average size potatoes can be placed therein. The use of this measure gives the dealer five pecks to every bushel. The use of this measure has been condemned by other states and on and after August 15 its use in Michigan will become illegal under the regulations that will be issued by the State Superintendent of Weights and Measures. Dealers and consumers will take notice accordingly.

It has been customary throughout the state for grocers to sell dry beans and like commodities in a tin quart measure. This tin quart measure holds a liquid quart which is about 10 cubic inches less than a dry quart measure holds. As a result a bushel of beans which contains 32 quarts when measured out to the consumer in a tin quart measure will measure 37 quarts and the consumer is therefore deprived of five quarts of beans on every bushel he buys. After August 15 all commodities not liquid must be sold by dry measure, a quart of which contains 67 1-5 cubic inches. Under regulations to be issued August 15 by the Superintendent of Weights and Measures, the use of liquid measures in selling dry commodities is prohibited and a failure to observe this law will invite prosecution. Inspectors of this department are notified to warn all dealers against the use of bottomless peck and half-peck measures after August 15, and also against the use of liquid quart measures when selling any commodity not liquid. James W. Helme, State Dairy and Food Commissioner.

ADVISES PASTEURIZING MILK AT LOW TEMPERATURES.

In order to determine the best way of pasteurizing milk so as to kill the disease germs and yet not give the milk a cooked flavor or lessen its nutritive value, the Department of Agriculture, through its dairy division, has been conducting a series of experiments, treating milk at different temperatures and for different lengths of time. According to the report on these experiments in Bulletin 166 of the Bureau of Animal Industry, when milk is pasteurized at 145 degrees F. for 30 minutes the chemical changes are so slight that it is unlikely that the protein (muscle building element) or the phosphates of lime and magnesia are rendered less digestible than they are in raw milk.

Moreover, from a bacteriological standpoint, pasteurizing at low temperature is found to be more satisfactory than pasteurizing at high temperatures. According to Bulletins 126 and 161, where low temperatures are used the majority of bacteria that survive are lactic acid organisms which play an important part in the normal souring of milk. When milk is efficiently pasteurized at high temperatures, the bacteria which survive are largely of the putrefactive kinds, and milk so treated if kept for any length of time has a tendency to rot instead of sour. From the standpoint of economy, the technologist of the dairy division finds

that pasteurizing at low temperatures calls for less heat. It is found that it takes about 23½ per cent less heat to raise milk to the temperature of 145 degrees F. than to a temperature of 165 degrees F. A similar gain is a saving of the ice needed, because it will require 23½ per cent more refrigeration to cool milk to the shipping point when it is pasteurized at the higher temperature. The department, therefore, recommends that "When market milk is pasteurized it should be heated to about 145 degrees F. and held at that temperature for thirty minutes."

THE GENERAL APPLE SITUATION.

Public and private surveys of the 1913 apple crop seems to indicate that the yield will be below normal and that prices ought to range above those prevailing the past season.

In the United States a variety of conditions prevail. Missouri and Iowa report a crop above the average; New York, Ohio, Virginia and Pennsylvania will have very small crops while Illinois, Arkansas, Michigan and Kentucky, the other commonwealths of importance in apple production, indicate a fair yield only. The following table shows the number of bearing trees in each of the 12 leading apple states as given by the census of 1910, and the condition of the crop for 1913, compared with 1912 and 1911, as estimated by the government crop reporters. These 12 states reported contain about 65 per cent of the bearing trees of the country.

	No. Bearing Trees.	Esti. 1913.	1912.	1911.
State.				
Missouri	14,359,673	86	78	49
New York	11,248,203	54	76	70
Illinois	9,900,627	75	47	62
Ohio	8,504,886	35	53	73
Penn.	8,000,456	41	57	73
Arkansas	7,650,103	68	77	47
Michigan	7,534,343	65	69	67
Virginia	7,004,548	38	80	40
Kansas	6,929,673	63	75	37
Iowa	5,847,034	83	28	73
Indiana	5,764,821	64	45	60
Kentucky	5,538,267	66	67	46

According to the advice of exporters at New York City, the apple crop in European countries, except Germany, will be light this year on good fruit. England has a light crop and also France. Germany has a larger crop than it had last year, although the increase in that country is not near large enough to offset the decrease in England and France. The Nova Scotia crop is a shade lighter than last year and also the Canadian crop. The indications are that there will be a good demand for fancy American apples in all of the European markets this year.

A SHORT HUCKLEBERRY CROP IN MICHIGAN.

Through reports received from various important huckleberry producing sections of the state, it appears that the yield will run below the normal output. In Wexford county where a large quantity is usually gathered the crop is reported a total failure because of late frosts. The marshes down in Cass county are producing a few crates that are selling at fancy prices. Saginaw and other counties to the north were affected by the late frosts and there is nothing of importance to harvest. The only hopeful locality coming to our attention is over in Genesee county where it is reported that the bushes are loaded, but even there the demand is so great because of the shortage of other small fruits, that the product will be taken almost entirely by consumers direct.

Seasonably heavy runs of southwestern grass cattle in the St. Louis, Kansas City and other southwestern markets have been a weakening influence in the cattle markets of the country recently, and a good many cattle have been shipped out from sections where pasturage was destroyed by dry and hot weather.

WANTED.

At once, a few men who are hustlers, for soliciting. No experience necessary. Good salary guaranteed and expenses paid. The work is dignified, healthful and instructive. In writing give references and also state whether you have a horse and buggy of your own. Address Box J. F., care Michigan Farmer, Detroit, Mich.

(Continued from page 139).

she comes fresh again. E. E. N., Vernon, Mich.—Yes, I believe she is likely to have trouble at each calving time. You managed her very well and, of course, will know what to do next time she comes fresh.

