

# MICHIGAN FARMER

AND  
**LIVE STOCK**  
PUBLISHED WEEKLY.

**JOURNAL**  
ESTABLISHED 1843.

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

VOL. CXXXVI. No. 10.  
Whole Number 3538.

DETROIT, MICH., SATURDAY, MARCH 11, 1911.

\$1.00 A YEAR.  
\$2.75 FIVE YEARS

## SOIL MANAGEMENT. THE FIRST STEPS IN SOIL IMPROVEMENT

THERE are three classes of relations that we must take into account before we can begin any systematic plan for putting our soils to the most profitable use. These are the physical, biological and the chemical relations and these three relations are so complex and so closely related in their actions that it is very difficult to say just where one begins and the other leaves off. Much of the matter that is written regarding this great question is written by men who have studied the problem in a comparatively small field and who are especially interested in some one way of increasing soil productivity. The result of reading these special articles causes many practical farmers to believe that one or two things constitute the sum total of the fertility problem, instead of being simply a fuller statement of one of the numerous things that every successful soil-handler must use.

When we get right down to the fundamental principles of keeping up and improving the fertility of the soil, so that it will yield the greatest profit consistent with unimpaired productivity, we find that no one method is the whole thing, nor can it be substituted for the other, although each one in its place may be very useful.

Every man has his hobby and some will preach lime, some clover, dust mulch, soil inoculation, humus, crop rotation, fallowing and chemical plant foods. For this reason it will be my purpose to discuss these three relations and point out a few of the limitations and show how each relation depends upon the other in any rational scheme which we may adopt in maintaining the fertility of our cultivated lands.

### The Physical Conditions of Soils.

The physical condition of the soil relates to its behavior toward moisture, heat, light, penetration of roots and the implements that are used in cultivation. The beneficial effects of drainage is not a subject of controversy, although there are many conflicting views with respect to the conditions under which it may be economically applied and the methods of application, but these questions must be worked out by the individual himself, according to the value of the land, the cost of labor and other considerations applicable to local conditions.

Thousands of acres of our naturally fertile lands are practically useless for agricultural purposes because the moisture conditions are not right. This leads us to drainage on one hand and conservation of moisture on the other. Of course, every farmer is not in a position to put in an extensive system of tile-drainage at one time or to get his soil in the best physical condition to conserve moisture, but he should plan his work so that what he is able to do from year to year shall fit into a permanent system of drainage. Drainage and moisture conservation go hand in hand and if these conditions are right, it is easy to control

the heat and texture of the soil by cultivation and plowing under humus-forming materials. Manure and fertilizers are expensive things that cost us either money outright or else animal foods and labor, and it is very important that we have our soils, as far as possible, adapted to their economy and reception. It is easy to throw away dollars worth of fertilizers or to squander them upon land that is in too poor physical condition to make economical use of them.

Thorough tillage and amending the physical condition of the land is a thing to which we do not pay enough attention. We spread our efforts out too thin. We have inherited this habit, but the circumstances which justified our fore-fathers in their thin farming and fertility robbing have passed away and present conditions demand a more intense system of agriculture that will build the fertility of the soil and place our farming on a more profitable and permanent basis.

In improving the physical condition of the soil we should look upon the land as the home of the plant and plan our work so that the roots of the plant will delight

out these minute organisms plants could not obtain nitrogen, which means that their growth and development would be practically stopped. The biological condition of the soil is today looked upon by soil experts as first in importance. Soil chemistry was for many years the great study. A profound change has come about during the past few years. We no longer look upon the soil as a dead, inert thing holding plant food, but a mass of organisms teeming with life. It is no longer recognized as a mere chemical laboratory composed of a number of chemical substances in various stages of availability, but rather as a mass of germ life. While we have not yet learned enough about germ life, or soil bacteria, to arrive at positive conclusions, yet the investigations of modern scientists are so important in their bearing upon the nitrogen of the soil and plants that they must be considered in deciding upon any rational plan of soil management.

While it is possible that these organisms, or bacteria, are as important to the mineral elements of fertility as to the nitrogen of the soil, yet the problem of

beyond the fertilizing value of the manure for the reason that its bacteria, after completing their work of making nitrogen in it available, seize upon the humus of the soil and hasten its nitrogen into a form available for plant food. An application of lime to a soil well filled with humus frequently stimulates the action of bacteria and increases its productivity.

Nitrifying bacteria require large supplies of oxygen and their work is stimulated by anything that adds more air to the soil. Good tillage and the frequent cultivation of the soil increases its amount of available nitrogen. Practical experience proves that the more thoroughly land is cultivated the more nitrogen is made available and the larger the resulting crops. Land that is cultivated when not occupied by a growing crop is subject to a severe loss of nitrogen, there being no growing plants to make use of the nitrogen, much is lost in the drainage waters.

The power of certain plants to appropriate nitrogen from the air and deposit it in the soil is so well understood that few thinking farmers would plan a rotation of crops without including at least one leguminous crop. However, it may be easier to arrive at an understanding of the question if we consider the conditions that are the most favorable for the development of these bacteria or root nodules upon the plants.

The amount of moisture in the soil has a marked effect upon the growth of root nodules, a moist soil being better adapted to their growth than a dry one. The organisms must have air, hence the great importance of cultivation to admit air and to conserve moisture. Soil acidity is unfavorable to the growth of these organisms, hence the addition of lime or ashes to the soil is an advantage and often a necessity for the formation of these root nodules on the nitrogen gathering plants.

The whole system of improving the biological condition of the soil depends upon making conditions favorable for the growth and development of these organisms. They must have suitable temperature, moisture, movement of the air in the soil, some base for their products to combine with, and likewise some food. In other words, the soil must be in good physical and chemical condition if these little helpers do their best work for us.

### The Chemical Condition of Soils.

Thus far I have discussed things that every practical farmer can do to improve the condition of his soil, but these count chiefly in using up the nitrogen faster and can do very little, indeed, toward making the minerals more available. There is certain to be a decrease in the productivity of the soil as the supply of chemical plant food is diminished. This condition is many times more noticeable on farms where the physical and biological conditions of the soil have had the greatest attention and goes to prove the fact that many of the best farmers have



Plowing Down Cornstalks to Increase the Humus in the Soil. (See Cornstalks for Humus, Page 2&2).

to be in it. If we could make all of our soils just right in respect to texture and absorbent power, then without any change in their chemical composition, without imparting to them any more chemical elements, crop-growing would be a simple and easy business. Improving the physical condition of the soil is the guiding principle in soil improvement, yet if we neglect to improve the other conditions we will gradually reduce the crop-producing capacity of the land until growing profitable crops is out of the question. The history of every agricultural country proves that it is more profitable to maintain the fertility of the land than to skin it of its original fertility and then try and bring it back again.

### The Biological Condition of Soils.

The biological condition of the soil is of great importance as it deals with the organisms that change the elements of plant food in the soil into a form available to nourish the growing plants. With-

the transformation of nitrogen is far more significant to the fertility of the soil. The nitrogen in the soil is rapidly lost unless the best methods are employed in its management and for that reason it is more important for us to devote our attention to promoting the development of the bacteria that act favorably upon the nitrogen and its various compounds, than upon the mineral constituents of the soil and plants.

It is a practical question to learn how these bacteria, being not already present, may be added to the soil and how we may stimulate their activity if they are present. These questions are receiving the closest study and attention and many facts of significance are being established.

Most soils have nitrifying bacteria already present, so that a stimulation of activity is needed rather than the addition of more bacteria. Stable manure contains bacteria in abundance and its use on a soil often produces results far



been paying too much attention to increasing the supply of available nitrogen without maintaining a corresponding increase in the amount of mineral fertility. Nitrogen stimulates a rank growth of plant structure, but the development of the fruit or grain is sure to depend largely upon the amount of available phosphoric acid and potash in the soil.

Right here we may call attention to the fact that the growth and development of every plant is limited by the one element in the smallest available proportions. If there is not enough phosphoric acid to mature a yield of twenty bushels of corn to the acre, there will be less than twenty bushels produced, even under the most favorable conditions, although there may be sufficient potash and nitrogen in readily available form to produce a sixty-bushel yield. In such a case the improvement of the conditions that make the nitrogen available would not produce any more corn, but would simply put the nitrogen in a condition to be lost by decomposition and drainage.

The first fact that we need to take into account is to understand that we cannot make something out of nothing and that we are sure to lose every time we try it. Plants cannot thrive unless they get food in the required proportions and the soil must furnish most of these elements. Many of the chemical problems connected with the soil give perplexing study to the most skillful chemists, but on the other hand, there are facts about the chemical composition of soils that every farmer ought to understand and can learn by giving the subject a little careful thought.

The great question is how to supply these chemicals to the soil and many will say at once, feed live stock and save all of the manure resulting from feeding, and I will say frankly that this is the most feasible plan, but every farmer cannot practice this kind of farming, and even though he could he would find that in time it would be necessary to add potash and phosphoric acid to his soils if he would continue to grow crops at a profit.

When we begin the improvement of land that has been skinned for two or more generations we must look beyond the manurial resources of the farm to bring it back to its former state of productivity. We may improve the biological conditions by the growing of legumes, adding stable manure and making the conditions favorable for the development of favorable bacteria in the soil, but once the supply of available potash and phosphoric acid is exhausted we must go beyond the farm to improve the chemical condition of the soil.

To sum up the improvement of the land, I would suggest that we give our soils water and atmospheric drainage, by tile-draining and surface drains, deep plowing, decomposing large quantities of organic matter, keeping the soil occupied by growing crops and increasing the root growth of plants by the use of chemical plant foods and getting away from the common, ignorant belief that the legumes are the only plants that increase the amount of available nitrogen in the soil. The legumes are the best, but the soil bacteria are waiting to feed upon every root, stubble and weed that is plowed under and will make its nitrogen available for another plant.

New York. W. MILTON KELLY.

#### CORNSTALKS FOR HUMUS.

Maintaining humus when barnyard manure is plentiful, may be quite an easy task. But when the farmer is a merchant, as in the present instance, and has a small farm with no live stock, and manure to buy is scarce at \$1.00 to \$1.25 a load, delivered, the humus question comes up under a different light; it is then that we have to figure out other ways of supplying this needed humus. Now, this little farm of mine (25 acres), is in as good condition as most of the farms around it, but I want it for "special crops," and that means I must improve it a great deal, as I intend to work along intensive lines. To begin with, I must have more humus, (and I will not forget drainage). With plenty of humus and the right commercial fertilizer I believe I can get this piece of land up to where I want it. I made a start along this line this past season. I had a good field of corn and no live stock to feed the stalks to, so the ears of corn were husked from the stalks into a wagon that had been rigged out for the occasion. Then I plowed the stalks under. They were first rolled the same way as the plow would go. A heavy chain on the plow

turned nearly every leaf under and the stalks in their green state were from 7 to 12 ft. high, and heavy. It's a perfect job. I also want to mention that at the last cultivation of this corn I sowed soy beans between the rows and cultivated them in. I got a growth of 12 to 15 inches. The stalks, beans and everything on the piece has disappeared.

I cannot tell what the actual benefit will be to the soil. That's a little guess-work perhaps, but I believe the land will show it and I will get results. I might have cut the corn and then had it shredded and then spread the shredded stalks evenly over the field. This would no doubt have been the better way, but it would have taken a good deal of team work to do all this, and team work is expensive when one has to hire, so I decided to do it the cheaper way and am satisfied so far. I will use lime on this field next spring.

I have not yet decided as to what course I will take with this field next season. I would like to seed it to clover in the spring without a nurse crop on a well prepared seed bed, and then turn this clover under, but don't like to lose the use of the land for a season. I will give it more thought during this coming winter. Suggestions along this line will be accepted.

St. Clair Co. G. A. BALDEN.

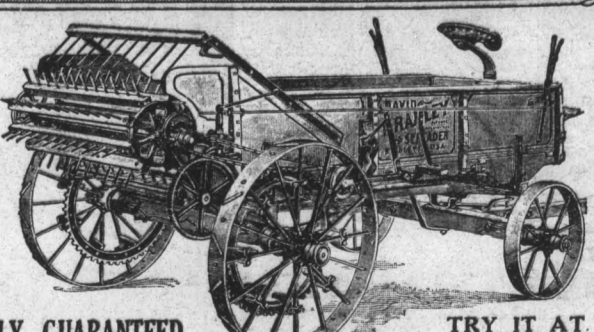
While the plowing down of a valuable forage crop like a big growth of corn-stalks may be generally considered an expensive way of keeping up the humus content of the soil, yet there is no doubt that it would be more economical in the long run than to allow the vegetable matter in the soil to become depleted to a point which would react injuriously upon the fertility of the soil. It is also possible that, where this has occurred this may be an economical way, in some special cases such as that cited by the writer of this article, to restore the lost humus to the soil and thus increase its fertility. If the humus has become depleted it is necessary to plow down some kind of a crop, as green manure, to restore it, and it is possible that in many cases it might pay to use the corn fodder for this purpose. The western corn growers have very generally followed the practice of husking from the stalk in the field, and then pasturing the stalks during the early part of the winter and plowing them down the following spring. We have generally considered this a wasteful practice, but when the cost of gathering the grain is taken into consideration, as well as the fact that the vegetable matter contained in the stalks is better distributed over the surface of the ground than it could have been if removed and then returned to the field, there are some good things to be said for the method. The western practice of plowing the stalks down in the spring is doubtless preferable to plowing them down in a green condition, as the latter method is likely to produce an acid condition of the soil. The application of lime to this land in the spring as suggested, will, however, overcome this objection to a large extent. There is no doubt that Mr. Balden is on the right track in improving the fertility of his soil by bettering its mechanical condition first, in order that he may supply needed fertility in an available form for a maximum production under intensive methods of farming. Mechanical improvement is the first step in the improvement of the fertility of our soils, and the man who keeps his land in good mechanical condition has complied with the first essential of good soil management.—Eds.

#### FERTILIZER FOR BEANS AND CORN.

Have never used any commercial fertilizer. Would it pay me to apply to beans and corn, and what kind? S.

Where one has not a sufficient amount of stable manure, and I think it is safe to say that none of us have, and is not raising satisfactory crops, I am sure he ought to at least experiment with commercial fertilizer. Fertilizer for beans ordinarily would not necessarily need to contain as large a per cent of nitrogen or ammonia as one for corn, because beans are leguminous plants and get some of their nitrogen from the atmosphere. Corn is a gross feeder of nitrogen and there isn't any danger of getting too much nitrogen into the soil for a big crop of corn. Some people do not use any nitrogen at all in the bean fertilizer, simply using phosphoric acid and potash, but I prefer to use one containing at least a small amount. One or two per cent of ammonia gives the beans a good start.

COLON C. LILLIE.



## DAVID BRADLEY

**Complete as Illustrated, 55-Bushel Size, \$69.50**

**65-Bushel Size, \$74.50**

**ABSOLUTELY GUARANTEED**

**Spreader Box Complete Without Truck, 55-Bushel Size, \$42.50**

**65-Bushel Size, \$47.50**

**TRY IT AT OUR RISK**

### The David Bradley Manure Spreader

Judge for yourself the value of the exclusive and special features of the Bradley Manure Spreader. The spreader not having them cannot give perfect satisfaction.

A full page picture could not reveal the superior points of the Bradley, but a trip through the factory would afford you no more complete information than does our Book of David Bradley Farm Implements.

**Eccentric Feed:** simple, silent, accurate, no wear or lost motion, self lubricating, spreads thin dressing or heavy coat.

**Double Chain Drive:** each chain engages seven sprocket teeth and is held securely on sprocket by positive locks on idler arm; chains cannot jump.

**Endless Steel Apron:** self cleaning; runs in two single-steel protecting tracks fastened inside heavy body sills.

**Feed Ratchet** works apron by double pawl, one to pull and the other to hold.

**Watertight Box:** bottom made of matched first quality yellow pine, mounted on heavy sills with four girts mortised through. Low down, easy to load. Wider at rear; no friction; load automatically released; no bothersome force feed. Box easily removed and truck used for other hauling.

**Light Draft:** two horses do the work of three and do it better. A boy can run it. Levers strong and heavy with malleable iron racks. Stanch connecting rods.

**Seat of comfortable design,** mounted on spring standard, swings forward for loading.

#### What Two Bradley Users Say.

Home Route No. 3, Box 23, St. Charles, Mo.  
Sears, Roebuck and Co., Chicago, Ill.

Gentlemen:—My 13-year old boy runs my David Bradley Spreader. I would not do without it. Have spread straw, dry and wet, some stalk fodder, long and short, wet, heavy and dry; it handles all the same. Two horses handle the spreader easily, and it works as good as any other spreader I have ever seen. It has not given me a minute's trouble and is so simple in construction that I cannot see much to wear out about it. I use it for a spreader and farm wagon, and now have it on an old truck that is not fit to go on the roads with and it works all right. I saved at least \$15.00 on the spreader, and also a big wagon bill.

Yours truly, BEN P. FETSCHE.

Litchfield, Mich.  
Sears, Roebuck and Co., Chicago, Ill.

Gentlemen:—We have tried the Bradley Manure Spreader purchased from you and are much pleased with it. Quite an improvement over the spreader I purchased from you some three years ago, although that gave good satisfaction. The Bradley is stronger and better made. The eccentric feed regulator beats anything I have ever seen on any spreader, making the spreader run smooth and almost noiseless. The angle steel track under body which supports conveyor chain is just the thing. The automatic lock which holds the drive chain down on sprockets is to my way of thinking the slickest device for its purpose yet invented. Two horses handle the Bradley with ease.

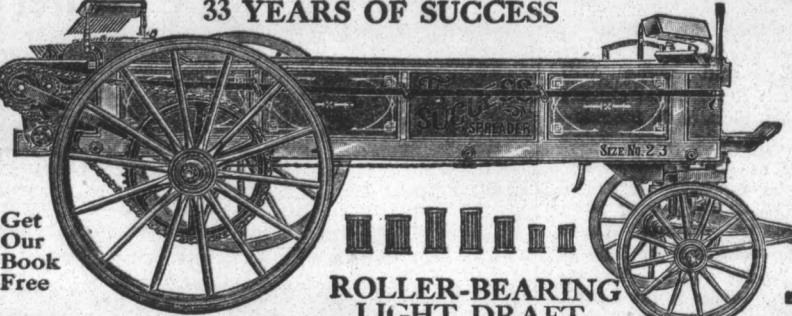
Yours very sincerely,  
D. CRONK.

Refer to our big General Catalog for pictures, complete descriptions and prices of David Bradley spreaders, plows, harrows, planters, cultivators, etc., the farm tools backed by eighty years of knowing how; or send today for our Book of David Bradley Farm Implements.

We can always supply promptly any repair part for any Bradley implement, no matter when or where bought.

**SEARS, ROEBUCK AND CO. CHICAGO**

### 33 YEARS OF SUCCESS




**ROLLER-BEARING LIGHT DRAFT**

## SUCCESS SPREADER

The only spreader with a 33-year record of good work. Simplicity, Durability and Light Draft always foremost. Direct Chain Drive. No Cog Gears. The choice of men who investigate thoroughly. Wood or metal wheels. A generation of experience back of every Success. The leader from the first. Exclusive features all patented. Catalog of facts Free. Write us promptly.

**Kemp & Burpee Company, Syracuse, N. Y.**

## 500 Bushels Per Acre




**BASHUMUS**  
125 LBS.  
THE KIND THAT BRINGS RESULTS  
**BASH'S FERTILIZER**  
MADE BY  
THE BASH FERTILIZER COMPANY  
FORT WAYNE IND.

That's what good potato soil anywhere should produce when provided with sufficient *Humus* to loosen the soil and conserve the moisture. One farmer reports 527 bushels per acre as the result of using **Bashumus Fertilizers**.

The secret of such a large yield is the Filler of Bashumus Fertilizers. It is all *Humus*. No rock, no waste, but all soil food and soil conditioner. There's a Bashumus Fertilizer for every crop, and farmers who use them are surprising themselves with the increase in their yields. Order Bashumus Fertilizers from your dealer. If he hasn't them drop us a card. We will see that you are supplied and will mail you a valuable book, "Richer Soil for Richer Profits." Write the card now.

**BASH FERTILIZER CO., Dept. B Ft. Wayne, Ind.**



**BASH'S**  
BRINGS RESULTS  
**FERTILIZERS**  
MADE BY  
THE BASH FERTILIZER COMPANY  
FORT WAYNE IND.

## ALFALFA The Mortgage Raiser

Is the biggest hay producer and is unequalled as pasturage. Adapted to soils in every state in America—unequalled as a Soil Fertilizer. Is a well-balanced ration supplying the Proteins and Carbohydrates so necessary for all kinds of stock. Has no equal for dairy cattle or to "finish" stock for market. Don't allow western growers to ship hay into your market. Grow the "mortgage raiser." Alfalfa. We are the largest growers and distributors of Dry Land Alfalfa Seed in America. Write today for sample, also our Alfalfa and Sweet Clover Book and complete Catalog of Field, Garden and Flower Seeds.

**The Nebraska Seed Co. 1219 Jones Street, Omaha, Neb.**



## LIME FOR BEETS AND ALFALFA.

I am writing for information regarding your experience in the use of agricultural lime. Do you think it a profitable investment to use it on beet land, sowing and working in the soil while fitting the ground? If so, how much to the acre? Would it pay to broadcast it on a meadow to be cut for hay this year? I have a timothy meadow mowed three times, that I will plow this spring for corn. Will the liberal use of lime, well worked in the soil after it is plowed, be beneficial to the corn crop? What effect has lime on a soil in a dry season? Will the use of lime have any effect on wireworms? I have a piece of ground well under-drained that was plowed for corn, followed the next year by plowing for beans, followed with beets without plowing. These crops have all been kept free from weeds. Would like this spring to sow same field to barley and seed in barley with alfalfa. The soil is quite rich. Would you advise a liberal use of commercial fertilizer or a liberal use of lime, or both, on this field? Which would be the best for the alfalfa seeding?

Gratiot Co.

F. O.

In this state we do not know so very much from actual experience about the use of lime on various crops. It has been supposed that we did not need very much lime, and that Michigan soil had a sufficient amount of this ingredient for all practical purposes. Lately, however, experiments in New England and in the south would lead farmers to believe that even in Michigan there might be a lack of lime for best results. For instance, I know of a man in Van Buren county who tried to get results with commercial fertilizer, and failed. Finally, however, he gave the land an application of lime and then he got splendid results from commercial fertilizer. It is a well known fact that you can't get good results with commercial fertilizers if the land is sour.

Now, I cannot tell F. O. very much about the value of lime from actual experience. During the past two years I have used a carload of hydrated lime on my farm. I have put it on nearly every kind of a crop in an experimental way to find out if it would be of practical value to me. A year ago last spring I put it on a portion of a sugar beet field and it seemed to me that I had marked beneficial results from its use. Last year the season was so against me that I could not tell whether I got any results on my beets or not. I also put an application on a portion of a field of heavy clay that was into peas and oats, and I thought I could see beneficial results from its use there.

I do not know whether it would pay to use lime on an old timothy meadow or not, but I am going to find out by experiment. My carload of lime is all gone now, it was used up last year, and I am going to order another carload this spring, because I want to find out if this lime will assist me in any way in raising more-profitable crops, and I think it is the duty of every farmer at the present time to experiment, even in a small way if necessary, and find out for himself what lime will do.

Those who have had the greatest experience in the growing of alfalfa claim that most all of our soil needs lime for the best development of this plant, and therefore I would advise everyone in seeding to alfalfa to use lime on a portion of the field at least.

Your soil may need it, and the only way to find out is to try. As to the kind and amount of lime to use per acre, this is also a rather unsettled question. If you use pulverized limestone, you can use any amount without any injury to the land. If more is applied than is really needed it won't do any harm. On the other hand, if you use caustic lime or hydrated lime in excessive quantities it would have a tendency to decompose the organic matter in the soil and destroy the vegetable matter or humus. I do not think we need have any fear in an application up to at least a ton, and perhaps two tons, per acre, of caustic lime. This caustic lime will give quicker results and it will correct acidity much better than the limestone. While it costs more you get more lime in a ton because, in burning you have reduced the bulk and driven off the carbonic acid and the moisture.

In all experiments with lime or fertilizer, it is good practice to try it on a part of the field, or at least leave a check plot to which none is applied so as to determine by comparison whether it is a paying proposition or not. It is also necessary to have an experiment cover more than a single year to afford accurate knowledge, on account of the difference in the seasons, particularly as to the distribution of rainfall.

COLON C. LILLIE.

Are you thinking of buying some fertilizers to use on your Spring crops? This matter is worth considerable thought. Write us for our booklet and find out how to fertilize properly and economically. We furnish quick acting high grade Fertilizers of many different compositions to meet the requirements of all crops grown on various kinds of soils. We make grades of

# fertilizers

where either the Nitrogen, Phosphoric Acid or Potash are component parts, with the right percentages of the other elements of plant food to properly balance the Fertilizer to use on muck land, clay, light soils, etc.

If your land is rich in Nitrogen you will save money by using Phosphoric Acid and Potash to balance out the plant food in the soil. Progressive farmers who study out these things are more successful than those who have not realized the great difference in Fertilizers. Even at the same price, one grade of Fertilizer under certain conditions will produce more profitable results than another.

In selecting Fertilizer the farmer cannot be any too careful. He should make sure that the goods are manufactured by a reliable firm, so that he may depend upon getting full percentages of plant food and of the highest agricultural value, also in first-class mechanical condition. The reputation of the manufacturer is very important.

We guarantee that our Fertilizers conform in every respect to all the requirements of strictly high-grade goods. They have been sold continuously for the last fifty years and have established a record of popularity unequalled by any other Fertilizers on the market.

☞ We want agents where we are not represented. Write us today for your home territory and particulars.

## The American Agricultural Chemical Co.,

Largest manufacturers of high grade Fertilizers in the world

Detroit Sales Department, DETROIT, MICH.

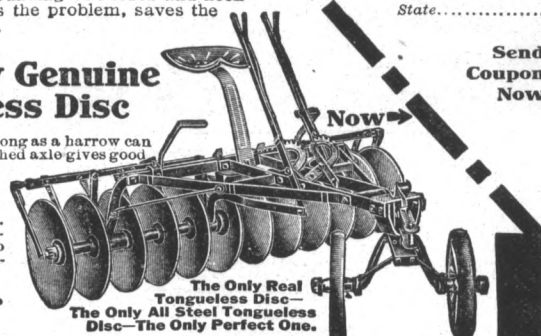
## Our Factory Price and Book Prove This the Biggest 1911 Value in a Harrow

HERE'S the one harrow bargain of the year—the first and only genuine tongueless Disc—at a price that you can't resist. You can't get higher quality or bigger value no matter what you pay. We'll let you have this Detroit-American on the only Real 30 day free trial offer—no money in advance, no deposit and we pay the freight. Then if you decide to keep the harrow, send money or pay on time—and our unlimited time guarantee protects you forever. Don't use an old fashioned tongue disc with its whipping and pounding of horses and neck-weights which injures the team just when you need it most. A tongueless disc solves the problem, saves the horses, saves time and work, lets you work closer to fences because no pole to catch. Get our book and freight paid price first. Note that the

## Detroit-American The Only Genuine Tongueless Disc

is all steel, which means no breakage, no repairs or costly delays in busy season. Light in draft—strong as a harrow can be made. Entire frame and front trucks are steel. Wide tired steel wheels do not cut into soil. Arched axle gives good clearance. Trucks are attached to frame by flexible pivots so wheels pass over uneven places without disturbing the perfect balance of frame. Steel discs cut to uniform depth. Disc sections do not strike together in center. All end thrust taken up by Hard Maple Ring Bearings. Pipe oilers. Steel Separators between blades. Long blade scrapers. These and many other Detroit-American advantages are shown in our big book. Choice of 13 sizes, cutting from 4 feet to 10 feet in width. Regular round disc blades 16, 18 and 20 inches. Cutaway discs furnished if desired. Get your harrow at a price that makes it the biggest bargain ever offered. Send coupon now. Get the guide to the right harrow at the right price. Also see new Detroit-American Manure Spreaders and Cultivators. All in the Big Book. Write now. Address

**American Harrow Company, 1037 Hastings Street, Detroit, Mich.**  
Warehouses in Many Cities Insure Prompt Delivery.



**American Harrow Co.,**  
1037 Hastings Street, Detroit, Mich.  
Send me your new, big book, free, and quote me your low, direct factory price.

Name .....

Town .....

R. F. D. ....

State .....

Send  
Coupon  
Now

## Pratt-Elkhart "40"

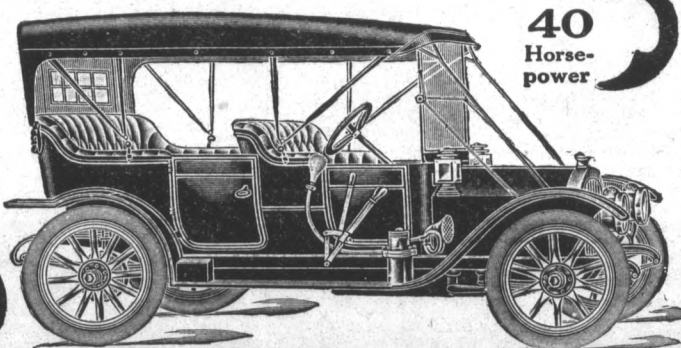
is the quietest, simplest and most powerful car in the "40" class. They are in use today in over half the States in the Union.

### BACKED BY THIRTY-EIGHT YEARS' SUCCESSFUL MANUFACTURING EXPERIENCE

Made in four classy designs; 117-inch wheel base, Unit power plant, three-point suspension, offset crank shaft, Bosch Magneto, 34x4-inch tires. List Price—\$1800.00. Top and wind shield extra.

We Want a Sample Car in Every Locality—Write for Catalog and very liberal proposition

ELKHART CARRIAGE & HARNESS MFG. CO., Elkhart, Indiana.



40  
Horse-  
power

When writing to advertisers don't fail to mention that you saw their ad. in the Michigan Farmer.





## I Promise To Save You \$37 to \$300 On a Gasoline Engine

GET my new 1911 Engine Book—and convince yourself. I'll positively prove just how I save you \$37 on a 1½ H.P. and \$105.50 on a 5 H.P. Engine. No matter what power you need—or what work you want to do—be sure to send me your name. A Postal will do.

## 5 H.P. Gasoline Engine Only \$119.50 For Pumping and all Chores

The greatest work-saver and money-earner ever installed on any farm. The only other engine that compares at all with this Galloway is sold for \$225. Here I save you just \$105.50 and give you a better engine. Equally large savings in proportion on all other sizes. Just send for My Engine Book and astonishing proposition. It gives you the real reasons why Galloway, with his enormous factory, and the steady trade of thousands of his farmer friends can offer the best Gasoline Engines and save you from \$37.00 to \$300.00. And every engine is covered by the Galloway guarantee, and sold to you on 30 days to 365 days free trial. I want to make you my special proposition. Just send me your name on a postal. Address me personally, Wm. Galloway, Pres.

Wm. Galloway Company  
645 Galloway Station  
Waterloo, Iowa  
Get This Free Book



## LEARN the merits of the SCHOFIELD PLANTER

If you would insure a Good Potato Crop

After 19 years' test it is recommended by thousands of satisfied users. Write for Catalog "M" today.

Sold direct from factory to farmer. Special prices. Satisfaction guaranteed by the manufacturers.

SCHOFIELD & CO., FREEPORT, ILL.

Satisfaction Guaranteed Users



## OUR PRICES AND QUALITY ARE RIGHT

Our O. K. Champion Planter makes and saves the owner money. One man and team plant five or six acres of potatoes a day accurately and easily. Learn more about this and our line of potato diggers, etc. Let us send you our free Catalog. Write today. Dealers sell our machines.

Champion Potato Machinery Co.  
145 Chicago Ave., Hammond, Ind.

## OATS

NEW SEED OATS. Big money in right kind of oats. Here's your chance. Imported Canadian seed oats, raised on Galloway Brothers' big farm in Canada. New, clean land. Regenerated Swedish Select went 116 bushels to acre; Early New Market 110 bushels to acre. Farmers who bought this seed from us last year raised as high as 75 to 100 bushels in this country, and found out their old seed was inbred and run out. Change your seed. Try some of this new seed. Send for free sample, or 10 cents for large packet. Will also send our free booklet, entitled "Big Money in Oats and How to Grow Them." Galloway Bros.-Bowman Company  
642 Galloway Station Waterloo, Iowa

## DON'T BUY FERTILIZERS

and pay fancy prices. With the simple directions we give you, and with no other tools than a shovel and the barn floor, you can

## MIX YOUR OWN

at half the cost. For full information see advertisement German Kali Works, on page 298.

THE BARTLETT COMPANY,  
STATE AGENTS. JACKSON, MICH.

## STUMPS

—Farmers having stumps and stones to blast should write for prices on dynamite caps and fuse. MEREDITH POWER CO., Richmond, Ind.

## STUMP PULLER

Warranted the most practical machine made. One man can lift 20 tons. 3 styles, 10 sizes. \$25 and up. Screw, Cable or Hand Power. We make cheapest TILE DITCHER and the best

Corn Harvester. One horse cuts 2 rows. No twine. On trial. Agents wanted. Our new 64-page Catalog FREE. Write today.

M. L. BENNETT & COMPANY, WESTERVILLE, OHIO.

## UP-TO-DATE CORN CULTURE.

As Discussed by Mr. Wing at the Round-Up Institute.

Prof. Taft was fortunate in securing Willis O. Wing, of Ohio, whose study of and experience with, the corn crop particularly fitted him for handling this subject, which is of such large interest and importance to Michigan farmers.

Knowledge regarding the culture of corn is not, as yet, well classified. We know very little of the principles underlying its growth, since like experiments do not always give like results.

We grow too much soft corn, is the opinion of Mr. Wing. At the present time it is keeping prices down 10 per cent below the basis corn should be selling on in his section. Elevator men are very cautious about loading up with corn not in merchantable condition. We should endeavor in growing the crop to eliminate as much soft corn as possible. This is brought about by securing varieties that mature early. The corn grower, after selecting the kinds that mature at the right season should select from these the heaviest yielders. No better means of getting at the merits of a particular variety can be found than the ear-row test. Mr. Wing has followed this method for some time, and almost invariably he discovers that the low-yielding ears and high-yielding ears show a margin of nearly 100 per cent difference. He selects the high yielders that mature in time and plants them to grow seed for the following year. By continuing this process he has developed strains giving a larger number of bushels per acre than those he started with. However, the variations in the seasons do not give a good basis for determining how much improvement has been made. In his test plots he seeks to get an ordinary soil rather than an unusually rich one, believing that the resulting corn is more dependable than corn under soil conditions that are ideal.

While there are many exceptions, he has found that as a general rule, moderate-sized ears are the ones that usually give the largest harvest. Do not conclude from this that all moderate-sized ears are better than smaller or larger ones, but the large yields usually come from such a grade of corn.

Changing from one variety to another is a too common habit. While it is well to investigate new varieties and learn their merits, it is well to do this on a small scale, and make a change of your corn only after a thorough testing and investigation.

Some men are making the mistake of selecting varieties that mature too early. It cannot be questioned that the variety which will mature two or three weeks before another variety, will yield less. One should seek to grow the crop over as long a season as possible without taking too much chance of meeting frosts.

Wintering corn out of doors is not a good method of hardening the seed, as many men suppose it to be. It rather works in the opposite direction, and tends, through exposure, to reduce the vitality of the germs in the kernels.

The germinating box is as essential to the corn-grower as are the scales and Babcock test to the dairyman. It is certain that men's services are worth more than \$5.00 per day when employed at testing seed corn. Mr. Wing does not place his germinating box in the most ideal location, as the field would not be apt to be in ideal condition, and he desires to select the strong ears which are able to overcome adversities. To do this he exposes the box to a cool temperature for a couple of days, then brings it to where growth will proceed rapidly. If there is any question regarding the merits of an ear he always throws it out.

Seed corn is graded as to size of kernels. Butts and tips are removed and after the corn is shelled it is run through a grader. This enables one to do much better at planting. The uniform kernels work better in the machine. He advised against drilling the corn, in that it is easier to keep down the weeds, and better cultivation can be given. To determine that one has the proper tension on the wires in planting, secure two spring balances. Attach one to each end of the wire, and, determining on a certain tension, it can be maintained throughout the field, thus keeping the rows in good order both ways. He plants from one to two inches deep. More than this is unwise, as then the kernels have not strength to break through the crust of the soil where rain occurs between the time of planting and the time for the corn to come up.

An important factor in corn raising is soil moisture. It should be supplied throughout the growing season. Tile drainage should be provided where there is lack of natural drainage, and most corn grounds have not been provided by nature with natural means of carrying off excess water. Mr. Wing formerly believed in shallow cultivation. Experience, however, has led him to revise his opinion regarding deep and shallow working of the corn ground. He cultivates as deep as possible, without covering the corn, using the shields when the corn is small. In cultivating deep it is necessary to work the ground often, as the little rootlets grow rapidly in the stirred soil, and are cut off in the next operation. He finds that he can cultivate his crop three extra times and give it a hoeing at \$1.50 extra per acre. The effect of this extra care is worth many times the cost.

In this discussion Mr. Wing stated that he practiced detasselling in his breeding plots. He plows cultivated ground deeper than sod ground. As to the number of kernels used in a hill he stated that the farther one goes south the fewer are recommended. In Tennessee two kernels are considered plenty; in Ohio three are sufficient, while in many of the northern states four are often advised.

## SPRING SEEDING.

As the season advances the work of the farmer begins to present itself to the farmer's mind with an added interest. One of the first things to present itself is the spring seeding, and the success or failure of the year's seeding is largely due to the plans that may be matured at this time. While the treatment the land may have received in the past, its condition as to the amount of humus incorporated in it, and its fertility are great factors, very much may still be done to insure a successful seeding, where conditions would not seem to be at all favorable.

The amount of money wasted in scattering high-priced clover seed where conditions are such as to almost preclude a possibility of a successful seeding is so large and so often repeated and the loss and annoyance so great from broken up crop rotations and short hay supplies that perhaps some personal experience along that line might be of benefit and interest. First, we ought to have a well thought out crop rotation which will include clover as often as possible, one that fits in with our personal inclination and the kind of farming we may be engaged in. Personally, I favor a three-year rotation of clover, corn, and a mixed crop of barley and oats and where these crops are fed out on the farm and the manure carefully saved and restored to the soil, both the land and the pocketbook are improved. Previous to adopting this rotation, clover seeding with me was a good deal of a lottery. If weather conditions were against me I drew a blank and I must say the blanks were more numerous than the prizes. I became convinced that there must be something radically wrong in a system which placed the farmer so completely at the mercy of a wet or dry season. I dropped out wheat, shortened the rotation, seeded with barley and oats on a well prepared soil bed, and to my mind it is immaterial whether that be accomplished with plow, cultivator, disk or any tool which will accomplish the desired result most quickly, allowing you to get your seeding finished as early as possible. The one thing I was some time in finding out was that the addition of 200 or 300 pounds of any good standard fertilizer carrying an analysis of 2:8:2 or better will make you practically immune from the weather. Dry, draughty summers have lost all their terrors for me; those mineral elements contained in an available form in the right proportion, enables the clover plant to quickly appropriate the nourishment it must have to make the strong root growth with which it overcomes unfavorable conditions that may arise later. This, at least, has been my experience and enables me to avoid the loss and annoyance of wasted clover seed.

Washtenaw Co. C. L. ROSS.

## A RIDING DEVICE FOR THE DRILL.

In your February 4 issue, "a four-horse drill must have a seat," attracts my attention. We have found that a foot-board running behind the machine about eight inches above the ground is a very convenient addition to a drill and would rather have it than a seat.

Montcalm Co. ROY ROSSMAN.

Please mention the Michigan Farmer when you are writing to advertisers.

## WHY GROW POTATOES

Simply because they pay. They find a ready market at good prices and bring in more revenue per acre—more net profit—than do many other farm crops. In all parts of the country where potatoes are grown as a farm crop, the Evans Potato Planter, manufactured by the American Seeding-Machine Co., Incorporated, Springfield, Ohio, will be found in the lead. There must be, and are good reasons for it. The Evans does the work right—more accurately than is possible by hand. It has the celebrated Evans Adjustable Pickers, which handle any size seed. One man or boy can operate the planter anywhere. It is simple, light draft and has many exclusive features that go to make up the perfect potato planter. It can be furnished with either disc or runner furrow openers. It has more good time and labor saving devices than any other potato planter on the market and is sold under such a broad and liberal warranty that purchasers run no risk. Send to the manufacturers for an Evans Potato Planter catalogue, read all about it and then go to your implement dealer and insist on seeing the Evans.

## ALFALFA

The largest grower of pure Alfalfa Clover, Timothy, Red, Alsike and Mammoth Clovers.

The kind the gentleman farmer and the farmer who respects his lands wants to sow on account of their absolute purity, namely 99.80 and 100 per cent. growth.

The kind America's famous agriculturist, Ex-Gov. Hoard, of Wisconsin, endorses, sows and praises.

**Salzer's Seed Catalog Free**

It's the most original seed book published, bristling with seed truths, and is mailed free to intending purchasers. Or remit 10c in stamps for 10 pkgs. remarkable farm seed samples, including our famous Alfalfa, Billion Dollar Grass, Speltz, etc.

JOHN A. SALZER SEED CO.  
135 So. 5th Street, LaCrosse, Wis.

## ALFALFA

All Northern grown, guaranteed to be 99 per cent pure and free from dodder. Write for free sample on which we invite you to get Government tests. This seed should produce hay at \$30 per acre annually. Free instructions on growing.

## GRAIN AND GRASS SEED

Northern grown and of strongest vitality. We handle export grade only and can furnish grass mixture suitable for any soils.

**MELILOTUS** best soil restorer known, an excellent preparation for Alfalfa. We have purchased large stocks of choice seed at so reasonable a price that we can retail at ordinary wholesalers' prices. Write for free catalogue.

## THE WING SEED COMPANY

BOX 742, MECHANICSBURG, OHIO.

## "More Potatoes"

From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for CATALOG, price, etc.

A. J. PLATT, MFR.  
BOX J STERLING, ILL.

## Regenerated Swedish Select Oats.

The only pure bred, pedigreed oats. This variety is in a class by itself. The best yielder, the stiffest straw, the freest from rust, of any oat today. I have some choice seed, all cured under hay caps, not a drop of moisture ever touched these oats after they were out. Every kernel has vitality.

COLON C. LILLIE, Coopersville, Michigan.

## Seed Corn and Oats For Sale—Early Yellow Dent

Swedish Select, Golden Fleece and National Oats. The best varieties. Write for samples, prices and circular. F. A. BYWATER, Memphis, Michigan.