Leg Weakness.—I have been a subscriber to the Michigan Farmer for 25 years and would like to know what to do for spring pigs that are fed on separator milk and corn while they run on pasture. Their appetite is good, but are weak in hind quarters. Sit down most Jersey cow that has gone almost completely dry during the past 48 hours. She was served six weeks ago; is perhaps in calf and has the appearance of a healthy cow. G. J. LaDu, Coral, Mich.—Give her 1 lb. epsom salts, one dose only. Then give her 1 oz. bicarbonate soda, 1/2 oz. ground gentian, 1 oz. ginger and 1 dr. ground nux vomica at a dose three times a day and feed her plenty of milk-producing food, is about all you can do for her.

Pigs Root Each Other.—I have a bunch of ten pigs about three months old, which commenced rooting each other about two weeks ago. They were weaned when six weeks old, are fed buttermilk and middlings. W. S. Durand, Mich.—You had better change their feed occasionally and it may be necessary to ring them. It all depends upon where they run. Nearly all hogs are inclined to root some, others a great deal.

Tuberculosis of Eye.—I have some chickens that are troubled with growths on head affecting one eye, which results in death of fowl. Mrs. Z. A. Hemlock, Mich.—I am not sure but your chickens suffer from tuberculosis and the buncches you refer to may be tubercular. Of course, other glands of the body may also be diseased. You had better either destroy the diseased chickens or cut out diseased parts.

of the time and wabble when they walk. I have rubbed their back and given them turpentine and have also given them a hog remedy. H. M. Quincy, Mich.—Instead of feeding corn, feed oats, a little oil meal and tankage. Their ailment is the result of eating an unbalanced ration. Skim-milk, oats and grass will soon help them. Mix together equal parts of ground gentian, ginger and cooking soda and give a dessertspoonful to each four hogs at a dose two or three times a day.

Splint.—My three-year-old filly has gone lame in hind leg, she has a bunch situated below hock on each side of leg. This, I believe, caused by her kicking stall partition. E. E. T., White Cloud, Mich.—Apply one part red iodide mercury and eight parts lard to bunches twice a week, and she will get all right.

Barrenness.—I have a grade Jersey cow six years old that calved September 2, 1912, cleaned promptly and seemed to recover quickly and has not appeared to be sick since, but she fails to get with calf. I have changed bulls several times. At first she would come in heat every 10 or 15 days and now sometimes goes six or eight weeks. She will remain in heat two days and seems to be crazy wild through her heat period. She has had no vaginal discharge of any kind, and is a good cow. W. S. F., Battle Creek, Mich.—I am inclined to believe that your cow will remain barren; however, she may have ovarian cysts which, by manipulation through rectal wall can be broken, then she may conceive; this is work for an experienced Vet.

Care of Mare Before and After Foaling.—Can you give me a few suggestions in taking care, before and after, of a mare that is soon to have a colt? Information will be greatly appreciated. H. W., Shelby, Mich.—If your mare is running out on pasture she will perhaps need no attention before or after foaling. It will do her no harm to do light work up to a within a few days of foaling time. When she foals saturate a linen or silk string in one part carbolic acid and 20 parts water and tie the navel cord one inch from body, then paint end of cord where you cut off, with tincture of iodine or powder it over with iodoform, then apply one part iodoform and ten parts boracic acid once or twice a day until it heals. It is good practice to not interfere with nature, and during summer weather she is much better off to be left out doors day and night, than to be stabled in a filthy barn.

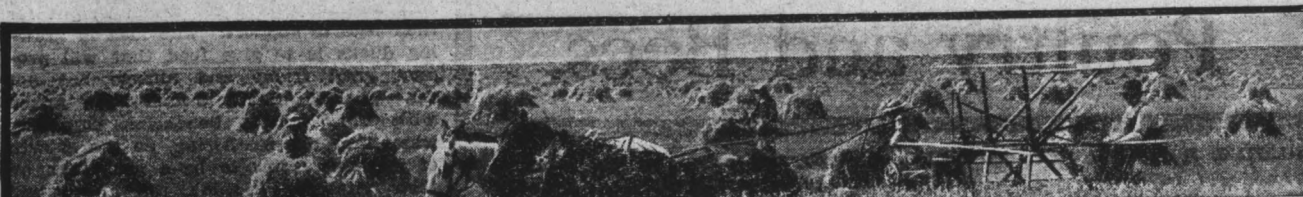
Infected Hock.—Have a spring colt with swollen hock joint which I have blistered without good results; now I am applying iodine once a day. I do not believe this colt met with an injury. E. W., Hand Station, Mich.—Give your colt 4 grs. of quinine and 5 grs. hyposulphite soda at a dose three times a day. Apply equal parts tincture iodine, camphorated oil to swelling three times a week.

DISTRICT AND COUNTY FAIRS THAT SHOULD BE WELL ATTENDED.

The Allegan County Fair will be held in Allegan, Mich., Sept. 29-30-Oct. 1-2-3. Competition open. First-class half-mile track, liberal purses; base ball; aeroplane flights, besides other free attractions. Come and see the exhibits of stock, fruit, grains and vegetables of the banner county of the state of Michigan. —L. A. Lilly, Sec.

The Inter-state Fair at Kalamazoo will be held Sept. 22-27, and will be open day and night. There will be two days of daylight fireworks and four nights of "The Battle in the Clouds." There will be a large display of stock farm implements, etc. It will be the biggest 25c gate fair.

The Chippewa County Fair will be held at Sault Ste. Marie, Mich., on the new Agricultural Park grounds, Tuesday and Wednesday, Sept. 23-24. On the afternoon of each day there will be a good program of horse races and other sports. Open to the world.—J. B. McDermid, Sec. H. A. Osborn, Pres.



Harvesting a Magnificent Crop of Western Canada Oats—Yield 115 Bushels

—as usual Western Canada's Crops on Top!

So great big PROFITS are practically certain for Western Canada farmers this year. Crops in the best agricultural states are far from satisfactory. But in the Canadian West CROPS NEVER WERE BETTER THAN NOW. And don't forget what an enormous crop we had in Canada last year.

Wealth's waiting for you here in the richest soil on earth. Come and take up FREE or LOW PRICE LAND, break and seed it and harvest the finest and biggest yield grain crop you ever raised. Money here in stock—horses that equal Kentucky's best, dairy and beef cattle that are champions of the earth, hogs that bring enormous profits, poultry, too, all these make wealth in Western Canada. A farm home and independence are waiting for you here. Raise any and everything you like—grain, stock, dairy products, vegetables, small fruits, poultry—whatever makes you money where you are now will make you more money if raised in Western Canada. Learn all about this.