## OAT SEED

grown from seed selected by the head for four generations that yielded 100 bushels per acre. Only a limited quantity. \$2 per bu., including sacks. E. M. Moore, Wixom, Mich.

## Seed Oats

Sensation—Yielded 95½ bu. per acre on 25 acres. Best oats in cultivation. Largest grain, stiffest straw and almost as heavy as wheat. Try them this season and double your yield. It will be the best investment you ever made. Sample and catalogue free.

THEO. BURT & SONS, MELROSE, OHIO.

## Regenerated Swedish Select Oats

for seeding. Known as the best oats. Big yielder. Stiff straw. Price 5 bu. lots, 75c. a bu. Bags and sample free. H. RYZENGA, R. No. 5, Holland, Mich.

## Seed Corn

—Reid's Yellow Dent, Imp. Leaming, Golden Surprise, American Pride, White Cap and Seed Oats. Catalog free. THEO. BURT & SONS, MELROSE, O.

## A LEGAL BINDING WILL

You can write for yourself at home with absolute secrecy, if you use our Legal Will Form. Full instructions given. Mailed to you for \$2.00. National Will Co., 504 Meisel Building, Port Huron, Michigan.

## Chicago Scale Co.



# LIVE STOCK

## FEEDERS' PROBLEMS.

### Pushing the Young Lambs.

The time to develop any young animal is right at the beginning of its life. In fact, the dam should be well fed so that she may properly nourish her offspring before birth, and she should be assisted in properly nourishing it after birth, both by her liberal feeding and supplementary feeding of her young, if the best results are expected. Years ago it was the common practice to have the lambs dropped when the ewes were on grass, which insured an abundant milk flow and the best kind of supplementary feed for the young animals. But in recent years, more farmers who keep sheep breed the ewes early and the lambs are dropped in March and sometimes even earlier, when the conditions are far less favorable for a maximum growth and development of the young lambs by nature's method. When lambs are reared under these artificial conditions, the flockmaster or shepherd should supply the deficiency if he would meet with marked success in his undertakings.

The first essential required in starting the lambs right is, of course, the stimulation of a liberal flow of milk in the dam. This can be done only by liberal and judicious feeding. Nitrogenous feeds, such as clover or alfalfa, constitute the best roughage for this purpose and should, if possible make up at least a part of the ration. Likewise the grain ration should be well balanced, and in addition to the home-grown feeds, such as corn and oats, the ewes should have some concentrate rich in protein, such as bran or oil meal, or preferably both. Then they should have some succulent feed as an appetizer and to aid in the digestion and assimilation of the dry feeds in the ration. Where silage is available, this will supply the need admirably, but where it is not at hand some kind of roots should be provided, as some succulent feed is absolutely necessary for the best results. Small potatoes serve the purpose very well indeed, and are generally available at comparatively small cost if not grown on the farm. In addition to these, pure water should be provided, preferably in an automatic manner, but if this is not practical without even occasional neglect on the part of the caretaker. Salt should also be placed where the ewes can help themselves, and the box in which it is provided kept constantly replenished.

But aside from this liberal feeding of the ewes with palatable and properly mixed feeds to compound a well balanced ration for the production of milk, the lambs should have some supplementary feed after they are two or three weeks old until the fresh pasture is available. This can be very easily provided by making simple preparations to that end. A lamb creep should be constructed so the lambs may gain access to a pen in some convenient corner of the shed from which the ewes are excluded. In this pen place a trough so arranged that the lambs can not easily get into it, and in this trough place a little bran. Later mix some ground oats from which hulls have been bolted or sifted, mixing the two grains in about equal proportions. The lambs will soon find it and will take a nibble occasionally at first, until they soon learn to like it and it will be a matter of surprise to see how much they will eat of it. By keeping some in the trough at all times they will not eat enough at any one time to cause serious digestive troubles, and it will be found to aid wonderfully in crowding them in growth until the pasturing season arrives. If a rack is also placed where a little choice clover hay can be given them, all the better, although if the ewes are fed clover hay they will soon be found in the racks when the hay is being put in, ready to pick off the blossoms and tender leaves, which they learn to eat very early in life.

After some years of experience in this method of providing supplementary feed for the young lambs, it is the writer's opinion that it pays better than extra feed given them at any other period of their lives, and it is neither much work or much bother to provide it. It would doubtless pay well to provide in the same way for the lambs after they are at pasture, but it is not so essential to their development, and the labor involved would be much greater. The lambs that are well started by this method of feeding for the first month or two of their lives will be all the more capable of shift-

ing for themselves when the pasture is at its best, and will have a start which will make it possible to turn them off in the late fall with supplementary feeding after they are weaned in better condition and at heavier weights than many native lambs attain after several weeks of heavy feeding in the barn. It may be argued that the price which they will bring will be lower, but that is not always the case as many lamb feeders are qualified to attest this year, and even if it were always so, one can afford to take less for them, as the cost per pound has been much less than where they are handled in the usual way. But the price for good fat lambs will generally be found to be quite satisfactory in the late fall, as the market is not usually over-supplied with them at that season of the year.

### Rape as a Hog Pasture.

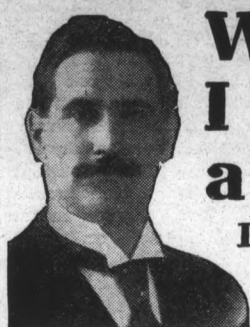
I am new in the farming business and have much to learn, but am hard to discourage. I am trying the hog business for money, not for fun. Have 40 acres of land, 20 acres of which is cleared and 20 acres is woods, fenced in with a woven wire fence. Two creeks running through this woodlot furnish plenty of good water, and there is plenty of grass and roots. I am planning to sow one acre of rape for pasture and one acre of field peas to be hogged down. Will have eight brood sows with their litters. I have been told by different men that they lost small pigs by pasturing them on rape, and that it was no good as a milk producer for sows suckling pigs. My woodlot furnishes a good deal of feed, but I thought the rape would be good to let them in for a short time each day, say an hour or so, and then turn them in the woods again. I think those who have complained about rape pasture for hogs left them on it for too long a time. I also thought I would let them on the peas a little while at a time. Kindly advise whether my plan is all right. Also whether the pea straw and rape plant will be of benefit to the soil when turned under in the fall. I had 18 hogs running in my woodlot last summer and they looked fine. I fed only \$3 worth of middlings and some carrots once a day.

Charlevoix Co.

S. SLOAN.

While rape is not as good a feed for hogs, and especially small pigs, as alfalfa or clover, it is a valuable succulent forage for them, and if the hogs are handled rightly while being pastured on it no harmful results will become apparent. The greatest trouble usually experienced with small pigs on rape pasture is caused by letting them run in the rape when it is covered with a heavy dew or during rainy weather. Of course, when they are given the liberty of a rape pasture they will run through it in all kinds of weather, and when the leaves are wet they seem to have an irritating effect on the tender skin of the young pigs, causing a chapped and scurfy condition which is deleterious and, with other complications, perhaps sometimes fatal to the pigs. But if the hogs are given the run of the rape pasture only under favorable weather conditions, it is the writers opinion that no trouble of this kind will be experienced. This would also make the pasture last longer. If the eight sows and their litters were turned into an acre of good rape pasture and left there all the time, they would soon feed it off and tramp it down, but if managed as suggested this acre, together with that sown to peas, will furnish an amount of feed that will not only keep the sows and pigs in a healthy condition, but will at the same time cause them to make more economical gains than would be possible without some succulent pasture along with their grain ration. With the rape for succulent feed after the fresh grass in the woodlot gets tough and with the peas to supplement the grain ration after the rape has been pastured off there is no reason why there should not be both fun and money in the hog business, for it is certainly a pleasure to see a good bunch of pigs developing into a good quality of market porkers, as well as to bank the check when they are sold.

It is, however, a mistake to depend so largely on the woodlot pasture as you did last season. These sows and their pigs should have a good liberal grain ration, with the nutrients well balanced to produce a maximum growth. This is not only better for the pigs but better for the pocket-book or the bank account as well. Cheaper gains can be made on a young animal than a mature one, whether it is a calf or a lamb or a pig. It pays to keep the pigs growing right up to their limit all the time. If their growth is not continuous and rapid, their development will be retarded and it will cost more to make up the deficiency afterward than it would to keep them growing rapidly from the start. Indeed, it is impossible to overcome an early deficiency in development. It will pay much better to feed liberally of middlings and corn and oat meal with a little oil meal or tankage mixed in dur-



## Why Can't You and I Make a Deal On a Manure Spreader

I Promise to Save You \$25 to \$40

AND I want to send you my Big Spreader Book to prove it. With this book I promise to send you the most interesting proposition ever offered.

I am selling more Manure Spreaders than any one manufacturer in the United States—selling them direct from our great Waterloo factories.

45,000 farmers all over this big country vouch for my spreaders, and I've saved every purchaser \$25 to \$40—clean velvet.

Think of it! A Galloway Wagon Box Spreader for only \$39.50—top notch quality—long time guarantee. Five other sizes and grades up to my complete Steel Truck Spreader—the one I save you \$40 on. And 30 days to 365 days free trial on your own farm.

Send for my Book and personal, man-to-man proposition before you are a day older.

When I say I am giving you absolutely the greatest spreader in the world for the money, I am telling you the straight, simple truth.

I have right here the spreaders made by others. My experts have taken them apart, tested their materials, have given them hard, fair working tests in comparison with my Spreaders. We want to know absolutely that the Galloway Spreader is far-and-away better than the priced-high kinds. And I tell you honestly that for actual working service, for real improvements, on a machine that will stand up and weather the hardest knocks and keep on delivering real service—the Galloway Spreader hasn't an equal in the field.

The big saving I make you is because I sell direct, and because of the Law of Volume—the many machines I sell. I am satisfied with a small manufacturer's profit for each machine.

Positively you should not buy a Spreader until you have at least had my Book and my proposition. Learn why you and I should deal together in the purchase of a Spreader. Learn how I actually can save you \$25 to \$40. Find out about my generous Free Trial and 5 year, guarantee Plan. Write me a postal—just say, "Galloway, send me your free Spreader Book and special proposition." I'll forward it first mail.

**\$39<sup>50</sup>**  
and Up

Wm. Galloway, President  
THE WILLIAM GALLOWAY COMPANY,  
649 Galloway Station, Waterloo, Iowa

Patented  
Force  
Feed

Send  
Postal  
For Big  
FREE  
BOOK

30 to  
365 Days'  
Free Trial

Freight  
Paid

## Do Both with this Machine

Anyone can Clip with this machine

It turns easy, clips fast and will last a lifetime. This

### Stewart Ball Bearing Clipping Machine

has all gears cut from steel, file hard and enclosed and protected from dust and dirt. They run constantly in oil. Clips both horses and cows without change. There is 6 feet of new style, easy running flexible shaft on this machine and the famous Stewart single tension nut clipping knife. Price of machine complete is only \$7.50

CHICAGO FLEXIBLE SHAFT CO.  
115 La Salle Ave., Chicago

Get one from your dealer or send \$2 and we will ship C. O. D. for the balance.

Send today for new 1911 catalogue

## Prairie Stock Farm

OUR LAST IMPORTATION OF

### Percheron Stallions and Mares

We cordially invite everybody to come and visit our stables and learn our method of doing business. We can sell you a first-class stallion or mare for less money than any importer in America. Terms to suit purchasers.

Niles is ninety miles from Chicago on the Michigan Central.

E. METZ HORSE IMPORTING CO., Niles, Mich.

### INSURE AGAINST DISTEMPER

and other kindred horse ailments by always having a supply of Distemperine on hand. Mild and prompt in its action; leaves no bad after-effects. It not only cures but prevents the spread of disease. Let us prove it to you.

## DISTEMPERINE

50 cents a bottle; \$5 a dozen. Ask your druggist, or order of us. We pre-pay express. Write today for valuable FREE booklet.

GOSHEN DISTEMPERINE CO. DEPT. C. Goshen, Ind.

When you are Writing to Advertisers please Mention the Michigan Farmer





## NERVES NEED Scott's Emulsion

the same as babies. Babies can't take care of themselves, nor can nerves.

Babies cry for attention—so do nerves. Probably both are half-starved for proper nourishment.

Give them  
**SCOTT'S EMULSION.**

## THRIFTY STOCK

PAYS  
MORE MONEY  
GIVES  
MORE SATISFACTION.

NO STOCK CAN THRIVE IF PESTERED WITH LICE, TICKS, MITES, FLEAS, SCAB, MANGE, AND OTHER SKIN DISEASES.

TO CLEAN OUT THESE PARASITES, GUARD AGAINST CONTAGIOUS DISEASES, CLEANSE, PURIFY, AND DEODORIZE. USE

**Kreso Dip No. 1**

BETTER THAN OTHERS, BECAUSE, IT IS STANDARDIZED, UNIFORM, DEPENDABLE, EFFICIENT. ONE GALLON OF KRESO DIP NO. 1 MAKES 60 TO 100 GALLONS OF SOLUTION (DEPENDENT UPON WHAT USE IS TO BE MADE OF IT).

A REAL NECESSITY ABOUT HORSES, CATTLE, SHEEP, SWINE, DOGS, GOATS AND POULTRY.

FOR SALE BY ALL DRUGGISTS. WRITE FOR FREE CIRCULARS. ASK FOR LEAFLET DESCRIBING A NEW CEMENT HOG WALLOW IF YOU ARE INTERESTED.

PARKE, DAVIS & CO.  
DEPARTMENT OF ANIMAL  
INDUSTRY,  
DETROIT, MICH.  
U.S.A.

**57 BUSHELS MORE  
POTATOES  
PER ACRE**  
WHERE PLANTED WITH

## IRON AGE

(Improved Robbins)

### Potato Planter

Average results obtained in a careful, thorough test against a "picker" planter by Maine State Experimental Station, in 1910. Ask us quick for the **proof**—we will send you **now** bona fide copy of their report in Bulletin No. 188, which will be ready about March 15th. Shows exact results. Also, comparison of level culture, high and moderate ridging. 100 per cent. perfect planting is what you want—no doubles, no misses, no injury to seed. Address

BATEMAN MFG CO.,  
Box 104-P  
GRENLOCH,  
N. J.



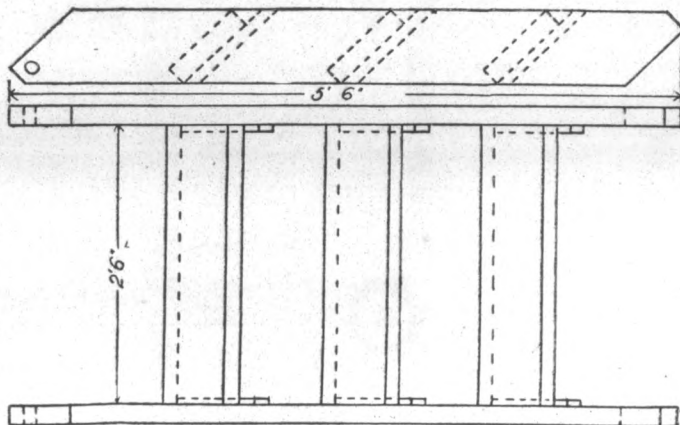
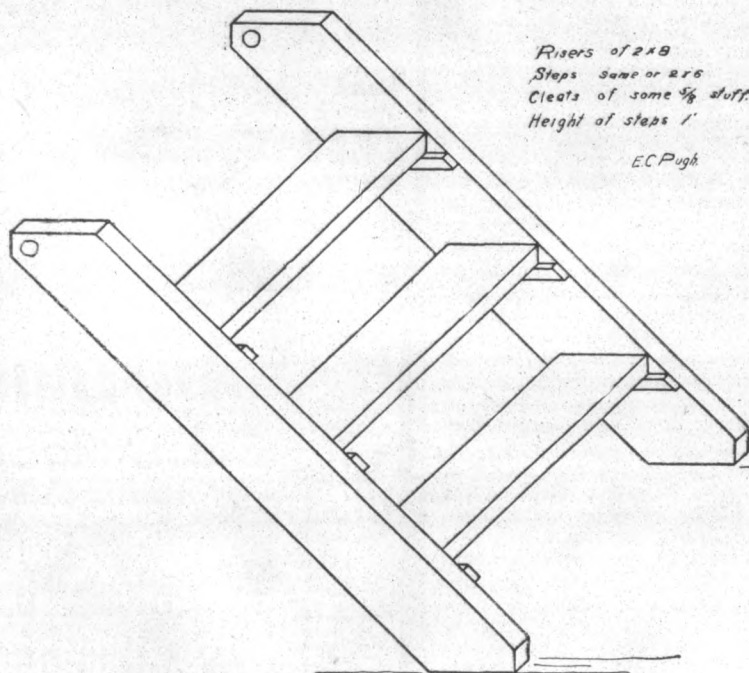
ALWAYS mention the MICHIGAN FARMER when you are writing to advertisers.

ing the suckling period and until the pigs attain considerable age. Make this into a slop and feed nearly all the pigs' appetites demand. They will eat the grass and later the rape and peas and the tender roots in the woodlot just the same. They will not, of course, require or eat as heavy a grain ration as they would if they did not have this range and succulent forage, but they will grow much faster with the combination and will make much cheaper gains than they would if confined in a small yard without the forage, no matter how liberally they were fed. In fact, the gains made in this way will cost little more than half as much as gains made in a small yard or pen, and the profits from the business will be correspondingly greater. But to get a maximum of profit from any branch of the live stock business, one must have faith enough in it to feed the young animals with a liberal hand, and with the pigs that liberal feeding should be begun through the dam and continued throughout their development.

The rape plants and the pea vines, together with the rich droppings of the hogs, will be very beneficial to the soil on which they are grown. Rape seems to have a peculiarly beneficial effect on the soil, and the pea is a leguminous plant like clover and, like it, adds nitrogen as well as humus to the soil.

### A HANDY WAGON LADDER.

In feeding shock corn to cattle it is usually a little expensive to send two men out to get a load of corn. If you



have never tried it, you will find it a pretty hard job to put on a respectable load alone. Often it happens that it is necessary to put on such a load. The device here illustrated is meant to help when such a condition occurs. It is really nothing but a short ladder that is tied to the rear end of the wagon rack by means of a rope or a wire that is passed through the two holes at the top. When this is done, take the back standards off of the wagon. Now if you bring the back end of the wagon close to the shock you can take as big a bundle of shocked corn or fodder as you want to carry, walk right up the ladder with the same, and deposit it wherever you want to. By this means you can load the front end as high as you wish and then work back. It is especially handy when the corn is cut by hand. Such corn is rather difficult to load after a certain height on the rack has been reached.

It is rather easily made. You can

simply pick up some loose stuff that is lying around and make it. The steps ought to be of 2-inch stuff, though 1-inch material that is strong will do. The cleats may be made of anything that you choose, though the steps ought to be of something that will not break under a load of 250 lbs. The drawing shows a perspective, side, and a top view.

Ohio.

CLYDE A. WAUGH.

### THE ABSORBENT PROBLEM.

There are many Michigan farms upon which the question of absorbents for the stable is one of serious import. In many cases this actually means a lack of suitable bedding for the stock to keep them in a clean and comfortable condition, to say nothing of saving the manure with as little waste as possible. Years ago it was a common thing to see old strawstacks rotting down in the fields, and sometimes they were wantonly burnt to get them out of the way, but conditions have changed, and at the present time there is not sufficient straw produced in many localities in the state to provide the needed bedding for the live stock kept in those communities. The writer is using the butts of cornstalks from the sheep yard, where they ought to be left for bedding in the horse stalls, and some of his neighbors are allowing their cattle to lie on the concrete and earth floors of their stables without any bedding of any kind under them. This condition is due to the fact that wheat and rye are no longer grown to any considerable extent, and the oat straw is largely fed to the

**.22 Remington REPEATER**

We are just as proud of the REMINGTON .22 Repeaters as we are of the REMINGTON Big Game high-power rifles—for just as good reasons. There is no other make of the .22 class built to as high a standard.

The features that place the REMINGTON .22 in a class by itself are the real big REMINGTON features—Hammerless and Solid Breech. You clean the barrel from the breech.

There is perhaps a greater difference between the REMINGTON and other .22 Repeaters than is to be found between rifles of any other class.

A real rifle—the REMINGTON .22 Repeater. Shoots without adjustment. .22 short, .22 long or .22 long rifle cartridges.

Set of targets mailed free.

THE REMINGTON ARMS COMPANY  
Agency 299 Broadway,  
New York City

### THE INDIANA AND OHIO Live Stock Insurance Co.

ORGANIZED IN 1886.

**Paid-up Capital \$200,000.00.**

Insures horses, mules and cattle against death from any cause. Special 30-day foaling policies issued.

Write today for full information.

Home Office 130 Main St., Crawfordsville, Ind.

## DUNHAMS' PERCHERONS

Fourth importation for 1910 arrived August 4th. Our present lot, we believe, equals or surpasses any we have heretofore collected. More horses of bone, size and first-class quality than ever. Numerous important prize winners. Write for catalogue.

W. S., J. B. & B. DUNHAM  
Wayne, Illinois

### Belgian, Percheron and Shire

Stallions and Brood Mares  
40 head of prize-winners to arrive March 25. Plenty of mares in foal. A guarantee with each animal.  
Prices reasonable.  
LOESER BROS., Importers,  
Dept. M, Ligonier, Ind.

### Percheron, Belgian, Shire and Hackney Stallions and Mares

As fine lot as there is in America, 3 to 4 years old, with lots of quality and good individuals, weighing or maturing 1800 to 2200 lbs.  
Prices on Imported Stallions, \$1,000 to \$1,200. American Bred Stallions, \$600 to \$900. Importations to arrive Feb. 18 and March 1st.

LEW W. COCHRAN, Crawfordsville, Ind.  
Office 109 1/2 South Washington St.

### JACKS and MULES

Raise Mules and get rich. For the next 20 days, 400 head of fine large Jacks, Jennys and Mules. 14 to 17 hands high at 1/4 off. Come soon for a bargain. Stock guaranteed. Write for prices to-day. Address

Krekler's Jack Farm,  
WEST ELKTON, OHIO.  
Branch Barns, Clinton, Ind.



**PAIR OF MULES FOR SALE**—32 months old, each, sound and smooth, kind, gentle, partly broken and very nice. JOHN FAHEY, Butternut, Mich.

**FOR SALE**—Two imported black, three-year-old, Percheron Stallions. Weight 1850 and 2000 lbs. They are extra good and price will be right. Must sell. J. M. TURNER, Williamston, Michigan.

**BELGIAN HORSES.** If you are wanting to buy Draft Horses write H. H. JUMP, Munith, Michigan.

**Bargain Prices**—Imported Belgian Stallion 9 years, Registered Clydesdale Stallion 8 years, sure breeders and second prize winners at State Fair 1910, one grade Belgian Stallion two years, extra good. JAMES H. BROWN, Route 3, Carsonville, Michigan.

**For Sale—IMMEDIATELY.** Three Registered Percheron Stallions, one Registered Trotting Stallion will be sold cheap, act quickly. Dr. N. A. Williams, Evergreen Farm, Bangor, Mich.

A. R. F.



## STORY OF THE BREEDS.

## The Origin and Characteristics of the Poland-China.

Perhaps the history and name of no other breed of swine has been the object of so much investigation and discussion as has that of the Poland-China. It has been exceedingly difficult to reconcile the claims and statements made by the different breeders and other interested persons in a manner satisfactory to all. But from the statements submitted a fairly correct history of the breed has been worked out, and the report adopted by the convention of the American Swine Breeders' Association, at Indianapolis, in 1872, is now accepted as the history of the Poland-China.

The breed had its origin in the Miami valley of Ohio, in the counties of Warren and Butler, and in a smaller part of the county of Hamilton. It appears that the common or native hog of that locality was improved by crossing with the Big China, the Russian and the Byfield. The Berkshire was crossed on this combination, and finally the last breed used, the Irish Grazer, was introduced. Then, by selection in different portions of the region the breed was developed and made permanent. Of the breeds used the Byfield and Russian were large, coarse, slow maturing hogs. The Big China and the Irish Grazer were large, white hogs with sandy spots, the Big China being the finest and earliest maturing of any of the breeds used, while the Irish Grazer was especially adapted to rustling and grazing.

While the question of the origin and history of the breed was being worked out, much important evidence was submitted to the American Swine Breeders' Association. Among this was a letter from Mr. Cephas Halloway, an agent for the Society of Shakers at Union Village. Mr. Halloway wrote, "I have resided in Warren county, Ohio, since 1813, during which time I have given much attention to the different breeds of swine bred in the Miami valley. The first introduction of China hogs was made in 1816, and twenty years later, in 1835, Mr. Munson Beach introduced the Berkshires into the county. About five years later the Irish Graziers were introduced and these latter breeds were extensively crossed with a former cross of the China and an original county hog. The stock thus produced constitutes the true and original basis of what is now known as the Poland-China breed." Mr. Halloway was a man of some note, his testimony was entitled to every consideration and doubtless influenced the convention greatly.

Mr. D. M. Magie, of Butler county, one of the noted early breeders of Poland-Chinas, wrote, "I have been breeding this stock for forty-five years in Butler county. They were produced from four pure and distinct types of hogs, of which three were imported, namely, Poland, Big Spotted China, Big Irish Grazer and Byfield."

Mr. Milliken, one of the important members of the committee investigating the Poland-China, in a controversy with Mr. A. C. Moore, quoted a letter from Stephen Milliken, who gave the crosses employed as Russian, Byfield, and finally Berkshire and Irish Grazer.

As a result of the evidence submitted the committee adopted the following report, written by Mr. Milliken: "The truth is, no man can truthfully say that he has had more to do in the formation of this breed than another. It was the result of the labors of many. It grew out of the introduction of the China hog by the Shakers of Union Village, the crossing with the Russian and Byfield, and the subsequent crossing with the Berkshire, and then with the Irish Grazer. After 1841 or '42 these breeds ceased to exist in Butler or Warren counties, and have had nothing to do with the breed for the past thirty-four years."

The characteristics of the breed adopted at that time were: "Good length, short legs; broad, straight, backs; deep sides; flanks well down on the legs, very broad, full, square hams and shoulders; drooping ears; short heads, wide between the eyes, of spotted or dark color; are hardy, vigorous and prolific, and when fat are perfect models all over, pre-eminently combining the excellence of large and small breeds."

Among the early breeders were Messrs. Moore and Magie, and the attempt was made to name the breed either Moore or Magie. In addition to these two names, it had been variously known as the Dick's Creek, Gregory's Creek, Shaker, Union Village, Great Western, Miami Valley, Butler county and Warren county hog.

The question of name was bitterly fought out at the convention. The name of Poland and China had grown largely into favor, but many claimed the breed had in no way been derived from a Poland stock, and should not therefore be so called; they even doubted the existence of a Poland hog. Others as stoutly maintained there had been in existence a large dark-colored, short-legged hog, with spots, known as the Polish or Poland hog, and that this hog had been a part of the basis of the Poland-China. It is now conceded that the existence of this breed has never been proved. It seems that a Poland, Major Asher, had some swine purchased of the Shaker colony. He sold a boar to Daniel Nelson or Gregory Creek, who referred to them as the Poland hog, on account of Mr. Asher's nationality. This may have given rise to the belief of the existence of a breed of Poland hogs. The committee decided that in view of the prevalence of the words Poland and China applied to the breed, it would be advisable to retain the words in the form Poland-China, even though the word Poland was a misnomer, and in accordance that name was adopted by the convention.

The characteristics adopted at that time have been retained, modified from time to time by changing conditions. Up to a comparatively recent time the tendency has been, in too many cases, to produce a too highly refined hog of the show ring type, that would and could not produce as favorable results in the feed lot as it should. The result is that at present many breeders are producing a big, heavy, "mastodon" type of hog, among which weights of 900 to 1,200 lbs. are often reported. While, doubtless, the tendency to the large hog may and is, in some cases, being overcome the effect of increasing the ruggedness and stamina of the breed cannot but be beneficial.

The first registry association of the breed was formed in 1878, and the breed is now represented by at least a half dozen registry associations.

The breed is characterized by a short, wide head, full cheeks, high forehead and a slightly dished, smooth face. The eyes are bright and clear of surrounding wrinkles. The ears are small, thin, soft, and silky, pointing slightly forward, the fore part drooping gracefully. The neck is wide, deep and slightly arched, while the jaw is broad, deep and smooth, extending far back and downward. The back should be straight or slightly arched, while the shoulders, back, sides and hams are broad, deep and very smooth. They should have the same width throughout, and the ribs should be so well sprung and the sides so nicely filled that a straight edge will touch all the way from the point of the ham to the point of the shoulder. The belly and flank should be wide, full and nearly on a straight line, while the chest should extend some distance in front of the fore legs. The buttocks should be large and full, should project beyond and come down to, and fill full between the hocks. The coat should be straight and smooth, of black color or with white in face or lower jaw, and on the feet and tip of the tail, and a few clear white spots on the body are not objectionable. Boars of two years should weigh not less than 500 lbs. and sows not less than 450 lbs. In style they are vigorous, easy and graceful, and as a rule, very gentle and easily handled.

Such, in general, is the outline of the breed of swine that at present outnumber any other breed in the United States. They are especially adapted to the corn belt, but they do well under any conditions that produce food enough to insure quick growth. They mature early and at almost any age, graze well and are free feeders and easy keepers. The meat is excellent in quality, producing much lard and little bacon. They cross admirably on any breed lacking compactness and early maturity. They are not the most prolific breeders, because in too many cases the continued corn diet has reduced their stamina and powers as breeders.

The position of the breed in the minds of the producers of a great quantity of the pork in the United States is very high, and is best summed up in the words of Dr. A. J. Chase in his book, "The Hog," and by F. D. Coburn in "Swine Husbandry."

Dr. Chase says: "If I were on a small farm and fattened but few hogs annually, or near a good market where fat pigs produce a good price the year around, we should not keep the Poland-Chinas. But for a farmer raising and fattening twenty to a hundred head or more, we believe they have no superior. In saying



**FIRE that will melt Iron-**

**won't burn this ROOFING**

The flame of a powerful blow-torch—which is intense enough to even melt iron—will not burn J-M Asbestos Ready Roofing when held on *one spot* for nearly an hour. Nor will it set fire to boards underneath. This has been proven by impartial tests made by Fire Chiefs and City Council representatives of many large cities.

J-M Asbestos Roofing is absolutely fire-proof because its base consists of several layers of pure Asbestos Felt. And Asbestos, you know, is the fire-proof, practically indestructible, mineral used in gas grates, stove mats, theatre curtains, etc.

These layers of Asbestos (stone) Felt are firmly cemented together with genuine Trinidad Lake Asphalt—that wonderful mineral cement which, in asphalt pavements, stands the grinding of wheels and pounding of hoofs for thirty to forty years.

Thus, J-M Asbestos Roofing is composed of *all minerals*. Not a particle of perishable material in

## J-M ASBESTOS ROOFING

Because of this mineral or stone construction, J-M Asbestos Roofing is also rust-proof, rot-proof and acid-proof. And, like all stone, it never needs painting or coating.

No other ready roofing gives a building such absolute fire protection. None other lasts so long with so little attention. J-M Roofing is still in good condition on many buildings after nearly a quarter of a century of service.

Our nearest Branch will supply you

with J-M Asbestos Roofing if not obtainable at your dealer's—also apply it, if desired.

### SEND FOR THIS ODD STONE

We want to send you a free sample, just as it comes from our mines, of the curious Asbestos Rock of which this roofing is made. We want you to see for yourself that its long, silky, pliable fibres will not burn when held in fire.

Write our nearest Branch now, and we'll also send our handsomely illustrated Book No. J-40

### H. W. JOHNS-MANVILLE CO.

BALTIMORE	CLEVELAND	ASBESTOS	NEW ORLEANS	SAN FRANCISCO
BOSTON	DALLAS		NEW YORK	SEATTLE
BUFFALO	DETROIT		PHILADELPHIA	ST. LOUIS
CHICAGO	KANSAS CITY		PITTSBURG	1360
For Canada:—THE CANADIAN H. W. JOHNS-MANVILLE CO., LTD.				
Toronto, Ont.	Montreal, Que.	Winnipeg, Man.	Vancouver, B. C.	



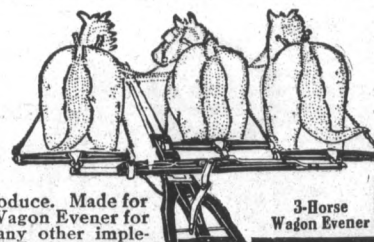
**WILLIAMS GUARANTEED QUALITY**

A good way to get the best in harness is to buy Williams' Guaranteed Quality. Nothing but the best bears this label—the best in leather, the best in trimmings, the best workmanship, the best service, the best value. And comparing what you pay with what you get, the price is the lowest.

The above Double Farm Harness is our No. 10F35607. Bridles,  $\frac{1}{2}$  inch—Lines, 1 inch wide, 20 feet long—Traces,  $\frac{1}{2}$  inches, three rows of stitching, with heel chain—Breeching, heavy—Double Hip Straps, 1 inch—Brest Straps and Martingales,  $1\frac{1}{2}$  inches. **\$38.78**  
Price, without collars.....

Our special Harness Catalog fully describes more than seventy different patterns in Williams' Guaranteed Quality Harness; also saddles and saddlery goods of every kind. Free for the asking. You need this book if you want harness of quality.

**Sears, Roebuck and Co.**  
Chicago, Illinois

**Heider Eveners**

Ask Your Dealer

Are the best that skill and brains can produce. Made for 2, 3, 4, 5 and 6 horses. HEIDER 3-horse Wagon Evener for wagon, manure spreader, grain drill or any other implement with pole. HEIDER 4-horse Plow Evener works 4 horses abreast on gang, sulky or disc plow, 1 horse in furrow, 3 on land. No side draft: all horses pull equal. We make Clevises to attach our Eveners to all plows. **ASK YOUR DEALER for HEIDER EVENERS;** if he can't supply you, write at once; we will tell you where and how to get them. Let us prove to you the many points of merit, why you should accept no other kind, and insist on getting **HEIDER EVENERS** if you want the best. We also make doubletrees, singletrees, neck-yokes, etc. **HEIDER MFG. CO., 174 S. Main St., Carroll, Ia.**

3-Horse Wagon Evener

4-Horse Plow Evener



this we do not forget the claims of the Berkshires, Cheshires and other breeds. They have their place and their merits and none appreciate them more than do we; but years of breeding have proved what we have stated, that the Poland-China is best adapted to the majority of hog raisers." Also, Mr. Coburn voiced the sentiments of many of the American pork producers when he wrote, "Controversies as to the precise crosses, by whom and under what circumstances they were made forty years ago to form the origin of the Poland-China breed of hogs may be of interest to a few; but what is vastly more important to millions of people is the fact that there has been produced a race of swine now bearing that name, that many practical and intelligent men consider the best pork making machines known, in fact, nearer what the farmers of the great west need than any other single breed in existence."

Mason Co.

J. H. TIBBS.

#### THE CARE OF MARES AND COWS AT FOALING AND CALVING TIME.

Every pregnant mare should have outdoor air and exercise, she will have less trouble at foaling time if she does light work up to within a few days of foaling. She should do no very heavy pulling, or fast road work during the last two or three months. It is well to avoid driving her on slippery roads; she should be well fed on food that is not too fattening, oats, bran, roots and mixed hay is the best. Cows should also have daily exercise, plenty of fresh air, fed nourishing, but not too fattening food. The bowels of both mares and cows should be open and active at foaling and calving time. If the bowels are constive the act of parturition is always more difficult than if they are loose. During the winter months when mares are foaling they should be kept in a roomy box stall, well bedded with clean straw, fresh air should be let in and the foul air allowed to escape. A damp underground stable is not a proper place for her. When she foals the temperature of stable should be not lower than 50 or 55 degrees Fahrenheit or warmer. However, it is not necessary to keep cows quite as warm as mares; the calf resists cold better than the colt and does not chill so readily. I am a great believer in keeping young animals warm and when it is not done with both mare, cow, colt and calf sickness and sometimes death follows. It is needless for me to say that a fluid comes from the teats of mares a few days before foaling and a wax-like substance forms in end of teat 24 hours before she foals. The natural way for a foal or calf to come is fore feet first with nose between the knees. The navel-string (umbilical cord) which connects the foal to the membranes, ruptures when the colt falls to the ground, or when the mare rises to her feet; the mare usually expels the afterbirth a few minutes later. The afterbirth is more likely to be retained by cows than by mares. If the cord does not break, soak a clean piece of silk or linen cord in one part carbolic acid and ten parts glycerine or olive oil and tie cord close to belly, cutting it off an inch from belly and leave the string on until it sloughs off. The navel of every colt and calf should be treated with healing remedies. Apply one part carbolic acid and 30 parts water, or apply one part bichloride of mercury, 1,000 parts water, or one part coal tar disinfectant and 20 parts water, or apply boric acid. These applications should be made once a day.

When it becomes necessary to assist either a mare or cow during parturition, it is important that you ascertain the position of the foetus, examine to see if both fore feet are coming first or both hind feet, which is sometimes the case, and be especially particular that it is not a fore foot and a hind one and if so the foetus should be forced back into uterus and placed in a normal position. Clean hands, clean cords and clean instruments should be used. If the animal suffers much, control the pain by giving from half to one ounce doses of chloral hydrate in a pint or two of tepid water, or give an ounce or two of laudanum with a teaspoonful or more of fluid extract of belladonna added. It may be necessary to repeat these doses every thirty or sixty minutes before the mare or cow is brought under control. The nails on operator's hand should be cut short and made as smooth as possible. This is done to avoid wounding the uterus and vagina. If the placenta (afterbirth) does not come away in mares at once it should be taken away and when it does not come away from

cows within twelve or forty-eight hours, it should be taken away. Hot cloths applied to the loin of an animal that does not clean is helpful, and by giving one-half pint of raw linseed oil and a teaspoonful of fluid extract of belladonna it will assist. When taking away the afterbirth oil the hands with carbolized oil and pass the hand gently between the womb and placenta and break up the attachments and adhesions with as little harshness as possible. If much bleeding takes place give one ounce doses of fluid extract of ergot and repeat the dose every thirty minutes until the bleeding ceases—or checks; also apply wet cloths to loins and apply cold water to external generative organs. Of course, this treatment should be discontinued as soon as the desired effect is produced. A few days before and for several days after foaling or calving the mare and cow should be prevented from drinking large quantities of very cold water at a time. Better take the cold chill off by adding some warm water. It is always a mistake to expose a mare or cow to cold rain storms or to keep them in a very cold air soon after foaling or calving. Whenever either the mare or cow has a vaginal discharge following parturition they should be treated and the treatment kept up until a recovery takes place. If they are treated they are likely to prove uncertain breeders and perhaps become barren. One of the least expensive and most satisfactory douches is made by dissolving one dram permanganate potash in one gallon tepid water or dissolve one ounce carbolic acid, four ounces glycerine in a gallon or two of water and wash out uterus and vagina once or twice a day, using a small rubber tube, (half-inch), with tin funnel. It is always good practice to give mares and cows after foaling and calving a dessertspoonful of powdered saltpeter at a dose night and morning for a few days and it is perhaps needless for me to say that they should have good care and a comfortable bed for at least a week or ten days. The brood mare and cow are too often treated harshly and cruelly during parturition, causing their owners financial loss.

Ohio.

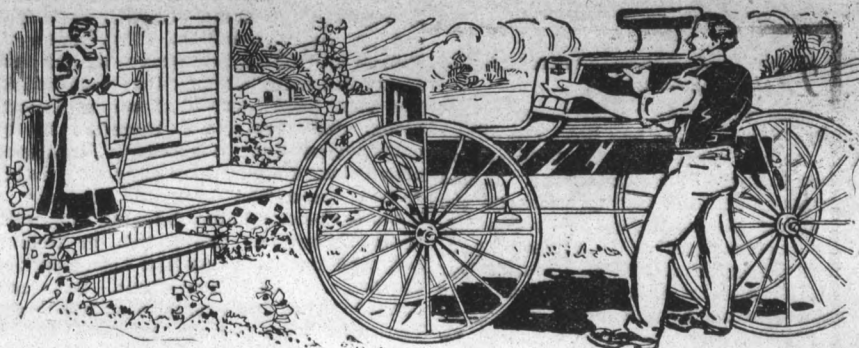
DR. W. C. FAIR.

#### CLIPPING THE FARM HORSES.

With the approach of spring and spring work, the subject of clipping the farm horses is one which should be well considered by every farmer. Where horses have been so fed and cared for during the winter, that their coats are comparatively short and their muscles in good condition, clipping is not so essential as where the horses have run in the yard or have been wintered on coarse feeds with little work, and as a consequence have long coats and soft muscles. When in this condition the horses will perspire freely when put to hard work, their long and heavy hair will become saturated with sweat, and they will remain uncomfortable for hours when put in the stable and are very likely to take cold from the effect of this treatment, with more or less serious results. But if the horses are clipped before being put to heavy work, they will not suffer from excessive perspiration, and when put in the stable after a hard day's work and covered with a warm stable blanket, will be comfortable and in no danger of taking cold.

Aside from the mere question of health, clipping will pay on account of the saving in the disagreeable labor of grooming a horse with a heavy coat during the season when the hair is shedding off. This is a disagreeable task at best, and besides it is a great annoyance to have the loose hairs flying in one's face or covering his clothing when driving or working a horse that is shedding freely. The writer has passed the experimental stage in the clipping of horses, and is firmly convinced that it pays from any point of view that may be taken. It is inexpensive, whether done at home with the regular help or by some one with experience who is employed for the purpose. But experience is not necessary to the doing of a fairly good job of clipping. One farmer of the writers acquaintance who does his own clipping has adopted the plan of clipping the body and leaving the hair on the legs. While this does not make a very good looking job, it serves a very good purpose so far as the comfort of the horse is concerned, and is much better than not clipping at all, and there is perhaps some merit in his argument that it is better for the horse to leave the natural protection on the legs, while the body is protected in the stable by an artificial covering.

A. R. F.



## "O Wife! See How I Have Fixed Up the Old Buggy. It Looks Just Like New."

Come here and see what I have done to this old buggy with a little time and a little Jap-a-lac. It looks just as good as the day we got it. I had about made up my mind that I would have to send it to town and get the painter to go all over it, then I read that advertisement of The Glidden Varnish Co., telling about the wonderful things you could do with Jap-a-lac.

Last week when I was in town I stopped in at the store and got a can. I didn't half believe myself that it would do all the things that they said it would, but it certainly does and I've saved a good big price on this job alone. I will finish up here just in a few minutes, just when I get the spokes and the wheels done and then I am going to start in on the harness. You see this is a stain, varnish and enamel combined. You simply spread it on with a brush and in a few minutes it dries hard and leaves a fine, glossy finish.