GET OUR FINE ILLUSTRATED BOOKS Given By FREE Officials

Let us show you how YOU can trade each worn-out acre you now own for ten rich virgin acres that will yield you enormous crops. Learn all about our good markets, fine towns, schools, churches, homes, stores, banks and railways—best of all learn how in Western Canada YOU can make five to ten times the return in money farming that you are now making. Come to Western Canada. GAIN A FORTUNE.

FREE Homesteads and Low Price R. R. Lands

The Canadian Government is making free grants of 160-acre homesteads to every adult male

applicant. These lands will produce without fertilizers 25 to 45 bushels of hard wheat to the acre—highest quality and biggest yielding wheat on earth! Or you can buy land near railroad, \$11 to \$30 an acre for finest grazing, mixed farming and grain lands—20 years in which to pay and your farm will pay for itself.

WRITE FOR ILLUSTRATED BOOKLETS and any information you want FREE. Let any of the officials whose names are printed below send you booklets containing maps, crop statistics, pictures, etc.—ALL FREE AND WITHOUT OBLIGATION. Send a few lines now, right away.

For Free Booklets Maps, Proofs of Opportunities, etc., Write Any One or All of the Following Officials:

Duncan Marshall,
Minister of Agriculture
Edmonton, Alberta

W. P. Hinton, G. P. A.
Grand Trunk Pacific Ry.,
Winnipeg, Manitoba

W. R. Motherwell,
Minister of Agriculture,
Regina, Saskatchewan

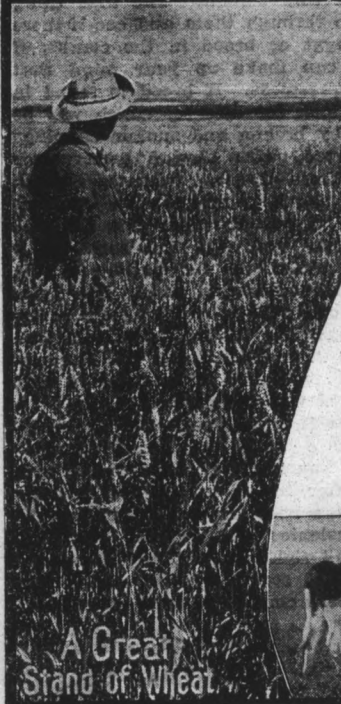
W. D. Scott,
Supt. of Immigration,
Ottawa, Ontario

N. A. Thornton, Colonization Agt.
Canadian Pacific Railway,
Chicago, Ill.

R. L. Fairbairn, G. P. A.,
Canadian Northern Railway,
Toronto, Ontario

Dairy Cattle Fed on Western Canada Alfalfa Are Making World's Records for Production

No Better Country On Earth for Hogs



A Great Stand of Wheat



VAN BRUNT FERTILIZER DRILLS

Our adjustable gate force feed compels even seeding of grain without crushing or damaging a kernel. Plants anything from alfalfa to bearded oats.

Grass Seeders furnished for all sizes.

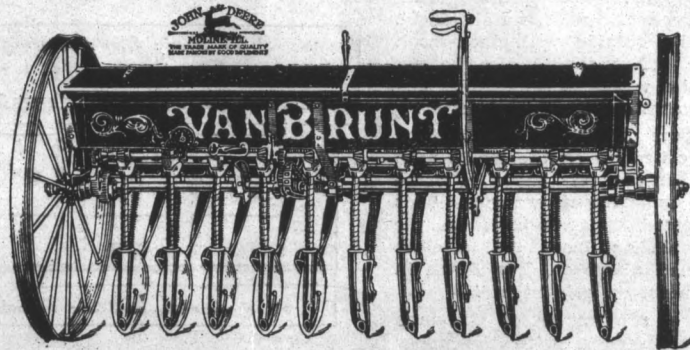
Drills furnished with single disc, double disc; shoe or hoe furrow openers. Disc Bearings run in a bed of oil. Guaranteed to last life of drill. Any that wear out replaced free. Shoes and hoes made of special steel for durability.

Get posted on these new and up-to-date grain drills. All features fully explained in our latest catalog. Learn the advantages of even seeding and correct covering.

To get the right book be sure to ask for Package No. 5 VB

John Deere Plow Co.
Moline, Ill.

These drills have fertilizer feeds that do not choke. Knockers keep them clean. This is just what you want. Amount of fertilizer instantly adjusted as desired. Buy a drill that fertilizes and plants with accurate FORCE FEEDS.



SAVE YOUR CORN THE FREELAND CORN CRIB

is absolute proof against rats, mice, birds and fire. Made of perforated galvanized sheet steel, is practically indestructible. Cures corn perfectly. Easy to erect. Write for illustrated catalog of sizes, prices and all details. Pioneer Manufacturing Company, Middlebury, Indiana.



Run on gasoline, kerosene, distillate, any cheap fuel oil. Cost less to run—develop more power. Patent throttle gives three engines in one. Many other exclusive features—guaranteed 10 years—we pay freight—30 days' free trial. Send for catalogue today. Ellis Engine Co. 111 Mallet St., Detroit, Mich.

TOO LATE TO CLASSIFY.

FOR SALE—A fine, large pair of old. THE MAPLES, Munger, Michigan.

SCOTCH COLLIE PUPPIES from pedigreed sire and dam. Color, sable and white. Farm raised. Price \$5, male or female. Thos Stanfield, Hillsdale, Mich.

When writing to advertisers please mention The Michigan Farmer.

Poultry and Bees.

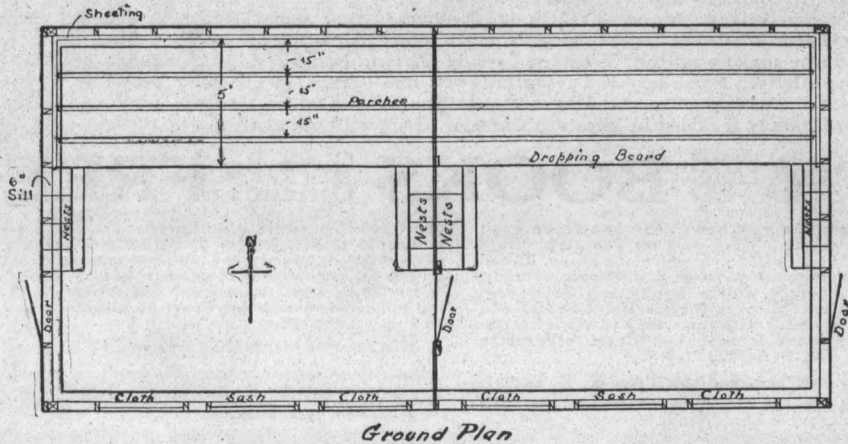
BUILDING A HOUSE FOR 100 HENS.

The accompanying plans show a very good house for 100 hens. It is 14 feet wide by 28 feet long and is divided into two pens for 50 birds each. This forms a practical working unit, for a pen of 50 birds is as large a number as can be economically handled in one flock, and the plan of the house is such that it may be increased or decreased in size to accommodate any number of birds by simply increasing or decreasing the number of pens. Four square feet of floor space is thus allowed for each bird, which is sufficient where the fowls have good

six-inch run board for the hens to fly upon to enter the nests.

Nests are placed along the ends of the pens about 18 inches from the floor, and should be about a foot square. They may be built in sections of four as shown in the drawings and should be removable so they can be taken out to clean and disinfect. If desired, one section of four may be placed on top of another so as to give more nests in the pen. In front of each row of nests is a built to prevent fowls from roosting on the nest boxes.

The estimated total cost of materials for such a house is between \$100 and \$125



range, and careful attention is given to cleanliness and ventilation.

The foundation wall should be of brick, stone, or concrete, building it at least 18 to 24 inches deep and about six inches above ground. This depth will prevent heaving by frost and will keep rats and other animals from working in beneath the floor.

The floor may be of earth, wood or cement, but must be kept dry. Good, dry, well drained, earth floors are cheap but are very hard to keep clean. Board floors, as a rule, do not last very long and are unsatisfactory. A good cement floor is best. It is easily cleaned and is very durable.

The roof, as shown, is the combination type with one long and one short pitch. It is a good looking and practical roof for a building of this kind. The angle of pitch is one-fourth. A good quality of 3-ply prepared roofing, over good matched roof-boards, makes a very satisfactory covering, or the boards may be covered with good tar paper and then shingled. This will prevent all chance of draughts through the roof, which is very essential.

The side walls may be of a good quality of matched lumber, or boarded with rough lumber and covered on the outside with one or two-ply prepared roofing secured with lathing. Such a structure is comparatively cheap, is warm, and is not ill-pleasing in appearance.

A combination of the open and cloth front houses is embodied in these plans. Each pen has one nine-light sash, using 8x10-inch glass panes. Besides this there are two cloth frames, each three feet square, placed one on either side of the window. The window and frames are built two feet from the floor so as to enable the sunlight to reach the farther side of the house. All windows should be covered on the outside with inch-mesh wire netting. They should also be removable so the whole house can be opened up on warm days and in summer.

The back part of the house should be plastered or celled up on the inside with matched lumber over tar paper to make the roosting compartments warmer. This house is sheeted out five feet on the ends, back wall, and roof, and a cloth curtain fastened above to drop down in front of the roost on cold nights.

The perches are made of 2x4-inch scantlings set on edge, with the upper edges slightly rounded. They should be placed about 15 inches apart and the back one 15 inches from the wall. A smooth platform or dropping board must be constructed and placed a foot below the perches, being about two feet from the floor so the space beneath will be available for scratching purposes. In summer, when the fowls are out of the house most of the time, the dropping boards may be removed, and the house will not need cleaning so often. In winter, however, when the fowls are shut up

exclusive of concrete work. The following is a bill of lumber required:

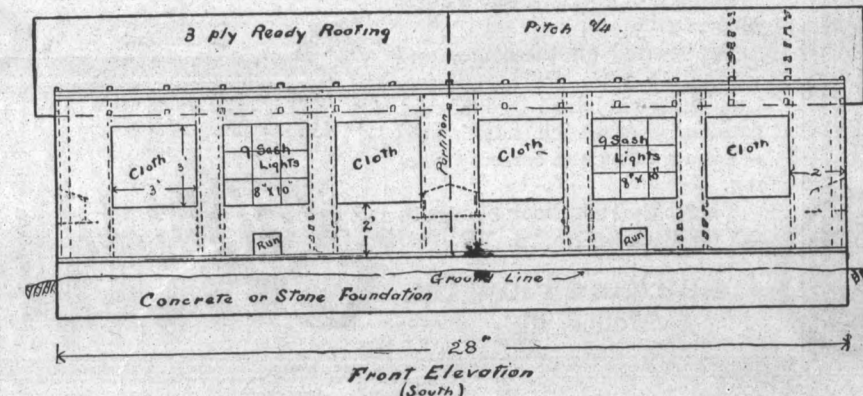
	Sq. ft.
6 pieces 2x6, 14 ft.—sills	84
8 pieces 2x4, 14 ft.—front rafters	75
15 pieces 2x4, 12 ft.—back rafters	120
8 pieces 2x4, 14 ft.—plates	75
6 pieces 2x4, 12 ft.—back studs	48
9 pieces 2x4, 12 ft.—front studs	72
7 pieces 2x4, 12 ft.—ends	56
2 pieces 2x4, 14 ft.—ends	19
2 pieces 2x4, 14 ft.—partition	22
6 pieces 2x4, 14 ft.—roosts	56
525 sq. ft. of siding	
650 sq. ft. of ship-lap for roof	
425 sq. ft. of ship-lap for inside sheeting	
140 sq. ft. of ship-lap for dropping boards	
7 squares 3-ply roofing, or	
7 squares 1-ply or tar paper and 5M shingles	
2 nine-light sash	
74 sq. ft. netting	
9 pieces 1x6, 12-ft. pine flooring for doors	
94 running feet of 1x6 pine for frieze	
240 running feet of 1x4 pine for flanchet and casings	

Hillsdale Co. C. G. BURROUGHS.