The book that came with it says that it is fine, too, for making floors look like new, restoring linoleum and oilcloth, wainscoting rooms, recoating worn-out tin and zinc bath tubs, for coating your pantry shelves and kitchen tables and for restoring old, worn out furniture. Next time I am up in town I am going to get you some too, as some of our things are getting to look a little shabby, and Jap-a-lac comes in 18 different colors besides the natural, which is a clear finish, so that we can have any shade we want.

No, there is nothing else like it that I know of. The book says there are a lot of imitations, but no substitute, and I guess it is right. They sell millions and millions of cans of it every year, so there must be something in their claim.

# JAPALAC

Made in 18 colors  
and Natural (clear)  
Renews everything from cellar to garret

Jap-a-lac is for sale by at least one store in every town. It wears forever. Look for the name "Glidden" as well as for the name "Jap-a-lac." There is no substitute. Send today for free book telling of its many uses. All sizes 20 cents to \$3.00.

**The Glidden Varnish Company**  
CLEVELAND, OHIO. TORONTO, ONT.

## It Tells at Market Time

Cattle and hogs fed Buckeye Feeding Molasses, take Blue Ribbons at the county fairs. Your sheep will produce more wool and a finer grade. Your horses will look slicker, pull more and not tire so easily. Your feeding bills will be reduced. Your veterinary bills will be wiped out. The digestive organs and intestines of all your animals will be in such good order that all danger of heaves, worms, colic, cholera, dysentery will be entirely removed.

# Buckeye

## Feeding Molasses

Not only gives the stock a keener appetite, but enables them to digest and assimilate their food, so that the same amount of feed produces a larger amount of flesh and blood. It means more milk, more beef; more lambs, more mutton; more pork, more shoats. Every hog a big hog—no runts. Your beef steers will weigh from ten to twenty per cent higher and bring from ten to twenty per cent more in cash. Your pork will be sweeter and finer grain.

### Prove This at Our Risk

To prove that mixing Buckeye Feeding Molasses with the feed will give you \$1.10 or more in results for every dollar of feeding cost, send us \$7.50 for 50-gallon barrel, \$5.40 for 30-gallon barrel or \$2.50 for a 10-gallon can and feed it 60 days. If you are not then perfectly satisfied return what is left and we will refund all you have paid. Send a trial order today.

**W. H. EDGAR & SON, Sugar Refiners**  
542 Lafayette Boulevard, DETROIT, MICH.

**When you are Writing to Advertisers  
please Mention the Michigan Farmer**



**Don't  
Let a  
Skin  
Disease  
Spoil Your  
Horse**

If he rubs mane, tail or other parts you have reason to suspect mange or other parasitic skin disease and it is time to administer the remedy.

## DR. HESS DIP and Disinfectant

is the horseman's mainstay when it's necessary to fight disease in the stable. This is a non-irritating and harmless preparation, sure death to infectious germs, skin parasites, lice, sheep ticks, etc.

In proper solution, it prevents and cures hog cholera, infectious pneumonia, sheep scab, foot rot, and lice on cattle, swine and poultry.

Nothing equals it as a disinfectant for pens, stables, outbuildings, and places where decay may breed disease. Write for booklet.

DR. HESS & CLARK, Ashland, Ohio.

Horse Owners Should Use  
GOMBAULT'S

## Caustic Balsam

The Great French Veterinary Remedy.  
A SAFE, SPEEDY AND  
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 tablespoonful 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 CO., Cleveland, Ohio**

### New Scientific No. 20 Mill

Heavy steel legs and steel  
hopper. Most efficient  
and strongest small  
power mill ever built.  
Will grind cob corn,  
shelled corn, oats and  
all other small grains to  
any desired grade, from  
hominy feed to meal.

**Fully Guaranteed**  
Equipped with flywheel,  
cold rolled steel shaft,  
end thrust ball bearing  
and 8-inch high carbon  
grinding plates.  
Two sets of plates fur-  
nished with each mill.  
Adapted for use in any locality. We stand back of  
every claim we make for it. Write for descriptive catalog.

**THE FOOS MFG. CO., Box 217 Springfield, Ohio**

## THE PROOF OF THE HAY PRESS

Is its Capacity—Earning Power.  
**SPENCER HAY PRESS** Catalogues make great  
and definite claims proven by the press in action  
or no sale. Nature of contract protects you. Covers  
every claim by actual figures. More tons per hour  
guaranteed than by any other  
horse press, same size bale.  
Send for new Catalogue f  
**J. A. SPENCER**  
Dwight, Illinois



### HARVEY BOLSTER SPRINGS

Soon save their cost. Make every wagon a spring  
wagon, therefore fruit, vegetables, eggs, etc.,  
bring more money. Ask for special proposition.  
Harvey Spring Co., 752-17th St., Racine, Wis.



GUARANTEED

### HYGIENE OF THE HORSE'S FOOT.

The horse's feet should receive special attention, for unless they are in a good healthy condition the animal's usefulness is in a large measure destroyed.

Many horses are so vicious or irritable that they will not allow anyone to examine their feet, to say nothing of cleaning, trimming or shoeing them.

The colt in the yard or at pasture should have its feet cared for as closely as the matured animal, in order that he may grow to maturity with feet in a healthy condition. The foot of the colt grows so rapidly that the wall will often project far below the sole and cause it to split and form quarter and toe cracks. It is better to use a pair of hoof cutters and rasp, and have the feet pared evenly and avoid unbalancing the animal.

Any horse used on the road should be shod, but the shoes ought to be changed every five or six weeks and the feet trimmed in order that the natural growth of the wall may be removed. If the shoes are improperly allowed to remain on the feet for two, three or four months, without changing them, the wall becomes excessively long and grows over the shoe. Pressure becomes too great on the sole and bars, resulting in corns, bruised soles and lameness.

A hoof hook should be included among the equipment of a well regulated stable. The feet of the horse should be cleaned every morning before he leaves the stable. The hoof hook will remove all litter, pebbles, or anything that may have become lodged in the foot. This precaution may prevent injury to the sole or sensitive structures of the foot. If the feet become very dry, pack them daily for a week with some form of clay. Then apply lard to the wall, to which may be added pine tar and rosin. This ointment holds the moisture in the feet and prevents further evaporation.

Colorado Agl. Col. C. L. BARNES.

### LIVE STOCK NOTES.

Farmers engaged in fattening live stock have been highly favored during the present winter by the remarkably mild, dry weather, and great savings have been effected in feed bills, much less corn, oats, hay and other feeds having been required. One result is that much more hay is now available for marketing than would have seemed possible early in the season, and unexpected country shipments have brought about marked reductions in prices of both timothy and prairie hay. Timothy hay now sells in the Chicago market in wholesale amounts at \$11.50 to \$18 per ton for the poorest to the choicest grade, while prairie hay is selling at \$6 to \$14.50. Prairie hay is shipped there from Indiana, Wisconsin, Iowa, Minnesota, Nebraska, the Dakotas, Kansas and Oklahoma, the two last named states furnishing the best lots. Corn, too, has sold at greatly reduced prices, while oats have dropped to the lowest prices seen in years. In most sections farmers are feeding as much of their corn as is possible to stock, but many farmers are unable to obtain as many hogs as they would like to feed, having foolishly marketed their brood sows some time ago because they were offered extra high prices; while many farmers are afraid to risk paying ruling high prices for stock and feeder cattle, some trying stock heifers, which are much cheaper.

Cattle interests in the southwest are undergoing a remarkable transformation, and farmers are plowing up enormous tracts of former grazing lands. On the other hand, cattlemen are going in and occupying lands formerly used by negro growers of cotton in Oklahoma. But, on the whole, the cattle grazing area is being greatly lowered, and this process is going on all the time, both in the southwest and northwest. Ultimately, no doubt, the new settlers will come to realize the importance of engaging in raising cattle, hogs, sheep and horses, as well as hens and other poultry, to say nothing of dairy cattle, but time is required to bring all this about, and in the meanwhile there is bound to be a continuance of the present shortage of stocker and feeder cattle. The time has arrived for farmers to breed and raise their own cattle, and advanced farmers are already doing this, some of them breeding and finishing off fancy little yearling heaves on the highest-priced farms of Illinois.

Charles O. Robinson, of Chicago, widely known to the live stock trade, says that in all his thirty-five years' experience in the cattle business, he has never known a better time to begin raising more and better stocker and feeder cattle. There are inducements on every hand. Take any one of the four popular beef grades—Shorthorns, Herefords, Angus or Gallo-ways—and grow them into the stocker or feeder age, one will be well repaid for his investment, provided he is well equipped for handling cattle.

Lew W. Cochran, of Indiana, who is known to Michigan Farmer readers through our advertising columns, recently returned from Europe with a new importation of Percheron, Shire and Belgian stallions. Mr. Cochran has also announced that he will have another importation in his barns early in March, which will afford prospective buyers as fine a selection in these three leading draft breeds as is to be found in America.

## 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 some one else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

**Lump Jaw.**—One of my cows has a suppurating face, the result of a hard, bony formation on her face. What had I better apply? F. E. D., Climax, Mich.—Apply tincture iodine to bunch and open sore once a day and give her 2 drs. iodide potassium at a dose in feed twice a day for 20 or 30 days.

**Sore Ear.**—Abscess.—My 12-year-old ox has a swelling at one ear which causes him considerable pain. I have thought perhaps that his blood was in bad condition. I also have a cow that has a large bunch on her side, caused, perhaps, by being hooked. P. M., Shelby, Mich.—Apply spirits of camphor to bunches and as soon as they soften, open them. The abscesses should be washed out with 1 part carbolic acid and 30 parts water twice daily. Give each of them a teaspoonful of powdered sulphate of iron, a teaspoonful sulphur, a teaspoonful of fenugreek and a tablespoonful of cooking soda at a dose in feed to each of them two or three times a day.

**Sprained Shoulder.**—While walking on ice some six weeks ago my driving horse slipped and fell and must have sprained his shoulder. I applied some liniment; it did him no good and our loyal Vet. prescribed another kind of liniment and that has not helped him. His shoulder is not sweeney, but I am inclined to believe the trouble is deep seated. L. F., Monroe, Mich.—Clip hair off shoulder and apply cerate of cantharides, this will blister and you may find it necessary to repeat the applications every week.

**Torpid Liver.**—Indigestion.—I have a 6-year-old horse that is very thin; he acts dull and his appetite is not always very good. I find he is more inclined to gnaw wood than my other horses. F. J. R., Brighton, Mich.—Give him 20 grs. calomel every three days for three weeks. This will stimulate his liver into action; also give a tablespoonful of the following compound powder: Powdered sulphate iron, bicarbonate soda, powdered charcoal and ground nux vomica, equal parts by weight and mix thoroughly. He should be fed some roots.

**Brittle Hoofs.**—I have a horse that has very brittle hoofs, shoes do not remain on him for any great length of time. This horse appears to be in perfect health in other ways. G. H. B., Quincy, Mich.—Apply one part coal tar disinfectant and six parts vaseline to hoofs once or twice a day.

**Bone Spavin.**—I have a horse that has a bone spavin and would like to know the best treatment for same. He is not nearly as lame as some horses are from a spavin. D. C., Wilmont, Mich.—Always keep in mind that there are some cases of spavining that are not curable, but by giving him rest and applying repeated blisters made by mixing one part red iodide mercury, one part cerate of cantharides and six parts lard every week or ten days, it will have a good effect. If he has been lame very long and is an aged horse you had better have him fired.

**Navicular Disease.**—I enjoy reading the veterinary department very much and notice that you consider navicular joint lameness incurable. Thinking perhaps it might interest your readers I mention the following case which recovered: A horse driven on a grocery wagon in Cincinnati, O., was treated by pouring oil of spike on the bottom of horse's foot, the foot being held up until it soaked into sole thoroughly and this horse recovered from his lameness. I only suggest this, thinking, perhaps, that it might be a remedy for navicular lameness. A. G., Union City, Mich.—I am much obliged to you for this information. However, most cases of chronic navicular lameness are incurable. I have treated hundreds of horses successfully that had coffin joint lameness, but when the ailment becomes chronic, having lasted for months or years, most of them only partially recovered.

**Lymphangitis.**—My horse was put in stable all right in the evening; the next morning one hind leg was stiff and swollen. I applied some liniment to inside of thigh, and washed out sheath, which was not very foul. The swelling has now settled below hock, but gone out of thigh. This horse acts a little dull and dumpy. D. A., Montague, Mich.—Give him 30 grs. calomel at a dose in feed daily for three days and apply equal parts extract of witch hazel, alcohol and water to lower part of leg twice a day. Also bandage leg in cotton. He should be exercised every day and if this treatment fails give him 2 drs. iodide potassium at a dose twice a day.

**Irritation of Ovaries.**—Barrenness.—I have a ten-year-old Jersey cow that came fresh Nov 1, 1910; since then she has been in heat every week and fails to get with calf. What shall I give her? G. J. W., Byron Center, Mich.—Give your cow 1 dr. fluid extract stramonium and a teaspoonful powdered nitrate of potash at a dose in feed three times a day. It is possible that she will have to be spayed and fattened for butcher as she may never breed.



## Free Write Today.

We have issued an attractive book on hay loaders, fully illustrated, including several illustrations in colors.

We will send a copy of it free to every farmer who will write for it.

It is full of Hay Loader information that will interest every farmer.

It shows why the "GEARLESS" is the cheapest loader to own, the cheapest to operate, (but one man required). It shows why the "GEARLESS" has the lightest draft, simplest construction, will outlast three of other makes.

We want every farmer to have this free book. Write for it today. A postal will bring it.

**LACROSSE HAY TOOL CO.,**  
32nd Street. Chicago Heights, Illinois



**Time and Hardest Work Can't Bring It Back!**  
Lisbon, Ohio, Oct. 4, 1910. — I want to say there is no use of anyone driving a lame horse if they will just try "Save-The-Horse." I had one so lame I could not use him. After using one bottle of "Save-The-Horse" he has never taken a lame step, and I drive him every day in my business, which is serving papers over the hilliest county in the state. You can use this with pleasure, as this is absolutely a voluntary testimonial.  
W. C. DAVIDSON, Sheriff of Col. Co.

**E. C. MESSIER,**  
Civil Engineer. Real Estate and Insurance,  
1008 Elm Street, Manchester, N. H., Oct. 22, 1910.

I sent \$5 for "Save-The-Horse" to cure a Bone Spavin. At the time he was not worth \$1; before he had the Spavin I was offered \$600. Four veterinarians told me he was incurable, so I felt blue, as you might believe. Since one month after treating him with "Save-The-Horse" he has not taken a lame step and I have driven him every day, and even thirty miles the same day. "Save-The-Horse" has done more than four doctors in a year. Now it seems exaggerated, but anyone in doubt can call at the neighbors to prove what I say, and furthermore, the horse can give them a ride, and probably one of the best in their lifetime. I cannot say enough to praise your remedy.  
E. C. MESSIER.

**\$5.00 a Bottle With Signed GUARANTEE**

A binding CONTRACT to protect purchaser absolutely in treating and curing any case of Bone and Bog Spavin, Thorough pin, Ring-bone (except low), Curb, Splint, Capped Hock, Windpuff, Shoebone, Injured Tendons and all Lameness. No scar or loss of hair. Horse works as usual. Send for copy of contract, booklet on all lameness and letters on every kind of case.

At all druggists and dealers, or express paid.  
**Troy Chemical Co. 20 Com'l Ave. Binghamton, N.Y.**

## NEWTON'S HEAVE COUGH, DISTEMPER AND INDIGESTION CURE

The first or second \$1.00 can cures Heaves. The third can is guaranteed to cure or money refunded.



**Makes the Horse Strong and Willing to Work.**  
**CURES HEAVES BY CORRECTING THE CAUSE** which is Indigestion. Send for booklet "Horse Troubles." Explains fully about the Wind, Throat, Stomach and Blood. Newton's Sassafor colic, adult or mare in foal.

**A GRAND CONDITIONER AND WORM EXPELLER**  
\$1.00 a can at dealers, or express prepaid  
**THE NEWTON REMEDY CO., Toledo, Ohio**

## MINERAL HEAVE REMEDY

**NEGLIGENT  
Will Ruin  
Your Horse**  
Send to day for only  
**PERMANENT  
CURE**

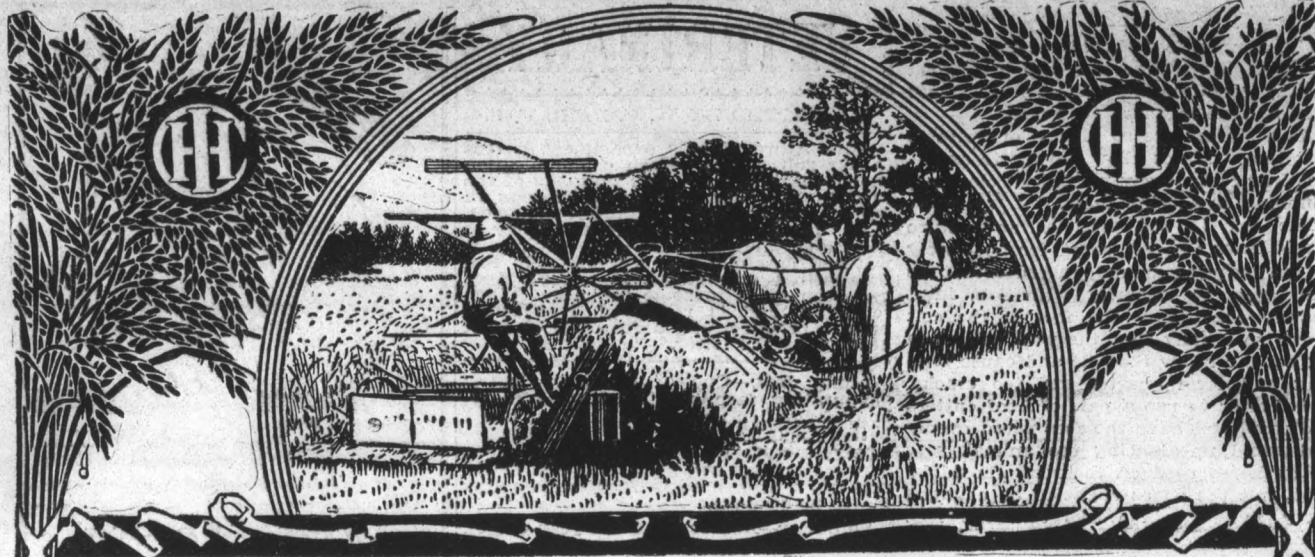
**\$3 PACKAGE**  
will cure any case or  
money refunded.  
**\$1 PACKAGE**  
cures ordinary cases.  
Postpaid on receipt of  
price. Agents Wanted.  
Write for descriptive booklet.

Mineral Heave Remedy Co., 463 Fourth Ave., Pittsburg, Pa.

**CURE GUARANTEED.**  
Dr. Frank's Remedy Co., Detroit, Mich., will tell you how FREE. Write postal today.

## HEAVES





## FORESIGHT IN FARMING

In every business, foresight plays a vitally important part. Lack of it encourages failure, while presence of it furthers success. And so it is in farming, for farming is now the world's biggest business.

Foresight simply means the ability to see things beyond today, or tomorrow, or next week. It means thinking about this year's harvest—now.

Thousands of farmers are aptly demonstrating their foresight by looking over their present equipment. Those who are doubtful of the efficiency of their machines; who are not sure they will work uninterruptedly through another season are getting new machines. They know that they would need new machines in a year or two anyway. They have foresight enough to see that it does not pay to take chances of delays from breakdowns when the grain is ripe.

The same foresight that prompts these up-to-date farmers to select harvesting machines now, is also prompting them to select I H C Harvesting Machines. They know that these machines are right. The test of time has proved it. They have won their way to the top by their work in millions of harvest fields throughout the world.

### Champion McCormick Osborne Deering Milwaukee Plano

All six are uniform in quality—each the best that long experience, correct principles, high grade materials, and skilled workmanship can produce.

#### I H C Service Bureau

The Bureau is a center where the best ways of doing things on the farm, and data relating to its development, are collected and distributed free to every one interested in agriculture. Every available source of information will be used in answering questions on all farm subjects. If questions are sent to the I H C Service Bureau they will receive prompt attention.

If ever necessary, exact duplicates of any part of each machine may be secured at your dealer's promptly. With any machine in the I H C line you can be sure of the harvest, and your profits.

It is the I H C resources—available ore mines, steel mills, timber lands, and saw mills, and the unequalled buying power, and output and manufacturing facilities—that insure the highest degree of efficiency in every I H C machine turned out.

Summing it all up in a "nutshell"—when you buy an I H C Harvesting Machine you are backed by many years of experience, by an organization that has the reputation of fair and honest dealing with farmers everywhere—a reputation that in itself is assurance of the highest possible quality.

Every day now brings you nearer and nearer to the real work. Every day from now on you will be busier and busier. Why not go to the I H C local dealer now—today? See the I H C harvesting machine that is best adapted to your use. Let the dealer explain all the facts to you. Then make up your mind to be ready for the harvest with the best equipment that money can buy. Do not overlook the very complete lines of haying machines and tools.

Be careful of your binder twine, too. Whether you want Sisal or Manila get the best. You will find that the I H C brands—Champion, McCormick, Osborne, Deering, Milwaukee, Plano, or International—in Sisal, Standard, Manila, or Pure Manila—are absolutely dependable.

Be sure you see the I H C local dealer. But if not convenient, mail us a request for any of the I H C catalogues and for any special information you desire.

### INTERNATIONAL HARVESTER COMPANY OF AMERICA

(Incorporated)

CHICAGO USA

### Buy "Go-Gall" Try "Go-Gall" Then if it don't work Condemn "Go-Gall"

We absolutely guarantee "Go-Gall" to cure gall sores, collar-boils, scratches, wire cuts and all sores and skin eruptions on man or beast. "Go-Gall" is a fine remedy to have in the house for the children's cuts and skin eruptions as it removes the pain in a few minutes; it will heal quickly and remove all danger of blood poisoning. One box of "Go-Gall" will go farther and do more good than several boxes of ordinary remedies. "Go-Gall" is a powder and any doctor will tell you that a powder is necessary to heal as salve or liquid keeps the wound too soft, therefore it cannot heal. If you cannot buy "Go-Gall" at your druggist we will mail you same prepaid on receipt of price. Reference—Peru National Bank, Peru, Illinois.

ACME REMEDY CO., Peru, Illinois.

Remember if you are not satisfied we return your money, so order to-day and give us a trial.

#### HEAVES CURED

An absolutely guaranteed remedy for Heaves, Coughs, Distemper, Indigestion and all Lung, Throat and Wind troubles; a Blood Purifier and Conditioner. 50c at dealers. 60c by mail. One or two packages most always cure; three or four packages—cure guaranteed or money back. There is no remedy in the world that will cure so quickly and permanently at so small a cost as Prussian Heave Powder—the recognized Heave Cure all over the country for twenty-two years. 172 page illustrated Farmers', Stockmen's and Poultrymen's Book Free.



SOUND



PRUSSIAN REMEDY CO. St. Paul, Minn.

YOUNG MEN WANTED TO LEARN VETERINARY profession. Catalogue free. GRAND RAPIDS VETERINARY COLLEGE, Dep. H. Grand Rapids, Mich.

#### CLOSING OUT SALE

of Poland-China Hogs, and high grade Jersey Cattle. **TUESDAY, MARCH 14th.** This herd has quality and the best of breeding. 30 head—20 bred sows; 20 head of cattle. Visitors taken care of at the Harmon House at our expense. R. W. MILLS, Saline, Mich.

#### BREEDERS' DIRECTORY.

##### CATTLE.

#### ABERDEEN-ANGUS.

Herd, consisting of Trojan, Ericas, Blackbirds and Prides, only, is headed by Egerton W. a Trojan Erica, by Black Woodlawn, sire of the Grand Champion steer and bull at the International in Chicago, Dec., 1910. He is assisted by Undulata Blackbird Ito. **WOODCOTE STOCK FARM, Ionia, Mich.**

**AYRSHIRES**—High type of Dairy animal. Young bulls and bull calves for sale. Prices low. Inquiries solicited.

**BERKSHIRE SWINE**—White and Barred Rocks, White & Buff Oringtons, White Wyandottes and Leghorns. Eggs in season 10c each. **MICHIGAN SCHOOL FOR THE DEAF, Flint, Mich.**

**Guernsey Bull Calf** Blood of Glenwood Boy of Haddon Prides, only, is headed by Egerton W. a Trojan Erica, by Black Woodlawn, sire of the Grand Champion steer and bull at the International in Chicago, Dec., 1910. He is assisted by Undulata Blackbird Ito. **WOODCOTE STOCK FARM, Ionia, Mich.**

**THE double standard Polled Durham.** Wild eyed Abotts burn. Milk strain. Grand Champion silver cup winner at 1910 Michigan State Fair. **JAS. H. HALL, Port Austin, Michigan.**

**Holsteins**—Young bulls of high quality and low prices, considering breeding. Get our descriptions. **LONG BEACH FARM, Augusta, Mich.**

#### TOP NOTCH HOLSTEINS

Top Notch registered young Holstein Bulls combining in themselves the blood of cows which now hold and have in the past held World's Records for milk and butter fat at fair prices. **MCPHERSON FARMS CO., Howell, Mich.**

**For Sale**—Choice bred registered Holstein Bulls ready for service, also younger ones. Farm near Willis, Mich. out of Detroit on Wabash. Write. **WILLIAM B. HATCH, Seabreeze, Florida.**

**ON account of pressure of work would sell my bunch of Holsteins.** 4 free cows, 4 calves, 1 yearling bull at a bargain. **E. W. FOSTER, Nearest Point, Byron, Mich.**

**DE KOL** Korndyke Bull Calf—Choice A. R. O. breeding. Splendid individual, mostly white. \$75. **COLE BROTHERS, Ypsilanti Farms, Ypsilanti, Mich.**

**Holstein Bulls**—I am going to sell 15 bulls in March. Write me as soon as you read this. I have one two years old; 3 yearlings, 5, 6 to 8 months old. The rest are younger. Will also sell a number of heifers bred, and a few good cows. Don't wait until spring work begins before you buy one of these. **L. E. CONNELL, Fayette, Ohio.**

**Holstein Friesian Cattle** Special prices on a couple yearling bulls. **W. B. JONES, Oak Grove, Michigan.**

**HOLSTEIN Foundation**—2 yearling heifers & grand-L son of Fietertje Hengervelds Count DeKol ready for service. **Hobart W. Fay, Eden, Ingham Co., Mich.**

**FOR SALE**—Holstein Bull 2 years old \$125. Bull Calves 6 months to 1 year \$50 to \$100. Bred heifers \$150 to \$200. Oldest herd in Ind. Send for Photos and Pedigrees. **W. C. JACKSON, 715 Rex St., South Bend, Ind.**

**FOR SALE**—Reg. St. Lambert Jerseys. Cows and Bulls from high producing stock. **C. A. BRISTOL, Fenton, Michigan.**

**Registered Jersey Bull**, 20 months old. Sound, sure, 425 lbs. of butter per year \$75, also six bull calves cheap. **J. C. BUTLER, PORTLAND, MICHIGAN.**

**HEREFORDS**—Both sexes and all ages for sale. Also Poland-China hogs. **ALLEN BROS, Paw Paw, Mich.**

**Register of Merit Jerseys.** Official yearly record. A fine lot of young bulls from dams with official records of 483 pounds and upwards of butter. **T. F. MARSTON, Bay City, Michigan.**

**LILLIE FARMSTEAD JERSEYS.** Vidas Signal St. L. No. 58197. **HERD BULLS** Jubilee's Foxhall, No. 82299. Bull calves sired by these great bulls, and out of splendid dairy cows, many of them in test for register of merit. Also a few heifers and heifer calves for sale. Write for description and prices. Satisfaction guaranteed, or money refunded. **COLON C. LILLIE, Coopersville, Michigan.**

**Jersey Cows** for sale. Large, rich milk producers. also 4 heifers and 2 yearling bulls. registered stock. **W. J. BROWNE, Mulliken, Mich.**

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

**Jersey Bull Calf** born April 10, 1910. Dam with go in Registry of Merit this year, gave 8224 lbs. milk as 2-yr-old. Sires Dam's record 10060 lbs. milk in 10 1/2 months. **THE MURRAY-WATERMAN CO., R. 6, Ann Arbor, Mich. Bell Phone.**

**Dairy Bred Shorthorns**—A few good bulls good as cash. **J. B. HUMMEL, Mason, Mich.**

**SHORTHORNS and POLLED DURHAMS.** Both sexes. **A. D. DeGarmo, Highland, Michigan.**

**Scotch Shorthorns**—3 young Bulls and a few cows and heifers for sale. **JOHN LESSITER'S SONS, R. No. 1, Clarkston, Mich.**

#### SHEEP.

**Hampshire** Ewes bred for March & April: registered stock; Choice individuals. **C. D. WOODBURY, Lansing, Michigan.**

**Oxford-Down Sheep** and Polled Durham cattle for sale. **J. A. DeGarmo, Mair, Mich.**

**Oxford Down Sheep**—Good Yearling Field Rams and ewes of all ages for sale. **I. R. WATERBURY, Highland, Michigan.**

**Reg. Rambouillets**—I have 100 ewes, among them also 55 ewe and ram lambs. Live 2 1/2 miles east of Morrice on G. T. Road. Address **J. Q. A. COOK.**

**INGLESIDE SHROPSHIRE**—Rams of all ages. Bred ewes, singly or in lots. **H. E. Powell, Robt. Groves, Shepherd, Ionia, Mich.**

#### SHROPSHIRE HALL STOCK FARM

Has for sale, twenty-five choice bred yearling ewes, at a low price, also a few good three and four year-old, bred ewes.

**L. S. DUNHAM & Sons, Concord, Michigan.**

#### HOGS.

**Durocs & Victorias**—Growthy Spring Boars & Gilts of choicest breeding from Prize Winners. **M. T. STORY, R. 2 1/2, Lowell, Michigan.**

**Berkshires**—Two yearling sows bred for spring farrowing. A few choice July gilts & boar pigs for sale. **A. A. Pattullo, Deckerville, Mich.**

**BERKSHIRES** Unexcelled in breeding. Selected boars, sows and gilts. Choice fall pigs. **T. V. HICKS, R. No. 11, Battle Creek, Mich.**

**DAMS BROS.** Litchfield, Mich., breeders of Imp. Chester A. White and Tamworth swine, service boars, sows bred or open, of either breed. Shorthorn Cattle, Buff Rock, Buff Wyandotte, W. Orington, Chk. all breeding stock leading winners.

**DUROC-JERSEY SWINE and HOLSTEIN FRIESIAN CATTLE.** One boar and one sow yet for sale. **E. R. CORNELL, Howell, Michigan.**

**DUROC BRED GILTS** for sale, extra good ones also one Reg. Holstein Cow 4 yrs. old and 1 heifer calf 4 mos. old. **M. A. BRAY, Okemos, (Ingham Co.) Mich.**

**DUROC-JERSEYS**—Nothing but fall gilts for sale. **CAREY U. EDMONDS, Hastings, Michigan.**

**Capitol Herd** DUROC-JERSEY Swine established 1888. One last spring gilt for sale. 1910 Gilts for sale. **J. H. Banghart, R. 5, Lansing, Mich.**

**DUROCS**—25 Bred Sows, of high quality. 10 Excellent Boars ready for service. 75 Fall Pigs both sex. Write or come and see. **J. C. BARNEY, COLDWATER, MICHIGAN.**

**IMPROVED CHESTERS**—Young boars ready for service, orders taken for sows bred for spring farrowing. Also Holstein Bull Calves of the best of breeding. **W. O. WILSON, Okemos, Mich. Both Phones.**

**O. I. C. Hogs** all ages. Sows bred. Males weighing 180 lbs. and more. **H. H. JUMP, Munith, Michigan.**

**O. I. C. Swine**—Spring, summer & fall farrowed, both sexes, breeding and type right. **Geo. P. Andrews, Dansville, Ingham Co., Mich.**

**O. I. C. Early Fall Pigs** Low prices. Only 4 bred gilts for sale. **C. J. THOMPSON, Rockford, Michigan.**

**FOR SALE—Fall Pigs and Bred Gilts** **B. M. WING & SON, Sheridan, Michigan.**

#### GREAT POLAND-CHINA HOG SALE. JANUARY 20th.

60 sows bred for spring farrow. If you want the best, attend my sale as I have the best in the state.

**WM. WAFFLE, Coldwater, Michigan.**

**Butler's Famous Wonders**—the Big Poland-Chinas that make good. They grow big, because they have been bred big for 20 years. Some great Aug. Sept., Oct., pigs, good enough for any breeder, cheap enough for any farmer. **J. C. BUTLER, Portland, Mich. Bell Phone.**

**O. I. C. SWINE**—Boars all sold. 20 young sows bred for spring farrow, for sale. **E. E. BEACH & SON, R. No. 3, Brighton, Michigan.**

**O. I. C.**—Choice Bred Sows. Boars ready for service. Glenwood Stock Farm, Zeeland, Michigan. Phone 94.

**O. I. C.**—Bred sows all sold, 1 June boar left. A few fall pigs either sex. Satisfaction guaranteed. **A. NEWMAN, R. 1, Marlette, Michigan.**

**POLAND-CHINAS**—Fall pigs either sex. Young sows, spring farrow. Write **L. W. Barnes & Son, Byron, Shiawassee Co., Mich.**

**O. I. C's For Sale**—Best quality, large growthy type, either sex, pairs not akin, some fine bred gilts, choice lot of fall pigs all ages. **OTTO B. SCHULZE, Nashville, Michigan.**

**O. I. C.**—Fall pigs either sex and one June Boar left. I am also booking orders for spring farrow. Shipped on approval. **HARRY T. CRANDELL, CASS CITY, MICHIGAN.**

**SPECIAL SALE** of heavy boned Poland-China Sows, bred. Boars ready for use. Prices low. Photos if required. **ROBERT NEVE, Pierson, Michigan.**

**POLAND-CHINAS**—Booking orders for spring pigs. **WOOD & SONS, Saline, Michigan.**

**POLAND CHINAS**—Sows of big type. Gilts bred for spring. A few choice boars and fall pigs. **E. D. BISHOP, Route 38, Lake Odessa, Michigan.**

**LARGE TYPE P. C.**—Largest in Michigan. Sept. pigs weigh from 175 to 250 lbs.—the herd without an equal, combining size and quality. **W. E. LIVINGSTON, Parma, Mich.**

**LILLIE FARMSTEAD YORKSHIRES.** The great medium bacon type. The hog that wins on sheer merit. Large, vigorous, prolific. Gilts bred for March or April farrow. Fall pigs either sex. Pairs not akin. I guarantee satisfaction or money refunded. **COLON C. LILLIE, Coopersville, Mich.**

**JUST SAY "Saw your Ad. in the Michigan Farmer"** when writing to our Advertisers.



## THE DAIRY

CONDUCTED BY COLON C. LILLIE.

### HOW TO RAISE CALVES.

If you have given your plan for raising calves in the Michigan Farmer, I shall be glad to have the date of that issue. If you have not written these matters up for publication, I will let the matter drop as I do not desire to impose upon you.

Wayne Co.

L. J. B.

I do not remember of ever writing an article covering the whole subject of calf raising, although I have answered numerous questions upon this subject, and if the subject will be of any interest to the readers of The Farmer, I am very glad, indeed, to go over the entire subject of my system of growing calves. In fact, I would like to have my own system criticised because, if I am not doing it in the best way I would like to find out the best way, and I know of no better method of finding the weak spots in any system of calf raising by farmers than submitting the plan to practical farmers for criticism.

The old saying is that a calf is half raised if it is well born, and there is much truth in this. If you have a strong, vigorous, healthy calf when dropped, the battle is half over, and if the calf is weak and sickly something is the matter with your system of feeding the cow or with her health and vigor. We ask a great deal of dairy cows. Good ones are asked to give milk 10 or 11 months of the year, and bring us in a good living calf besides. They are kept under rather artificial conditions for the purpose of making larger profits and many of them are confined too closely, with too little physical exercise for the good of the offspring. When kept under artificial conditions, great pains and good judgment are required to keep them in proper condition to give birth to vigorous calves.

Under our modern system of keeping dairy cows, where they are confined closely during the cold periods of the year, I think we get better and stronger calves if we have them freshen in the fall, say in September or October, because, for a few months previous to parturition they have had considerable exercise; while, if they freshen in the spring, after being confined in the stable all winter, the probability is that they have not been fed and exercised sufficiently to bring forth the strongest calves possible.

Understand, I don't believe it is necessary to turn a cow out in the cold all day long every day, in the winter time in order to have her produce a good strong calf. Not at all. I think she can be kept in the barn a greater part of the time if she is properly fed and cared for. Some people make a mistake in not feeding the cow when she is dry. They think that when a cow is not giving milk, and particularly just prior to parturition, she can get along with cornstalks and straw and without grain. This is a great mistake. A good dairy cow ought to have some grain every day in the year, and that grain when she is dry ought to have enough protein in it so that she can properly develop the fetus, which requires a good per cent of protein in order to build up the muscular tissues of the vital organs of the fetus. If cows are fed the right amount of feed, properly cared for, and regularly exercised, you can raise just as strong calves in the spring as you can in the fall.

A good, healthy, vigorous cow, under normal conditions will produce a sound, healthy, vigorous calf. Now, if the calf could run with its dam, get her own milk, there is very little trouble in raising them; but it is not profitable to allow the calf of a dairy cow to run with its dam. The cow gives very much more milk than the calf needs. The cow would be ruined as a dairy animal and the calf would over-feed, consequently, the only practical way is to take the calf away from the cow as soon as possible. Our rule is to take the calf away from the cow just as soon as it is nursed once or twice. We want it to get the first milk of the cow, the colostrum. Then the calf should be taken away from the dam and taught to drink. It requires quite a little bit of skill and patience to properly teach a calf to drink, but it can be done with little trouble. It is not necessary to go into detail here. The calf should have its dam's milk for two weeks, but we should be careful and not over-feed it. Four or five pounds of milk at a feed is sufficient.

Keep the calf a little hungry. At the end of two weeks we should gradually substitute for the whole milk of the dam, skim-milk, which should be warm and sweet. Cut the ration down at first, to two and one-half pounds of whole milk and two and one-half pounds of the skim-milk. Then cut it down still more, until finally, at the end of three or four days you have gradually substituted the skim-milk for the whole milk.

Now, since we have removed the butter-fat from the whole milk we must furnish a substitute. As I have explained many times in the Michigan Farmer, I don't believe there is anything we can get that is any better than a jelly made from mixing flaxseed meal with boiling hot water. Flaxseed contains 30 per cent of fat and helps to balance up the ration. In raising a good calf very much depends upon feeding it at this early age. Taking away its dam's milk and substituting another ration is a very important step. If properly done there is little difficulty experienced afterwards. Most people make a mistake by feeding too much skim-milk. They seem to think that, skim-milk being cheap, they can afford to feed lots of it. But they get the digestive apparatus of the calf out of condition, causing indigestion, scours, and often death.

Linseed meal or oil meal is not a good feed to feed with skim-milk because it is not well balanced. After the calf is on a skim-milk and flaxseed jelly ration, we feed the same quantity of skim-milk at a feed that we did previously of the whole milk, i. e., four or five pounds to a feed. The calf is encouraged to eat all kinds of feed. A handful of ensilage is put into the meal, a small amount of clover hay, a little ground peas and oats is sprinkled on the ensilage and soon the calf is eating a little dry feed. We give them all the dry feed they will eat up clean but do not take the milk away from them.

In order to raise good calves and have them form good habits it is necessary to keep each calf in a pen by itself, or to keep them tied so that they cannot suck each other. I consider this very important. Many a calf is ruined by being sucked by other calves.

If your calf is dropped in the fall, and you feed it in the above manner during the winter, when spring comes all you need to do is to turn the calf into a good pasture, being careful not to make the change suddenly, and it will take care of itself as long as the good feed lasts. If the pasture gets short, then other feeds should be supplemented and a little grain given to keep the calves in a good, thrifty, growing condition.

The following fall when the calves are put into the barn again they should be put in stalls by themselves so that you can tell just how much each calf eats. They should be fed a good growing ration. Plenty of roughage is necessary in order to develop the digestive organs and the capacity of the animal for consuming large quantities of coarse feed. This is what we want. They should also have a concentrated food. This concentrated food contains a good per cent of protein. I do not believe there is anything better than ground oats and peas for this purpose. If you lack ground oats and peas feed any of the by-products which are rich in protein.

### FROZEN ENSILAGE.

I see in the Michigan Farmer every one advises to throw the frozen ensilage down in the feed room or chute to thaw it out. Now, why is this advised? Why not let it hang to the side of the silo until it thaws out? Suppose we should have 10 days' of freezing, cold weather, cold enough to freeze the silage every day. Then there would probably be, say 20 inches of frozen ensilage on the side. How long would it take, with the mercury at two above freezing, to thaw this out. My experience teaches me about 36 hours, or possibly less. And I consider frozen ensilage, after the frost is out of it, is just as good as before.

Of course, the corn in the crib looks good, but if I were a dairyman, (which I am), I would guarantee to produce more milk from ensilage and a grain ration with hay, or in summer just enough pasture to give the milk the grassy smell, than from the best pasture ever grown, except alfalfa. Maybe this will seem quite strong, but I have the experience to back this statement. Also, I must say something about the soy bean. It is O. K. to plant with the corn to go in the silo.

Kalamazoo Co.

J. W. EGGSTAFF.



## Once Is Enough To Buy a Cream Separator—

If you have never owned a separator, let your first machine be your last. Don't buy carelessly or buy only on price and then find that you need and want a really good machine.

If you have an unsatisfactory, or worn out separator, let your next one be a lifetime investment. You will not be genuinely satisfied, you will not be making the dairy money you could, you will not be producing the finest dairy products with the least work, until you get a Great Western Cream Separator. Don't waste money on other machines to find this out. Let others experiment—you be sure from the start. Decide now to investigate and test

## The GREAT WESTERN

On Free Trial—5-Year Guarantee

Thousands have written us of their experience with other machines before they got a Great Western. Send for our book and read the letters.

Read our Free Trial Offer—any kind of arrangement you say. Read our guarantee—not for 1 or 2 years, but for 5 years, backed by \$1,000,000.00.

Cow owners who want all the cream, highest quality cream, least work, the biggest profits for the longest term of years, come to the Great Western Separator sooner or later.

It is the only separator with a skimming system that follows nature's laws—the milk sinks, the cream rises. The only separator that will skim cold milk clean, with the only close skimming, easy turning bowl that is kept perfectly clean without effort. Imported ball bearings throughout and more accurate adjustments than used in many watches make the Great Western easier for a boy or girl to turn than for a man to turn any other separator. Low tank and low gears, with high crank, mean greatest convenience, least vibration, velvety cream and longest wear without repairs.