DUCKS IMPROPERLY FED.

My Indian Runner ducks get to be about four to six weeks old then get weak in their legs, stagger and fall over. Then they seem better for a time but gradually grow worse and die. They were fed bread and scraps from table for a while, then were put on a ration of corn and wheat screenings.

Allegan Co. SUBSCRIBER.
I think the trouble with these ducks is overfeeding of too fattening a ration, perhaps aggravated by an attack of rheumatism. I would suggest cutting out the feed of corn and substituting a soft mash mixed with either skim-milk or butter-milk. This season I have fed a mash composed of ground oats, barley, wheat, alfalfa meal, and beef scrap, mixed with



butter-milk or skim-milk, and have never seen ducks grow faster or appear more healthy. A mixture of equal parts salicylic acid, saltpetre and common baking soda, thoroughly mixed and given at the rate of a teaspoonful to a hundred pounds of poultry in their mash, once a day for a week, will probably correct the rheumatic trouble.

I infer from the query that Subscriber

has been feeding these ducks quite liberally, and they have too much weight for their legs to support. The idea in growing ducks is to give food that will produce good frame and muscle but not fat. A little finely ground bone mixed with the feed is beneficial, especially when they are feathering, as the growth of feathers seems to be a great tax on their vitality. I think the above will also answer Mrs. A. C. Stauffer's inquiry, as I think her troubles are identical with those described above.

Hillsdale Co. CLAUDIA BETTS.

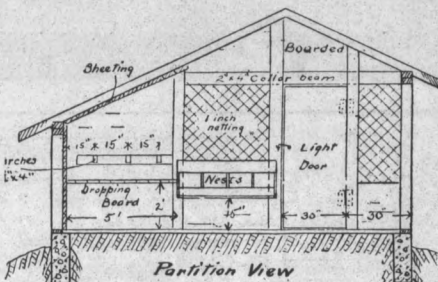
BUILDING UP WEAK COLONIES.

Would like to learn, through the columns of your paper, how to strengthen my bees. I have two medium swarms and one quite weak swarm in a lot of four. How could I best strengthen these so they will winter well and be strong enough to start in good shape next spring? I would rather not decrease the number of colonies.

Newaygo Co. BEGINNER.

I could answer this question better if I knew what caused them to be weak. It may be that some of your weak colonies are queenless, in which case you will have to give them a queen before any further steps toward strengthening them will be of any benefit. The first thing you do, go through them and see if there are any eggs or brood in the combs; if not, you can make up your mind that they are queenless. If brood is found in all hives, look for disease, which will be indicated by broken and sunken cappings in the brood, with ragged perforations here and there different from the smooth round cut the bees make when they are hatching. If you examine this diseased brood closely you will find some of it dead and settled to the bottom of the cell, a rotten maturated mess. The color of this brood will be a light coffee color at first, growing darker as the disease advances. A slight ropiness will be manifest if a toothpick is inserted in this mass and slowly withdrawn.

If disease is found you had better notify the State Dairy and Food Commissioner, at Lansing, who will send a man to look after it. If no disease is present, and the bees are not queenless, the medium colonies will in all probability build up all right without any assistance on your part before winter, except that in case there comes a dearth of honey it



would be well to feed them a little sugar syrup while they are not gathering from outside.

The very weak colony is a harder proposition, but if you have a strong colony that you can draw from, you can build them up by taking frames of hatching brood from the strong colony and giving to the weak one. Take only one frame at a time, and choose one with as little unsealed brood as possible and in which you can see the bees already gnawing their way out. Shake off all the bees from this and insert it in the center of

Wood Shingles Won't DO!

In this 20th Century AGE OF STEEL, wood shingles are fast disappearing. They cost too much; they rot out too quickly; too much trouble to put on; too apt to catch fire. That's why 100,000 men have come to put these beautiful Edwards STEEL Shingles on their buildings.

Edwards Steel Shingles never burn nor rot. Come in big clusters of 100 or more, which makes them ten times as easy to put on as wood shingles. Each Edwards STEEL Shingle is dipped in molten zinc AFTER it is cut. No raw or exposed edges. No chance for rust ever to get a foothold. And the patented Edwards Interlocking Device, which allows for expansion and contraction, gives PERMANENTLY water-tight joints.

Edwards STEEL Shingles



Get Prices As to prices, these STEEL Shingles are far below wood. For we sell direct from factory to user and pay the freight ourselves. Just get our latest Steel Shingle Books and Prepaid Factory Prices. Then compare. Then see if you can afford common wood shingles when you can buy genuine Edwards STEEL Shingles at these prices. Give dimensions of your roof if possible, so we can quote price on entire job. Send postal today and our Catalog 867 and Prices will reach you by return mail.

The Edwards Manufacturing Company
817-867 Lock Street, Cincinnati, Ohio
Largest Makers of Sheet Metal Products in the World.

Running Water

in House and Barn at even temperature Winter or Summer at Small Cost.

Send Postal for New Water Supply Plan. It will bring you 100 pictures of it in actual use. Do it Now.
Aermotor Co., 1144 S. Campbell Av., Chicago, Ill.
Aermotor Co., 2d and Madison Streets, Oakland, Cal.

The Largest and Best Line of Road Machinery

We have been making it for over 35 years. Everything for Road Building. The oldest Company in the business with the Latest Improved Machinery. Send for handsomely illustrated catalog—FREE.
THE AUSTIN WESTERN ROAD MACHINERY CO., CHICAGO

AMERICAN GUARANTEED FOR 30 YEARS INGOT IRON ROOFING

Money back or a new roof if it deteriorates or rusts out. No painting or repairs required. Our Indemnity Bond protects you. Costs no more than ordinary roofing. Write for big illustrated book FREE.
The American Iron Roofing Co.
Station G ELYRIA, OHIO.