**FREE—Valuable Information** Learn in a few minutes from our large dairyman's book what thousands have been trying to accomplish for generations. Turn to page 19 of our Art Catalog and get the cream of knowledge regarding milk separation. Study these facts a little, then study the Great Western Separator. The rest we leave to your judgment. You'll decide to try a Great Western anyway—all at our risk. If it doesn't beat every other, on every point we don't expect you to keep it. Write for book now. Ask for Separator Catalog No. C331.

**SMITH MANUFACTURING CO., 158 East Harrison St., Chicago, Ill.**

### Which One Will You Test on Your Farm for Ninety Days? Freight Prepaid

Which will you try, 30 Days' Free or 90 Days' Approval Test?

—Any capacity from 200 to 950 pounds per hour, according to your needs, and I'll save you from \$25.00 to \$50.00 on the price.

—The only Separator whose gearing runs in a "Bath of Oil" like a \$5,000 automobile—Feature worth \$50.00 alone.

—Automatically oils itself—Pour oil at the top, once a month from your oil jug or can—No danger of running dry, or ruining it like others—No oil cups to remember to fill or turn up twice a day.

—Dust-proof—Danger-proof—All gears enclosed—simple but standard built and absolutely dependable.



Only \$29.75 and Up

I'll Save You \$25 to \$50

### GALLOWAY'S New "Bath in Oil"

#### HIGH GRADE STANDARD CREAM SEPARATORS

—Has the only revolving supply tank—worth \$15.00 alone.

—Easiest to clean and the few parts come out easy and can't get back out of place.

—Easiest to run—high crank—low tank. With no high lifting and no "back-breaking" cranking.

—Gets the finest quality cream and all of it—no lumps or churning, as Nature's true principle is followed without forcing either the milk or cream the wrong way up or down.

—Skims closest in any climate or season, no matter whether your milk is warm or cold.

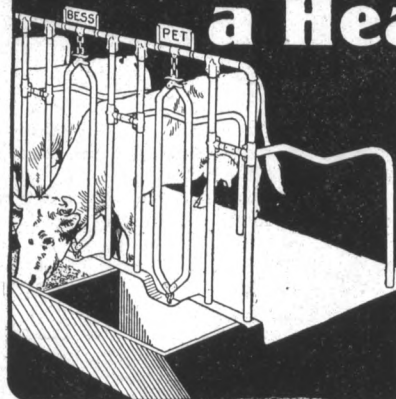
—Is as handsome a machine, compact and substantial, as you ever saw or could find. Beautiful finish.

—Let me send you my Big New Separator Book—post paid—Free, so you and your wife and the boys and girls can talk it over and then try one of my separators under my easy plan for you to do it.

You'll call it the best if you test it alongside any of the highest priced \$85.00 and \$110.00 separators sold by anybody today—makers—catalog houses—dealers—jobbers or anybody else. Write me today.

**Wm. Galloway, Pres. WM. GALLOWAY COMPANY 643 Galloway Sta., Waterloo, Ia.**

## Does the Cows a Heap of Good



Cow comfort and cow sanitation result in more cow profits, and that alone should induce any farmer or dairyman to seek these conditions.

Louden Sanitary Steel Stalls and Stanchions double the light and air in a barn and insure perfect ventilation, perfect sanitation—a result impossible with any wooden equipment. Yet

### LOUDEN STALLS AND STANCHIONS

are actually cheaper. Louden stalls of heavy tubular steel, with malleable fittings, have no flat surfaces for dust to accumulate—easy to keep clean and almost indestructible. Louden stanchions give cows more comfort than other makes, yet keep them perfectly lined up. Throat chains prevent cows from lying down when milking. Simple and very durable. Latch easily opened or closed with gloved hand, but can't be opened by animal. Send today for free catalogue of sanitary, money-saving barn equipment.

**LOUDEN MACHINERY CO., 603 Broadway, Fairfield, Ia.**

## SILOS OR ROUND BARN

SHOULD BE CONTRACTED FOR BEFORE CORN PLANTING—CAN SERVE YOURSELF AND NEIGHBORS BY BUNCHING THEM IN CAR LOTS AS

**EARLY BUYERS SAVE MONEY**

AS WE SHALL PAY FREIGHT OVER THE ROAD ONCE ONLY FROM THE MILL

**DIRECT TO YOUR HOME TOWN**

CATALOGUES OF ENSILAGE CUTTERS DISTRIBUTORS & CATTLE STANCHIONS FOR DAIRYMEN AND FEEDERS

**KALAMAZOO TANK & SILO CO. MICHIGAN.**

When Writing to advertisers mention the Michigan Farmer





Part of Trinidad Asphalt Lake

**The costliest roofings are the roofings that don't last.**

The roofing that *does* last is made of Trinidad Lake Asphalt—

## Genasco

**the Trinidad-Lake-Asphalt Roofing**

Other roofings all have their drawbacks: Shingles crack, split, and rot; tin rusts; slate breaks and blows loose; coal-tar gets brittle and cracks; so do the many so-called "asphalt" roofings, because they lack the "live" lasting qualities of *natural* asphalt.

Genasco has the natural oils of Trinidad Lake asphalt sealed in it; and they keep the roofing always pliable and strong and defensive against all weathers. Genasco doesn't crack, rot, rust, or break. It is *permanently* waterproof. That means real economy.

It pays to cover the roof of every building on the farm with Genasco. Fully guaranteed.

The Kant-leak Kleet prevents nail-leaks, and waterproofs the roofing-seams without cement. Makes Genasco easier to apply than ever.

Ask your dealer for Genasco mineral or smooth surface Roofings with Kant-leak Kleets packed in the roll. Write us for the Good Roof Guide Book and samples.



**The Barber Asphalt Paving Company**

Largest producers of asphalt, and largest manufacturers of ready roofing in the world

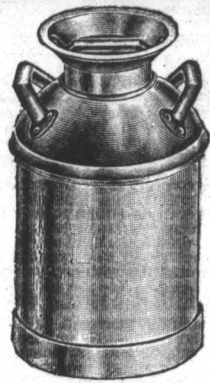
Philadelphia

New York San Francisco Chicago

Cross-section Genasco Smooth-surface Roofing  
Trinidad Lake Asphalt  
Asphalt-saturated Wool Felt  
Trinidad Lake Asphalt

## Don't Put Clean Milk Into Dirty Cans

It doesn't pay. Get cans that are easy to clean and easy to keep clean. That's the Sturges. Every inside seam soldered as smooth as glass—no cracks, crevices or dirt to lodge. People call it the



## Sanitary Sturges

but it's also the *strongest* milk can on the market. Made of A1 quality steel plate, tinned and refined in our own shops. Seamless neck, sanitary cover and one-piece round handles are other features. See your dealer about Sturges milk cans or write postal now for free book that tells all about milk cans and proves that Sturges means the best milk can investment you can make. Ask for free book 46 and write now.

**Sturges & Burn Mfg., Company**  
508 South Green St., Chicago, Ill.

## Owl Brand Cotton Seed Meal

41 Percent Protein Guaranteed

Standard for 35 Years.  
Corn can't replace cottonseed meal.  
Animals need Protein. Feed a balanced ration.  
Write for our booklet "Science of Feeding."  
F. W. BRODE & CO., Memphis, Tennessee—Established 1875

## ANNUAL MEETING OF MICHIGAN DAIRYMEN.

(Continued from last week.)

The first evening session proved one of the most interesting of the entire meeting. It was held in the Y. M. C. A. building, Vice-President Vandenberg presiding. A very unusual program feature was the excellent talk by a practical dairy woman, Mrs. Scott Durand, of Chicago, who dealt with her experience and methods in dairy farming. Starting with the proposition that the security of nations rests upon the one word honesty, she plead for a stronger sense of honor and fairness, and a better appreciation of intelligent methods, in dairymen. Dairy organizations have long taught the desirability of weeding out the unprofitable cow. In her estimation it is just as necessary to get rid of the unprogressive dairyman, and this can only be done by educating him to the need of more progressive ways, or else driving him out of the business entirely. The abuse of the farm separator was held in large part responsible for the high percentage of inferior product now being made by creameries, while the failure of dairymen to cull the poor cows from the herd, either through individual effort or by promulgating the organization of cow-testing associations, was held accountable for the unsatisfactory showings made by many dairy farms. She has no use for the dual purpose cow but advises choosing one of the dairy breeds and improving it as fast as possible through the use of pure-bred sires, the scales and the Babcock tester. It is absolutely necessary to get rid of the unprofitable or less profitable cows, and Mrs. Durand thinks the modern cow-testing association is the agency through which this problem will be finally and satisfactorily solved. The present effort to legalize a compulsory test for tuberculosis in her state came in for a word of criticism in which she voiced the opinion, based upon experience in her own herd, that the tuberculin test is unreliable. She uses the so-called model cow stall, uses odorless disinfectant in the stables and clips the flanks of her cows to insure greater cleanliness. She went into the dairy business to prove to her own satisfaction that clean, healthful milk could be produced at a price that would bring it within the reach of most people. As to price, she held that the producer should receive about 4c per qt. for good clean milk in the can or 8c if bottled; advocates bottling upon the farm. In the course of six years she has built up a most profitable dairy. She has built up a rundown farm through the application of rock phosphate and the growing of alfalfa, now having fields which cut six tons of hay per acre. Ensilage is one of her principal feeds, with which she uses middlings, gluten feed and cottonseed meal. As a general proposition she believes that dairymen feed too much grain; also that the dairy farmer farms too many acres; that the enrichment of the soil and more intensive methods in growing feed are needed.

Dr. Marshall, of M. A. C., followed with a sound, sensible talk on "The Consumer's Part in Securing Pure Milk." He said that specialization and thorough understanding of a business, and honesty in conducting it, are the keystones to success, and he commended this thought to the producer especially. The consumer, he asserted, will be but a reflection of the producer, and if the latter fully appreciates what he is doing the former becomes interested and gradually they come to serve each other's interests. He deplored the fact that men in this country do not serve long apprenticeships in learning a business as in some of the older countries, and, as a consequence, we have men in every avenue of business whose efforts, though thoroughly honest, come to naught through lack of knowledge. Many say they cannot improve their product at present prices when, in truth, comparatively few know how to go about it to bring improvement. A thorough knowledge of, and pride in, their profession are lacking. Appreciation, he held, is at the bottom of everything, but absolute honesty must go with it. The ethics and etiquette of the present commercial world must not be the criterion. The milk producer who attempts to cover anything up quickly loses the confidence of the consumer, and it is equally disastrous to shake his confidence in the producer's ability to produce the right quality of product.

Speaking of the medical milk commissions in the cities, Dr. Marshall said that

they are doing a good work but they do not understand the producers. Their zeal leads them to prescribe conditions and requirements which it is not practical to live up to, but the dairy industry is developing leaders who are demonstrating that it is possible to produce pure milk under practical conditions. As the consumer's part in the solution of the pure milk problem he suggested that they free city milk commissions and the inspection service from the influence of partisan politics. Membership on the commissions should, in his opinion, be confined to representative citizens who will be willing to study the problem from every standpoint and to quietly serve the public for the sake of serving. A better understanding between consumer and producer is most desirable, and this cannot be brought about through the enactment of legislation.

Replying to Mrs. Durand's criticism of the tuberculin test, Dr. Marshall said that people generally do not understand this test. He declared it to be practically infallible where it is carefully and intelligently used. He considers the veterinarian unwise who condemns an animal on the strength of a single slight reaction. In most cases the test should be applied more than once and the effect at each application carefully noted. Medical statistics show, however, that where the tuberculin test has been thus carefully applied more than 98 per cent of the diagnoses have proven correct, and he asserted that there is no other diagnostic agent known to the medical world that surpasses it on the score of reliability. But Dr. Marshall thinks the time has not yet arrived when the big cities or even a state may safely or sensibly demand compulsory tuberculin testing or compulsory pasteurization of milk. A campaign of this character, to be of any real value, must be continued over a period of four or five years at the least, and the city or state that plans for such a campaign will find the cost absolutely prohibitive. A compulsory test covering a period of not more than two years would prove a reckless waste of funds. Individual owners of herds are gradually taking the matter in hand, and the campaign of education that is being waged, touching the proper lighting and ventilation of dairy barns, is bringing results. Dr. Marshall favors the encouragement of such individual efforts in every manner possible.

Wednesday was butter-makers' day, and the morning session convened in Odd Fellows Hall, across the street from the Armory, with Mr. Fred Eldridge, of Breckenridge, in the chair. It was hoped that Mr. Slater, Secretary of the National Dairy Union, would be able to be present at this session, but in his absence Mr. Shilling, of Chicago, made a few remarks on the present butter situation. He reminded the butter-makers that quality is the watchword, ascribing the present rather dubious outlook to the lack of quality in a large portion of the annual butter output. He stated that there are more than 60,000,000 tons of surplus butter in cold storage at the present time, and despite the fact that values have declined materially this butter has not moved as it should, which fact he believes to be due to its mediocre quality. Despite the fact that this large surplus has been piled up, the production of oleomargarine has greatly increased, something like 140,000,000 lbs. of this product having been sold last year. As a remedy, he insisted that butter-makers must demand a better quality in their raw material, and to that end he advocated the grading of cream and paying for same according to quality. He thinks the tendency is toward the supplanting of gathered cream plants with whole milk factories, and regards this a good omen. He admits that the farm separator has its use where properly employed, but thinks its abuse is largely responsible for the present situation. He believes, however, that the adoption of a system of grading cream will put such a premium upon cleanliness and proper handling of the product upon the farm as to make the use of the separator under any other conditions unprofitable.

At the close of these remarks the Association nominated officers for the ensuing year, and then Mr. Shilling took up the topic which had been assigned him on the program, viz., "Organization," declaring that organization in this age is absolutely necessary, and that the individual, single-handed, cuts very little figure. He referred to the good work of the National Dairy Union in securing the present oleomargarine law as an example

## A SHARPLES Cream Separator Delivered at Your Home

No Money in Advance

No Freight to Pay

You don't have to unbox it. You don't have to put it together. You don't have to start it. You don't have to do anything by guess. You don't have to take any risk or responsibility.



You let us hear from you and we will deliver the separator, show you how to operate it, how to make it pay you, and show you how it costs you less than any separator for which you are asked to send money in advance. This machine will be guaranteed forever by America's oldest and the world's biggest cream separator concern. We can make that guarantee because Tubulars are The World's "Best—wear a lifetime—whereas cheap separators last, on the average, one year. Write for catalog No. 152 and say you want a Tubular set up in your home—free—



30 Yrs

THE SHARPLES SEPARATOR CO.  
WEST CHESTER, PA.  
Chicago, Ill., San Francisco, Cal., Portland, Ore.  
Toronto, Can., Winnipeg, Can.

## CULTIVATE OFTEN

and you hold the moisture in the ground. Cultivate shallow or deep as the crop needs it and you release the forgotten or unknown soil properties which are needed to make the crop grow properly. We have been making farm tools for 75 years and think we have as good a line of Riding Cultivators as you need to choose from.

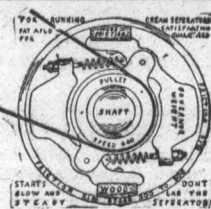


## IRON AGE RIDING CULTIVATORS

are long-lived machines—adjustable for rows 28 to 50 inches, while in motion—teeth adjustable for depth and angle—pivot or fixed wheel, one row or two—high or low wheels—work well on hillsides—farm close and true. A complete line. Our Anniversary Catalog will show you—also, potato machinery, garden wheel hoes and drills, etc. Address:



BATEMAN MFG CO.  
Box 1047  
GRENLOCH, N.J.



Dairymen Take a Look at the Strite Governor Pulley. It's the original and "only thing" for driving cream separators with gasoline engines. Once tried, always used. TRY ONE. Ask your dealer for a "STRITE" or write us direct. Don't take an imitation.

Strite Governor Pulley Co.  
303 So. Third St., Minneapolis, Minn.

## Let SANDOW Run It!

### Wonderful Work Engine

Farmers and Shop Owners, Stop Swearing! A few dollars gets this grand little work engine, complete and ready to run Cream Separators, Corn Shreders, Grist Mills, Feed Mills, Dynamos, Printing Presses, etc., etc. Gives a lifetime of steady service! All Sizes: 2 to 20 h. p. No cranking! No cams! No gears! Only 3 moving parts. Finest construction. Thousands in use. Guaranteed 5 years. Write for Special Introductory Proposition.

DETROIT MOTOR CAR SUPPLY CO., 164 Canton Ave., Detroit, Mich.



There are many superior features in the **NAPPANEE SILO**. Let us tell you about them.

RELIABLE AGENTS WANTED.  
**THE NAPPANEE LBR. & MFG. CO.**  
Nappanee, - Indiana.

## SPECIAL PLANS

For this wonderful

## SILO

in use 16 years. Won't shrink nor swell. Write for particulars.

IONIA SILO CO.  
IONIA, MICH.



**CALVES RAISE THEM WITHOUT MILK, BOOKLET FREE**  
J. E. BARTLETT, Co., Jackson, Mich.



of what can be done through organization. The consumption of oleo decreased very rapidly after the passage of that law, but, with the high butter values prevailing the past year, the oleomargarine interests have become more active, and the vigilance of the dairy organizations has been put to a severe test in preventing the repeal of the statute. Every effort has been made to mislead the public regarding the value of oleo as a food product, the manufacturers even going to the expense of running paid articles in many of the popular magazines. He also assured the butter-makers that the cost of oleomargarine is so small, in comparison with the cost of producing a high-class article of butter, that it would be easily possible for the oleo manufacturers to ruin the butter business of the country. The high price of butter has made it possible for the oleo manufacturers to pay the 10-cent tax on their colored product and then reap a tremendous profit, and as an illustration of how easily the consuming public is misled, he cited the fact that the price of colored oleomargarine has kept very close to that of good butter, which may be considered conclusive evidence that the bulk of this product goes into the hands of the consumer in the guise of butter. He urged that the dairymen of the country bend every effort to secure a statute which will make it absolutely impossible for the oleo manufacturers to sell their product for what it is not.

Mr. Shilling then asked his hearers to forget all political affiliations and, in that frame of mind, make a close study of the pending reciprocity agreement, as well as of the treaty or trade agreement made between this country and Canada in 1854. He believed that such a study of the question would show it to be a very one-sided arrangement—an arrangement which must do one of two things, viz., injure the farmer very materially, or completely fail to bring the promised relief to the consumer.

"The Benefits of Co-operation Among Creamerymen," was the topic which had been assigned to Mr. A. L. Burroughs, of Owosso. In his absence Mr. Wm. Bechtel, of Caro, a practical butter-maker, took up the discussion. He argued for greater frankness between competing butter-makers, declaring that the practice of endeavoring to win your competitors' patrons is but putting a premium on poor cream, and, as a rule, the butter-maker who tries to build up his business in this way gets only the dissatisfied customers—the natural kickers. He believes that butter-makers must work out some system of grading cream, but admits that a system which will be fair to all will be hard to establish. He then gave an example from his own experience how a good customer's cream will suddenly go wrong, and how difficult it is to always find the cause. He told of a case in which it has been necessary for him to make a separate churning of one customer's cream for several weeks, for the simple reason that this cream has suddenly developed a flavor which would lower the quality of the entire product of his factory. He has advised the customer and has personally inspected his dairy, but so far they have been unable to determine where the trouble lies.

A dairyman from Indiana who was present told of a similar case, stating that the source of the trouble was only arrived at when they finally resorted to churning the product of each cow separately. In this way the trouble was traced to a single tuberculous cow in the herd.

In speaking of grading cream, Mr. Eldridge held that the outlook for this reform is brightening, and he cited one of the big centralized plants and several creameries which will adopt the plan the coming spring.

The grading of cream as a promising means of improving the quality of their product seemed uppermost in the minds of most of the butter-makers present and the matter was discussed at some length, without, however, arriving at any very definite conclusions. One member characterized the modern hand separator as simply an inducement to get people into the dairy business and prophesied that their use will gradually be abandoned and that the desired improvement in butter quality will be brought about by the whole milk factories. However, the newly organized Creamery Managers and Owners' Association held a meeting on the following day and adopted a standard for grading cream which will be given in a later installment of this report.

(Concluded next week).

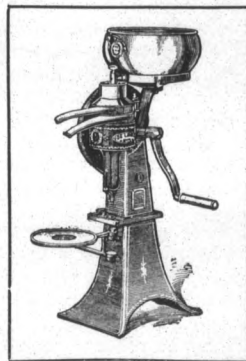
## Trade in Your Old Separator for a New DE LAVAL

More than 15,000 users of inferior and worn out cream separators of various makes traded them in last year on account of new

DE LAVALS, and doubtless there are many more owners of such machines who will be glad to know that the DE LAVAL Company still continues to make liberal "trade" allowances for them.

While these old machines have little actual value to the DE LAVAL Company, as the machines thus taken in trade are broken up and "scrapped" for old metal, such exchanges afford a practical example of the difference

between good and inferior separators, and add to the prestige of the DE LAVAL in the neighborhood.



Now that you will soon be milking more cows, why not take advantage of this liberal offer? See the nearest DE LAVAL agent, and he will tell you how much he can allow on your old machine toward the purchase of a new DE LAVAL. If you don't know a DE LAVAL agent, write to the nearest DE LAVAL office giving make, number and size of your present machine, and full information will be sent you.

### Important to Users of Old DE LAVAL Separators

While DE LAVAL machines of ten or fifteen years ago are much superior even to present day machines of other makes, during the past four or five years many improvements have been incorporated in the present DE LAVAL machines that make them simpler in construction, easier of operation and more effective in skimming.

Liberal trade allowance will be made by any DE LAVAL agent on your old DE LAVAL toward the purchase of an up-to-date style. It will pay you to investigate. Any DE LAVAL agent will be glad to explain the new DE LAVAL improvements, or a DE LAVAL catalog illustrating and describing the construction of latest styles and sizes will be sent upon request to the nearest DE LAVAL office

## THE DE LAVAL SEPARATOR CO.

165-167 Broadway  
NEW YORK

178-177 William Street  
MONTREAL

29 E. Madison Street  
CHICAGO

14 & 16 Princess Street  
WINNIPEG

Drum & Sacramento Sts.  
SAN FRANCISCO

1016 Western Avenue  
SEATTLE

## Supreme Quality

farmer no more, and will give many more years of satisfactory service. Any JOHNSTON user will tell you these machines are the best made and the most profitable to own.

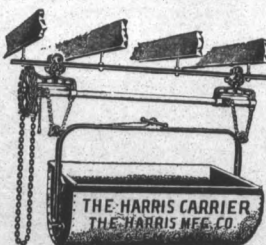
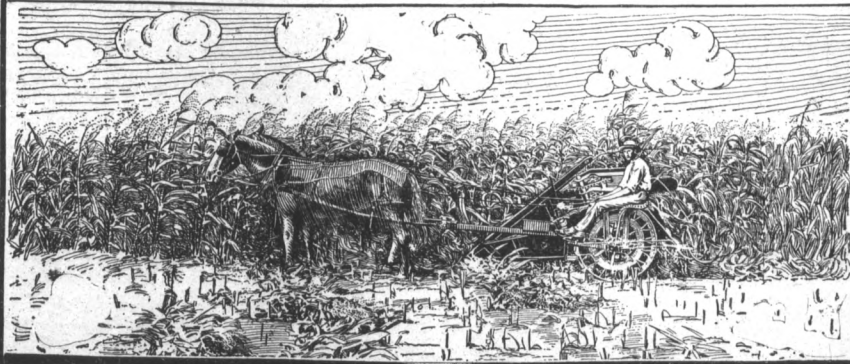
## JOHNSTON CORN BINDER

Enables the farmer to harvest his crop easier, quicker and cheaper than with other machines. It cuts and ties corn where other binders are even unable to start. Simply constructed, light of draft, all levers convenient to operator. Will bind corn either above or below the ears. Has more good exclusive features, is more reliable and will give longer satisfactory service than any other binder.

THE JOHNSTON LINE includes Grain Binders, Reapers, Manure Spreaders, Rakes, Spring and Spike Tooth Harrows, Side-Delivery Rakes, Corn Binders, Mowers, Tedders, Hay Loaders, Disc and Orchard Harrows, Land Rollers, etc.

If you are interested in buying farm machines of supreme quality, send postal to-day for our new 1911 catalog. It will interest you. Or state what tool you are interested in, and we will send booklet.

THE JOHNSTON HARVESTER CO. Box 105-C BATAVIA, N. Y.



## HARRIS

Stalls and Woodlined Stanchions, Litter and Feed Carriers

will give you the best kind of satisfaction. We manufacture our goods out of the very best materials and our Equipment is in every way UP-TO-DATE.

Our prices will please you. Write today for descriptive catalogues.

THE HARRIS MANUFACTURING CO.

316 Cleveland Ave.,

Salem, Ohio.



## \$15.95 AND UP-WARD AMERICAN SEPARATOR

SENT ON TRIAL, FULLY GUARANTEED. A new, well made, easy running separator for \$15.95. Skims hot or cold milk; heavy or light cream. Different from this picture which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Whether dairy is large or small, obtain our handsome free catalog. Address Box 1061 AMERICAN SEPARATOR CO. BAINBRIDGE, N. Y.



### THE ROSS SILO

The only thoroughly manufactured Silo on the market. Full length stave, Continuous door frame complete with ladder. Triple beveled silo door with hinges. Equipped with extra heavy hoops at bottom.

**AIR TIGHT**  
Makes winter feed equal to June grass. THE ROSS will more than pay for itself in one season. Write today for catalog which gives facts that will save you money. Agents wanted. The E. W. Ross Co. (Est. 1850) Box 14 SPRINGFIELD, OHIO.

## FREE TO FARMERS

A Valuable 160-page book entitled "SILO PROFITS"

Written by 200 of the most successful Feeders, Farmers and Dairymen in the World. Every farmer in America should read this book, and as long as our supply of these books lasts we will mail one copy free to each person asking for it. It gives the actual experience of these farmers and in their own words. Our Factories are located at Anderson, Ind., Des Moines, Iowa, and Kansas City, Mo. Write NOW "Silo Profits" for this book.

INDIANA SILO COMPANY

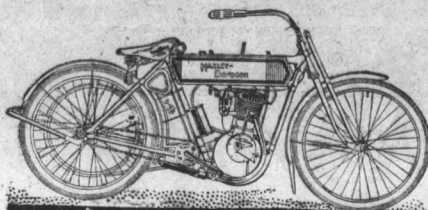
382 Union Building, Anderson, Indiana

### Will You Accept a Bull Dog Feed Grinder On 10 Days' Trial?

We don't ask you to take our word for what it will do. Just prove its worth to you by actual use. Write for catalog today, and select the grinder you want.

CROWN POINT MFG. CO., 133 E. Road, Crown Point, Ind.





### TO Town and Back For a Cent

INSTEAD of taking two or three hours to go to town and back, you can make the round trip with a

### HARLEY-DAVIDSON MOTORCYCLE

in comfort and safety in 20 or 30 minutes. That is a big saving of time and what is more it costs less than 1/4 cent per mile to operate a Harley-Davidson.

SEND FOR CATALOG "72"  
HARLEY-DAVIDSON  
MOTOR CO.

91 L-Street  
Milwaukee Wis.

## ROOFING \$1.00 First-Class Rubber Per Square

Roofing for \$1, \$1.25 or \$1.50 a square, complete.

**WHY** Pay \$3.00 or \$5.00 per square for roofing not as good. We also sell tarred threaded felt 250 feet in roll at 65 cents per roll.

**HOW** can we do it? We sell for cash car loads or less. Write for samples and particulars.

**H. EIKENHOUT & SONS,  
GRAND RAPIDS, MICHIGAN.**

## Write a Postal for this Post Hole Auger Book Today

Get posted before you buy. Learn why Fenn's Adjustable Post Hole Auger is guaranteed to dig faster and easier in any soil than any other.

### SAVE YOUR BACK YOUR HANDS

Do two days work in one. Fenn's digs different size holes—handles gravel as none other will—goes through sod like a knife. Money back if it fails to do work as claimed. Write for free book and prices today.

Fenn Mfg. Co., Box 24 Charlotte, Mich.

## KNOW Your Weights—Don't Guess

The successful farmer of to-day KNOWS the exact weight of the supplies he purchases; he KNOWS to a certainty how much the products weigh that he sells. Accurate weights are a big, vital feature in profitable farming. Public scales are expensive, unreliable and often situated at a distance, but every farmer can be sure of perfect accuracy if he owns an

## OSGOOD PITLESS SCALE

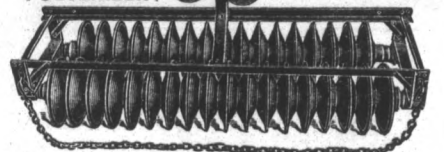
These Scales are absolutely reliable—warranted so. Every farmer can now afford one. Send for catalogue.

### STEEL FRAME

OSGOOD SCALE CO.,  
Box 126, Binghamton, N.Y.

\$50

## IMPERIAL PULVERIZER



SEND FOR CIRCULARS The Peterson Mfg. Co. KENT, OHIO.

## OLDS GASOLINE ENGINES

Our free catalog is worth its weight in gold to you.

Be sure you get it before you decide upon an engine.  
The Olds has been the standard farm engine of the world for thirty years.  
SEACER ENGINE WORKS,  
915 Walnut St., Lansing, Mich.

## POULTRY AND BEES

### CAUTION AS TO FEEDING ANIMAL MATTER.

Care should be taken about feeding the hens too much meat, as it sometimes causes bowel diseases, more especially where the flock has been without it and then receives it in liberal quantities. I have a case in mind where the owner of a choice flock of hens had access to the offal of a slaughter house and thought he would feed it to winter layers. He argued that if a little meat is good more was better, so he fed more, and he lost nearly his entire flock from bowel trouble.

A moderate allowance, of meat or ground green bone two or three times a week is about all that can be fed with safety. Where one lives near a slaughter house and can get blood to mix with corn meal, this makes a mighty good combination if fed with judgment. Where plenty of oyster shells are fed I prefer scrap meat to green bone, and so do my hens.

I am convinced of this one thing, however; that "high level" yields in egg production can not be reached unless the hen has sufficient animal food, whether in the form of scrap meat, insects, worms, or green bone. And right here let me say that the next sixty days is when they need it most, as they should be making lots of eggs and consequently need plenty of fat and albumen. There are no insects or worms to be had so you should feed a little more than the usual amount of foods containing these elements. Perhaps you will get eggs without doing this, but the hen will be drawing on her own vitality to supply the want and her laying period will be shortened accordingly.

Isabella Co. WM. J. COOPER.

### CONSTITUTIONAL VIGOR IN BREEDING STOCK.

Increasing the constitutional vigor in breeding stock is one of the important problems before farmers and poultrymen at this time of the year. The heavy egg production required of the modern hen has the effect of lowering her physical vitality and producing a relatively high mortality during the chick rearing season. Infertility of eggs, low hatching power, weak, puny chicks and losses in the breeding flock are evidences of low vitality.

But whatever the direct contributory influences, the fact remains that strong as well as weak individuals can be found in nearly all flocks. By directing special attention to selecting the strong, vigorous fowls for breeders, and disposing of the weaker ones, constitutional vigor may be perpetuated in the young stock. Poultry farmers, however, as a rule do not realize the importance of maintaining breeding pens from which to select eggs for hatching, and in consequence annually rear a large per cent of young stock low in physical vigor.

Increasing constitutional vigor in the flock must have its beginning in the selection of strong healthy individuals from which to obtain eggs for hatching. The hap-hazard method of selecting eggs from flocks containing both weak and strong fowls is unproductive of improvement. Every farmer should have a spacious pen in which those fowls showing evidences of pronounced constitutional vigor may be placed at the proper season and kept exclusively for producing eggs for hatching purposes.

There are numerous causes of loss of physical vigor in the flock, and they should be taken into consideration by every poultry owner. Heavy feeding to induce increased egg laying is one of these. Injudicious selection of males and females for breeding purposes is another. Inbreeding year after year without regard to desirable qualities has also exercised a potent influence in lowering vitality. The use of immature breeding stock, either too young, or physically weak, has prevented the transmission of desirable characteristics, and improper management of the breeders in not causing them to take the required amount of exercise, has materially reduced health and vitality.

The principle to adopt in the successful management of poultry is that only the strong stock should survive and the weak be eliminated. When weak individuals appear in the broods it is well to put them by themselves so they may have a better chance. Chicks may overcome physical weakness in a measure under proper feeding, but such individuals should be marked and not retained for

breeding purposes. It is a well established fact that weak chicks, when matured, transmit their weaknesses to their progeny and consequently perpetuate undesirable characteristics in the flock. It may even be advisable in making up the breeding pen, to discard or dispose of the entire flock and purchase new blood.

As a means of selecting desirable breeders attention is directed to individual characteristics which distinguish the weak from the strong. Activity in a fowl is generally good evidence of its physical vigor. The shape of the body is closely related to physical vigor and development. Deep, thick, compact conformation, with large fluff, are indications of greater vitality than will be found in a slender body and long thin thighs and shanks. The strong vigorous hens, during the laying period, have large, bright red combs and wattles. The quality, brilliancy and general appearance of the plumage are also good indications of physical vigor.

The production of a flock is largely dependent upon their ability to consume food and turn it into profit. Fowls suffering from acquired or transmissible weaknesses can not produce a profitable egg flow or convert food into profitable flesh gain. Those desirous of improving the quality of their flock this season must not overlook the points discussed above. Time, labor and money are wasted in attempting to make poultry husbandry profitable with stock that is lacking in physical vigor.

Shiawassee Co. LEO C. REYNOLDS.

### PROBABLY TUBERCULOSIS.

A Tuscola county subscriber writes that her hens become lame and gradually waste away. Examination shows small hard bunches on heart and liver and in some cases on the intestines. The presence of the tubercles on the internal organs, and the fact that the fowls gradually decline until they die from weakness, may be considered very strong indications of tuberculosis. Lameness, also, sometimes accompanies this disease and there may be swellings of the joints or ulcerous growths on the surface of the body. Get the opinion of a competent veterinarian or send some of the tubercles to the bacteriologist at the Agricultural College for examination. If it proves to be tuberculosis the entire flock should be destroyed and the poultry house and yards, in fact every part of the premises frequented by the fowls, must be thoroughly disinfected. If the foundation for a new flock is secured at once it will be advisable to choose a new location for their quarters.

### COOKED FEED FOR LITTLE CHICKENS.

Almost before the first hint of spring, practically every woman in the country will begin to set hens and get coops ready for the little chickens that will soon make their appearance. And this is a very small part of the work of raising chickens, the greater part of which comes in taking care of them and feeding them properly.

One thing that is worth almost more than everything else connected with the care of little chickens is to see that they have nothing but cooked food, at least until they are six or eight weeks old and have good, strong healthy bodies. Of course, it will be extra trouble to prepare this food, but the chickens will do so much better and grow so much faster that the effort will be amply rewarded.

Corn meal, which is not a good food given raw, is an ideal one when baked in the oven. It can be mixed up with water, or better still, if one has it, with milk, and enough can be baked at one time to last several days. Or it can be cooked in a pot like ordinary mush, but should be cooked a long time to make it as dry as possible.

A good way to dispose of the small potatoes that form a part of the crop every year is to cook them for the little chickens. While the chickens like these cooked potatoes very much, this food is not enough of itself to satisfy them but should be fed in connection with the baked meal. Another thing that chicks like is the curd formed by scalding sour milk; but this, like the cooked potatoes, should be fed with more substantial articles.

When the chickens are six or eight weeks old they can be fed cracked corn, or even the whole grains if they are not too large. One should be very careful not to feed too much at one time, as this food will pack in their crops if they eat too

## The Taste Test—

# Post Toasties

Have a dainty, sweet flavour that pleases the palate and satisfies particular folks.

### The Fact—

that each year increasing thousands use this delicious food is good evidence of its popularity.

Post Toasties are ready to serve direct from the pkg. with cream or milk—a convenient, wholesome breakfast dish.

### "The Memory Lingers"

Postum Cereal Co., Ltd.,  
Battle Creek, Mich.

### WANTED—A PEAHEN—State age description and price. THOS. BUELL, R. No. 1, Union City, Mich.

### WHITE LEGHORNS, WHITE BLANCHARD-WYCKOFF

Strains separate. Greatest layers on earth. Eggs for hatching. No. One, \$1. No. Two, \$2. No. Three, \$3. No. Four, \$4. No. Five, \$5. No. Six, \$6. No. Seven, \$7. No. Eight, \$8. No. Nine, \$9. No. Ten, \$10. No. Eleven, \$11. No. Twelve, \$12. No. Thirteen, \$13. No. Fourteen, \$14. No. Fifteen, \$15. No. Sixteen, \$16. No. Seventeen, \$17. No. Eighteen, \$18. No. Nineteen, \$19. No. Twenty, \$20. No. Twenty-one, \$21. No. Twenty-two, \$22. No. Twenty-three, \$23. No. Twenty-four, \$24. No. Twenty-five, \$25. No. Twenty-six, \$26. No. Twenty-seven, \$27. No. Twenty-eight, \$28. No. Twenty-nine, \$29. No. Thirty, \$30. No. Thirty-one, \$31. No. Thirty-two, \$32. No. Thirty-three, \$33. No. Thirty-four, \$34. No. Thirty-five, \$35. No. Thirty-six, \$36. No. Thirty-seven, \$37. No. Thirty-eight, \$38. No. Thirty-nine, \$39. No. Forty, \$40. No. Forty-one, \$41. No. Forty-two, \$42. No. Forty-three, \$43. No. Forty-four, \$44. No. Forty-five, \$45. No. Forty-six, \$46. No. Forty-seven, \$47. No. Forty-eight, \$48. No. Forty-nine, \$49. No. Fifty, \$50. No. Fifty-one, \$51. No. Fifty-two, \$52. No. Fifty-three, \$53. No. Fifty-four, \$54. No. Fifty-five, \$55. No. Fifty-six, \$56. No. Fifty-seven, \$57. No. Fifty-eight, \$58. No. Fifty-nine, \$59. No. Sixty, \$60. No. Sixty-one, \$61. No. Sixty-two, \$62. No. Sixty-three, \$63. No. Sixty-four, \$64. No. Sixty-five, \$65. No. Sixty-six, \$66. No. Sixty-seven, \$67. No. Sixty-eight, \$68. No. Sixty-nine, \$69. No. Seventy, \$70. No. Seventy-one, \$71. No. Seventy-two, \$72. No. Seventy-three, \$73. No. Seventy-four, \$74. No. Seventy-five, \$75. No. Seventy-six, \$76. No. Seventy-seven, \$77. No. Seventy-eight, \$78. No. Seventy-nine, \$79. No. Eighty, \$80. No. Eighty-one, \$81. No. Eighty-two, \$82. No. Eighty-three, \$83. No. Eighty-four, \$84. No. Eighty-five, \$85. No. Eighty-six, \$86. No. Eighty-seven, \$87. No. Eighty-eight, \$88. No. Eighty-nine, \$89. No. Ninety, \$90. No. Ninety-one, \$91. No. Ninety-two, \$92. No. Ninety-three, \$93. No. Ninety-four, \$94. No. Ninety-five, \$95. No. Ninety-six, \$96. No. Ninety-seven, \$97. No. Ninety-eight, \$98. No. Ninety-nine, \$99. No. One hundred, \$100.

FRANK W. FLOYD, Proprietor, Spring Garden Farm, Box 491, Birmingham, Michigan.

### BUFF PLYMOUTH ROCKS—Only perfect standard

cockerels. April and May hatch at \$2 and \$3 each. Excellent laying strain. Fred Nickel, Monroe, Mich.

### THOROUGHBREDS S. C. BROWN LEGHORN Eggs

at \$1.00 per 15 or \$5.00 per 100. Stock all sold. LEWIS T. OPPENLANDER, R. No. 4, Lansing, Mich.

### R. I. REDS of Quality. Early hatched Cockerels,

both combs. \$2.00 and \$3.00 each. ELMER MATHEWSON, St. Jos. Co., Nottawa, Mich.

### BUFF PLY. ROCK COCKERELS—Farm raised

healthy, good size, shape and color. At farmers prices. Eggs in season, Albert Wells, Saranac, Mich.

### For Sale—THOROUGHBREDS CHOICE BARRED ROCK

COCKERELS \$2.00 each, \$3.50 a pair. Dr. C. S. LAYTON, R. No. 3, Ypsilanti, Mich.

### Eggs for Hatching from pure bred Buff Wyandottes

at \$1.25 30 eggs \$2. W. J. Ireland, Cass City, Mich.

### EGGS: EGGS—White & Buff Orpingtons,

White & Barred Rocks, Black & White Minorcas, White & Buff Leghorns, Rose & Single Comb Reds, Houdans & White Crested Blk Polish. H. H. King, Willis, Mich.

### Barred Rock Chicks.—Vigorous, farm raised, and

bred from prize winners. \$3 each, two for \$5. J. A. BARNUM, Union City, Mich.

### EGGMAKERS Strain S. C. Brown Leghorns.

Eggs 38c. per 15; \$1.48 per 30; \$3.98 per 100. WM. J. COOPER, Mt. Pleasant, Michigan.

### FOR SALE—8 cockerels, 2 B. P. Rocks, 2 Buffs and

4 White Orpingtons. All pure bred at \$3 or 2 for \$5. Eggs from any one of these at \$2.50 per 15. W. J. ROWLEY & SONS, Leonard, Michigan.

### R. C. Brown Leghorns—Kulps 242 egg strain, prize

winners, farm range, select eggs \$1.00 15; \$3.00 50. S. W. HENSEL, Basil, Ohio.

### Buff Rock Cockerels—Farm raised. Healthy, good

size, shape and color. From \$1.50 up. WILLIS S. MEADE, R. No. 3, Holly, Mich.

### Big Business Barred Rocks

J. E. TAYLOR, Belding, Michigan.

### COCKERELS FOR SALE—Light Brahma White

Wyandotte & B. P. Rocks, good ones, also pullets. E. D. BISHOP, Route 38, Lake Odessa, Michigan.

### BUFF PLY. ROCK and S. C. Buff Leghorn Cockerels.

Exceptionally good stock at farmers prices. Eggs in season. F. J. H. BURCH, Blaine, Michigan.

### R. C. B. Leghorn Cockerels—Kulp strain, the best

there is, \$1 to \$3. Eggs in season. C. W. WAITE, Gobleville, Michigan.

### S. C. W. Leghorn Cockerels—Celebrated Ferris

strain. Also eggs for hatching. JOSEPH OCOBOCK, Montague, Mich.

### SINGLE COMB BLACK MINORCAS—A few more

fine large cockerels. Satisfaction guaranteed. Eggs \$3 per 15. R. W. MILLS, Saline, Michigan.