Lice Murder Chicks
check laying, stunt growth, ruin the plumage, torture the hens
PRATT'S LICE KILLER
(Powdered) murders lice and so insures greater profits.
5c. 50c. Guaranteed. Pratts 160-page poultry book 4c by mail.
Get Pratts Profit-sharing Booklet At all dealers, or
PRATT FOOD COMPANY
Philadelphia Chicago

POULTRY.

BARGAINS. Best strains S.O.W. Orpington breeding stock at greatly reduced prices, also half grown cockerels and pullets.
Mrs. Willis Hough, Pine Crest Farm, Royal Oak, Mich.

BARRED ROCK EGGS, \$1 FOR 15.
W. O. COFFMAN, R. No. 6, Benton Harbor, Mich.

Prize Winning Barred Rock, R. I. Reds, Mammoth Pekin and I. Runner ducks. Stock for sale. Eggs \$1.25, per set. Utility \$5 per 100.
EMWOOD FARM, R. No. 13, Grand Rapids, Mich.

COLUMBIA Wyandottes. Winners at Chicago, Grand Rapids, South Bend and St. Joseph. Stock and eggs.
RICHARD SAWYER, Benton Harbor, Michigan.

SILVER LACED, golden and white Wyandottes. Eggs for hatching at reasonable prices; send for circular.
Browning's Wyandotte Farm, R. 30, Portland, Mich.

LILLIE FARMSTEAD POULTRY
B. P. Rocks, R. I. Reds, and S. O. W. Leghorn eggs for sale. 15 for \$1; 25 for \$1.50; 50 for \$2.50.
COLON C. LILLIE, Coopersville, Mich.

WHITE LEGHORN COCKERELS—Wyckoff strain.
Maple City Poultry Plant, Box C., Charlotte, Mich.

White Wyandottes—Noted for size, vigor and egg production. 1913 circular ready in February. A. FRANKLIN SMITH, Ann Arbor, Mich.

DOGS.

Write W. A. Ewalt, Mt. Clemens, Mich., for those bred sable & white Collie Puppies, natural stock workers.

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

FOX AND WOLF HOUNDS

of the best English strains in America; 40 years experience in breeding these fine hounds for my own sport. I now offer them for sale.
Send stamp for Catalogue.
T. S. HUBSPETH, Siboy, Jackson Co., Mo.

MECOSTA CO. L. C. WHEELER.

Grange.

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

PEDAGOGS HELP GRANGE WORKERS.

It should be possible for any lecturer to get something of use to him in his lecture work from an interview with a real teacher. It was my good fortune, a few days ago, to spend an afternoon with two good teachers. At the close of the day I felt that I had "bagged" considerable "game" of genuine value to me as a Grange lecturer—some of which can be shared with others.

One of these teachers last year taught agriculture in a high school of another state. He is a man who appreciates that no school can do its best confined to the four walls of the school building; and so it transpired, that afternoon while we visited, that his talk was quite as much about the fields and fathers and mothers of the neighborhood as of his pupils. One most interesting piece of work he had had his class in civics do—and it is the sort of work that any Grange might take up with delightful and, no doubt, surprising results. The members of this civics class made a survey of the community surrounding the village in which the school is located. They first drew a map to show the location of every family in the township; then one boy ascertained the most distant family in each direction which traded in that town, and connected these families on his map by a line about the town, in order to show how far out the village reached in a business way. Another member of the class did the same thing for the families that sent children to school in the village; another made a similar canvass for church attendance, and still another undertook to ascertain how many depended upon the village for their social life. Many additional facts were shown, as, for example, what preparation the teachers of the schools of the township had had and what wages they received.

All of these were facts which concerned the community in one way or another and, when put upon a map, where they could be seen with the eye, made a deep impression. "Nothing that we did during the entire year attracted so much attention and created so much talk as this," said the teacher. Placed in a store window, where all might study it, what silent evidence it must have given of the town's enterprise in this or that direction! The lines on the map showed that the village reached out socially least of all, and this fact may have appealed to the church people, or the fraternal orders, as an opportunity. The merchants may have seen where another village was cutting into their territory; or the school may have been shown to have exceeded the church or trade lines. What a new sense of the reality of the community must result from such work and a study of such a map. How much good training it must give boys and girls to collect facts for such a map and what new feelings of belonging to the community it must give them. Would not the same results in large part be secured if any Grange undertook to collect and set forth such facts about its own locality?

These teachers fell to discussing methods of teaching, and one of them said: "Miss ——— makes it a rule to find at least one point which she can commend in every paper submitted to her, no matter how poor the paper as a whole may be—this in order that criticism may not wholly discourage the pupil." Now, was that not a good pointer for a listening Grange lecturer? And the other teacher made this point even more helpful when he replied: "When I went out among the farm fathers of my pupils I could always find something about each man's premises or fields which I could speak well of, and I made it a point to do this during my visit with him. It was the surest way of gaining his confidence and opening up the way for us to be mutually helpful one to the other."

Would it not have been a pretty poor sort of a Grange worker who had not been able to gain a rich crop from that afternoon's opportunity?

JENNIE BUELL.

Paris Grange, No. 19, of Kent county, extends a cordial invitation to all present and past members to be present at a home-gathering to be held at their hall August 21, 1913.

HOME-GATHERINGS.

(Continued from last week.)

With homes, as with individuals, a high and holy trust is lodged, commensurate with the power of influence which they enjoy. This trust may be set aside, but the time will come when its lack of fulfillment will cause a regret, if not an absolute injustice to those with whom we come in contact. There is no love of home, worthy the name, which does not reach out after those who need our aid in the struggle of life. Consequently we have no right to confine our social obligations to those of our own family. It is true that the home is the social safeguard of the family, but in keeping this thought in view let us not forget that there are those to whom the word "home" is an unknown term. We country people are becoming too conventional; we are thinking too much of what "they" will say, whoever "they" may be. And so when we are about to give a quiet little home entertainment, we "pass on the other side" and turn away our eyes, lest some poor wayfarer should chance in our pathway, to whom a kindly invitation might be the means of saving a character. You've all, no doubt, read "The Postman," by Margaret Sangster, and how a letter came from the country home, just in time to save a boy from yielding to temptation. In just that way a whole-hearted invitation has sometimes been the means of saving a wayward one just at the turning point. Not that undue freedom should be given full sway in the selection of our home associates, but that, with the powers of discernment which belong to every intelligent man or woman, we should discriminate always in favor of those who are willing to accept the helping hand. We may make mistakes; few of us do not. But if the atmosphere of our home is pure and, above all, the family fireside is the most attractive place on earth to our family, there will be little harm done. No man or woman ever stepped aside from the path of virtue to whom the word "home" meant all that was best on earth! On the other hand, no man or woman who is constantly thrown into the society of good and worthy people can fail to be benefited thereby.