### SINGLE Comb Brown Leghorns—One of Michigan's

largest breeders of the Brown Beauty's winning at the leading shows. Send for catalog with prices and photos of my birds. Box 324 D. Charles Ruff, St. Clair, Mich.

### FOR SALE—S. C. and R. C. Rhode Island

Red Eggs. 15 for \$1.00; 50 for \$2.75; 100 for \$5. BUELL BROS., Ann Arbor, Mich.

### SILVER, GOLDEN and WHITE WYANDOTTES 100

White cockerels at \$2 and \$3 each. New circular after January 15th. C. W. Browning, Portland, Mich.

### Wyckoff and Blanchard Strain S. C. W.

Saled, Trap nested, heavy winter layers. Eggs 100 \$3.00 \$3.15 \$1. F. E. BOSTEDOR, Eaton Rapids, Mich.

### White Wyandottes—Noted for their size, vigor and

egg production. Send for circular. A. FRANKLIN SMITH, Ann Arbor, Mich.

### DOGS.

### TRAINED foxhounds and hound pups for hunting

fox and coons. Also collies. Inclose 2-cent stamp. W. E. LEOKY, Holmesville, Ohio.

### YOU WRITE W. J. ROSS, Rochester, Michigan,

for those beautiful sable and white Collie Puppies, of the finest breeding, and from stock workers.



much. Better feed less at a time and do it oftener.

Do not neglect to keep plenty of clean water in the drinking fountains, which are better kept in some shady place where the water does not get so warm and stale as that placed in the hot sun.

Chickens that are fed in this manner will have big, strong, healthy bodies and, by the time they are six or eight weeks old, will have a good start and be practically out of danger of gapes, diarrhoea or the countless other diseases that kill so many chicks.

Ohio. M. M. ICHLER.

(Supplementary to the above advice regarding the feeding of cooked rations to chicks, it should be said that extreme care is necessary to have the food sweet at all times. Cooked rations are generally fed in a moist condition, and as wet feed spoils much more quickly than dry feed it is absolutely essential that the chicks eat every particle or that the attendant clean up any that remains after each feeding; also that the troughs or dishes in which it is given be kept clean. This system of feeding also calls for considerable extra labor, since the feed must necessarily be prepared in small quantities. It is this extra trouble and labor, together with the eternal vigilance necessary to prevent disease springing from souring, neglected remnants of the ration, that has brought dry feeding into favor. We shall be glad to hear from readers who have practiced both wet and dry feeding and have made a careful comparison of results.—Ed.)

#### BRINGING BEES OUT OF CELLARS.

No two bee-keepers seem to agree as to the proper time for bringing the bees out of the cellar. I believe that it is best for one to consider existing circumstances and use his judgment. It may be very well to wait until nature has provided a supply of pollen, if the bees remain quiet, but if they become uneasy and fly from the hive, it will be best to bring them out.

One must exercise care in bringing them out or he will do considerable damage. The day before they are to be brought out, open the doors and windows so that the air in the cellar will become purified. If this is not done the bees will, when brought into the purer outside air, come out with a rush. It is well to take the smoker into the cellar and smoke the bees well before bringing them out. Reducers should be placed in the entrances so that, after the hives are placed on the stands, only a few bees can come out at a time. If this is not done they will come out with a rush, failing to mark their own hive and thus returning to the wrong one, with the result that some hives will be over-populated while others will be almost deserted. Avoid bringing out on a windy day, for the bees will be driven to the leeward side of the apiary and the hives on that side will be over-populated.

After a little experience a person can tell by the weight of the hive whether, or not, the bees have a good store of food. For convenience it will be well to set those hives that may need feeding to themselves. If the bees in any hive have died, set that to one side in the cellar. If in doubt as to the bees being alive, blow into the hive and they will let you know if living.

After setting the bees out let them alone a few days before examining, as they are in a commotion and opening the hives excites them. Some pleasant day examine each hive to see if the bees have sufficient stores and if the queen is all right; also clean the dead bees out, etc. If any are found to be short of stores, give them combs from the colonies that have died.

#### BREEDING BELGIAN HARES.

A Wayne Co. subscriber who has secured a few Belgian hares wants to know at what age they breed and how old the young ones should be before re-breeding the doe. The females will breed as young as five months and give birth to their young 30 days later. Then they will produce a litter almost every 30 days year in and year out if allowed to do so, but growers of Belgians advise giving the doe a rest of 30 days before re-breeding. The young should be weaned at six weeks. During this period the doe should receive milk and cereal foods, such as oatmeal, with no green food whatever. After three weeks of age the young may have bread and milk, also a little oats and bran, and bits of good clean hay, but may not safely receive green food until four months of age.

## Fruit Sprayed with Bowker's "Pyrox"

**brings more money** because it is free from injury by worms, scab, etc. Over 300 testimonials in our new catalogue show the great value of this preparation on all kinds of fruits and vegetables. Pyrox serves two purposes; it kills insects and prevents disease and blemish. It adheres to the foliage even through heavy rains, saving labor and cost of re-spraying. Perfectly safe. It is all ready to use by mixing with cold water. Every grower who seeks fruit and vegetables free from blemish needs "Pyrox," the "one best spray." It

**"Fills the barrel with the kind they used to put on Top"**

Send for new catalogue with photograph of sprayed and unsprayed fruit in original colors. Will convince the most skeptical. Say how many and what kinds of fruit trees, or how many acres of potatoes you have to spray, and ask for special prices. We ship from Boston, Baltimore, and Cincinnati.

**BOWKER INSECTICIDE COMPANY,**  
43 CHATHAM STREET, BOSTON, MASS.

## Low Factory Price Sells This Cultivator Quick

**30 Days' Trial—No Money Down**  
**Freight Paid No Matter Where You Live**

We manufacture the Cultivator you want in the Spring Tooth, Pivot Axle, or Walking Style, or Lever Drag—each the most perfect tool of its class—guaranteed for all time—and each offered at a *delivered* price that shames all competitors. Pick the one best suited to your needs and try it *free*, 30 days or more. We demand no money in advance, no deposit.

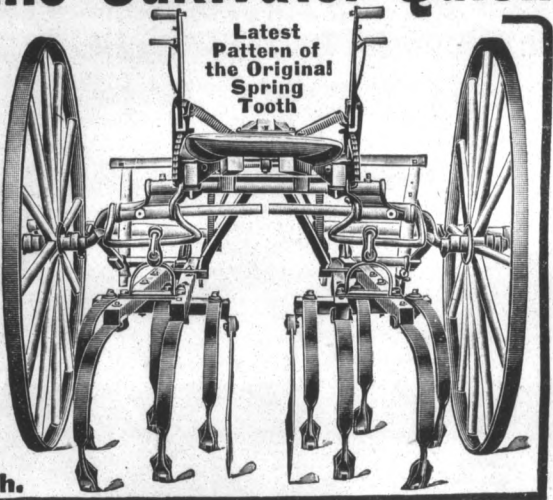
We show here the *original* spring-tooth cultivator brought down to 1911 perfection. Does everything any spring tooth does, in all soils—does it *better*. Does work no other cultivator can do. Has widest range of adjustments. With center section of 5 teeth bolted in, makes a first-class, easy-riding, spring-tooth harrow. Also a perfect Broadcast Seeder and Bean Harvester with simple attachments.

**Detroit-American Take Your Choice**  
**of Cash or Credit**

No other cultivators made, regardless of prices asked, compare with Detroit-Americans. Thousands in use in all States. Satisfaction guaranteed on quality and prices and terms *right*. Cash, 30 days or long time payments. No dealer, no agent, no mail-order house can give you this quality—a Detroit-American. We deal only direct from factory.

Write for free book. See the cultivator you want at the right price. Also shows the Detroit-American Manure Spreader and Tongueless Disc Harrows. Don't wait till it's too late to learn how much we save you. Send postal by next mail.

**American Harrow Co., 1032 Hastings St., Detroit, Mich.**



## 140 Egg Incubator and 140 Chick Brooder Both For

**Think of it. Two big machines (140 capacity) only \$10** if ordered together. Guaranteed 5 years. Incubator is made of best California Redwood, completely covered with asbestos and galvanized iron. Hot water type, triple walls, copper tank and boiler, self-regulating, galvanized lamp bowl, O. K. burner, Tyco thermometer, egg tester, roomy nursery under egg tray, complete ready to use. Brooder is large, well made, fireless type. Can be used out-doors. No others equal the Ironclads. Compare size, quality of lumber, workmanship with any and you'll surely buy the Ironclad. Send for Free Catalog or send in your order—money back if not satisfied. Ask publishers of this paper about our responsibility.

**IRONCLAD INCUBATOR CO., Box 65, Racine, Wis.**

**Dear Sirs:** The incubator we bought of you was the best we ever saw. I have had three hatches. The first time I placed 120 eggs in the machine and got 109 chicks; the second time we got 119 chicks from 127 eggs and the third time 129 chicks from 130 eggs. I can gladly recommend the Ironclad incubator as the best made. Yours truly, J. B. POWNELL, Romeny, W. Va.

**Dear Sirs:** I received incubator and brooder all O. K. and they were in good shape. From the first hatch I got 112 chicks from 125 eggs. How is that, as I never run an incubator before. I think the Ironclads are good in every way. Yours respectfully, W. DORSEY, R. No. 4, Manitou, Okla.

**Dear Sirs:** I had very good success with the Ironclad incubator I bought of you last spring. I had two hot air incubators on trial but give me the hot water. I think I will get another Ironclad in the spring. I cannot say too much for your incubator. They are very easy to operate. After you get the right temperature there is nothing to do but turn the eggs and fill the lamp. Yours respectfully, C. P. CHAPMAN, P.O. Box 183, New Cumberland, Pa.

**BUY THE LOWEST COST ENGINE** MADE. Lowest fuel cost; lowest up-keep cost; easiest on the machine it operates, delivering steadier power than any other gasoline engine, adapting it especially for operating farm machinery, with better results and least waste of grain. Lowest fuel cost for it runs on Gasoline, Kerosene, Distillate, Gas or Alcohol and has perfect lubrication. Lowest cost because it delivers greatest available power per horse. A slow speed, high duty engine. Starts easier and quicker than any other engine, occupies less space, is less cumbersome, with less vibration, therefore adapting it for either stationary, portable or traction use. **IT IS THE POWER CONTRACTOR'S FAVORITE ENGINE.** No engine made has so wide a range of use. **YOU WILL MAKE A MISTAKE IF YOU DO NOT WRITE US FOR INFORMATION.** 1½ H. P. to 5½ H. P. single cylinder. 6 to 20 H. P. two cylinder. 30 to 50 H. P. four cylinder. State your requirements and get our advice. **THE TEMPLE PUMP CO., Manufacturers, 412 West 15th St., Chicago, U. S. A.** This is our 58th year.

## Better Farming A John Deere Book



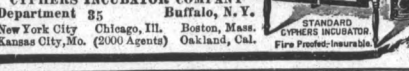
**—Just Out—**  
**A Farmer Can Get It Free**  
THIS valuable book has eighteen articles on live farm topics, written by the highest authorities. Get the book and a full description of John Deere Plows and Cultivators. They are the implements of quality, made for farmers who want the best. We will send the book and catalogue of John Deere goods if you write for **Package No. 5.** Mention the package number *sure*, then you will get exactly the right stuff.  
**DEERE & COMPANY, MOLINE, ILL.**

## Hatch After Hatch 90%—or Better

Write today. Don't you start this new Billion Dollar Chicken money year, without getting our Big Free, 212-page book for money-makers, "Profitable Poultry Raising"—greatest we've ever issued. It tells about

### CYPHERS Incubators and Brooders

with late letters from Cyphers owners all over the country proving biggest hatches right along. Own a real incubator—not an imitation. Before you buy any, get the facts. They're all in our Big Free Book. Address **CYPHERS INCUBATOR COMPANY, Department 85, Buffalo, N. Y.** New York City, Chicago, Ill., Boston, Mass., Kansas City, Mo. (2000 Agents) Oakland, Cal.



**DON'T KILL OR SELL**  
**POTTERIZE THEM AND KILL THE NON-PRODUCERS.** POTTER'S SYSTEM tells the secret. Circulars free. Our two books on portable poultry houses and fixtures, 125 pages and 150 illustrations mailed for 4c postage. Write today. **Potter Co. Box 132 Downers Grove, Ill.**

Mention the Michigan Farmer when writing advertisers

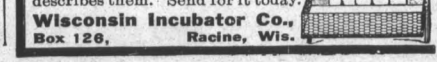
**"Hatching Facts" Free**  
Your address on a postal brings latest edition of "Hatching Facts." It tells how to start right at least expense; how Belle City won World's Championship last season. Write today, but if in a hurry order direct from **J. V. Rohan, Pres. Belle City Incubator Co.**

**\$7.55 Buys Best 140-Egg Incubator**

Double cases all over; best copper tank; nursery, self-regulating. Best 140-chick hot-water brooder, \$4.85. Both ordered together, \$11.50. Freight prepaid (E. of Rockies). No machine at any price are better. Satisfaction guaranteed. Write for book today or send price now and save time. **Belle City Incubator Company, Box 14, Racine, Wisconsin**



**125 Egg Incubator and Brooder Both For \$10**  
If ordered together we send both for \$10. Freight paid east of Rockies. Hot water, copper tanks, double walls, double glass doors. Free catalog describes them. Send for it today. **Wisconsin Incubator Co., Box 126, Racine, Wis.**





# The Michigan Farmer

ESTABLISHED 1843.

THE LAWRENCE PUBLISHING CO.,

EDITORS AND PROPRIETORS.

39 to 45 Congress Street West, Detroit, Michigan.  
TELEPHONE MAIN 4525.NEW YORK OFFICE—41 Park Row.  
CHICAGO OFFICE—600 First Nat'l Bank Building.  
CLEVELAND OFFICE—1011-1015 Oregon Ave., N. E.  
GRAND RAPIDS OFFICE—5 & 6 New Hawkins Building.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:

Five Years 260 Copies Postpaid \$2.75

Three Years, 156 Copies, Postpaid.....\$2.00

One Year, 52 copies, postpaid.....\$1.00

Six Months, 26 copies, postpaid.....60 cts.

Canadian subscriptions 50 cents 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 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, with reasonable discount on orders amounting to \$24 or over. No adv't inserted for less than \$1.20 per insertion.

No lottery, quack doctor or swindling advertisements inserted at any price.  
Entered as second class matter at the Detroit, Michigan postoffice.

## COPYRIGHT 1911

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

WE GUARANTEE to stop THE MICHIGAN FARMER immediately upon expiration of time subscribed for, and we will pay all expenses for defending any suit, brought against any subscriber to The Michigan Farmer by the publisher of any farm paper, which has been sent after the time ordered has expired, providing due notice is sent to us, before suit is started.

Avoid further trouble by refusing to subscribe for any farm paper which does not print, in each issue, a definite guarantee to stop on expiration of subscription.

The Lawrence Pub. Co.,  
Detroit, Mich.

DETROIT, MARCH 11, 1911.

## CURRENT COMMENT.

To those of our readers who have had the opportunity of seeing this popular comedy played the above title will bring recollections of Tilly, the household drudge, who was compelled to stay at home to attend to the menial household duties, while her more aristocratic sister and various other members of the household went to a passing show for a pleasant evening's entertainment, which was a rare opportunity in the community. They will also recall how Tilly fell asleep and dreamed of a broader life in the more congenial environments with which she was surrounded after her marriage with a playmate of her youth, who had become a wealthy New York merchant, and how, after her numerous experiences which brought out the ridiculous side of some phases of life in the American metropolis and the courts of Europe, she was awakened from the nightmare by the return of the others from the show.

But those among our readers who have not seen this dream enacted on the stage have been given a glimpse of an equally interesting and somewhat parallel vision recently beheld by a prominent actor in our great national theater in which the tragedy (or comedy) of Canadian reciprocity is being played. We refer to the interview recently given out by Senator-elect Townsend, of Michigan, in which he announces that the Canadian reciprocity agreement is but the first step in a grand scheme to bring about closer commercial relations between the United States and Canada. The vision which he unfolds for the admiration of the public, after an interview with President Taft, is no less than a grand scheme for an agreement with Canada, whereby the United States will appropriate millions of money to aid Canada in the improvement of the Welland Canal and the deepening of the shoal waters in the rapids of the St. Lawrence river to admit the large ocean vessels to the Great Lakes, thus providing the farmers of the middle western states, as well as those of Canada, with cheap transportation to "their markets," and cheap transportation from foreign countries on the things they have to buy, besides solving the problem of colliers for the navy in the event of war. Mr. Townsend devotes considerable space to a computation of the added dollars

that would accrue to the farmers of the lake states from such an arrangement and some to telling how it would benefit the industries of the urban centers in these states and in Canada, especially the lake ports, but unfortunately does not mention the fact that in numerous places in the water route to them, the navigable channels are not sufficiently deep to permit the uninterrupted passage of the larger lake boats at many times, during the rather short season of open navigation, to say nothing of the larger ocean ships, notwithstanding the fact that the government has spent and is annually spending millions to keep up with the demand in this direction. He has also, and unfortunately, from an argumentative standpoint, tacitly admitted that the enactment of this agreement will compel our farmers to sell their products on a world price level for many years to come, since he comments on the benefits of cheapened transportation to "their markets," which might then be reached by ocean shipments. Unfortunately, too, he has failed to note in his statement that any possible reduction of transportation charges on the things which the farmers have to buy would not permit their purchase at the world price, plus the transportation charge, since they will still be protected by a tariff, even those which they might get from nearby Canada under the terms of this agreement.

But let us see if this "vision" is not capable of interpretation. This is the third report of an expression by Mr. Townsend on the proposition of Canadian reciprocity. In the first statement accredited to him soon after the announcement of the terms of the pact he said in effect that he did not see how our farmers could be expected to support our protective tariff policy if the things they had to sell were admitted free of duty while the things they had to buy were kept in the protected list, a sentiment that apparently came from the heart of a man who understood and sympathized with the position of a great class of his constituents on this important question. Later a statement was accredited to him to the effect that notwithstanding the protests of the farmers of Michigan, he thought he would support the agreement, since a broad view of the situation compelled him to look to the future, as well as the present welfare of Michigan and the country. Unfortunately, it is not a matter of record how he felt on the subject at the time the vote was taken in the house, but apparently he has since been shown a great light, as evidenced by the interview above mentioned and his introduction in the house, during the closing hours of the session, of a resolution empowering the President to enter upon negotiations looking toward the consummation of the scheme above outlined whenever in his opinion the conditions seem to warrant such a course. Now for the interpretation! It would appear to "a man up a tree" that the opposition to the Canadian pact which has been so strenuously voiced by the farmers of the middle west has made such an impression on the President that he has considered it necessary to do something to counteract it, hence the interview and the resulting vision which Senator Townsend has reported to his constituents. But we do not believe it will serve to begot the issue. We believe that someone will awake to find they have been in the throes of a nightmare, and we do not believe it will be the farmers, as it surely would be if this dream were accepted by them as an attainable fact, instead of an "inspired" vision. It will, however, serve a good purpose in showing his rural constituents where Senator Townsend is now "at" on this question, and should "inspire" them to awaken him as quickly as possible to their own present and future attitude toward this agreement and those who are not disposed to give them a "square deal" in its consideration.

Is the present system of conducting Institute work satisfactory? Has the current method served its purpose, and if so, what change can be made that will enhance the efficiency of this institution? Should there be a complete revision of the system or should we gradually introduce new features as we proceed under the present organization? These and other questions are being seriously considered by institute workers, students of rural sociology, and laymen, and while the questions are easily asked, the answers given are widely at variance with each other, the only harmony being on the question that something ought to be done. While it

may seem at first thought that the occasion for these questions is a criticism of the present administration of the institute work, a deeper study of the case shows it to be the very opposite, for this work, being carried with such enthusiasm as it has to every corner of the farming sections of the state, has aroused men and women to the larger possibilities of farm life and they are now demanding more than it is possible for this institution to give under its present organization.

However, in the face of this apparent unrest regarding this point, the sixteenth annual meeting of farmers and workers at M. A. C. last week, gave evidence that there was still a live wire connected in the present scheme. The attendance at the meeting, according to Superintendent Taft, was larger than a year ago, both at the men's and women's sessions, and the interest and attention manifested would be difficult to improve, there being an unusually large number of the patrons who brought their note books and pencils to take home records of those things which most concerned their line of farming, or housekeeping. The progressive lectures given by Profs. Kedzie, Jeffrey and Shpe-smith, of the college, were most practical and the demonstrations given held the audience at rigid attention throughout the forenoon gatherings. Many appear to see in this class of work the hope of the institute. The other numbers were excellent and Michigan farmers are to be congratulated on being able to hear such a high-class program as was presented. The addresses of Prof. Humphrey, of Wisconsin, of Prof. McKeever, of Kansas, of Dr. Hamilton, of the Department of Agriculture, Mr. Wing, of Ohio, and others, proved a treat, not only for the valuable information brought to the audience, but also for the interesting manner of presentation. Fruit men were disappointed when it was learned that Cyrus G. Miller, of Massachusetts, could not be present, but they were glad to learn from the long experience of Prof. Mainard of the same state, who spoke on the subjects assigned to Mr. Miller. The principal addresses given will be reviewed in the several regular departments of The Farmer in succeeding issues for the benefit of those of our readers who could not attend the sessions.

As before stated in these columns, the reports received from different sections of the state show a great variety of opinions regarding the desirability and efficiency of the present highway law. But notwithstanding the fact that dissatisfaction has been expressed by the residents of many townships, it seems to be well established that the law is more satisfactory than the old law was to a majority of the progressive farmers of the state.

This apparent fact was evidenced by the resolution passed by the State Association of Farmers' Clubs at its annual meeting during the closing days of last year. A review of the opinions received from various sources seems to indicate that where the law has been unsatisfactory in application, the trouble has been with the manner in which its provisions have been carried out rather than with the law itself, since in localities where the electors have been fortunate in their choice of highway officers and where the voters have been reasonably liberal in their appropriations for highway maintenance and improvement a degree of satisfaction with the new method has very generally been expressed.

It is obvious that if an insufficient sum is appropriated at the annual township meeting to make needed repairs and improvements, the officers selected to direct the work cannot be blamed if the results are not all that might be desired. If, on the other hand, the electors have been careless in their choice of highway officers, they are equally to blame and the remedy lies in their own hands. With the spring election close at hand, it is high time for the progressive farmers in any township where the new highway law has proven unsatisfactory for either of the reasons mentioned above to start a campaign which will remedy the difficulty for the ensuing year. If the moneys appropriated are insufficient for the purpose required, talk the matter over and have enough interested voters present at the noon hour when the appropriation is made to remedy the difficulty. Also talk over the matter of selecting suitable highway officers before the caucuses are held at which they will be nominated. While this is not really a matter for partisan politics, yet it is so

by precedent, and it would be a wise precaution to have the candidates on the leading tickets of the right stamp to insure satisfactory results in the administration of the law. In many cases this can be accomplished only by some concerted action on the part of the voters. It is not always the man who seeks an office of this kind who will make the most satisfactory official, but often the right man could be induced to take the office if his friends would do a little work to that end, so as to make it unnecessary for him to appear to seek the place.

In addition to the regular duties of the highway officers in the maintenance and improvement of the highways, they are charged under the statute with the administration of the law designed to prevent the spread of noxious weeds, which is also an important factor to be taken into consideration in the selection of men to fill these places. For these reasons, then, it would be the part of wisdom for the progressive farmers in every locality in the state in which there has been marked dissatisfaction with the operation of the present highway law to give the matter a little attention previous to the spring election, to the end that the moneys appropriated may be wisely expended and the taxpayers receive a maximum of benefit and satisfaction from the administration of the law.

While complete statistics are not yet available, it is stated on good authority that

Michigan's product of beet sugar for the current year will exceed that of the previous year by 35 million pounds, and that the total production for the year will surpass the best season's record for Colorado, while at the present rate of increase Michigan's production will soon outstrip that of California. The large increase in the production of beet sugar in Michigan within the last decade is well known by every Michigan Farmer reader, and in view of that increase accurate knowledge regarding the production of beet sugar for the country, as well as the production and importation of cane sugar and the consumption of this staple product in the country, will be of interest. It will doubtless be a matter of surprise to most readers to know that the production of beet sugar in this country now exceeds that of cane sugar, having passed it in 1907. The total production of sugar in the United States, according to government reports now exceeds 175 billion pounds, of which more than one billion pounds is beet sugar and about 175 million pounds is cane sugar. This amount represents about one-fourth of the sugar consumed annually in the United States. About one-half of the amount consumed is imported from foreign countries and about one-fourth, or an amount similar to our own production, is brought in from the islands under the American flag. While about half of the world's sugar supply is made from beets, practically all of the sugar imported into the United States is cane sugar, most of the beet sugar produced in Europe being consumed in the country where it is produced. The cane sugar imported into the United States comes mostly from Cuba, the East Indies, Mexico and South America. Our own islands supplying a portion of the sugar used in this country are Porto Rico, Hawaii and the Philippines. The cane sugar produced in this country comes from the Gulf states.

Regarding the consumption of sugar in the United States, the latest government report on the subject says:

"The people of the United States are larger consumers of sugar per capita than those of any other country of the world except England, for which the latest figures show a consumption averaging 86 pounds per capita, against our own average of 81½ pounds per capita. The next largest per capita consumption is in Denmark, 77½ pounds; followed by Switzerland, 64 pounds; Sweden, 54 pounds; and Germany and Holland, each about 43½ pounds.

"Not only is the United States the second largest sugar consumer per capita, but the total amount consumed annually is much greater than that of any other country, aggregating, as above indicated, more than seven billion pounds per annum, against about four billion pounds in England and about three billion pounds in Germany.

"The sugar 'habit' is evidently a growing one with the people of the United States and probably with those of other countries, since the total world production of sugar, including all countries for which statistics are available,



has increased 50 per cent in the last decade and about doubled in 15 years. In our own case the consumption has shown a rapid growth, the per capital consumption having been, in 1880, 40 pounds; in 1890, 51 pounds; in 1900, 59 pounds, and in 1910, approximately 81½ pounds."

#### ALGONAC FRUIT MEN ORGANIZE.

The initial meeting of fruit men living in the vicinity of Algonac, was recently held for the purpose of organizing a local society. Secretary Bassett, of the State Horticultural Society, was present and made an address in which he advanced the benefits to be derived from co-operation and impressed the necessity of careful, persistent and intelligent action regarding old orchards. He is sure men are justified in laying out new plantations where conditions favor the fruit planted. The new society elected temporary officers as follows: D. Munro, president; W. G. Hodge, secretary, and D. O. Dostader, prompter. Another meeting will be held soon to complete the organization and start a campaign for a large membership.

#### HAPPENINGS OF THE WEEK.

##### National.

The New York legislature still finds itself unable to select a senator to succeed United States Senator Depew.

The strike order issued by the building trades in Chicago is being held in abeyance.

A grand jury is investigating the alleged vote-selling scandal at Danville, Illinois.

The California legislature has passed a measure abolishing capital punishment.

The Battle Creek plant of the Quaker Oat Company was destroyed by fire Monday, causing a loss of \$100,000.

One of the clerks of the Detroit post-office has been placed under arrest for selling obsolete stamps which should have been destroyed according to the orders of the government.

A measure was passed by the 61st congress authorizing a commission to investigate the proposed advance of postage on magazine matter. Justice Hughes, of the United States supreme court, will head the commission.

A south wind broke ice on which some thirty persons were skating at Traverse City and carried the persons out in the bay. It was with much difficulty that they were rescued.

The syndicate block between Fifth and Sixth streets, Minneapolis, Minn., was destroyed by fire Sunday, causing a loss estimated at \$1,000,000. This is the largest fire in the history of the city. A call was made on St. Paul for aid in fighting the flames.

The democrats have already named their members of the ways and means committee for the 62nd congress, which committee will have the authority of selecting all other committees of the house. This committee is headed by Robert L. Henry, of Texas. Of the republican members who were on the old committee only two remain, Dalzell, of Pennsylvania, and Lawrence, of Massachusetts.

Col. Theodore Roosevelt leaves New York Wednesday of this week for his five weeks' western trip which will take him through the south to the western coast and thence back to the metropolis where he will arrive April 16. His first stop is at Atlanta, Ga. He has 22 engagements and will speak on a wide variety of subjects.

Six prominent business men of Detroit and one Chicagoan were indicted by a federal grand jury sitting in Detroit, Monday night after a careful investigation of the alleged frauds connected with claims of Alaskan coal lands near Homer. The lands aggregated about 48,000 acres and are valued at \$50,000,000.

A force of 700 American marines is being sent by the navy department from Philadelphia to Guantanamo in the West Indies under secret orders. The purpose of the move can only be guessed at, but it is believed that the recent disturbance in Haiti is at the bottom. England has complained to this country that her interests were being imperiled by the revolutionists. This with the endangered condition of American interests is assigned as the reason for sending so large a detachment, the largest since the one sent to Nicaragua last year.

The supreme court of the United States has decided that West Virginia is obligated to pay a part of the debt of Virginia incurred before West Virginia was made a separate state. The whole debt was \$33,000,000 and the court decided that the younger state must pay \$7,182,507 as her portion.

##### Foreign.

A fire in a moving picture theatre at Bologoe, Russia, caused a stampede for one small exit and resulted in the death of 120 persons.

Construction on the transcontinental railway across South America between Durazno and Trinidad is begun.

The teams of the American Atlantic fleet are competing in rifle practice at Calmanera, Cuba.

Two Chilean war vessels have left Valparaiso to meet the American battleship Delaware which is carrying home the body of Anabel Cruz, the late minister of Chili to the United States.

Natives of Fez and Tangiers are reported on the warpath. Communication between the places has been cut and couriers are said to have been captured. The German government has ordered a

gunboat to the Barbary coast to protect her interests.

Newfoundland has been caught in a fierce blizzard and all means of transportation have been blocked by the deep snows.

It is stated that there is unrest in China over the encroaching movements of Russians in Manchuria. Exception is taken by the government at Peking to the extended reports in the Russian press of the danger of another boxer uprising, the officials stating that the people are under control.

The Mexican insurgents have planned to seize Chihuahua and Juarez, and if successful in this will appeal to the United States for recognition. Juarez is defended by 400 Mexican soldiers and is said to be surrounded by 5,000 rebels. The town of Tapia is reported to have fallen into the hands of the rebels after severe fighting, there being heavy losses on both sides. The war department at Washington has ordered other detachments of troops to proceed to San Antonio to be ready in case forces are needed to protect American interests.

There is a move on for delaying action by the Canadian parliament upon the Canadian trade pact until after it has been ratified by the American congress. It appears that the opposition across the line is developing, besides England herself is taking more interest in the legislation. It is now the plans of the democrats of the house of representatives at Washington to take up the measure immediately after organizing the new congress, which President Taft has called for April 4, and it is anticipated that it can be passed by that body in four weeks. The house will then set about revising other tariff schedules affecting the necessities of life.

#### CROP AND MARKET NOTES.

Genesee Co., March 4.—Fine spring weather. No snow and frost coming out of the ground slowly, leaving roads in fine condition. Sugar bushes being tapped and an average flow of sap anticipated. Plenty of auction sales and changing of tenants on farm in this vicinity. Stock brings good prices. Farm help scarce and as high as ever. Old potatoes slow sale. Hay pretty much sold. Sheep feeders not realizing much on the season's work. Dairy products keep up well but eggs are off several cents. Market quotations as follows: Wheat, 86c; oats, 29c; corn, 47c; dressed hogs, 9c; dressed beef, 6@8c; live chickens, 11½c; potatoes, 40c; apples, \$1.50@2 per bu; baled hay, \$12@14; loose hay, \$13@16; straw, \$5.50@6; butter, 24¢-25¢; eggs, fresh, 20c.

Emmett Co., Feb. 28.—There has been several thaws during the month, with light fall of snow. There is much bare ground to be seen. It is altogether likely that winter grain and clover seedlings will come out in the spring in a less vigorous condition than usual. The prospects are good that a pickle factory will establish a salting station at Petoskey the coming season. There will be the usual number of farm sales this spring. Eggs, 23c; butter, 28@30c; hay, \$16; straw, \$8; dressed chickens, 17c; pork, \$8@9. Sleighing good, with a considerable amount of traffic going on. Beech and maple logs are being marketed at \$10@12 per M.

Washtenaw Co., Feb. 27.—The last of the winter months is about to depart. The weather is much too warm, bringing muddy roads and freezing and thawing nights which, if continued for the next month, will be especially hard on wheat and clover. Wheat prices are steadily declining, 80@84c; oats, 28c; potatoes, 25c; butter, 20c; eggs, 14c. With farm help scarce, month hands commanding from \$27 to \$33 per month and keep of a horse extra, and reciprocity in the near future, the farmer unable to do his own work has indeed a discouraging future outlook. In many cases more money would be made to cut the acreage in half, dispense with hired help, pasture a larger acreage of the land, and in general prepare by cutting expenses to the lowest possible point, than to continue a ruinous competition with each other and Canada added.

#### CATALOG NOTICES.

The Imperishable Silo Company, of Huntington, Indiana, send a 32-page illustrated catalog describing the imperishable silo made from the patented, vitrified clay blocks manufactured by this company. Write them for the book, mentioning the Michigan Farmer, if in need of a silo.

"Everything for the Garden" is the title of a large sized 200-page catalog issued by Peter Henderson & Co., 35-37 Cortlandt street, New York. This catalog lists a complete line of tools and implements for garden use, as well as a complete line of garden and flower seeds and plants.

Crawford's 1911 catalog of strawberry plants and other small fruits and gladiolus bulbs, sent by M. Crawford Company, Cuyahoga Falls, Ohio, offers a select list of high-grade plants for the critical buyer of these goods for spring planting.

Burpee's 35th anniversary supplement, issued by W. Atlee Burpee & Co., of Philadelphia, Pa., contains a profusion of fine illustrations of their offices, seed houses and seed gardens and trial grounds at their Fordhook Farms in Pennsylvania, as well as their New Jersey and California farms, and a list of prize awards for 1910 placed by this well-known company.

#### Have You Poultry to Sell.

Lewis T. Oppenlander, Lansing, Mich., advertising Leghorns, writes: "Change my advertisement to eggs. I wish I had all the stock and eggs that I could sell through my advertisement in your paper."

Those who have stock to sell should advertise it in the Michigan Farmer.

# CONGO ROOFING

## GUARANTEED UNTIL 1921



### A Real Surety Bond

We know Congo will last **more** than 10 years.

One thing the guarantee forces upon us; it makes us extremely careful in manufacturing.

We make doubly sure that every roll is perfect.

We use the best material that money can buy.

We provide free of charge, **galvanized** iron caps which are rust proof and will last as long as the roofing.

Send for free copy of our Guarantee Bond, and a sample of Congo Roofing.

THE owner of a building covered with Congo has the satisfaction of knowing that his roof is **guaranteed for 10 years.**

In each roll of Congo 2 ply and 3 ply is a **genuine legally binding Surety Bond** issued by the National Surety Company of New York.

This year we will guarantee thousands of roofs **to last till 1921.**

Of course we are not going to lose—we are offering a sure thing.

**Congoleum** We should like to send every reader of this paper a sample of Congoleum, the new floor covering and wainscoting. A perfect imitation of light and golden oak. Unusually durable. The price is very low. Write for samples and further details.

### UNITED ROOFING & MANUFACTURING CO.

PHILADELPHIA CHICAGO KANSAS CITY SAN FRANCISCO

## Fifteen Years' Service Without Painting—Or a New Roof—That is Our Guarantee to You—

and the guarantee is stamped right on the roofing itself with the year you buy it.



### DICKELMAN EXTRA

#### Galvanized Metal Roofing

is the only metal roofing made which is so scientifically galvanized that it can be guaranteed against rust.

Only the toughest, most pliable, open-hearth stock is ever used. This metal is peculiarly porous and long-fibred, so that when it is put into the galvanizing pots the liquid spelter does not veneer but penetrates this fiber and amalgamates with the metal base, thus protecting it forever.

Dickelman Extra is easily laid. It is already turned and adjusted for end locks. All you have to do is to place together, and you have a perfect double seam.

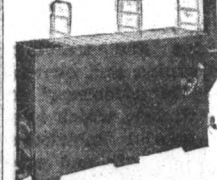
Try one of our samples, test it and then test some ordinary galvanized roofing. Buy the one which does not flake or crack. It will be Dickelman's. Write today for

#### Free Samples and Book on Roofing

The book will show you how you can save money on your roofing, how to lay roofing easily, how to avoid repair bills. Your dealer will know about Dickelman's. Ask him. But let us send you this free book and sample. Write today.

THE DICKELMAN MFG. CO.  
66 Gormley St., Forest, Ohio

## HOME CANNING FOR PROFIT



Many dollars' worth of fruit and vegetables go to waste on the farm that could be made into a profit. Many times the markets are glutted on some articles, where, if you had one of our **CANNING MACHINES** you could can these articles and sell them on a much higher market.

You realize Mr. Grower, that it is not the grower that makes the large profits, but the middleman does, and you do the hard work. Why not can your own products and get a portion of this profit? Write us for full particulars.

### THE CANNERS SUPPLY CO., Wabash, Indiana.

# SEED CORN 153 BU. ACRE

**Diamond Joe's Big White**—A strictly new variety. None like it. It is the Earliest and Best Big White Corn in the World—Because it was bred for most Big Bushels, not fancy show points; because grown from thoroughbred inherited stock; every stalk bears one or more good ears, because scientifically handled, thoroughly dried and properly cured and had the most rigid examination. Big Seed Catalog FREE. It tells about all best farm, grass, garden and flower seeds grown. Write for it today.

Address, **RATEKIN'S SEED HOUSE, Shenandoah, Iowa**

When Writing to advertisers mention the Michigan Farmer



## HORTICULTURE

### HORTICULTURE AS A VOCATION FOR YOUNG MEN.

**H**ORTICULTURE offers many opportunities for the young man who has made himself master of his vocation. I know of no occupation which, at the present time offers more varied, healthful and remunerative employment than horticulture. Work with trees or plants is necessarily a refining occupation, more so than work with stock, but the work requires patience and energy—it is no vocation for the shiftless, or the young man who is afraid of his hands or clothes. The horticulturist must expect to do some hard work and some disagreeable work, along with that which is easy and pleasant, but this is true of all occupations, and if he has a love for the work and a willingness to put his best into it, he will reap both pleasure and profit from his chosen vocation.

One feature of horticultural work which appeals to the average young man is its speculative nature. One is dealing with variable objects—plants or trees—no two of which are ever the same or will respond in the same way to the same treatment. Then, too, the weather conditions enter into the varied and speculative nature of the business, and make an amount of uncertainty as to results. This element of speculative uncertainty is just sufficient to keep the average young man interested in the game of horticulture. It doesn't get monotonous to him. The laws of mathematics are certain. The same computations with the same figures will always give the same results. There is no variation, no speculation. As a result mathematicians are said to be narrow, as a class. They deal with certainties and feel that everything should be certain. The horticulturist can not follow set rules and always get the same results. He must rely upon his knowledge of plant life and soil and weather conditions to make his rule variable enough to fit all cases, or to formulate a special rule to fit each case. To the one whose heart is in his work this does much to relieve horticultural work of any monotony, and it also tends to make the horticulturist a broad minded man.

Another feature which makes horticultural work desirable and pleasant is the quiet beauty which usually surrounds it. The horticulturist is out in the open surrounded by growing plants, beautiful trees, a balmy, healthful atmosphere, and a sunny sky. He can drink in the beauties of nature to his heart's content. His vision is not limited by four walls and a dingy ceiling, his walls are the horizon and his ceiling the blue sky; he is not forced to breathe the vitiated air of a small factory or office but draws his supply of oxygen from God's free atmosphere; he need not accustom his nerves to the rattle of pavements or the hum of machinery, but rather to drink in the quiet music of nature, or catch the song of the bird. Certainly the conditions surrounding the horticulturist's work are helpful and restful alike to mind and body.

Still another desirable feature of horticultural work is its variation. The skilled mechanic may stand in a shop day after day, doing nothing but shape a pattern or a casting. This work may require skill, but when this skill is attained there is little more to do except to act as a machine is turning out this part of the factory output. Although the horticulturist may specialize in the production of some one crop he can never escape an almost daily change in his work, in fact, he will more often change several times a day. This is restful, both to body and nerves, and gives the horticulturist the advantage of a wide range of experience, lessens the monotony of the work, and gives both body and mind opportunity for a broader development.

The fruit grower has the advantage of the stock farmer in that he can arrange his work so as to have vacation periods. The dairyman must care for his cows and milk them week days and Sundays, summer and winter. The fruit grower can always find something to do at any season, and is a little extra busy on some seasons, but he can usually arrange to have Sundays to himself and to have more or less liberty during the winter season. While stock must be cared for day after day, such work as pruning, manure hauling, or making crates can be put off for a season and an occasional vacation enjoyed.

To the young man who is thinking of taking up horticulture I would suggest that he prepare himself as thoroughly as possible for his work. If he has had some practical experience on a farm or with fruit it will be of much assistance to him, but a lack of this experience should not deter him from getting the technical training which an agricultural high school and the Agricultural College can give him. If possible, the horticultural student should complete the four-year course at the College, if this is impossible much can be gained from the short course. Then, if he is not familiar with the practical work on a fruit farm he can spend part of his vacations at this work.

If the young man has no farm to which he can return after his completion of a college course he will find many openings along the line of teaching or professional work or on the farms of others.

The government, with its great department of agriculture, with its divisions and subdivisions, and hundreds of specialists working along definite lines, offers an opening for many trained horticulturists. Foresters, entomologists, pathologists, plant breeders, etc., are wanted continually, both at Washington and throughout the country, and these positions are filled from the young men trained at our agricultural colleges. Several of my classmates have taken up this line of work and attained considerable success in their chosen profession. One whom I recall is investigating and promoting school gardens, another is working to improve the nut industry of the south, another is working on the diseases of citrus fruits in the west, and so on.

Another interesting line of work for the young horticulturist is the experimental work at the various experiment stations in the several states, or in field work taken up under the supervision of our colleges. Several of my acquaintances are in work of this kind.

Many of the trained horticulturists make teaching their occupation, at least for a few years, or until they can start into fruit growing for themselves. The agricultural colleges offer a wide field for this work, and the rural high schools and agricultural courses in village and city high schools are at present making more of a demand for young men competent to engage in this work than the colleges can supply.

Agricultural and horticultural journalism presents another field for the horticulturist who is handy with his pen. Farm and fruit papers and magazines need a large staff of contributors as well as editors, which affords work for horticulturists, some of which can be done in connection with other work on the farm. I recall three classmates of mine who have taken up agricultural journalism, and who now occupy influential positions with leading agricultural journals. One of these clerked in a grocery store for a season after completing his course until a menial position opened up on an eastern agricultural journal. Now he is editor-in-chief of this journal.

But aside from what might be called the professional positions in horticulture, there are many lines of horticultural work outside of government or state institutions or horticultural journals, and many of these are demanding the best horticultural talent that can be found, and are offering very remunerative inducements to those who can "deliver the goods."

Among these are, (1) landscape architects. Our public parks, cemeteries, and private grounds and estates must be kept up by those skilled in this work. (2) Nurserymen. The trees and plants for our orchards and yards must be grown under the management of those familiar with plant development and plant diseases, which requires the trained nursery specialist. (3) Seedsmen. Our gardeners must be supplied with fresh, healthy seed, the growing and breeding up of which is a business in itself, which requires much knowledge and training. (4) Foresters. Lumbermen and owners of timber tracts need "land lookers" to care for and estimate timber, which is a business requiring a special knowledge and familiarity with the growth and uses of trees. (5) Greenhouse management. The demand for potted and cut flowers has grown to such proportions that a small army of trained workers under glass are needed to furnish the supply. (6) Vegetable forcing. Not only does the trade demand flowers but they must have vegetables, both in and out of season, and the growing of these under glass on a large scale presents a field for the horticulturist trained along this line.

Aside from these and many other lines

## WALTER A. WOOD

Here are two machines that will help harvest your hay crop in less time and with less work than ever before.

### The Admiral Mower

is the easiest-running, cleanest and most powerful cutting mower because no other has *genuine under-draft, floating frame and uniform tilt of the cutter-bar*, giving the greatest possible cutting-power and without neck-weight.

### No. 10 Steel Rake

is unequalled for long and satisfactory service. It is made entirely of steel. Every tooth is individually held and has a coil-spring that relieves strains and prevents breakage. The teeth are always under control. Wheel hubs are renewable. The No. 10 always rakes clean.

### Send for our big Diamond Jubilee Catalog

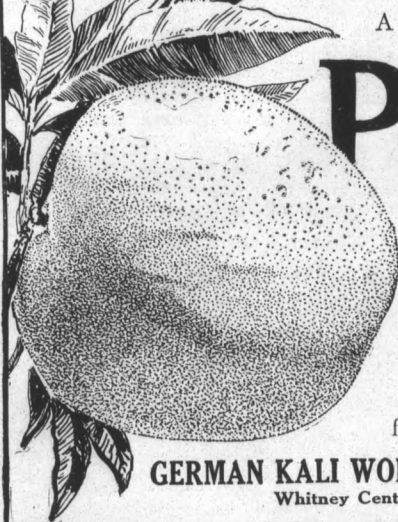
which explains why the Admiral Mower and No. 10 Rake are the best money can buy. There are 95 illustrations of these and other Wood Machines you should see. Just send name and address on a postal and send *now*.

WALTER A. WOOD M. & R. M. CO.

Box 232, Hoosick Falls, N. Y. or Detroit.



WELL FLAVORED,  
LARGE, AND  
HIGHLY  
COLORED



THIS is the kind of peach it pays best to raise, because it's the kind people want most and pay highest for.

A better shipping peach results from an application of

## POTASH

In other words—Potash Pays. See that your peach orchard fertilizer contains at least 10% of actual Potash, or broadcast 200 lbs. muriate of Potash and 400 lbs. acid phosphate per acre in the orchard.

We sell Potash in any amount—from 200-lb. bags up. Write now for price.

GERMAN KALI WORKS, Inc. Continental Building, Baltimore  
Monadnock Block, Chicago  
Whitney Central Bank Building, New Orleans

## "3 in 1" Red Raspberry Herbert

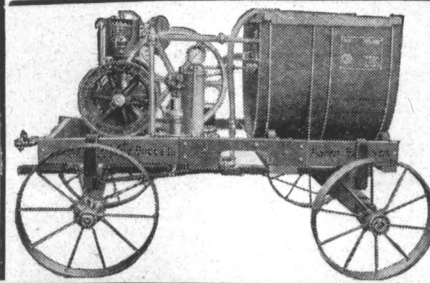
Hardest of all Reds and Heaviest Yields of All

205 Bushels to the Acre—Cuthbert only Averages 56

Description of The Herbert Raspberry

By Prof. W. T. Macoun, of Ottawa  
HERBERT (No. 17)—A chance seedling, originating with R. B. Whyte, Ottawa, Canada, in 1887. One of 30 seedlings, probably of Clarke. A very strong grower, hardy and very productive. Fruit large to very large, obtusely conical, bright to rather dark red; drupe medium size, not crumbling; moderately firm; sweet and sub-acid, sprightly, juicy and of good flavor. Quality very good. Season begins a few days before Cuthbert. The best red raspberry tested here. It has all the good points required in a berry for local market, being hardy, vigorous, productive, with fruit of large size, good color and very good quality.  
WE ARE growing this berry largely in U. S. and Canada. Prices quoted for shipment in either country, free of duty. Address us BROWN'S NURSERIES, Ontario, Canada.

BROWN BROS. CO., Nurserymen, Limited



THE "New-Way" "SUCCESS"

Twin Cylinder Power Sprayer

Light High Detachable  
Weight Pressure Engine

Save Your Fruit—It Pays

Write Now for "Success" Catalog No. "C"

THE "New-Way" MOTOR COMPANY  
LANSING, MICHIGAN, U.S.A.



## Hardy "Blizzard Belt" FREE

Everybody likes fine strawberries, and to prove that our new GIANT variety is the largest and strongest grower, as well as the heaviest fruiter, we offer to send you TWO PLANTS (worth 30 cents) absolutely FREE. We have picked 12 quarts of fine berries from a test bed grown from but two GIANT plants set the year before. You can do as well, and at the same time raise young plants for a new bed. If you care to send 10 cents for mailing expense, we will add 6 BABY EVERGREENS 2 years old, and send all to you at proper planting time in the spring. It will pay you to get acquainted with our "HARDY BLIZZARD BELT" Trees and Plants. Write to-day and we will reserve the plants for you and send you our catalog by next mail. Address

THE GARDNER NURSERY CO., Box 354, Osage, Iowa





## HURST SPRAYERS

### on Free Trial

No money-in-advance, no bank-deposit. Shipped direct to you at dealer's wholesale prices. Pay us out of the "extra profit" the sprayer earns.

### Horse Power Sprayer

No trees too high, no field too big for this king of Sprayers. For orchards, vineyards, potatoes, weeds, etc. No hand pumping required—works automatically. One man can do more work with this machine than two men with the old style sprayers. It saves you labor, time and money.

### Doubles Your Crop

The Man-Power Sprayer is an all-purpose machine for the medium-sized grower, cheap in price, light, strong and durable. All our sprayers are GUARANTEED FOR FIVE YEARS. We pay the freight. Write a letter or card to-day—and we'll send you Spraying Guide, Catalogue of all kinds of sprayers, and Special Free-Sprayer offer for first in each locality this season. Don't delay. Write now. It means money to you.

**H. L. HURST MFG. COMPANY**  
243 North St., Canton, Ohio

### Spray with the Comet for Surest Results



Price \$3.50 to \$4.50 Agents Wanted

**Comet Sprayers are Easiest to Operate**  
Simplest in construction—foot Rest is attached or detached instantly. Have complete agitator and Brass Screen which prevent clogging of pump. This double-acting spray throws a continuous stream 60 feet or spray fine as a mist. The fruit saved from a choice tree will more than pay for it. You need it for your orchard, vines, lawns and plants. Very durable—all brass. Weighs only 5 pounds. Thousands of fruit growers and farmers have proved it a success. Just try it for applying liquid poisons, fertilizers, etc. The results will surprise you. Best proposition for agents. Send us a postal for full information about this superior sprayer now. Get after the tree and plant pests early and make more money.

**H. B. RUSLER MFG. CO.**  
JOHNSTOWN, OHIO  
Dept. 4

### You Can Depend on These Sprayers

Don't waste your money on uncertain sprayers—the kind that are often out of order. The largest fruit growers use the "Hardie" because it's a sprayer with the trouble left out.

This Hardie No. 2 Power Sprayer has 150 gal. tank, all brass pump, 1 1/2 h. p. engine. Weight 750 lbs. Price \$180.00.

### The Hardie Sprayers

are made in 25 different sizes and styles; prices \$35.00 to \$360. Our catalogue describes these sprayers, and shows you the best way to spray. It's free. Send for a copy.

**THE HARDIE MFG. CO.**  
942 Mechanic St., Hudson, Mich.  
also 19 No. Front St., Portland, Ore.

### BETTER SAFE THAN SORRY

Potatoes, tomatoes, cucumbers, cantaloupes, small fruits, orchards, can be sprayed; at slight comparative cost for protection against blight, bugs, scale, etc. with an "IRON AGE" SPRAYER. Also, actually increases the yield. The machine is adjustable to various widths rows—solution thoroughly mixed—delivered in a fine spray that covers the plant—single or double acting pumps—three, four, six or seven rows—one or two horses—55 or 100 gallon steel or wood tanks. Also orchard attachment and many others.

### IRON AGE Farm and Garden Tools

are practical, effective, economical. They give permanent satisfaction. We have been making the dependable kind for 75 years. Formulas for solutions furnished on application. Write for our free Anniversary Catalogue showing potatoes, machinery, horse hoes, cultivators and complete line of garden drills, wheel hoes, orchard tools, etc.

**BATEMAN MFG CO.** Box 1084 Grenloch, N. J.

### SPRAY FRUITS AND FIELD CROPS

and do whitewashing in most effective, economical, rapid way. Satisfaction guaranteed. BROWN'S

### HAND OR Auto-Sprays

No. 1, shown here, is fitted with Auto-Pop Nozzle—does work of 3 ordinary sprayers. Endorsed by Experiment Stations and 800,000 others. 40 styles and sizes of hand and power sprayers—also prices and valuable spraying guide in our Free Book. Write postal now.

**THE E. C. BROWN COMPANY**  
32 Jay St., Rochester, N. Y.

### Dowagiac Drills & Seeders Are the Leaders

THERE ARE MANY REASONS WHY DOWAGIAC MANUFACTURING CO. DOWAGIAC, MICH.

**Strawberry Plants**—Answer this ad., mention the year free, when time to plant, 2 Norwood plants worth 25c. Illustrated catalog free. Send us postal today. **MAYER'S PLANT NURSERY**, Merrill, Michigan

of horticulture we have the main occupations of fruit growing and vegetable gardening. The latter is being developed so rapidly in the south and about our large markets that there is hardly enough trained help to look after the many problems which it presents. Fruit growing is developing even faster, and there is a continual demand for men capable of taking charge of orchard tracts, fruit farms, or co-operative fruit organizations. These positions offer excellent opportunities for the young man who is made of the right material to take a minor position and work up as fast as he can master the practical work, demonstrate his ability to handle men, and look after the details of the work. When he has done this, if he has saved a part of his salary he is in a position to invest in the business of his employer or in a fruit farm of his own, for, after all the ultimate desire of everyone is to be independent and to have a business of his own, and there are few vocations that will make one more independent than the ownership of a fruit farm.

I can name a number of my classmates and college friends who went back to the farm or who have gone back after taking up other work for a few years, and who have made fruit growing a success. I can also name others equally successful who had only a short course at the college or even none at all, but who, through energy and determination have acquired the necessary knowledge by reading and experience and have become leaders in their chosen vocation. One is a specialist in grape growing; another has gained a reputation in growing fancy strawberries; another has secured a competency from the successful growing of peaches; still others have taken hold of neglected orchards and changed them from a mass of brush to healthy, bearing trees, producing a greater revenue than the entire farm produced under careless management.

But it is needless to recite further the many openings which present themselves to the trained horticulturist. I think I have cited enough to convince the young man with a liking for the work and the energy to stick by it that he can make no mistake by launching into horticulture, but the young man who is not adapted to the work, who is looking for a snap, or who is too genteel to dig in the dirt, would better look for another occupation.

S. B. HARTMAN.

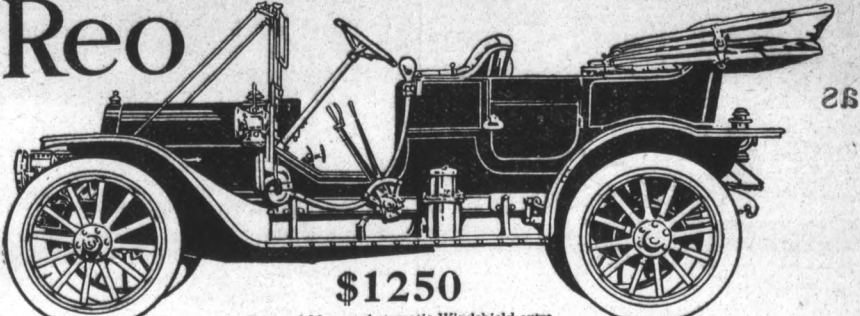
#### HOW TO GRAFT FRUIT TREES.

Please give me the best way to graft fruit trees. H. L. S.

The best time to graft is at the beginning of growth in the spring, although it may be successfully done even a month later, and before buds start. If done before the buds start the scions may be taken directly from the tree of the variety desired, and inserted; otherwise, they should be secured when trees are dormant, from ends of bearing branches of previous year's growth. Do not use fruit spurs nor yield to the temptation to select smooth suckers or water sprouts. Tie the scions in small bundles with cut ends even and store in a box with sand packed about the bundles, using care to have cut ends well surrounded. Keep sand moist and store in cellar or in soil out of doors, in well drained place. In working tree cut branches to be grafted with well-sharpened saw, split down the center of the stock, or stub, insert wedge at heart of limb to hold split open until scions are placed. Cut butt ends of scions wedge-shaped, with one edge slightly thicker than the other. Insert two of these scions in split, one on each side of the wedge holding the split open. Put bark of thick side of the wedge end of each scion so it will come in direct contact with the bark of the limb and then withdraw the holding wedge. This presses the growing cambium or growing tissues of both stock and scion into close contact, which will allow the sap of the limb to enter the scion and continue growth. Cover every exposed surface with good grafting wax to prevent drying out of the wood. Grafting wax is made by melting together four parts resin, two parts beeswax and one part tallow and pour into a pail of cold water. Then grease the hands and pull the wax until it is nearly white.

As to pruning the trees, the cutting should be done to allow sunshine to get into the top, which will promote growth and develop fruit buds and spurs throughout the center of the tree. It is only in this way that low-topped trees can be developed and maintained.

# Reo



**\$1250**  
Top and Merger Automatic Windshield extra

You want proof, and the Reo has plenty of it. The most important thing is get-there-and-back ability. This is absolutely proved by the Reo record from

## New York to San Francisco 10 days 15 hours 13 minutes

It is also complete proof of ample power, speed, strength, comfort, and all the other qualities that belong to a high-grade motor-car.

The car that ploughed through the deep mud of Nebraska in wet weather, kept going at a steady pace through the wash-outs and chuck-holes of the Great American Desert, climbed the rough grades of the Desert, the Rockies, and the Sierra Nevada Mountains—the car that has done all this at record speed, with not a wrench touched to the engine, will do all that you will ever ask of it.

You know what you can do with a Reo—this record proves it. We have plenty more proof if you want it.

The most economical car to buy and own.

Send for catalogue and "Reo and the Farmer". Plain facts.

R M Owen & Co Lansing Mich General Sales Agent for Reo Motor Car Co



## Only \$29.50

Warranted For Three Years. Catalogue FREE.

**Buys this three-year-guaranteed Buggy. Surries, \$45.00 up. Two-Horse Farm Wagons, \$50.00.**

You save the wholesaler's and retailer's profit. MUTUAL vehicles warranted for three years. Satisfaction guaranteed or money refunded.

**WRITE FOR CATALOGUE.**

**MUTUAL CARRIAGE & HARNESS MFG. CO., Dept. 40 East St. Louis, Ill.**

## Which is the STIFF STAY Fence?

This picture shows why Jackson <sup>stiff</sup> Stay Fence is the best.

The Stay wires are made from the same gauge (size) hard steel wire as the laterals. The Jackson knot is made from the same material and holds both in a grip that *never loosens*. The whole fence is *stiff and strong*, and being made with *mechanical accuracy* it always "sets right." Goes up or down hill as smoothly as on the level. No uneven line wires.

**\$50 in Gold for Fence Photographs**

Use this coupon to learn about our big prize offer and also to get a Jackson Fence Tool FREE.

**JACKSON FENCE CO. Box 14 Jackson, Mich.**

Dealers: Our double-barreled selling plan for 1911 will increase your sales. Write and ask about it.



**FREE TOOL COUPON**

Jackson Fence Co., Box 14 Jackson, Mich. Tell me about photo contest and send me a Jackson Fence Tool free. I expect to use rods of fence in high this spring.

I trade at \_\_\_\_\_ (town)

Name \_\_\_\_\_

P.O. \_\_\_\_\_ County \_\_\_\_\_

R.F.D. \_\_\_\_\_ State \_\_\_\_\_



**IT'S as easy to buy Good Paris Green as it is to buy the other kind. And it's easy to know you are getting the best.**

**C. T. Reynolds Paris Green** is as good as can be made; that means purity—no adulteration; effectiveness; results.

For spraying for insects and other enemies to fruit trees and crops.

**Devoe Arsenate of Lead.**

**Devoe Lime and Sulphur Solution** are the best.

Your dealer can supply you; if he does not write us.

**Devoe & Reynolds Company**  
Chicago

New York Kansas City Denver

Largest Makers of Pure Paints in the World

# TREES

Grown in wide, roomy rows on new ground; heavily rooted, healthy, vigorous; propagated from bearing trees selected while in fruit. If you want trees you can depend on—the kind that make heavy-bearing, long-lived orchards—at Wholesale Prices write today for my FREE CATALOG. 33 Years' Experience.

W. E. HEFFNER, Troy, Ohio.

## GOOD SEEDS

**BEST IN THE WORLD**  
PRICES BELOW ALL OTHERS

I give a lot of new sorts for trial with every order I fill. A Grand Big Catalog FREE illustrated with over 700 engravings of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Illinois



### Seeds, Plants, Roses,

Bulbs, Vines, Shrubs, etc. Hundreds of car lots of FRUIT and ORNAMENTAL TREES. 1,200 acres, 50 in hardy Roses, none better grown. 44 greenhouses of Palms, Ferns, Ficus, Geraniums and other things too numerous to mention. Seeds, Plants,

Bulbs, Roses, Small Trees, etc., by mail, postpaid. Safe arrival and satisfaction guaranteed. Immense stock of SUPERB CANNAS, the queen of bedding plants. Acres of Paeonias and other Perennials. 50 choice collections cheap in Seeds, Plants, Roses, etc. Elegant 168-page Catalog FREE. Send for it today and see what values we give for your money. Direct deal will insure you the best at first cost. 57 years. (12) The Storrs & Harrison Co., Box 139, Painesville, O.

## 20 Lily of the Valley

**Roots 25¢**  
The most delicately beautiful of all flowers. It is a perfectly hardy perennial, easily grown, and produces an abundance of lovely pure white, bell-shaped flowers, which are deliciously fragrant. Have usually been quite expensive, but we have a large stock this year and offer 20 nice roots for 25¢, 100 for \$1.00; 1,000, \$8.00; charges prepaid, with directions for growing. Large catalog of plants, seeds, etc., free. IOWA SEED CO. Dept. 48 DES MOINES, IA.

**WHOLESALE PRICES**  
Our Strawberry, Raspberry, Blackberry, Gooseberry, Currant, Asparagus and Grape Plants, Heavy Rooted, High Grade Stock. 19th Annual Catalogue Free. A. R. WESTON & CO., R. 1, Bridgman, Michigan

**STRAWBERRY PLANTS**  
Guaranteed as good as grows at \$1 per 1000 and up Catalog free. ALLEN BROS., Paw Paw, Michigan.

### PROF. MAITLAND SPEAKS ON FRUIT AT THE ROUND-UP.

The first and most important factor in fruit culture is the man. The latest possibilities of success and the conditions that spell failure in the business of fruit growing are all tied up in the man. To succeed well he must be energetic, persistent, a hard worker, and provided with a strong constitution. He should have a good eye and a hand easily trained to do the multitude of acts necessary in the performance of the duties of the horticulturist. This was the first point developed by Prof. S. F. Maitland, who came from Massachusetts, where he has taught horticulture for 25 years, to Michigan to address the patrons of the Round-Up, as a substitute for Cyrus G. Miller, who was compelled to cancel his engagement here. Prof. Maitland's first address was confined to the subject,

#### "Essentials for Success in Fruit Culture."

He then pointed out how the well-equipped man chose a location adapted to his needs, and in doing this he is not forgetful of considering his market, adjacent planters, transportation conveniences, fruit organizations, as well as an elevation to secure drainage of water and air. In many regards the eastern man has far superior advantages over the western grower, and it seems "fool-hardy" in most instances to go west, with the many opportunities at hand for the man that wishes to grow fruit of the highest quality and at the lowest cost when offered to the consumer.

The right man will seek a good soil. For the apple he will seek a soil that will produce good grass, of a clayey loam nature. For pears a lighter land will do and for grapes and peaches more precaution will be taken with the elevation and the soil might be of still a lighter texture. With bush fruits low loam soils are to be selected. On lands where many kinds of soil are found the proper variety is often provided by mixing the sand, clay and loams or any two of them in such quantities as needed by the plants to be grown. Michigan localities frequently to allow this practice.

It is better to get out of valleys or low places with the tree fruits. The right man will see that his trees are planted on soil where the cold air of spring and fall, when frosts are likely to check growth, can work to a lower level, and he will shift his orchard to a slope not tilted to catch the direct rays of the sun but to receive those rays at as much of an angle as possible, since an orchard on a northern slope suffers less from its buds being killed by frost than an orchard on a southern slope.

Fertilizers, farm manufactured and commercial, are important. To the man who seeks to get the most from his trees the problem of feeding them is no less neglected than pruning and spraying. He saves his ashes, barnyard manure, makes use of cover crops and spends liberally but judiciously for commercial products. He watches the trees and is aided by their appearance and development in determining the kinds of elements to be applied, and he keeps their wants in mind when cultivating or mulching the land.

As to pruning, the horticulturist is aware that as much harm can be done by injudicious cutting, as good is accomplished by right treatment with the saw and shears. The practice of removing the lower limbs should be stopped. They grow "bald" by the shading of the limbs above. Their removal means the removal of the top to a higher level. A continuation of the practice ultimately results in a tall, ungainly figure, with long limbs carrying a tuft of leaves at the very extremity. The results would be different if the pruning is done in the top. Then sunshine gets to the lower limbs, produces leaves throughout the center of the tree and consequently develops new and bearing wood nearer the ground. This kind of pruning makes a low, compact, large bearing surfaced tree, that will carry a heavy load of fruit in reach of pickers.

When a "bug" attacks the trees of the man with a horticultural eye, he knows it and he knows the "bug." And, furthermore, he is informed of the best way, if there is any way, to kill him or drive him to other feeding grounds.

As to harvesting and marketing, local conditions control to a large extent. Custom should be followed in part where dealing with a general market, but it should not be "tracked" beyond the limits of principle, e. g., because it is the custom to face barrels with fruit of an entirely different grade than the center

of the barrel is filled with, is no reason for others to continue it and the right man will not do it. In Massachusetts they use the barrel for packing apples almost exclusively, 14 to 16-quart baskets for peaches, 24 basket cases in which all the baskets are in view are employed for strawberries.

About varieties the fruit man has learned that some types do well over a wide section. Others are limited. A kind adapted to a small section can, if it has good qualities, be made valuable in right hands by careful growing and judicious advertising. That wide-awake fellow is watching for such opportunities, but his intelligence and caution keeps his eye fixed upon the varieties of wider popularity with which he carefully compares the virtues of the special kind as developed in its "cosy" location.

In the discussion following Prof. Maitland's address, he advised cultivation where it could be done. Where rocks are numerous it becomes impossible to use tools. There food is supplied and moisture retained by mulching instead of plowing and harrowing. Both systems give good results when prosecuted in the right manner.

#### HOW ABOUT THE SPRING GARDEN?

Now is the time to look up the empty boxes which have been cast from time to time into the basement or the attic. What for? Why, to start the little seedlings for the early spring garden. Be sure to bore holes in the bottom of the boxes before putting in the first layer of sand and ashes, with a few clinkers to permit drainage. Add finely pulverized earth, and drop in the seed through a small sifter. Do not cover, just shake down. Place in a dark corner of the basement where it is warm, and cover the boxes with newspapers, lifting every morning to moisten the earth and nurture the tiny seeds. If allowed to become dry the seeds will dry, whereas if kept moist a threadlike green shoot will make its appearance in the course of a couple of weeks.

When the leaves appear, wait until the second pair show themselves, then lift by means of a dull quill toothpick and deposit in a long, wooden, shallow box in a sunny part of the basement, and cover with glass, removing the paper gradually to get the new plant accustomed to the light. The necessity for transplanting is obvious. Unless the small plant is removed from its first environment it will grow tall and spindling, with but a few fibrous roots; if transplanted according to directions the root growth can be controlled. Seeds that may be planted now are the pansy, mignonette, forget-me-not, and the tomato, parsley, lettuce, cauliflower, and cabbage.

It is time now to cut up the bodies of the geranium plants which have been hanging from the rafters during the winter or lying with their roots in a box of sand in a cool, dark corner. They look lifeless and impossible at first, but if carefully cut apart into slips from five to seven inches in length and placed in pots of black soil, with the usual sprinkling of coal ashes, thoroughly watered, and gradually brought out to the light, they will make good and one plant will give forth a quantity of sturdy new plants, which may be set in the same old familiar geranium corner of the garden as soon as all danger of frost is past.

For the left over bulbs which you forgot to plant last October, now is the time to find a section of the yard where you may construct a trench and set a shallow box of these spring beauties, so dry looking in their crinkled brown coats. Water them thoroughly and cover with earth and a mixture of straw and manure. Leave them until several weeks have passed. Then uncover, bring into the house, and gradually expose to the light. In another two weeks your discarded bulbs will be in full bloom in a riot of color on the window ledge. Is it not worth the effort?

Van Buren Co.

W. J. GRAND.

In the east strawberries are grown more than any other fruit; every person has a patch and many grow large acreages. The best practice in the production of this fruit is to plow under clover sod, cultivate one year to destroy the grub and then set the plants. He advised planting 4x5 feet and allowing the rows to mat until about 3 feet wide, leaving a two-foot space between them.

To prevent moles from taking peas. Soak them in this solution the night before planting: One tablespoonful kerosene to a pint of water.—R. M. C. Niles.

## Try This Pile Cure

**It Is Absolutely Free.**

Pile sufferers may know to a certainty they can get instant relief and a quick permanent cure by trying this free method.

Simply send your name and address to the Pyramid Drug Co., 345 Pyramid Bldg., Marshall, Mich., and they will mail you a free trial package of Pyramid Pile Cure in plain wrapper and sealed. This will tell the story. There'll be no more doubt, no more misery, no more piles. If a bad case go to any drug store and for 50 cents get the regular 50 cent package of Pyramid Pile Cure and be sure you get what you ask for. This will do the work, vanish all vestige of piles and leave you free, active, contented and happy.

It is a remarkable remedy. Thousands who were destined for hospitals have saved themselves by the timely notice that Pyramid Pile Cure does the work. It is astonishing how pain disappears, how swollen protrusions vanish, how internal swellings are reduced; how bleeding and itching stop instantly. One of the most important things in life is to know just what to do in an emergency. And in piles the thing to know is that Pyramid Pile Cure brings quick relief, a permanent cure and you can prove it free. Write today for free package.

## 10 CHERRY TREES for \$1.95

This very special collection of 10 Hardy Cherry trees will be sent you for \$1.95. The selections were made by Mr. Green personally, as the result of his 30 years' experience as a successful fruit grower. Here is the list—there is none better—all gilt-edged, first-class, largest size, 2-year-old trees—and all for \$1.95.

One Dyehouse, three Early Richmond, five Montmorency, one English Morello. The true value of these is \$2.25 according to Green's "Direct to you" Prices, but others would charge you much more.

Here is another—a Plum—bargain: Six first-class Plum trees, medium size, worth \$1.50. Green's "Direct to you" price, \$1.00. The varieties are as follows—1 Burbank, 1 Abundance, 1 Niagara, 1 Bradshaw, 1 Lombard, 1 York State Prune—six in all.

AGENTS PRICES CUT IN TWO  
**Green's Trees**  
DIRECT TO YOU.

There are many other Bargain Collections of trees to be found in our 1911 Catalogue—larger, finer and better than ever before. Every tree we send you is first-class, thrifty, north grown, triple inspected and guaranteed true to name.

We sell direct—have no agents—and our prices are only one-half what agents charge. Read this:

"My trees arrived in good shape. They are fine, better than some of my neighbor's trees which cost twice the price I paid."

Send today for our 1911 Catalogue to convince yourself. We will also send you free our souvenir book, "30 years with Fruits and Flowers."

GREEN'S NURSERY CO., Box 30, Rochester, N. Y.

## 10,000 SEEDS 10c.

We want you to try our Prize Seeds this year and have selected 50 best varieties and put up 10,000 seeds especially to grow Prize Vegetables and Flowers. They will produce more than \$25. worth of Vegetables and 10 bushels of Flowers.

800 Seeds Cabbage	3 Best Varieties	3 pkts.
2,600 " Lettuce	4 " "	4 " "
800 " Onion	2 " "	2 " "
1,000 " Radish	4 " "	4 " "
300 " Tomato	3 " "	3 " "
2,000 " Turnip	4 " "	4 " "
2,500 " Flowers	30 Grand Flowering Varieties	

In all 10,000 Seeds, and our new Seed Book with a 10c Credit Check good for 10c selection, postpaid, 10c. FAIRVIEW SEED FARMS, Box 122, Syracuse, N. Y.

## Plant Trees Crown at Monroe, Michigan

Procure stock that will stand the coldest winters. Our trees have a reputation for reliability. We sell direct to the planter at the very lowest prices. We guarantee our trees to reach you in good condition at the proper season for transplanting. Catalogue free. Write for our prices.

The Michigan Nursery Company, Monroe, Mich.

## PIONEER SEEDS

For all kinds of CLOVER and FIELD SEEDS also GARDEN, FLOWER SEEDS and Implements, write to this Old Reliable House. Catalog free and Field Seed price list mailed you on application.

The Henry Phillips Seed and Implement Co., Toledo, O.

## PLANT HARDY TREES

Healthy, acclimated, high grade, true to label fruit trees and plants for Northern States at wholesale prices, direct from nursery to planter. Send for catalogue. CELERY CITY NURSERIES, DESK E, KALAMAZOO, MICH.

**FRUIT TREES**—Small Fruit Plants, Shrubs & Bulbs at Wholesale Prices. No Agents. Catalog free. WOODBINE NURSERIES. W. A. ALLEN & SONS, Geneva, Ohio.

**FINE CATALPA SPEC. AND BL. LOCUST.** \$3 per 1,000, \$25 10,000. All forest trees and evergreens cheap. Cata. T. G. BROSTUS, Tiffin, Ohio.

**Buy Direct—Save Money** and Get the Best Peach Trees, fine at \$4.00 per hundred. Apple, 10c; Cherry 8c. All kinds of Trees and Berry Plants. Cheap Catalog free. ERNST NURSERIES, Box 1, Moscow, O.





# Woman and Her Needs

## At Home and Elsewhere



### "Charity Covereth a Multitude of Sins."

I want to write today about the spirit of tolerance, and in doing it I am going to scold some of my readers a bit. In fact, I am afraid you are all going to rise up when I say country people, as a rule, are intolerant, but I can't help it if you do. It is out now and I am not going to take it back.

You see, I was a country girl myself and having spent the first 20 plus years of my life there I know what I was like. Of course, not every countrybred man or woman is as narrow and intolerant as I was, but all are touched a bit with that spirit which made possible the inquisition, the burning of witches and other practices of the good old days we are some of us sighing for.

Part of it is due to the limited outlook. It is impossible for anyone except a genius, to be broad and tolerant if he is not constantly bumping up against other human beings. The man or woman who is much alone is bound to grow self-centered and more or less opinionated. You simply can't help it, because there is no one around to show you there are other ways of doing. It is only when you are constantly meeting other people who do things differently and hold opinions different from yours that you come to see that "God is the God of the Gentiles also."

It was a terrible shock to me to find out that women who loved to dress and go to parties and who even played cards and danced, were good wives and mothers and might even love their husbands and children very dearly. It was queer, too, to see how pleasant and happy they were, not half so scoldy and naggy as some of the women I knew who would have declared these "stylish" women were heathen and outcasts. I was very much set against them at first, didn't want to know them because I was sure they couldn't have a single good quality, but after 11 years of living among them I find that they often bring the blush of shame to my cheek by their ready sympathetic tolerance of the faults of others

and their desire to make everybody comfortable.

Then another reason we are intolerant is because we are not sure of ourselves. Our education has been neglected and we do not know just how to act in sundry places. Instead of being humble about it we are watching for a fault in someone else so we can pounce upon it and decry our fellow in the hope of boosting ourself. For example. A friend from the country visited me and I took her to our club. Now none of us pretend to be parliamentarians. Our president frequently gets all mixed up on rules of order and half the members do not know how to put a motion. But we don't care. The club is for goodfellowship and helpfulness, and we don't care whether a member says "I move" or "I motion," so long as everyone is happy. But, dear me, my friend from the country cared very much, and she took pains to tell me that we "city folks" didn't know as much as the women in her country club, in fact, her club members could "put it all over us" in parliamentary proceedings. She raked our club fore and aft and poked fun at members who were dowdy, or whose English wasn't of the best. But just suppose I had gone from the city to the country and done such a thing. I would have been called "stuck-up," "rude," "disagreeable," and would probably have been told if I didn't like the country I had better stay in the city where people "were smart and knew everything."

So I want to make my little plea for tolerance. Don't think because a person doesn't live in your community or go to your church he is not as good as he ought to be, nor that he thinks he is better than you are. Just think he is a brother, with all the faults and failings you possess yourself, possibly, more, but probably not so many. We are all traveling the same road, living pretty much the same lives, and expecting the same end. It makes life much sweeter if you think of it in that way, and it will make you much more loving and lovable.

DEBORAH.

### THE LETTER BOX.

Not "Where is Your Home?" But "What is Your Home?"

Editor Household Department:—May a college woman, who for the past three years, has been a farmer's wife, be allowed to speak of her own experience on this question under dispute? Miss Grimes's article on "College Girls as Farmers' Wives," interested me greatly, but the comment on it in last week's issue put me on the defensive at once.

After graduating from our State University and teaching several years in one of our large city schools, I gave up the work which had always been a delight to me and became the wife of a farmer. I want to say right now that I would not go back to the schoolroom for anything, and I have yet to experience any of the misery and loneliness against which Mrs. W. V. A. warns the college girl who is thinking of making the farm her home.

When my husband and I married, we invested our savings in 25 acres of improved land with good buildings, which we are buying on contract, and for which, within a few years, we hope to hold the joint deed. Before we began housekeeping, we had the house remodeled, putting in a furnace and adding a bath, until now it is most comfortable and convenient. The money question, which seems to trouble so many families, has been easily solved in ours. From the first we have had a joint bank-account, and each of us has sufficient confidence in the other to know that whatever is spent will not be spent unwisely. Why is not this plan tried by more families? To my knowledge, it has proved successful in several cases, and it does away with the notion of "mine" and "thine," and makes the husband and wife truly partners.

No college-bred woman today need fear the isolation of country life. One may easily feel far more alone in a great,

rushing city than in a quiet rural home. But is it such a misfortune, after all, to be by one's self for a part of the time each day? Only last week a letter came from a college friend teaching in a western town, in which she said, "I take my books and steal away to the park for a quiet hour Sunday afternoon to gain strength and poise. It is absolutely the only time that I am alone." When the country woman feels socially inclined her case is far from hopeless. We have found the Grange a pleasant place in which to meet our friends and neighbors, and a place in which a college woman can certainly use to advantage whatever gifts or talents she may have cultivated while at college. We attend the Pomona Grange occasionally and there come in touch with people that any college man or woman might be glad to count among his or her acquaintances. There is, also, plenty of opportunity for helpfulness in every country church and Sunday-school, and help from one who has had some training is always greatly appreciated. Why, the country woman doesn't even have to get along without a whist club! Every alternate week our local paper prints an account of the meeting of one of the two different card clubs held within three miles of us, and I know one farmer's wife who often attends both. For the past two winters my husband and I have driven in to the nearest town to attend the concert and lecture course, and we have always seen many of our neighbors there, also. Of course, it requires a little more effort to drive in than it does to step on a car and ride a half dozen blocks or more to the hall, but we have felt well repaid.

Now why is it that some will set forth all country life in such dismal colors when we have all these privileges, and fresh air, green grass, the birds, the flowers, the trees, and the sunshine thrown in? Wouldn't such people be unhappy where-

ever they were placed? Wouldn't the farmer who was so provident that his wife was obliged to dress always in calico, be equally unfortunate had fate cast his lot in the city? The majority of our farmers' wives dress well, and, although perhaps not so fashionably, yet in equally as good taste as the average woman from town.

The life of the country woman is a busy one, but what matters that, if she be happy? If her life be well occupied, it does not follow that she is necessarily a drudge. Many farmers now sell the milk or cream produced on the farm, and realize as great a profit as when it was made into butter, and the housewife is saved much of the hard work that once fell to her share. The modern methods of doing work make it much easier than formerly. I have in mind a farm home almost adjoining ours, where the farmer keeps 18 or 20 cows, but he attends to the butter-making himself. The separating and the churning is done by means of a gasoline engine, and the packing of the product into jars is done by the man. I believe his wife does tie the paper over the jars before they are carried in their automobile to the market.

Now just a word about the reading on the farm. It is all nonsense to say that a farmer's wife has to put up with "the cheap magazine or the newspaper, and be thankful for that." To be sure, she can't run into a library every afternoon for the latest novel, but the daily mail can and does bring to her door just as many and as good periodicals as her taste and purse may dictate. We take at present seven different papers and magazines, and spend many of our evenings reading aloud together. Besides this current literature, we have found time to read several good plays, novels, and poems during the winter months. Occasionally a neighbor from across the way comes in during the afternoon, and one of us often reads aloud while the other sews. We exchange magazines with each other, and save the copies when we are through with them, for another neighbor who has none of her own.

When we reach the truth of the matter, the vital question is not "city or country?" To a sensible college-bred woman it doesn't depend so much where her home is, as it does what it is. If the man she chooses is kind, thoughtful, capable, and congenial, and if she brings to the home similar qualifications, that home is bound to be a happy one, be the man farmer, doctor, lawyer, chief. The fact that agriculture is raising its standards and that many of those who enter its ranks today are men of culture and education, has bridged the distance between the college woman and the farmer and caused her to find in him "the sturdy counterpoise which makes her woman's life complete." Get out your copy of Whittier, girls, and read his poem, "Among the Hills." That is my conception of what a country home should be, and I am happy in my effort to attain that ideal.—Katherine.

### The College Girl Needs the Farmer.

Editor Household Department:—The lady who wrote the article, "College Girls Would be Miserable on Farms," in the February 18 issue of the Michigan Farmer, evidently has some very decided opinions. I have some, too, and feel that she will respect mine as I do hers.

Nor are these opinions formed from any superfluous thought or reading. They are based entirely upon experience. I am a college graduate with a B. A. degree, not much, but it means four years spent in the halls of one of the best colleges of the land. I am also a farmer's daughter and hope to be a farmer's wife. I have had experience on both sides of the question.

I have a teacher's certificate rolled up and stored in my desk. Why am I not using it? Because I am more happy on the farm. It is my privilege to stay here, if you please. It isn't from lack of ambition, either, for I am the only daughter on a farm of 200 acres of land. Mamma and I do all of the house-work, besides our own sewing. We do not have steady help, although I have known what it means to hire assistance in the kitchen.

### The Quickest, Simplest Cough Cure

Easily and Cheaply Made at Home. Saves You \$2.

This recipe makes a pint of cough syrup—enough to last a long time. You couldn't buy as much or as good cough syrup for \$2.50.

Simple as it is, it gives almost instant relief and usually stops the most obstinate cough in 24 hours. This is partly due to the fact that it is slightly laxative, stimulates the appetite and has an excellent tonic effect. It is pleasant to take—children like it. An excellent remedy, too, for whooping cough, sore lungs, asthma, throat troubles, etc.

Mix one pint of granulated sugar with ½ pint of warm water, and stir for 2 minutes. Put 2½ ounces of Pinex (50 cents' worth) in a pint bottle and add the Sugar Syrup. It keeps perfectly. Take a teaspoonful every one, two or three hours.

Pine is one of the oldest and best known remedial agents for the throat membranes. Pinex is the most valuable concentrated compound of Norway white pine extract, and is rich in guaicol and all the other natural healing elements. Other preparations will not work in this formula.

The prompt results from this recipe have endeared it to thousands of housewives in the United States and Canada, which explains why the plan has been imitated often, but never successfully.

A guarantee of absolute satisfaction, or money promptly refunded, goes with this recipe. Your druggist has Pinex or will get it for you. If not, send to The Pinex Co., 232 Main St., Ft. Wayne, Ind.

Write To-day For FREE Book and Save ½ to ⅔ Your Fuel Bills

Take Your Time to Decide for Comfort, Efficient Service and Economy

Let us quote you a price and send you our Home Heating Book Free—save you on first cost and lasting economy and reduce your fuel bills ½ to ⅔. Find out about the thousands of satisfied owners of Holland's Double Grate Surface-Patented Cord Air-Admitting Double Firepot, burning fuel from sides and top, nature's way for greatest even heat. Consumes gas, soot and cinders with least smoke. No explosions or gas. Book tells all improved tested points, convenience and satisfaction of

### Holland Gas and Soot Consuming Furnace

Burns any fuel—soft coal—slack screenings—hard coal—lignite of wood with least waste. Patented heat radiator in Holland saves heat—smoke travels twice as far, so no waste. Equal heat all over house in all pipes. Many other points to tell you. Special double guarantee. Write a postal for Book FREE. Who is your dealer?

Holland Furnace Co. Dept. 6 Holland, Mich.



Saves Its Price Quickest "Makes Warm Friends"

### 44 Bushels to the Acre

is a heavy yield, but that's what John Kennedy of Edmonton, Alberta, Western Canada, got from 40 acres of Spring Wheat in 1910. Reports from other districts in that province showed other excellent results—such as 4,000 bushels of wheat from 120 acres, or 33½ bushels per acre. 25, 30 and 40 bushel yields were numerous. As high as 132 bushels of oats to the acre were threshed from Alberta fields.