We are dependent upon each other for the happiness we get out of life, and in just that degree that one nature answers to another we receive companionship. And thus, while we extend the hand of fellowship to others, we simply reach out after that which is required by our own natures. Intellectual communion is the sustenance of the soul! And where, let us ask, is there a better opportunity for intellectual communion than in the dear old farm home, where we may still gladly welcome to our fireside gatherings those by whom we have lived through storm and sunshine? Their faces, perchance, like our own, are beginning to show deep furrows of care, so we will make the most of these pleasant meetings while we can, for "We'll never pass this way again."

The home-gathering has been the starting point of many an inspiration. The soft shaded light, the glow of the fireside, the pleasant interchange of thought, all lend an indescribable charm which finds its outlet in the creative faculty of the mind. Irving Bacheller's greatest success was founded on the home-gatherings of the North-Country of New York. The book has no claim to the great literature of the world, but from the droll humor and homely pathos of its pages we may learn many a beautiful lesson. Our fathers placed great importance on the country home-gathering. Who of mature years does not remember the hearty midnight suppers and their accompanying pleasures? And while we would not advocate the hearty midnight suppers, we would advocate the emulation of the congenial spirit which characterized those home-gatherings. Let us throw about our home-gatherings the charm of intellectual refinement, the beauty of cheerfulness, and the willingness to constantly do our part in bringing about the desired result.

It must not be assumed that wealth is the prime requisite to successful home-entertainment. The humblest home may extend its hospitality to those who are accustomed to every-day luxury, and no lack of display be felt, because of the quiet grace and dignity with which that hospitality is extended. And although the country has always an abundance of good things, the simplest fare, if served with love, and daintily prepared, is sufficient for all requirements. But, what we

Farmers' Clubs

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—Jas. N. McBride, Burton.
Vice-President—C. B. Scully, Almont.
Secretary-Treasurer—Mrs. C. P. Johnson, Metamora.

Corresponding Secretary—Mrs. Wm. T. McConnell, Owosso.

Directors—C. P. Johnson, Metamora; H. W. Chamberlain, White Lake; Wm. T. Hill, Carson City; Jerry Spaulding, Belding; R. J. Robb, Mason; J. F. Reiman, Flint.

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

Associational Motto:

The skillful hand, with cultured mind, is the farmer's most valuable asset.

Associational Sentiment:

The farmer, he garners from the soil the primal wealth of nations.

THE FARMERS' CLUB IN OTHER STATES.

To those who have been interested in the Farmers' Club movement in Michigan the inception of this kind of work in other states is always of interest. From time to time during the history of the organization in Michigan reports have come from various states, both east and west, of local interest in organizations of this kind. In no other state has the movement developed as it has in Michigan, but even in Michigan it was many years in getting beyond the few localities where the first Clubs were organized. Later, when the few Clubs existing in scattered sections of the state were organized into a state body, the development of the organization became much more rapid, and it is entirely probable that this will be the case in other states where the Farmers' Club is new and the advantages of such organizations comparatively unknown or little appreciated by the great body of country people.

One of the latest reports of the organization of a Farmers' Club in another state comes from South Dakota, where the organization of Prosper Township Farmers' Club was reported in an early spring issue of the Breeders' Gazette. According to the Gazette's correspondent, the farmers of this community came to a realization of the fact that organization is of social and educational as well as of money value, and a few of the more progressive men and women from the farms of the section in which this Club is located gathered into a little one-room country schoolhouse in the center of the township and perfected an organization.

Among the leaders were a few students of a nearby college, one or two of whom lived in the township and through an appreciation of the advantages of such an organization aided materially in getting it started. The people of the neighborhood, however, were hearty in their response to the proposal, thus illustrating, as has been many times illustrated in Michigan farm communities, that all that is required for the establishment of better things is a leader who will devote some time and energy in an unselfish effort to bring good to the whole community.

The programs of this Club are very much like those given at Michigan Farmers' Clubs. A paper on "Birds," by one of the young men of the Club, is mentioned in this report as an item of special interest. Corn and alfalfa have come in for a fair share of consideration, but the factor which is mentioned as most important is the social feature of the meetings. The general sociability among the men and women who are members, together with the musical and literary features of the program are greatly enjoyed by all. So well appreciated are the benefits of this organization that it has met twice each month without any abatement shown in the interest from the outset.

It is undoubtedly a matter for con-

do need is a unity of force and purpose, for without this condition our efforts will not avail—the country home-gathering will be a failure. And whatever the line of purpose followed, let it be that of the greatest good to the greatest number. With this object in view, there can be no failure. It is a high and holy aim which reaches out even to the great home-gathering above.

Kent Co.

HELEN P. WILLIAMS.

gratulation that the Farmers' Club spirit is abroad in other states, but this should not cause us to neglect the opportunity for effective work along similar lines right here in Michigan, where there yet remain hundreds of communities in which such an organization is needed and could be easily effected if a few public spirited people in these communities would constitute themselves as self-appointed leaders to promote sentiment for such an organization and to take active steps toward bringing the people of the community together for the purpose of discussing the proposition.

THE FARMERS' CLUB FAIR.

Again the season is approaching when preparations will be made for the Farmers' Club fair in many Club organizations throughout the state. At least in past years there has been an increasing number of these events, since few, if any, Clubs which have once held a Club fair abandon this feature of Club work.