**THE SILVER CUP** at the recent Spokane Fair was awarded to the Alberta Government for its exhibit of grains, grasses and vegetables. Reports of excellent yields for 1910 come also from Saskatchewan and Manitoba in Western Canada.

Free Homesteads of 160 acres, and adjoining pre-emptions of 160 acres (at \$3 per acre), are to be had in the choicest districts. Schools, convenient, climate excellent, soil of the very best, railways close at hand, building lumber cheap, fuel easy to get and reasonable in price, water easily procured, mixed farming a success.

Write as to best place for settlement, settlers' low railway rates, pamphlet "Last Best West" and other information, to Sup't. of Immig., Ottawa, Can., or to Can. Gov't Agt. (54)

M. V. McInnes 176 Jefferson Ave., Detroit, Mich. C. A. Laurier, Marquette, Mich.

### Wheels that Last ELECTRIC

Steel. Unbreakable. Nothing to dry apart. No tires to set. Buy just wheels and make your old wagon good as new—a low-down labor-saving handy wagon for all work. Fit guaranteed. Broad tires, lighter draft, no rutting. Send for free book today. ELECTRIC WHEEL CO., Box 35 QUINCY, ILL.

### NEW UPRIGHT PIANO FOR SALE.

A strictly high grade PIANO which sold for \$350 retail, will be sold for \$139 cash. Piano is a strictly high-grade instrument and may be tested and tried in your own home for 10 days. If you want a real bona-fide bargain, write Box 52 care Michigan Farmer, Detroit, Mich.

**PATENTS:** For facts about Prize and Reward offers and Inventions that will bring from \$5000 to Ten Million Dollars, and for books of Interest to Inventors, send 8c. postage to Pubs. Patent Sense, Dept. 89, Barrister Bldg., Washington, D. C.



We do not need it. Lighting plants, water systems, furnaces, fireless cookers, and vacuum cleaners furnish all extra help needed nowadays.

Women are sociable creatures. A farmer's wife can find time for various clubs, secret societies and churches, for I have proved it by experience. You ask, "Where is there a more isolated life for a college girl than on a farm?" Teaching school in some little town of from 400 to 800 inhabitants, among strangers, then going on to some other town. And that is where the majority of college girls go.

She will not "have to be satisfied with cheap magazines or a newspaper." I have more time to read at will now than in college, where a certain amount of reading or experimentation was mapped out by some college pedagogue. It would be impossible for a year's time to pass by without seeing some new addition to my library. Nor is it cheap, that is, unless Arnold Pater, Newman, Tennyson, Shakespeare, Browning, Wordsworth, and scores of others are cheap. Our library consists of only about 150 volumes of standard works, but it's more than in many and many a city home.

In college I learned to be satisfied with less clothes than ever on the farm. What I know about economy in dress I learned in college and seem to be rapidly forgetting in one year on the farm.

I do not consider that I am sacrificing myself nor am I unhappy. Unhappy only when anything is said about selling the farm. I hold it a privilege that I have been allowed to come back to the farm after a college course, for I appreciate its beauty, and usefulness now much more than ever before those four years. One could never study Wordsworth and not feel an added charm to the farm. I feel that the college girl needs the farm and the farmer more than the farmer needs the college girl. It is a good combination, anyway. As long as I have the privilege I shall stay on the farm.—L. F. T., Gobleville.

#### A CONVENIENT HOUSE DRESS.

BY ELLA E. ROCKWOOD.

The house dress, or work dress, should be first of all, comfortable. Tight bands at neck or waist should be avoided and the sleeves of a size which will enable the arm to be bent without inconvenience.

For practical purposes a one-piece suit is good because it is easy to get into, but a two-piece garment has more points in its favor. The single piece must be washed and ironed as a whole, whereas one part almost always needs to go to the wash before the other. It is, too, heavier to handle in the tub and less convenient to iron.

The popular shirt waist and skirt, buttoned or hooked together at the waist, makes an ideal work dress. A pattern may be chosen from among those described in the Michigan Farmer. Or select a dressing jacket pattern fitted to a belt with a peplum which combines nicely with any skirt pattern. The peplum part may be worn outside or in as desired, but both waist and skirt should be alike. A house dress such as suggested should be made short of skirt. Fashion sanctions ankle length even for street gowns now and the skirt one wears about the housework need not be longer. Ruffles on the bottom mean only so much more labor in ironing and a plain hem is preferable. Plaits or tucks also stand for additional time at the ironing table, and may be dispensed with. A good seven-gore skirt which fits neatly about the hips and is not too full at the hem, is about the best style.

Three-quarter length sleeves of bishop style are so much more convenient and comfortable than longer ones that they need no recommendation to those who have worn them. A Dutch neck for young women and a rolling collar for older ones will provide an excellent finish and one which is comfortable in warm weather.

Just a word as to material. Without doubt, gingham or percale wears better than calico or print. But either one is much harder to wash and iron. For this reason many women prefer the print. Pretty checks or a fine stripe look well and wash well. Many of the patterns in indigo blue also are excellent. Black and white print washes admirably, equally as well as the indigo and the material is much cooler in summer than gingham or percale.

In washing prints never put them into very hot water. Neither use overmuch soap. Tepid water and a weak suds does not injure even the most delicate colors if dried in the shape and ironed without excessive heat.

#### AN ARTISTIC ROOM DEMANDS A PLAIN RUG.

"The whole idea in choosing a floor covering is to have it a solid, neutral color," such is the dictum of an expert rug buyer. "Then the attention is not distracted by the rug from the rest of the furnishings, the pictures, furniture and hangings, which are really what we want to display. The rugs and carpets covered with huge roses, once so popular, are no longer being chosen by people of good taste. Neutral colors in a conventional design, or a solid color for the center with a band border are now acknowledged to be more artistic. If a design is chosen at all it is in a small pattern."

No one who has seen the two types of room will deny the truth of this man's statement. Many an otherwise beautiful room has been spoiled by a rug of a glaring color in a pronounced pattern, while the making of many ugly rooms is the plain, substantial, unobtrusive looking rug which gives the color note to the floor.

Unless you can choose a real Oriental, there is nothing better for style and service than the Wiltons. These are of

this year promises to be green, with brown and blue following as second and third choice. This does not mean, however, if the rest of your room is brown you are to choose a green rug. The rug should always harmonize in color with the rest of the furnishings or be a complementary tone.

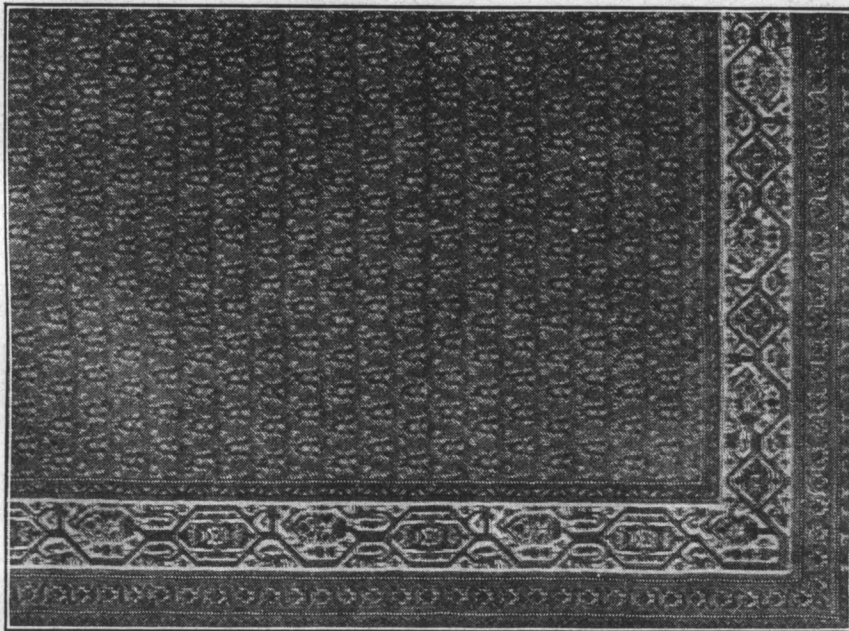
#### APPETIZERS OR CANAPES.

No. 37.

BY MRS. ALTA L. LITTELL.

While work is the best appetizer known to man, and the busy, hustling person rarely needs anything to "whet his appetite," the hostess who wants to do things right frequently serves appetizers, or hors d'oeuvres at the beginning of a formal dinner.

The thing most commonly served, in this section of the globe at least, is raw oysters. These may be served on the half shell, with a quarter section of lemon, salt and a dash of cayenne. Or an oyster cocktail may be served. This consists of oysters with tabasco sauce, Worcestershire sauce, horseradish, lemon and catsup, a combination strong enough to



Some Prevailing Patterns in Wilton Rugs with Oriental Colorings.



many designs, the Anglo-Persian, a small all-over Persian pattern, the Anglo-Indian, Royal Worcester, French Wilton, Hardwick Wilton, Bundhar Wilton, in an Oriental pattern, and the Balkan and Bagdad Wilton. Of these the first mentioned is generally conceded to be best, some of its devotees claiming that it will last practically a lifetime. The rugs come in all sizes from 18x36 inches to 11 feet three inches by 15 feet. They may also be made especially in any size required.

The Axminsters come mostly in the plain centers with a band border. They may be bought in any color and any size, stock sizes running in from 36x63 inches to 12x15 feet and in price from \$10 to \$125. If you have one made to order you pay from \$5.75 to \$25 a yard for the carpet.

A popular rug is one in two tones of the same color, blue, red, green and brown being much used. The background is a dark shade of the color and a conventional design is worked out in the lighter tone. The best color for rugs

give almost anyone a desire for something else.

If one can not obtain oysters, however, canapes are easily made and served. These are thin slices of bread, either brown or white, and always stale. They should be cut thin, not more than two inches long, and an inch or inch and a half wide, and may be toasted. Spread them with butter, either plain or mixed with a little pounded cress, mint or perhaps olives, to give it a flavor and color. When the bread is neatly spread, cover with a paste of meat or fish.

A fine canape is made from ham which has been chopped and pounded into a paste and mixed with a salad dressing. Chicken could be used, or any sort of fish you may have. Whatever the covering is, it should be worked into a paste and given a piquant flavor by the addition of mustard, cayenne, paprika, lemon juice, parsley, or whatever you may have at hand.

A single canape should be placed on the service plate, or plate which is before the guest when he is seated.

#### HONEST CONFESSION

A Doctor's Talk on Food.

There are no fairer set of men on earth than the doctors, and when they find they have been in error they are usually apt to make honest and manly admission of the fact.

A case in point is that of a practitioner, one of the good old school who lives in Texas. His plain, unvarnished tale needs no dressing up:

"I had always had an intense prejudice, which I can now see was unwarrantable and unreasonable, against all much advertised foods. Hence, I never read a line of the many 'ads' of Grape-Nuts, nor tested the food till last winter.

"While in Corpus Christi for my health, and visiting my youngest son, who has four of the ruddiest, healthiest little boys I ever saw, I ate my first dish of Grape-Nuts food for supper with my little grandsons.

"I became exceedingly fond of it and have eaten a package of it every week since, and find it a delicious, refreshing and strengthening food, leaving no ill effects whatever, causing no eructations (with which I was formerly much troubled), no sense of fullness, nausea, nor distress of stomach in any way.

"There is no other food that agrees with me so well, or sits as lightly or pleasantly upon my stomach as this does.

"I am stronger and more active since I began the use of Grape-Nuts than I have been for 10 years, and am no longer troubled with nausea and indigestion." Name given by Postum Co., Battle Creek, Mich.

Look in pkgs. for the famous little book, "The Road to Wellville."

"There's a Reason."

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

#### Headache Gone!

"For years I have suffered with Backache, Headache, Neuralgia, Nervousness and Extreme Fatigue. I tried many remedies without relief. Four months ago a grateful friend induced me to write to the Pope Medicine Co., Washington, D. C., for a box of Pope's Herb Compound Tablets. The very first dose of two tablets gave me relief. I used not quite a box and am now entirely cured of the pain in my back, and have no more headaches."

Mrs. J. C. Meade, Hyattsville, Md.

Pleasant, Palatable, Dependable, Household Remedy. Guaranteed to cure or your money back. \$1.00 a box of 200 by Mail Postpaid. Send us your name and address today and we will at once send you by mail a sample package free. Fine opportunity and terms in unoccupied territory to agents. POPE MEDICINE CO., INC., 670 Pope Building, WASHINGTON, D. C.

#### LIGHTNING RODS

8½c PER FOOT

Best Quality Copper—Extra Heavy Cable Don't do a thing about buying Lightning Rods until you get my Proposition. I have an entirely New Plan—a complete System direct to you with full instructions for installing. Easy to put up.

Buy Direct—On Trial—Freight Prepaid. System guaranteed satisfactory or your money back. Just write me a postal personally for our Proposition and FREE Catalog which makes everything plain.

J. A. SCOTT, President  
The J. A. Scott Company  
Dept. J. Detroit, Mich.

#### CIDER PRESSES

The Original Mt. Gilead Hydraulic Press produces more cider from less apples than any other and is a BIG MONEY MAKER. Sizes 10 to 400 barrels daily. Also cider evaporators, apple-butter cookers, vinegar generators, etc.

CATALOGUE FREE.  
THE HYDRAULIC PRESS MFG. CO., 131 Lincoln Ave., Mt. Gilead, Ohio.

#### WONDER LAMP

The Factories Sales Co., 823 Wyandotte St., Kansas City, Mo., is making an offer to send a lamp free, to one person in each locality FREE to whom they can refer new customers and who will show and recommend this marvelous, new, incandescent 100 candle power oil lamp. Simply send name and address.

#### THE LARGEST AND BEST LINE OF WELL DRILLING

MACHINERY in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 14. Send for it now. It is FREE.

Austin Manufacturing Co., Chicago

#### Harness at Wholesale Prices!

Direct from our shops to you. FREIGHT PAID. We Can Save You Money. Write to-day for a copy of our HARNESS BARGAIN Catalog. JOE'S HONEST HARNESS CO., CARO, MICHIGAN.



# THE COUNTRY GIRL'S CHANCES IN TOWN.—No. 4.

BY HILDA RICHMOND.

## In Which Nursing is Considered.

Whatever may be said about girls finding plenty of work right at home in many lines of activity, learning to be a trained nurse requires life in a hospital, and few of the hospitals in the small cities have training schools for nurses. The larger the hospital the better the school, as a general rule, though nurses with diplomas are in such demand that a graduate from any good hospital training school is sure to be employed as many weeks in the year as she can stand the work. The world is just beginning to know that often it is more important to have a trained nurse than a doctor, and it is hardly likely the profession will be overcrowded for some time to come. Whatever objection there may be to girls from the country coming to the city to find work, the hospital furnishes the work and the home, too, since in all training schools the hours off are few, the board good and the girls in direct care of the head nurse or manager.

Country girls are much better fitted in many ways for nurses than town ones, and therefore have much better chances to get into the training schools and ultimately succeed. There are few country girls who do not know how to wash and scrub and clean and do hard work, and hard work develops muscles that are trained for duty and nerves that are steady in emergencies. I know there are many girls who wonder why a knowledge of washing and scrubbing would be worth anything in a hospital, but one or two days in a training school will answer that question. The nurses must wash out bedding and garments when patients have infectious diseases, and they must scrub and scour everything scrupulously clean about their domain in caring for patients in private homes if there is no one else to do it. The strong, healthy, sensible country girl has ten chances for success to her city sister's one, unless the city girl is very healthy and has been carefully reared.

The getting in is very simple. Of course, the prospective nurse must have a common school education and have good health, or she is told politely and firmly that she will not do. The education might be acquired at a night school before making the trial, but the health must be as nearly perfect as possible. The popular idea among young girls that nursing is a very easy, interesting occupation consisting mainly of bathing "fevered brows" and turning pillows, sends many probationers home the first week, but the sensible, well informed young women go into the work with the full knowledge that it is confining, extremely hard and yet very pleasant. An enthusiastic probationer who told the head nurse she was willing to do anything, left the third day when told to wash some sheets in carbolic water. She informed the nurse in charge of the floor that she was not used to domestic service and left in disgust. Her "anything" meant very little, as the head nurse soon discovered.

And after she has served her time without pay, with a mere sum sufficient for simple needs, what are the chances for the country girl? More than she will be able to take advantage of. The bright, cheery, healthy nurse who received her training in hard work in her country home will be able to work many weeks in the year, though not the whole year by any means, and will earn from fifteen to twenty-five dollars per week according to her rates. If she cares to, she may find plenty of "cases" near home, and thereby enjoy her home and her chosen work at the same time. Some people discourage girls who want to be trained nurses by telling them they are throwing away two or three of the best years of their lives in the training school, but where is another institution that will fit girls for a profession on such terms? Surely no profession open to women offers such opportunities to young, ambitious girls who have no money for college and who want to be independent. The young girl in the country who is determined to leave the farm can do nothing better than to enter a thorough hospital training school, and fit herself to relieve suffering humanity.

Contrary to most other occupations, the less the girl knows, or thinks she knows, about taking care of sick people, the better chance she has in any training school. She will soon learn if she possesses common sense, but if she thinks she knows more than the head nurse and the doctor, she will soon come to an end as a

nurse. She may think all she pleases about the course of treatment and wonder why they do not try the methods to which she has been accustomed, but that is as far as she is allowed to go. Unless she can obey orders, she will fail from the beginning, so for that reason she will do well to keep her opinions to herself, and be ready to obey every regulation and rule without question and comment. Later on she will see the reason for all the seemingly foolish ideas, and thank her stars that she kept her lips closed. The healthy, sensible, teachable girl from the country has ever made the ideal nurse, and there are plenty of opportunities left for other girls from the farms.

## SHORT CUTS TO HOUSEKEEPING.

When making pie dough, make enough for several pies. After making one pie, wrap the dough that is left in waxed paper, and put in a cool place. Thus it is easy to make a fresh pie occasionally.—Mrs. J. J. O'C.

In heating baby's milk for the bottle, place a piece of paper under one of the covers to the range, light, and quickly place a pie tin containing milk over the blaze. Baby's milk will be ready in a "jiffy."—Mrs. G. P. C.

Try putting a little cooked starch in the rinsing water for your napkins and table cloths, also the fine towels. It gives just stiffness enough to make the articles, especially if of old linen, seem like new.—Mrs. J. J. K.

When popping corn use half butter and half lard. When butter is used alone, it makes the popcorn much darker.—G. C. E.

Anyone wishing to clean a paint pail to use, can do it easily with sawdust, before the paint is dried on.—Mrs. F. A. B.

If a lead waste pipe or cistern pipe spring a leak, mend with putty. It will last as long as solder and you can do it yourself.—Mrs. F. A. B.

Scald a broiler, pick rapidly, thrust into warm water and scrape with a dull knife, and nearly all the pin feathers will come out very readily.—Mrs. P. C. L.

To save boys' stockings. When you see them begin to wear out, cut them off just above the foot and below the shoe top, turn back to front and sew on foot again, overcast and darn. You wouldn't know they had ever been turned.—A. K.

## THE FARMER PATTERNS.

These patterns may be secured from the Michigan Farmer. In ordering be sure to give number and size.

No. 4824—Children's Coat.—Four sizes, ½ to 5 years. For 3 years it requires 3 yards, 27 inches wide, with cape; 2½ yards 27 inches wide without cape. Price 15 cents.

No. 2025—Ladies' Corset Cover.—Seven sizes, 32 to 44 inches bust measure. For 36 bust it requires ¾ yard, 36 inches wide, with ¾ yards edging. Price 10 cents.



No. 4625—Girls' Semi-Princess Dress.—Four sizes, 6 to 12 years. For 8 years it requires 5¼ yards, 34 inches wide. Price 15 cents.

No. 4725—Girls' "Middy" Dress.—Five sizes, 6 to 14 years. For 8 years it requires 2¾ yards, 44 inches wide; 6½ yards of braid. Price 15 cents.

No. 2638—Ladies' Dart-Fitted Open Drawers.—Nine sizes, 20 to 36 inches waist measure. For 24 waist it requires 2¼ yards, 36 inches wide, with ¾ yards of edging 12¼ inches wide. Price 10 cents.

## Uneeda Biscuit

**Always Ready**

Wise foresight should lead you to keep in the cupboard a half dozen or more handy packages of

## Uneeda Biscuit

They won't get broken, musty, soiled or soggy like ordinary soda crackers because their crisp, clean freshness is protected by the moisture-proof and dust-tight package.

**5¢**

*In the moisture-proof package*

**NATIONAL BISCUIT COMPANY**

—Copy—

Frankfort, Mich., Feb. 14, 1911.  
Michigan State Telephone Co.,  
Detroit, Mich.

Gentlemen:—We are using your telephone service on the roadway plan, and are very well satisfied with it. We get good service over it and our experience with it convinces us that it is the ideal plan for farming communities wishing telephone service. It seems to us the cheapest and best plan that people living in rural districts can adopt if they are going to have telephone service at all.

Our business relations with the Michigan State Telephone Co. have always been agreeable and pleasant, and if you ever have occasion to refer farmers or rural residents to us, we assure you we will gladly tell them of our satisfaction with the roadway plan of the Michigan State Telephone Company.

Yours truly,  
Crystal Lake Farmers' Mutual  
Tel. Co.

Similar Letters from  
all parts of the State

## Farmers Recommend "Bell Service"

For particulars write

**Michigan  
State Telephone  
Company**  
DETROIT, - MICH.  
Rural Line Department.

**Be An Independent Buyer**

## "A Kalamazoo Direct to You"

TRADE MARK REGISTERED

—"And Gas Stoves, Too"

Over 21,000 towns. Over 400 styles and sizes to select from. \$100,000 bank bond guarantee. We prepay all freight and give you

**—30 Days' Free Trial**  
**—360 Days' Approval Test**  
**—CASH OR CREDIT**

Write a postal for our book today—any responsible person can have same credit as your home stores would give you—and you save \$5 to \$40 on any famous Kalamazoo stove or range, including gas stoves. Sold only direct to homes. Over 140,000 satisfied customers.

Write a postal for our book today—any responsible person can have same credit as your home stores would give you—and you save \$5 to \$40 on any famous Kalamazoo stove or range, including gas stoves. Sold only direct to homes. Over 140,000 satisfied customers.

Be an independent buyer. Send name for **Free Catalogue No. 113**. Kalamazoo Stove Company, Mfrs., Kalamazoo, Michigan

**Spend One Cent For This Big FREE Book**

## ENTERPRISE

### Bone, Shell and Corn Mill

A money-saver and money-maker. Cracked grain, ground bone and shell, increase egg production when fed properly. The "ENTERPRISE" Mill is a wonder. Strongly built, reliable, runs easily and won't get out of order. Grinds dry bones, corn, oyster and other shells, etc. Price of Mill shown, No. 750, is \$8.50. Weight, 60 lbs. Grinds 1½ bushels of corn an hour. Hardware and general stores everywhere.

Catalogue FREE. Famous Recipe Book, "The Enterprising Housekeeper," for 4 cents in stamps.

THE ENTERPRISE MFG. CO. OF PA., DEPT. 48, PHILADELPHIA, PA.

No. 750  
Price \$8.50

For Dry Bones etc.



# MARKETS

## DETROIT WHOLESALE MARKETS.

March 8, 1911.

### Grains and Seeds.

**Wheat.**—With action on the Canadian trade pact delayed by failure of the 61st congress to ratify it, the price of wheat immediately took a stronger position and the market has held firm at slightly advanced figures since the adjournment of our federal legislature. And this in spite of the rains and snows which have supplied the needed moisture in the southwest and removed all cause for drought claims by the bulls. Dealers are anxiously waiting for the government report on the amount of wheat estimated to be in farmers' hands, which experts declare is small compared with other years. Primary receipts have shrunk during the past week. The world's visible supply is placed at 183,046,000 bushels, against 145,678,000 bushels a year ago. On Tuesday Argentine reported an advance in prices and Australia was sending out smaller offerings. The price for No. 2 red wheat one year ago was \$1.17 per bu. Quotations for the week are:

	No. 2	No. 1	Red.	White.	May.	July.
Thursday	.....90	.....88½	.....92½	.....90		
Friday	.....90	.....88½	.....92½	.....90		
Saturday	.....91	.....88	.....93½	.....91		
Monday	.....90½	.....87½	.....93¼	.....90½		
Tuesday	.....90	.....87½	.....92¾	.....90		
Wednesday	.....90	.....87½	.....93	.....90		

**Corn.**—The receipts of corn on Monday at the various American points aggregated less than for the corresponding week-day of 1910, and the shipments run higher, which gave the deal a firmer tone along with wheat. Prices are on a little higher basis than a week ago. Visible supply shows a decrease of 554,000 bushels. One year ago the price for No. 2 corn was 59½¢ per bu. Quotations are:

	No. 3	No. 2	Yellow.
Thursday	.....46	.....47	.....47
Friday	.....46	.....47	.....47
Saturday	.....46	.....47	.....47
Monday	.....46½	.....47½	.....47½
Tuesday	.....46½	.....47½	.....47½
Wednesday	.....46½	.....47½	.....47½

**Oats.**—A fractional advance in prices is the result of the week's activity in oats. Primary receipts are running below the offerings of a year ago. The price then was 47½¢ for standard. Quotations for the week are:

	Standard	No. 3	White.
Thursday	.....33	.....32½	.....32½
Friday	.....33	.....32½	.....32½
Saturday	.....33	.....32½	.....32½
Monday	.....33	.....32½	.....32½
Tuesday	.....33	.....32½	.....32½
Wednesday	.....33	.....32½	.....32½

**Beans.**—An advance of 2c followed the drop of a week ago and no transactions are reported at the higher values. The nominal quotations issued by the local Board of Trade are:

	Cash.	May.
Thursday	.....\$1.90	.....\$1.95
Friday	.....1.90	.....1.95
Saturday	.....1.90	.....1.95
Monday	.....1.92	.....1.97
Tuesday	.....1.92	.....1.95
Wednesday	.....1.92	.....1.95

**Clover Seed.**—Prime spot and March seed have advanced under a good demand from the country. The deal is active and the movement liberal. Alsike is steady. Prices are as follows:

	Prime Spot.	Mar.	Alsike.
Thursday	.....\$9.00	.....9.00	.....9.25
Friday	.....9.00	.....9.00	.....9.25
Saturday	.....9.00	.....9.00	.....9.25
Monday	.....9.00	.....9.00	.....9.25
Tuesday	.....9.00	.....9.00	.....9.25
Wednesday	.....9.00	.....9.00	.....9.25

**Rye.**—A 2c advance occurred in the rye market with a brisk demand and small offerings. Quotation is 87c per bu. for No. 1 rye.

**Timothy Seed.**—Price has advanced to \$5.35 per bu., with the market active and firm.

### Flour, Feed, Provisions, Etc.

**Flour.**—Market continues slow with prices unchanged. Quotations are:

Clear	.....\$4.25
Straight	.....4.65
Patent Michigan	.....5.30
Ordinary Patent	.....4.90

**Hay and Straw.**—All grades of hay are slightly higher; no change in straw prices. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$16.50@17; No. 2 timothy, \$15.50@16; clover, mixed, \$15; rye straw, \$7@7.50; wheat and oat straw, \$6@6.50 per ton.

**Feed.**—Prices are steady with a week ago. Carlot prices on track are: Bran, \$27 per ton; coarse middlings, \$26; fine middlings, \$28; cracked corn, \$22; coarse corn meal, \$22; corn and oat chop, \$20 per ton.

**Potatoes.**—There is no change to the old potato deal. Last week's prices still rule. In car lots Michigan potatoes are selling at 37@40c per bu.

**Provisions.**—Family pork, \$20@22; mess pork, \$19@20; medium clear, \$18@20; smoked hams, 13@14c; briskets, 11½c; shoulders, 10½c; picnic hams, 10½c; bacon, 14½@15½c; pure lard in tierces, 9½c; kettle rendered lard, 10½c.

### Dairy and Poultry Products.

**Butter.**—Butter values are a fraction lower than last week. The market is easy with a brisk demand at the lower figures. Offerings are large. Extra creameries are now quoted at 25c; firsts, 22c; dairy, 16c; packing stock at 18½c lb.

**Eggs.**—The expanding demand for eggs appears to have overtaken the offerings the past week and prices regained the amount lost the previous period. Re-

ceipts, however, are still large. Fresh receipts, case count, cases included, are now quoted at 17c per dozen.

**Poultry.**—With the exception of lower values for fowls, the poultry deal continues steady with a week ago. Quotations are: Dressed—Turkeys, 21@22c; chickens, 14½@15c; fowls, 14½c; ducks, 18@19c; geese, 14@15c per lb. Live—Spring chickens, 15c; fowls, 14c; old roosters, 10@11c; turkeys, 17@18c; geese, 12@13c; ducks, 15@16c per lb.

**Cheese.**—Michigan, 17c; Michigan late, 15@16c. York state, September, 17@18c; do. late made, 15@16c; limburger, old, 16@17c; Swiss domestic block, 18@22c; cream brick, 16@18c.

**Veal.**—Market steady. Choice, 10@11c; ordinary, 9c per lb.

**Rabbits.**—Steady. Per dozen, \$1.

### Fruits and Vegetables.

**Cranberries.**—Higher. Quoted at \$3.50 per bu.

**Cabbage.**—Steady. Selling at \$1.75 per bbl. for new.

**Onions.**—Steady. Quoted at 75@80c per bushel.

**Honey.**—Choice to fancy comb, 15@17c per lb.

**Apples.**—This trade continues firm at the figures given a week ago except that Baldwins are going a little higher. The market is active. Fancy Greenings are quoted at \$5.50@6; Baldwins, \$4.50@6; Steel reds, \$6; ordinary grades, \$3@3.50 per bbl. Western apples, \$2.25@2.50 per box.

### OTHER MARKETS.

#### Grand Rapids.

The potato market is still weaker, the buying price ranging from 20@25c. Dealers are still looking for better prices a little later. Eggs are worth 15@16c; dairy butter, 21c, and creamery 23½c, the latter having advanced 1c since last week. Poultry is steady at 13c for spring chickens and 12c for fowls. Dressed hogs are worth 8@8½c. Wheat is bringing 87c. Rye is 2c higher, and is quoted at 77c.

#### Chicago.

Wheat.—No. 2 red, 90@91c; May, 90½c; July, 88½c per bu.  
Corn.—No. 2, 46@46½c; May, 48½c; July, 49½c per bu.  
Oats.—No. 2 white, 31@31½c; May, 30½c; July, 30½c.

Barley.—Malting grades, 80@96c per bu; feeding, 65@75c.  
Butter.—With Elgin showing a slight advance, and conditions in this market considerably improved, a feeling of general firmness developed early in the week. Prices very steady at last week's range. Quotations now are: Creameries, 16@26c; dairies, 15@21c.

Eggs.—This market is steadier than at this time last week. Business moderately active at last week's reduced figures. Quotations are: Prime firsts, 17½c; firsts, 16½c; at mark, cases included, 12@14c per dozen.

Potatoes.—Despite the fact that receipts since the beginning of the year have run over 300 cars behind the same period last year, there is an accumulation of stocks. Prices show a further reduction with market rather weak. Choice to fancy are quoted at 42@43c per bu; fair to good, 38@40c.

Beans.—This market continues weak; last week's lower values rule. Choice hand-picked pea beans quoted at \$1.98@2.05 per bu; prime, \$1.90@1.95; red kidneys, \$2.75@3.

Hay and Straw.—Hay firmer; the better grades are \$1 higher. Quotations now are: Choice timothy, \$18.50@19.50; No. 1 timothy, \$17@18; No. 2 do. and No. 1 mixed, \$15@16; No. 3 do. and No. 2 mixed, \$9@14; rye straw, \$8@8.50; oat straw, \$7@7.50; wheat straw, \$6@6.50 per ton.

#### Boston.

Wool.—Nobody appears anxious about the wool market. Occasionally a holder shows a disposition to make short concessions, but generally speaking the deal is steady and very quiet. A few small shipments of new wool from Arizona have made their appearance on the market. The leading domestic quotations are: Ohio and Pennsylvania fleeces—Delaine, washed, 33½@34c; XX, 31½@32c; fine unmerchanted, 25@26c; ½-blood combing, 29@30c; ¾-blood combing, 29c; ¼-blood combing, 26½@27c; delaine, unwashed, 26½@27c; fine unwashed, 22c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 20@21c; delaine, unwashed, 26@26½c; ½-blood, unwashed, 28@29c. Kentucky, Indiana and Missouri—¾-blood, 27@27½c; ¼-blood, 25½c.

#### Elgin.

Butter.—Market firm at 26c per lb., which is ¼c above the quotation of last week. Output for the week, 440,600 lbs., as compared with 450,400 lbs. for the previous week.

### THE LIVE STOCK MARKETS.

#### Buffalo.

March 6, 1911.

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

Receipts of stock here today as follows: Cattle, 130 cars; hogs, 8,000; sheep and lambs, 20,000; calves, 1,250.

With 22,000 cattle reported in Chicago, and 130 cars on our market, while the number of out-of-town buyers was comparatively small on account of the Lenten season, we quote our market today from 10@15c higher.

We quote: Best 1,300 to 1,400-lb. steers \$6.50@6.65; good prime 1,200 to 1,300-lb. steers, \$5.75@6.30; best 1,100 to 1,200-lb. shipping steers, \$5.50@6.20; medium butcher steers, 1,000 to 1,100 lbs., \$5.35@5.75; light butcher steers, \$4.75@5.25; best fat cows, \$4.75@5.25; fair to good do., \$4@4.50; common to medium do., \$3.25@3.75; trimmers, \$2.75@3.15; best fat heifers, \$5.50@5.75; good do., \$5.10@5.50; fair to

good do., \$4.25@4.75; stock heifers, \$4.25@4.50; best feeding steers, dehorned, \$4.60@4.85; medium to good feeding steers, \$4.25@4.50; stockers, all grades, \$3.85@4.25; best bulls, \$5@5.40; bologna bulls, \$4.25@4.75; stock bulls, fair to good, \$3.75@4.25; best milkers and springers, \$50@65; good to best do., \$40@50; common to good do., \$25@35.

Common milkers and springers, and late springers hard to dispose of at satisfactory prices. Late springers in most cases have to be sold by weight.

With light receipts of hogs today, our market opened 15@25c higher on all grades of hogs, closing steady at the opening, with all selling that got yarded in time for the market. Prospects look fair for the near future.

We quote: Medium and heavy, \$7.50@7.70; mixed and yorkers, \$7.75@7.80; light yorkers and pigs, \$7.80@7.85; roughs, \$6.60@6.70; stags, \$5@5.50.

Lamb market opened active today; most of the choice handy lambs selling at \$6.40@6.50. Heavy lambs, that is, weighing 100 lbs. and over, selling mostly at \$5.75@5.85. Look for prices to be a little easier the balance of the week unless the runs should continue very light. Sheep market was active today; most of the choice ewes selling at \$4.25@4.50; wethers, \$4.75@5. Look for about steady prices on sheep the balance of the week.

We quote: Best handy lambs, \$6.40@6.50; heavy lambs, \$5.75@5.85; bucks, \$3.25@3.75; heavy ewes, \$4.25@4.50; yearlings, \$5.25@5.65; wethers, \$4.75@5; cull sheep, \$3.25@3.75; handy ewes, \$4.25@4.50; veals, choice to extra, \$10.50@10.75; fair to good do., \$8@10.25; heavy calves, \$5@6.50.

#### Chicago.

March 6, 1911.

Cattle. Hogs. Sheep.  
Received today .....21,000 38,000 16,000  
Same day last year.....23,992 29,768 9,818  
Received last week.....45,920 137,136 60,794  
Same week last year.....58,141 110,436 44,206

Richard Manafee, of Iowa, started the stock yards this morning when his consignment of 27 superfine Angus 1,155-lb. steers of his own breeding and raising brought \$7.35. These are the best cattle seen in a long time, and they went 35c higher than any steers would bring. It was another triumph for yearling baby beeves. The cattle supply is falling off greatly, and steers were up 10@15c today, following a rise last week of 10@25c. Hogs closed last week about 15c lower than a week ago, with choice light bringing \$7.15@7.25 and coarse heavy packing \$6.65@6.90, while choice heavy sold at \$7.05@7.15, the premium on light hogs and pigs being smaller than heretofore owing to the falling off in the shipping demand. Last week's hog receipts averaged 229 lbs., compared with 232 lbs. three weeks ago, 211 lbs. a year ago and 203 lbs. two years ago. Today saw a rise of 10c or more early in the morning, sales ranging at \$6.75@7.32½, with a reported sale at \$7.35, but there was the customary break later, packers holding off and buying at lower figures. Sheep and lambs advanced 10@25c, following last week's rise of 15@25c, the supply being meager. Lambs went at \$5.25@6.40, wethers at \$4@4.90, ewes at \$3.25@4.75 and yearlings at \$4.75@5.60. The outlook seems brighter for sheep, lambs and cattle, and smaller receipts of hogs are likely to retard the downward movement in values.

Cattle, as well as other live stock, are affected by the abstinence from beef, mutton and other meats observed by many people during the Lenten season, which began on Wednesday last week. Fortunately for sellers, last week's receipts were within quite moderate bounds, and in place of the feared decline in prices, sellers were in a position to make better terms with buyers than a week earlier, advances taking place on several days. The character of the general demand has not changed perceptibly, and buyers are more apt by far to call for handy-weight steers or heifers that can be converted into comparatively cheap small cuts of beef than for the higher-priced long-fed steers. Eggs are everywhere exceptionally plentiful and much cheaper than in former years at this time, and they are in great measure being substituted for beef and mutton. Beef steers have been selling for a week past largely at \$5.60@6.60, with common to medium grades bringing \$5@6 and choice to fancy heavy beeves \$6.50@6.95. Good to prime yearlings brought \$6.15@6.75, and there was a fair export demand for steers early in the week at \$5.75@6.30. Butcher stock was in very good request, cows and heifers going at \$3.50@6, while cutters sold at \$2.90@3.45, canners at \$2.35@2.85, and bulls at \$3.50@5.60. Calves were taken at \$3.50@9 per 100 lbs., the only good demand being for the better class of light-weight vealers. Milkers and springers sold about as usual at \$30@60 per head, backward springers being salable only to packers, dairymen wanting none except a few forward cows, which were in moderate supply. Stockers and feeders were scarce and in good demand at higher prices, the former going at \$4.25@5.60 and the latter at \$5.10@5.90. The tendency is for stockmen to give cattle a short feed and get them back to market in a few months.

Hogs show a downward tendency from week to week, despite frequent rallies in prices, such as the market is accustomed to. Monday is usually the day for liberal supplies, and 54,209 hogs showed up on the opening day last week. This naturally caused a sharp decline in prices, notwithstanding a large shipping and local demand, and this brought about such greatly lessened receipts that some good advances in quotations followed. Upward movements were due largely to good buying of the more desirable consignments by local speculators and eastern shippers, as the Chicago packers contested every advance and usually waited until late in the day and then filling up at

lower prices than those paid early. The average quality of the receipts was extremely choice, few sows showing up, while light hogs and pigs were as scarce as ever. The only complaint heard was the old one that the consignments were averaging too heavy in weights. Buyers gave their preference to light hogs, and extremely heavy lots were very slow to advance when others were going higher.

Sheep and lambs were received last week in such small numbers that in spite of the poor demand for mutton, some good advances took place in the choicer descriptions, the largest inquiry being from local slaughterers. The demand embraced the best wethers and ewes, as well as choice lambs and yearlings, and at times heavy sheep sold quite well under the influence of buying for export. Breeding ewes were in good demand at \$4.25@4.60, yearlings going highest, and a sale was made of 222 head of western feeding yearlings that averaged 85 lbs. at \$4.70, while feeding lambs sold well whenever any were to be had. Shorn flocks were marketed in a much more liberal manner than heretofore. Both sheep and lambs continue to sell at much lower prices than in most former years, because of their great abundance in feeding districts of the corn belt.

Horses have been arriving in fast increasing numbers and have been much plentier than a year ago. Demand has been larger for the better class of horses, which have brought \$10@15 per head more in recent weeks than at the low time several weeks ago, but the commoner horses were offered in too generous a manner and sold off last week largely \$10@15. Blemished horses are slow at \$75@150, while there is a good outlet for drafters at \$200@300, and drivers are selling moderately, mostly around \$175@225. Farm mares for shipment to Illinois and Iowa farms for breeding purposes are in good demand at \$165@215.

### LIVE STOCK NOTES.

Late reports from Kansas say that about the same number of cattle are being fed in that state as a year ago, the reduced corn crop having prevented stockmen from feeding larger numbers. In such states as Missouri, Iowa and Illinois cattle feeding this winter has been larger than usual, the rousing big corn crop raised last year having encouraged feeding as many cattle as possible. Oklahoma reports a marked falling off in cattle feeding compared with a year ago, the corn crop having been somewhat short, and the oil mills of that new state are feeding a big share of the cattle.

Reports from Spokane, Wash., state that dairymen of that section are planning to vastly increase their operations and have decided to purchase about 7,500 Holstein, Ayrshire and Jersey cows and stand ready to pay the highest cash market figures for tuberculin tested cows. They have come to the conclusion that the best plan is to send commissioners to Minnesota, Iowa, Wisconsin, Illinois, Indiana and Michigan to buy all the cows of good grade that will pass under the dairy laws of the state of Washington.

Interest in the new spring "crop" is strong, and it is believed that a great many pigs will be born, for nearly all farmers fully realize the great importance of raising as many hogs as possible. They know that the country's hog supply has been running greatly behind and that the business of raising swine promises larger and quicker returns than any other branch of farming and stock raising. The farmers who are not taking the best of care of their sows are few in number, and mighty few sows are showing up in the markets of the country. But it is known that most of the old sows were sent to market some time ago, their owners being tempted to take the unusually high prices that were offered, and as gilts are being mainly depended upon for reproduction purposes, small litters must be expected. No young sows are seen in current hog receipts in western markets, and no considerable offerings of sows are likely to be seen until next summer and autumn, after they will have weaned their pigs and become fattened for the market.

W. A. Drake, who is an authority on the subject, says that about one million sheep and lambs are being fed in Colorado this season, this being only half the number fed in some years, and comparing with 1,500,000 and 1,750,000 in several years past. Most of the feeding is being carried on in southern Colorado, the Arkansas valley leading off with 600,000 head, while only 150,000 head are being fed in northern Colorado, the smallest number in seventeen years, this being due to a very small crop of alfalfa. Mr. Drake usually has sufficient alfalfa on his own farms to handle 15,000 lambs, but this season the crop was too small to provide for 1,000 head. Southern Colorado had a wonderful crop of both alfalfa and peas, which accounts for the large feeding operations down there. Thus far shipments of sheep and lambs from southern Colorado have been smaller than usual, the movement to feed lots having been later than in recent years, and because of the abundance of choice feed, owners have been in no hurry to sell. Besides, there is a disposition to wait until the flocks fed in the corn states are out of the way, thereby avoiding glutting the markets. However, the time has arrived for selling, and Colorado lambs will be marketed liberally from now on to the close of May.