Where the Club fair is to be held, and we believe it should be held in a majority of Clubs throughout the state, it will afford an opportunity for interesting the young people in the Club work, which should be peculiarly helpful toward this desirable end. By giving some features of the meeting over to the young people, by arranging contests for them and by interesting them in the proposition of getting a liberal list of exhibits they will become interested in the organization itself, and it will then only be necessary to give them places upon the program at future meetings to make their affiliations with the Club organization permanent.

More Clubs have failed to assure themselves a prosperous future because they have failed to interest the young people in the Club work than for any other reason. There are many ways in which the young people can be interested in this work, but none of these, perhaps, is more feasible than through the Farmers' Club fair. Any Club which has tried out this plan of interesting the young people in Club work through the medium of the Farmers' Club fair would render a service to fellow Club workers throughout the state by reporting the details of their methods and the success which accompanied their efforts in that direction for publication in this department.

CLUB DISCUSSIONS.

Will Picnic in August.—The Oxford Farmers' Club met at the farm home of O. E. Granger, June 25, with an attendance of about 50, owing to the busy time of the year the ladies were much in the majority. The Club was called to order by the president, W. Nash, about 2:00 p. m. The first two questions for discussion, "How would I run a farm if I were a man?" discussed by the ladies; and "How would I keep house if I were a woman?" discussed by the gentlemen, caused quite a bit of merriment, showing pretty conclusively that the members present had much to learn in regard to both subjects. The last question, "Shall we pension our school teachers?" was strongly objected to by all present. Several recitations were given by the young people. Owing to the busy time in July it was decided to omit the July meeting and hold a picnic Saturday, August 16, at Stony Lake. After the Club adjourned the usual good supper was enjoyed by all present.—May Cowdin, Sec.

Have August Vacation.—The Salem Farmers' Club held its July meeting with Mrs. Thomas Hammond. Mr. Lawrence, of Northville, whose work is in the city of Detroit as truant officer, gave an excellent talk on the care of children and the responsibility of parents. He has had 20,000 children of different ages under his care during the 30 years he has been in this work, and says most of them have gone wrong on account of the negligence of parents. A large percentage of them also have parents addicted to the use of alcohol, which is sure to ruin the home. The Club voted thanks to Mr. Lawrence for his most excellent talk. The Club also voted to send letters to our senator and representative condemning the needless slaughter of our wild birds for milliners' uses. Little Velma Nelson gave a recitation on "Keep a Little Hen." Music was furnished on the graphophone. Club will take a vacation during the month of August.

Wise Farmers' Club Picnic.—The Wise Farmers' Club will hold their fourteenth annual picnic at Hendrie's Landing, Stevenson's Lake, five miles southwest of Clare, August 18, 1913. G. H. Slocum, of Detroit, will be the principal speaker.—Frank Dalton, W. J. Jennings, Asher Knight, J. H. Seeley, Committee.

Among the Live Granges.

Clinton County Pomona held a very interesting meeting with Ovid Grange, on Wednesday, July 16. E. E. Warren, master of Ovid Grange, was at that time very sick and has since passed away. Ovid Grange thus losing a valuable member and helper. It has the sympathy of the subordinate Granges of the county. The next meeting of Clinton Pomona will be the annual rally, to be held on the fair grounds at St. Johns, August 20. Come and hear State Master Ketcham.—Secretary.

Overland

Price comes down; value goes up!

\$950

f. o. b. Toledo

With Gray & Davis Electric Starter and Generator—\$1075

Electric head, side and
tail lights
Storage battery and
Ammeter
35 horsepower motor

114-Inch wheelbase
Timken bearings
33 x 4 Q. D. Tires
Cowldash
Splittorf magneto

Brewster green body with
a light green striping, nickel
and aluminum trimmings
Mohair top and boot
Clear vision windshield

Stewart speedometer
Electric horn
Flush U doors with disappearing
Hinges
Turkish upholstery

HERE is the car of the hour!

The 1914 Overland is ready for immediate delivery.

Again we lower the price. Again we increase the value.

This new car is larger, more speedy and powerful, more finely equipped and more elegantly finished, but in spite of this enormous value increase the price has been materially decreased.

The motor has been enlarged to 35 horsepower and will develop 50 miles an hour with ease.

The wheelbase has been lengthened to 114 inches—which is the average wheelbase of \$1500 cars.

The 1914 Overland tires are larger; the tonneau is longer and roomier; the equipment is better—including such big and costly additional features as electric lights; the body is handsomer, being finished in beautiful rich dark Brewster green, with heavy nickel and aluminum trimmings.

The 1914 Overland is the most magnificent and graceful popular priced car that has ever been made.

In fact, in every single and individual respect here is a much greater, bigger and better car at a reduced price.

This is only another demonstration of how big production will cut costs. For, instead of building 40,000 cars as in 1913, this year we will build 50,000 cars. This is the world's largest production on this type of car.

One big western dealer is begging our sales department for an allotment of 7000 cars. Think of this! A single allotment greater than the individual outputs of over 50% of all the automobile factories in existence.

Other dealers and distributors in the big eastern and western agricultural districts want several thousand cars apiece. Such is the initial demand for the newest Overland.

As we have told you in the past: the combined buying power of thousands lowers the cost for each individual. This year 50,000 will be bought. Therefore we can make a greater reduction than ever. Overland quantity production saves money for you—and lots of it. This year it is saving far more than ever before, because in addition to increased production we are building but one chassis.

We urge you to see this new model at once. Feel what a difference the increased wheelbase makes in riding comfort; see the car's changed appearance; examine the beautiful new finish; inspect the many little refinements about the motor—making it resemble the motors in the big \$3,000 and \$4,000 cars. Examine the tonneau. Enjoy the increased lounging space and the Turkish upholstery.

Look up the nearest Overland dealer. Have a demonstration. Make the demonstration thorough; test the car's remarkable fuel economy. If you want an early delivery do not delay. Act today.

Write us direct for handsomely illustrated 1914 literature—gratis.

Please Address Dept. 86

The Willys-Overland Company, Toledo, Ohio