Western slaughtering of hogs by packers is now on a larger scale than a year ago, but much smaller than two years ago. During the four months of the winter packing season that ended with last month approximately 8,525,000 hogs were packed in the west, a decrease of 200,000 hogs compared with a year ago.



THIS IS THE FIRST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.  
March 2, 1911.

**Cattle.**  
Receipts, 1,343. Market 10@15c lower than last week on all grades.  
We quote: Best steers and heifers, \$5.75; steers and heifers, 1,000 to 1,200, \$5.40@5.60; steers and heifers, 800 to 1,000, \$4.75@5.25; steers and heifers that are fat, 500 to 700, \$4.50@4.85; choice fat cows, \$4.50@4.75; good fat cows, \$4.25; common cows, \$3.25@3.75; canners, \$2.75@3.25; choice heavy bulls, \$4.75@5; fair to good bolognas, bulls, \$4.25@4.75; stock bulls, \$4.50; milkers, large, young, medium age, \$4.00@55; common milkers, \$25@35.

Roe Com. Co. sold Newton B. Co. 1 cow weighing 1,050 at \$4.50, 2 oxen av 1,075 at \$4.75; to Kamman B. Co. 16 steers av 915 at \$5.25; to Newton B. Co. 1 bull weighing 780 at \$4.40, 4 butchers av 705 at \$5, 6 do av 666 at \$4.75, 1 bull weighing 1,120 at \$4.50; to Regan 7 steers av 693 at \$4.60; to Goose 9 cows av 920 at \$3.25; to Mich. B. Co. 6 do av 880 at \$4.50, 4 do av 1,215 at \$4.50, 6 steers av 891 at \$5.25, 5 do av 994 at \$5.25, 4 do av 640 at \$1.50; to Heinrich 23 do av 940 at \$5.45; to Thompson Bros. 13 do av 950 at \$5.60, 1 cow weighing 810 at \$2.75; 1 do weighing 1,100 at \$3.75; to Hammond, S. & Co. 11 steers av 900 at \$5.25, 1 cow weighing 1,330 at \$4.50, 10 steers av 1,177 at \$5.75, 1 cow weighing 970 at \$3.50, 3 do av 900 at \$4, 4 do av 1,050 at \$3.50, 1 heifer weighing 460 at \$4, 2 cows av 1,100 at \$4; to Cooke 14 butchers av 930 at \$5.25, 1 cow weighing 1,180 at \$4; to Goose 1 do weighing 780 at \$2.75; to Rattkowsky 1 heifer weighing 320 at \$4.50.

Bishop, B. & H. sold Bresnahan 8 steers av 770 at \$4.85; to Hammond, S. & Co. 1 bull weighing 1,000 at \$4.50, 4 cows av 965 at \$3.65, 4 steers av 980 at \$5.30, 2 do av 735 at \$5, 1 bull weighing 1,070 at \$4.75, 1 do weighing 1,270 at \$4.75, 2 do av 1,500 at \$5, 1 do weighing 800 at \$4.50, 2 cows av 915 at \$4.50, 2 do av 1,015 at \$3.75, 1 steer weighing 710 at \$4.25, 4 do av 1,250 at \$5.75, 4 do av 910 at \$5.10, 5 cows av 942 at \$4.50, 1 do weighing 910 at \$3.75; to Regan 3 heifers av 660 at \$4.60, 6 heifers av 675 at \$4.60; to Brown 15 steers av 700 at \$4.75; to Marx 6 do av 1,041 at \$5.65, 2 cows av 1,000 at \$3.75; to Newton B. Co. 1 bull weighing 1,270 at \$4.75, 4 cows av 845 at \$3.25, 5 do av 1,100 at \$4; to Thompson Bros. 1 bull weighing 1,470 at \$4.75; to Parker, W. & Co. 3 cows av 1,000 at \$3.50, 5 butchers av 886 at \$4.50, 3 cows av 826 at \$3.18, steers av 1,055 at \$5.50, 8 do av 840 at \$4.90, 14 do av 821 at \$5; to Kull 5 butchers av 710 at \$4.60; to Rattkowsky 5 cows av 906 at \$4.25, 2 do av 1,125 at \$4.35; to Sullivan P. Co. 5 cows and steers av 1,190 at \$4.75, 1 bull weighing 960 at \$4; to Mich. B. Co. 7 steers av 836 at \$5.10, 5 cows av 990 at \$4.25, 12 steers av 810 at \$5.25, 3 do av 787 at \$5, 17 do av 921 at \$5.40, 14 steers av 900 at \$5.35, 5 do av 1,004 at \$5.50; to Newton B. Co. 12 do av 1,066 at \$5.25, 4 butchers av 790 at \$4.75; to Capp 3 do av 793 at \$3.25, 3 cows av 950 at \$4, 8 do av 892 at \$3.40, 1 do weighing 1,350 at \$4, 5 do av 904 at \$4.

Haley & M. sold Hammond, S. & Co. 4 bulls av 1,037 at \$4.60, 1 do weighing 810 at \$4.50, 3 cows av 777 at \$3.25; to Lachait 10 butchers av 850 at \$4.75; to Sullivan P. Co. 13 do av 690 at \$4.50, 6 cows av 1,133 at \$4.35; to Mich. B. Co. 3 steers av 857 at \$5, 3 do av 733 at \$4.75, 2 cows av 975 at \$3.75, 2 do av 1,015 at \$4, 11 butchers av 945 at \$5, 1 cow weighing 900 at \$4, 1 do weighing 1,180 at \$4.75.

Brewer sold Newton B. Co. 19 butchers av 910 at \$5.  
Spicer & R. sold Rattkowsky 2 cows av 1,000 at \$3.75, 2 steers av 725 at \$4.75, 4 cows av 350 at \$3.75; to Bresnahan 4 heifers av 663 at \$4.40, 1 do weighing 530 at \$4.40, 3 do av 457 at \$4.25, 9 butchers av 580 at \$4.25; to Rattkowsky 2 bulls av 860 at \$4.50; to Schlischer 4 do av 905 at \$4.75, 1 cow weighing 960 at \$3.75; to Sullivan P. Co. 15 steers av 908 at \$5.25.

**Veal Calves.**  
Receipts, 777. Market steady at last week's prices; 25c higher than Wednesday. Best, \$9@9.50; others, \$4@8.75; milch cows and springers steady.

Calf market closed 50c lower than opening, with \$9 the top at close.

Spicer & R. sold Hammond, S. & Co. 9 av 125 at \$9, 6 av 150 at \$9.25, 5 av 125 at \$6.50; to Rattkowsky 6 av 155 at \$8; to Goose 8 av 140 at \$8; to Mich. B. Co. 2 av 140 at \$8.75.

Downing sold Parker, W. & Co. 2 av 130 at \$9.  
Belheimer sold Burnstine 9 av 145 at \$9.  
Kendall sold same 10 av 119 at \$8.75, 2 av 145 at \$7, 7 av 150 at \$9.

Haley & M. sold Mich. B. Co. 4 av 150 at \$8; to Sullivan P. Co. 4 av 155 at \$4.50, 8 av 130 at \$8.50; to Parker, W. & Co. 5 av 150 at \$9; to Sullivan P. Co. 11 av 130 at \$7.25; to Newton B. Co. 4 av 145 at \$7, 16 av 135 at \$9.  
Roe Com. Co. sold Mich. B. Co. 14 av 135 at \$9; to Sullivan P. Co. 6 av 145 at \$9; to Goose 15 av 150 at \$8; to Thompson Bros. 2 av 155 at \$7.50.

Bishop, B. & H. sold Mich. B. Co. 9 av 140 at \$9; to Parker, W. & Co. 3 av 145 at \$8.75, 5 av 155 at \$8.75, 2 av 150 at \$9.25, 13 av 135 at \$9.25, 4 av 150 at \$9, 21 av 130 at \$8.30; to Nagle P. Co. 11 av 125 at \$8.25, 23 av 140 at \$9.25; to Swift & Co. 4 av 180 at \$7.50, 4 av 135 at \$9.25, 22

av 150 at \$9.50, 23 av 155 at \$9; to McGuire 4 av 110 at \$8, 17 av 145 at \$9.

Sheep and Lambs.

Receipts, 5,767. Market steady at last Thursday's prices.  
Best lambs, \$5.75@5.85; fair to good lambs, \$5.25@5.50; light to common lambs \$4.50@5.25; fair to good sheep, \$3.50@4; culls and common, \$3@3.25; heavy lambs, 100 lbs. up, \$5@5.15.

Bishop, B. & H. sold Mich. B. Co. 13 sheep av 75 at \$4, 39 lambs av 65 at \$5.35; to Nagle P. Co. 26 do av 115 at \$5.10, 33 do av 90 at \$5.25, 114 do av 75 at \$5.75, 211 do av 75 at \$5.75, 124 do av 73 at \$5.75, 115 do av 85 at \$5.80, 40 do av 83 at \$5.60; to Swift & Co. 98 do av 85 at \$5.60, 88 do av 80 at \$5.75, 34 do av 80 at \$5.75; to Sullivan P. Co. 109 do av 110 at \$5.15, 14 do av 90 at \$5.25, 16 do av 85 at \$5.25, 40 do av 70 at \$5, 18 do av 70 at \$5, 22 do av 90 at \$5.25, 17 do av 85 at \$5.35; to Newton B. Co. 184 sheep av 90 at \$3.85, 41 do av 110 at \$4, 107 lambs av 80 at \$5.75, 102 do av 90 at \$5.65; to Thompson Bros. 63 do av 65 at \$5.10; to Parker, W. & Co. 116 do av 87 at \$5.80; to Hammond, S. & Co. 51 do av 68 at \$5.60, 40 do av 50 at \$5.30; to Sullivan P. Co. 14 do av 53 at \$5.25; to Fitzpatrick Bros. 44 do av 77 at \$5.75; to Nagle P. Co. 163 do av 75 at \$5.85.

Spicer & R. sold Sullivan P. Co. 51 lambs av 80 at \$5.60; to Fitzpatrick Bros. 15 do av 85 at \$5.75, 45 sheep av 88 at \$3.75; to Mich. B. Co. 7 do av 120 at \$3.50, 84 lambs av 75 at \$5.50; to Wood 47 do av 110 at \$5.10; to Sullivan P. Co. 11 do av 68 at \$5.50.

Taggart sold Newton B. Co. 101 lambs av 65 at \$5.60.

Vickman sold same 38 do av 85 at \$5.50.

Kendall sold same 31 do av 83 at \$5.75.

Downing sold Mich. B. Co. 18 sheep av 90 at \$4, 31 lambs av 90 at \$5.

Long sold same 77 lambs av 60 at \$5.40.  
Roe Com. Co. sold Mich. B. Co. 57 lambs av 75 at \$5.40; to Sullivan P. Co. 5 sheep av 120 at \$3; to Newton B. Co. 35 lambs av 75 at \$5.50.

Hogs.

Receipts, 4,056. Packers bidding \$7.25 at noon for all grades; nothing sold.  
Range of prices: Light to good butchers, \$7.25; pigs, \$7.25; light yorkers, \$7.25; heavy, \$7.20.

Bishop, B. & H. sold Hammond, S. & Co. 2,368 av 185 at \$7.25, 210 av 150 at \$7.30.  
Sundry shippers sold same 470 av 190 at \$7.25.

Spicer & R. sold Parker, W. & Co. 435 av 180 at \$7.25.

Haley & M. sold same 520 av 170 at \$7.30.

Sundry shippers sold same 860 av 180 at \$7.25.

Roe Com. Co. sold Sullivan P. Co. 275 av 190 at \$7.25.

Friday's Market.

March 3, 1911.

Cattle.

Receipts this week, 1,485; last week, 1,769. Market steady at Thursday's prices. Best steers and heifers, \$5.75@6.50; steers and heifers, 1,000 to 1,200, \$5.40@5.60; do. 800 to 1,000, \$4.75@5.25; do. that are fat, 500 to 700, \$4.50@4.85; choice fat cows, \$4.50@4.75; good fat cows \$4@4.25; common cows, \$3.25@3.75; canners, \$2.75@3.25; choice heavy bulls, \$4.75@5; fair to good bologna bulls, \$4.25@4.75; stock bulls, \$4.50; milkers, large, young, medium age, \$4.00@55; common milkers, \$25@35.

Veal Calves.

Receipts this week, 937; last week, 969. Market 50c lower than at opening Thursday. Best, \$8.75@9; others, \$4@8.50. Milch cows and springers steady.

Sheep and Lambs.

Receipts this week, 6,022; last week, 10,895. Market steady at Thursday's prices. Best lambs, \$5.85; fair to good lambs, \$5.25@5.65; light to common lambs, \$4.50@5.25; fair to good sheep, \$3.50@4.25; culls and common, \$3@3.25; heavy lambs, 100 lbs. up, \$5@5.15.

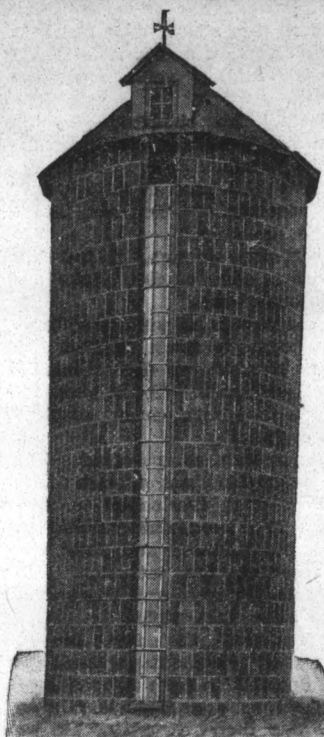
Hogs.

Receipts this week, 5,059; last week, 7,035. Market 5@10c lower than on Thursday. Light to good butchers, \$7.15@7.20; pigs, \$7.25; light yorkers, \$7.15@7.20; heavy, \$7@7.10.

**"RANGER" BICYCLES**  
Have imported roller chains, sprockets and pedals. New Departure Coaster-Brakes and Hubs. Puncture Proof Tires; highest grade equipment and many advanced features possessed by no other wheels. Guaranteed 5 yrs. direct to you at less than factory prices. A few good second-hand machines \$3 to \$8.  
**10 DAYS' FREE TRIAL** We ship postal, freight prepaid, anywhere in U.S., without a cent in advance. DO NOT BUY a bicycle or a pair of tires from anyone at any price until you get our big new catalog and special prices and a marvelous new offer. Write it now.  
**Tires** Coaster Brake Rear Wheels, lamps, parts, and sundries half usual prices.  
Rider Agents everywhere are selling money making our bicycles, tires and sundries. Write today.  
**MEAD CYCLE CO., Dept. S-77, CHIC GO.**

**FARM GATES**  
Send for prices with manufacturer's discounts on farm gates and fence. Hundreds of patents—many cheaper than wood—all better. **STEELE BOOKLET FREE.**  
THE WARD FENCE CO., Box 875, Decatur, Ind.

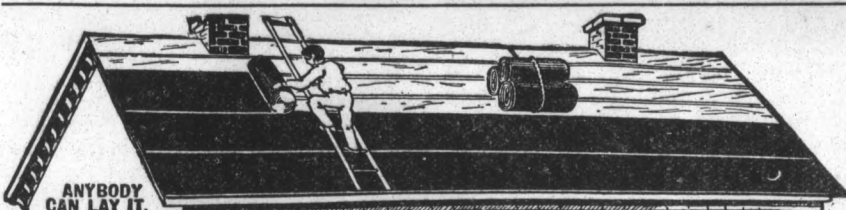
**Have You The Piles?**  
One complete Cure, not Relief, sent Absolutely FREE to one man in each locality. Write today.  
**THE ANTI-HEMORRHOIDAL COMPANY, DETROIT, MICHIGAN.**



# The Imperishable SILO

is not an experiment. It has been thoroughly tried out in Eastern Ohio for six years and has stood every test. Made from our **Patented Interlocking Vitrified Clay Blocks**. Vitrified clay is the material from which sewer pipe and paving brick are made. It never decays. Imperishable Silos combine the convenience and moderate cost of the stave silo with a durability unexcelled by granite. No hoops, no painting, no care—The Ideal Silo. Valuable descriptive catalog free. Write now.

**IMPERISHABLE SILO CO.**  
HUNTINGTON, INDIANA.



## Rubber Roofing

**ONE-PLY . . . Weighs 35 lbs., 108 Square Feet, \$1.10 per roll.**  
**TWO-PLY . . . Weighs 45 lbs., 108 Square Feet, \$1.30 per roll.**  
**THREE-PLY . . . Weighs 55 lbs., 108 Square Feet, \$1.50 per roll.**

**TERMS CASH:** We save you the wholesalers' and retailers' profit. These special prices only hold good for immediate shipment.

**Indestructible by Heat, Cold, Sun or Rain.**

Write for **FREE SAMPLES** or order direct from this advertisement. Satisfaction guaranteed or money refunded. We refer you to Southern Illinois National Bank.  
**CENTURY MANUFACTURING COMPANY, Dept. 319, East St. Louis, Ills.**

# FERTILE VIRGINIA FARMS

**\$15 PER ACRE** and up; easy payments. Productive soil, mild climate, fine water, good roads, close markets, unsurpassed school and social advantages. Write for beautiful illustrated Quarterly, other attractive literature and cheap excursion rates. **F. H. LaBaume, Agt. Norfolk & Western Railway, Box 2040, Roanoke, Va.**  
**NO IRRIGATION HERE YEARLY RAINFALL 45 INCHES!!**

## Farms and Farm Lands For Sale

**Choice Mich. Farms**—Have a big list including some of the very best in Ingham Co. Write or visit. **D. P. WHITMORE, Mason, Mich.**

**MICHIGAN FARMS**—Rich agricultural district. Write for list. **TOLBERT & CO., Charlotte, Michigan.**

**The Best Farms** for the money in Michigan. Write stating what you want to. **E. N. PASSAGE, Plymouth, Michigan.**

**I SELL FARMS** in Oceana, best County in United States. Fruit, Grain, Stock, Poultry. Write for list. **J. S. HANSON, Hart, Mich.**

**FARM FOR SALE**—Write me, **E. GREGORY, Lakeview, Montcalm Co., Michigan.**

**FOR SALE**—120 acres, 40 improved, 30 timber, partly fenced. Fair buildings, good soil, water & location. Inquire owner, **A. D. Clark, R. No. 4, Hesperia, Mich.**

**Jersey Meadow Farm**—165-a. This is best farm on the market today for the money. Everything up-to-date. 1 mile from town. Can have **R. R. Switch, \$12,000**, \$2,000 cash, balance mort. **D. R. REES, 724 Dollar Bank Bldg., Youngstown, Ohio.**

**80 Acre Farm** in Eaton Co., good silo, a nice home and a good farm. Ask for description and terms. **M. HARTZ, Bellevue, Michigan.**

**\$2,200** takes 113-acre farm, 50 acres bottom land, 1 1/2 miles creamery, market, graded school and railroad town. First-class buildings, spring water in house and barn, \$500 valuable timber. Write for other farm bargains.  
**VALLEY FARM AGENCY, OWEGO, N. Y.**

**OWN YOUR OWN HOME.** Come to Oscoda County, Michigan, where clover is king and all other crops do well. We can sell you a good farm very reasonable. Address **OSCODA COUNTY REALTY CO., Mio, Mich.**

**FOR SALE CHEAP**, on account illness requiring removal from state, fully equipped dairy farm, one-half mile from creamery in Wayne Co., Mich. With or without herd, 40 registered Holsteins. Illustrated booklet mailed to intending farm purchasers. **William B. Hatch, Seabreeze, Florida.**

**Minnesota**—Free 200 Page Book compiled by State. Accurate information about Price of Lands in and products of Each County. 2,000,000 Acres. Homestead Lands. Farm laborers wanted. Farms for rent. Address **STATE BOARD OF IRRIGATION, Room 269, State Capitol, St. Paul, Minnesota.**

**Land Opportunities In Colorado**  
State land, government land, deeded land; free land, cash land, installment land; irrigated and unirrigated land, \$5 to \$100 and up per acre; land yielding net annual income of 25 to 50 per cent on valuation. Money making opportunities for 30,000 farmers. We do not sell land but furnish you complete and reliable information gathered by the state. **Colorado State Board of Immigration, 38, State House, Denver, Colo.**

## Virginia Farms

offer best opportunity for land buyers and the best place to live. Mild winters, cheap land, sunshine. Grow all crops. Produce best flavored apples. Cattle, hog raising, dairying and poultry raising profitable. Near 40 million consumers. Get top prices. Write for 300-page "Hand Book of Virginia."  
**G. W. KOINER, Com. of Agric., Richmond, Va.**

**Mich. Farms**  
Write for list 7 of **STOCK, GRAIN, DAIRY AND FRUIT FARMS** in Barry and Eaton Counties. **GOOD SCHOOLS, GOOD ROADS, LOW TAXES AND GOOD LOCATIONS.**  
**BUCKLES & MATTHEWS, Hastings, Mich. Eaton Rapids.**

## FARMS

**THREE CROPS A YEAR.**  
20 acres, good soil and climate. Mobile Co., Alabama. Yearly production. Mr. Jackson off 52 acres \$9500. Mr. Bolton 80 acres \$11000; pecans, vegetables for northern markets. \$12 to \$25 per acre. Easy terms. Bank references. Descriptive booklet.  
**THE OHIO-ALABAMA LAND CO., Hamilton, Ohio.**

## CAROLINA COAST COUNTRY

**AN IDEAL FARM AND HOME IN THE SOUTH**  
THOUSANDS OF ACRES—Rich, Black Soil; Virgin Farm Lands fronting on the ocean. In the world's finest climate. Nearby markets. Low priced lands.  
Write us for Free Illustrated Booklet, Maps, etc. Address **W. W. CROXTON, G.P.A., Norfolk Southern R.R., Dept. B, Norfolk, Va.**

**FOR INFORMATION AS TO LANDS IN**

## The Nation's Garden Spot—

**THAT GREAT FRUIT AND TRUCK GROWING SECTION—**  
along the

## Atlantic Coast Line RAILROAD

in Virginia, North and South Carolina, Georgia, Alabama and Florida, write to **WILBUR MCCOY, A. & I. Agt. for Florida, Alabama, Georgia, Jacksonville, Fla.** and **E. N. CLARK, A. & I. Agt. for Virginia and the Carolinas, Wilmington, N. C.**



## HOME AND YOUTH

TWO BIRDS WITH ONE STONE.

BY CHARLES A. HARTLEY.

On the door of a village store in southern Ohio, just after the Civil War, a hand-bill was posted offering a reward of \$1,000 for the arrest of certain persons who had been committing wholesale burglary and robbery in the adjoining county. They had taken advantage of the lax administration of law during the war, and had carried on their depredations with impunity.

After the store had closed on an October night, five young fellows who had all seen service in the army were roasting eggs on brown paper on the top of the stove, and incidentally roasting one another. They were Ben and Dan Brown, sons of the storekeeper, Sam Lindsey, a famous hunter, John Austin, and Jack Hayes.

"Say, fellows," said Ben, "did you read that bill on the store door?"

They had all read it carefully.

"What's the matter with going after them, and takin' in that reward?"

The boys were all attention.

"Gard Wilson was telling me there are a few wild-cats left over there among the hills. Let's go over there on a hunt. While we're huntin' wild-cats we can hunt the other varmints. What d'ye say?"

The boys threw up their hats and wanted to yell, but Ben put a stop to it.

"Now mind," said Ben, "this is a hunt. Not a word must be said by anybody about the robbers."

They all went to work with a will getting ready, being careful to announce everywhere that they were invited over into the adjoining county to exterminate the wild-cats. But they were careful not to give any information as to the exact locality to which they were going.

In due time they got together their outfit, consisting of guns, dogs, pots, pans, bedding, and grub, and the expedition started. Toward the evening of a fine day, they reached their destination, a great cave among the hills, of which Sam had knowledge. It was a few rods from the road, up a ravine, and entirely concealed. They got the wagon up within a short distance of the mouth of the cave, took off the bed and carried it into the cave. The horses were stabled on one side, while the boys occupied the other. The boys gathered dry wood and soon had a roaring fire. Sam, who said he was "no slouch of a cook," was detailed to get supper. What with the fatigue from riding all day in a jolting wagon, the appetizing odor of coffee and ham, and the charm and novelty of the situation, they were a contented lot.

Night came, and while the horses munched they hay the boys lit their pipes and laughed and joked until a late hour.

When the fire had died down to a mere heap of glowing coals, they decided to turn in. The wagon-bed had been filled with clean straw, and by a proper adjustment of legs and arms they were all enabled to stow themselves into it with comparative comfort. The night was not cold, and they had plenty of blankets. They lay awake a long time chaffing one another.

Suddenly Ben slapped himself, flung the blankets off, and climbed out of bed.

"What's the matter, Ben?" asked Dan.

"Oh, nothing, much," he replied, carelessly. "I guess I'm a little bit nervous, is about all. Don't you fellows mind me; I'll take a smoke and be all right in a little while."

Pretty soon there was another slap, and a yell, and Austin leaped out.

"Now, what's the matter with you," asked Dan.

"Indigestion, I guess. Sam must have forgot to put soda in the biscuits. 'Sinkers' never did agree with me."

Then Jack crawled out with an injured look on his face, and finally Sam joined the group about the fire, with a face as impassive as an Indian.

"Say," said Dan, "you fellows are getting mighty high-toned—can't bunk in a wagon-bed, full of clean straw. I've seen the time when two rails were a luxury. Well, this is comfort. The whole bed and all the clothes."

The boys winked at one another. Sam went over, tucked the straw and blankets about Dan, and wished him pleasant dreams. He then went back to the fire and sat down where he could watch developments. They didn't have long to

wait, for soon the straw and blankets flew in every direction and a frantic figure rose, with mighty yells, from the bed.

"Holy Moses," he shouted, slapping himself here and there and clawing frantically at his person.

"Now what's the matter with you?" asked Ben, severely. "You act like a man with the jim-jams."

"Matter? Matter enough. I feel like I'd swallowed a dose of fish hooks and they'd broke out on me."

Then the old cave rang with laughter.

The truth began to dawn on Dan. He straightened himself up—he measured over six feet—and said: "Look here, fellows, that's a low-down, ornery trick to play on an orphan."

The mystery was soon solved. Just above the wagon-bed was a wasp's nest that the boys had overlooked in their excitement. The heat and smoke had exasperated the inmates and they very naturally resented the intrusion. The straw was full of them, and there could be no more sleep that night.

They replenished the fire, laughed heartily at their discomfiture, and, late as it was, decided to take a coon hunt.

They had several dogs, but old "Drive," Sam's dog, was their mainstay. He was a splendid specimen of the hound, quite large, and as courageous as a lion.

After being out an hour or two, blundering along through the underbrush that scratched their faces and tore their clothes, they began to wonder, as Chesterfield did about fox hunting, if a man ever did it more than once. Pretty soon they heard Drive baying in the distance. His deep, musical voice stirred them like the old bugle call. Sam was beside himself, his fatigue and disgust all gone in a moment. He listened eagerly, and the boys awaited his interpretation.

"Boys, it's a wild-cat, as sure as guns."

Drive suddenly quit baying, and the boys almost held their breath. The mongrels, Tray, Blanche, and Sweetheart, all came tearing through the bushes and grovelled at their feet.

"The cat's tryin' to fool him," said Sam. "They have a trick of jumpin' onto the side of a tree, and then jumpin' off, to break the scent. He won't fool old Drive long. Now listen."

Drive soon found the scent again, and away they went, in a merry chase, over hills and through hollows. In the gray of the morning they overtook Drive, standing at the foot of a great oak, panting and whining. Far up among the branches, that looked almost spectral, they saw the form of the cat, his eyes shining like balls of fire. The other dogs came up in the meantime, very courageous now. The boys began firing at him with their shotguns, but this only enraged him. Finally, as it became lighter, Sam brought him down with a rifle shot.

The next night they entered into the sport with a little more zest, almost forgetting, in their enthusiasm, the chief object of the expedition.

Some time after midnight, while they were huddled together on a narrow ridge listening for Drive's overture, they heard a slight rustling among the bushes.

"Hist," whispered Sam; "That's somebody walking. They're coming. Be quiet, on your lives."

Two men passed them like shadows, in perfect silence, each carrying a bundle.

"Say, fellows, they're not out for their health," whispered Sam. "Jack, you and Dan follow them. Don't forget how you used to trail bushwhackers over in West Virginia."

The two boys, with their guns ready, slipped off into the darkness. Fortunately the leaves were damp, making their footsteps almost noiseless.

In a little while Drive opened up, and the others once more became absorbed in the mad chase. This time they were doomed to disappointment. It was a wild-cat, sure enough, but a wary one, and by doubling and turning it finally outwitted Drive and succeeded in reaching its den.

They got to camp shortly after daylight, to find it cold and silent. When they began to prepare for breakfast they learned, to their dismay, that the better part of their provisions had disappeared.

"Say, boys," said Ben, as he looked ruefully at the scanty remains of their store, "there ain't going to be any more foolishness about this. A wild-cat's a gentleman compared to a scally-wag who'd steal from a fellow out here forty miles from a grocery."

Jack and Dan got back about nine o'clock, in a cheerful mood, bringing with them a little old charcoal burner they

had picked upon on the way. He was from North Carolina, and had been in the Confederate army.

"Well, I guess we've got 'em," said Dan. "At least we know right where we can put our hands on 'em."

"They've stole our grub," said Sam, "and I'm for going right after 'em."

When Jack and Dan left the boys on the ridge they followed the two figures, keeping as far behind as possible, and they had been led a merry chase, up hill and down. But they stuck to them like two shadows until near morning, when they saw them enter a cave above a deep ravine. The place was almost inaccessible, but they had the key to the situation and could find the place at their leisure. In the meantime they were hopelessly lost and, but for the North Carolinian, would have had some trouble finding their way out.

"I'll stay with you all, boys," said the North Carolinian. "I fit you all durin' the wah, and I'm guine to show you all I'm back in the Union."

"All right," said Ben. "If you didn't do any more harm in the war than I did, you're forgiven long ago."

"He wasn't nothin' but one of them 'coffee coolers,'" said Sam.

After a breakfast, such as it was, they decided to assume the offensive. They decided it wouldn't do to take the dogs, and it wasn't prudent for all to leave the camp. They might have to go to bed supperless, also. So Sam and Austin were left behind.

In an hour or two they reached the foot of the ravine and went cautiously along the little creek that traversed it. On the right was a sheer cliff, up which it was impossible to climb. Jack and Dan pointed out to them a bench along which the two men had crept, and a fallen limb that hid the mouth of the cave where they had entered. By making a long detour they reached this bench and crept silently along it to the fallen limb. On coming up to it they discovered a great fissure in the rock. On one side the rock seemed to have been pushed back, leaving a space wide enough for a person to enter. They stood some time, silent. They had all felt that way before, and there was no wavering. "North Carolina," anxious to show his zeal, slipped as quietly as a serpent into the opening. In a short time he came back and held up his hand.

"They're in thar, boys."

"Ready," said Ben. "This beats wild-cat hunting all hollow."

They went in single file, their guns at a "ready." The entrance, fortunately, was not direct. They came upon an angle that concealed them completely, within hearing distance of those inside. Here they stopped and listened. They could distinctly hear the low voices of two persons in conversation. At a sign from Ben they entered.

Two men sat by a small table, or box, rather, smoking and playing cards.

The boys scarcely breathed, and the silence was intense, but the robbers felt, rather than saw, the intruders and dropped their cards. They rose to their feet and reached for their pistols, but Ben was too quick for them and ordered them to sit down.

"Put up your hands, if you please," said he, "and keep them up till I tell you to take 'em down. Make a miscue and we'll fill your hides so full of shot holes they won't hold shucks."

The boys stood some time, until their eyes became accustomed to the dim light, when they saw a queer sight. The cave was of good size, and as high as an ordinary room, dry and cool. It was filled with all sorts of plunder, dry goods, groceries, meat, and even eggs. It was evident they were in the hiding place of the famous gang.

"By hokey, boys," exclaimed Dan, "here's our breakfast."

"All right," said Ben, "if you're sure of it, bring it along. The rest of the stuff we must turn over to the sheriff." Then turning to his prisoners, he said: "We came out here to rid this county of varmints, and we ain't a bit particular whether they're two-legged or four-legged. You will please fall in the procession and go right along with us. You've got to the end of your string."

They were marched off to the camp, sullen and crestfallen. They refused to answer any questions, or give any account of themselves. They were both young men, and not bad looking fellows. The boys mounted "North Carolina" on one of the horses and sent him to the county seat. When the sheriff came he was thunderstruck. He recognized them at once. They were the sons of two

## Pimples Off In 5 Days

The New Calcium Sulphide Treatment Does Wonders to Every Kind of Skin Eruption.

Trial Package Sent Free To Prove It.

You don't want to wait forever and a day to get rid of your pimples or other skin eruptions. You want to get rid of them right now. Next week you may want to go somewhere where you wouldn't like to have to take the pimples along.

You can get rid of them just in time by taking Stuart's Calcium Wafers.

These wonderful little workers have cured bad boils in three days, and some of the worst cases of skin disease in a week.

They contain as their main ingredient the most thorough, quick and effective blood cleanser known, calcium sulphide.

Remember this, too, that most pimple treatments reek with poison. And they are miserably slow besides.

Stuart's Calcium Wafers have not a particle of poison in them. They are free from mercury, biting drugs or venomous opiates. This is absolutely guaranteed. They cannot do any harm, but they always do good,—good that you can see in the mirror before your own eyes a few days after.

Don't be any longer humiliated by having a splotchy face. Don't have strangers stare at you, or allow your friends to be ashamed of you because of your face.

Your blood makes you what you are. The men and women who forge ahead are those with pure blood and pure faces.

Stuart's Calcium Wafers will make you happy because your face will be a welcome sight not only to yourself when you look into the glass, but to everybody else who knows you and talks with you.

We want to prove to you that Stuart's Calcium Wafers are beyond doubt the best and quickest blood and skin purifier in the world—so we will send you a free sample as soon as we get your name and address. Send for it today, and then when you have tried the sample you will not rest contented until you have bought a 50c box at your druggists.

Send us your name and address today and we will at once send you by mail a sample package, free. Address F. A. Stuart Co., 421 Stuart Bldg., Marshall, Mich.



## LE PAGE'S LIQUID GLUE

In the tool house on the shelf handy for instant use be sure to have a can of LE PAGE'S LIQUID GLUE, the best adhesive made.

It mends things almost as good as new and holds fast. Saves many a long trip and many a delay.

Sold in cans holding 1/2 gills, gills, 1/2 pints and pints; also in cap sealing bottles and pin sealing tubes, which we recommend for household requirements.

Your dealer sells it. Demand LE PAGE'S. Accept no substitute.

Library slips with every bottle and tube

## Have Electric Lights On the Farm at Low Cost

Electric Lights make the brightest, safest, cleanest and most reliable lighting system known for farms and country homes. The Dayton Electric Lighting Outfits are low in cost, easy to install, cost almost nothing to operate. Give you better lights than most city people enjoy. Write today for complete illustrated catalog showing outfits, fixtures, etc.

DAYTON ELECTRICAL MFG. CO.

237 St. Clair Street Dayton, Ohio



prosperous farmers, and were supposed to be in the west. It is needless to say there was no longer any desire to hunt, much to Sam's disgust, as he had the true instinct of the hunter. The boys were too much elated over their success to think of pursuing mere four-footed animals.

The robbers were tried in due time, found guilty, and sentenced to long terms in the penitentiary. They never betrayed their confederates, but the band was broken up and depredations ceased.

#### A FOOL FOR LUCK.

BY MRS. ALTA L. LITTELL.

"This one might have been a success if it hadn't been for baby," Mrs. Mason spoke hopefully, though it was a dubious look she cast upon the peculiar looking object she had just placed on the table. "He cried so hard just as I got it in the oven I simply had to take him up, and then, of course, I forgot it and I didn't remember to regulate the heat and it all puffed up and ran over and then when I opened the door it dropped down to nothing in the middle. I thought I might make it stick together after I got it out of the tins if I put plenty of icing on it, but I didn't seem to have any luck with that either. I guess I boiled the sugar too long, or I didn't boil it long enough. Anyway," desperately, "we've got to eat it. I have thrown three into the garbage already this week and eggs are 37 cents a dozen and going higher."

"Oh, it's another cake, is it?" queried Mr. Mason. "That remark about throwing three into the garbage gave me a tip. Well, if I've got to eat it the quicker I start the better. Let's get at it and have the agony over. Thank Heaven, the steak and potatoes were all right and I can stand another cup of that coffee."

"You needn't eat it all tonight," Mrs. Mason said encouragingly, as she refilled her husband's coffee cup. The hand which held the pot trembled a bit but her voice was without a quiver. Teary wives had always been objects of scorn to this young woman.

"Seems funny, though, you can't learn to make cake," Mr. Mason mumbled as he munched the soggy mixture which masqueraded under that honored name. "Why, I made 'em when I was only ten years old," he began, reflectively.

Mrs. Mason groaned inwardly. "Must I hear that tale again?" she thought. Then quickly interposed, "Yes, I did, too, but mother stood right by to tell me just what to do."

"Well, doesn't my mother tell you just what to do now?" asked Mr. Mason. "I believe I could eat another piece of that mixture," he interjected encouragingly. "That icing makes it go down. It isn't so bad as the stuff it separates. I heard her tell you about the oven the last time we were there and she showed you a dandy cake she had just made."

"Yes, and she told me she beat that cake an hour and your sister beat it another one," answered Mrs. Mason. "Where do I get two hours in any one day to beat cakes? I really did mean to watch the oven this time, though," she added, "but I told you, to begin with, baby was to blame. I had to take him up."

"You take him up too much," declared Mr. Mason, in that wise-as-Solomon tone all new fathers assume when discussing the bringing up of babies. "Let him cry a little; it won't hurt him. If he is warm and comfortable and well fed he doesn't need anything else. Just let him lie and cry while you work."

"But John, I can't stand it!" Little Mrs. Mason was very near to tears now, but she winked them back. "It makes me so nervous to hear him I could scream and dance or jump out of the window. I would rather pick him up and let everything go to smash than to stay in the room with him and hear him cry."

"Sure you would, and he knows it. That's why he cries so much when I'm not here," Mr. Mason responded largely. "He knows better than to try any of those tricks on me. I'll bet I could take care of him and make a cake that anyone need be proud of." And, having finished his second cup of coffee and third piece of cake, Mr. Mason retired behind his paper, while his wife removed the dishes, the while indulging in a few strictly feminine thoughts regarding the foibles of men.

On the following Saturday Mr. Mason arrived home quite unexpectedly, just as his wife was finishing her luncheon.

"A half holiday, Mary," he cried, en-

thusiastically. "Put on your toggery and go out for an airing and I'll run the establishment."

"But the baby, John," began Mrs. Mason. "Do you think I had better leave him?"

"Sure," responded John heartily. "Can't I warm his milk as well as you can? I can manage him and the dinner, too. Just go out and make a day of it and leave things to me."

Not without some misgivings did Mrs. Mason prepare for her outing. She was not sure John could get along with baby, but it was seldom she got out without the little rascal, and the day was bright, and Mary was young, and her gown was new and—well, anyway, John couldn't kill the baby in one afternoon, so forth she fared.

Ever and anon, amidst the delights of shopping, thoughts of home would intrude themselves, however. John really did not know very much about babies though he thought he knew a great deal. Suppose Baby Jack should prove quite unmanageable? Pictures of baby screaming himself hoarse while a distracted father tried in vain to soothe him, tortured her for a moment and then she thought grimly, "Well, I don't care just for once. Baby surely can't hurt himself and John can find out just how I have it. He'll know now why my cakes are a failure. Imagine any man baking even a loaf of unleavened bread with a crying baby to upset him!"

At 5 o'clock Mrs. Mason opened the hall door of the apartment house where they had their tiny flat and wearily climbed the stairs. Halfway up the smell of a delicious fresh cake assailed her nostrils.

"Mrs. Smith has been baking," she thought, enviously. Mrs. Smith was famous throughout the building for her cakes, and Mrs. Mason had more than once wished for the secret of her neighbor's luck. The smell grew stronger, however, as she neared her own flat and left Mrs. Smith's in the distance.

"Can it be John's mother is here and has baked a cake for us," she thought joyously. "But no, she could never get any farther than telling me how," the afterthought trailed along. "It must be the new woman upstairs."

She slipped her key into the lock, turned it and entered her own hall. Fresh, warm and odorless cake must be somewhere in her own apartment. That strong scent could not permeate from without. John sat reading his paper, a look of utter unconcern masking his feelings, and in the carriage, actually wide awake and not crying to be held, Master Jack played with a rattle or made frantic attempts to catch his toes.

"Has your mother been here?" cried Mary, interrupting John as he seemed about to speak.

"Why, no, did you think she was coming?"

"Then who made the cake? Surely I smell cake," demanded Mary.

"The cake? Oh, to be sure," indifferently; "I just tried my luck this afternoon and it doesn't seem to have been so bad. It's on the dining-room table."

Mary pushed open the door hastily and stopped in silent admiration. Puffed up where it should be, browned to a turn, crumbly-looking and odoriferous, there stood John's masterpiece.

"The proof of the pudding," said John, with a flourish, cutting a generous slice for Mary and a second for himself. "I've been dying to try it but nobly waited for you."

Mary tasted warily, then contentedly, then, it must be confessed, greedily.

"But who showed you—where did you get a recipe—what did you do with baby?" she queried between bites.

"Nobody, out of your book, put him in the cab and gave him my watch," responded John, ditto. "There wasn't any cream so I used a little milk out of each one of Jack's bottles, and I couldn't find any soda so I used baking powder. That's what mother puts in cakes, anyway."

Mary snatched the cookbook which lay open on the table and read, "One and a half cups of flour, one cup of sugar, one teaspoon of soda dissolved in a tablespoonful of boiling water. Break an egg in a cup and fill the cup with sour cream. And I suppose you didn't put in any butter, and dissolved your baking powder in the water?" she demanded.

Then as John nodded assent she gasped helplessly. "Surely a merciful Providence does watch over the innocent. Skimmed milk and patent baby food, no shortening, and baking powder dissolved in boiling water, and this the result."

## Let Us Send You the Best Hydegrade Petticoat That \$1 Ever Bought



No. 1143.—Petticoat of "Hydegrade" taffeta; hard to tell from silk and wears better. Plain tailored style; deep flounce and dust ruffle. Colors: black, brown, blue, purple and green. \$1.00, postage paid.

There isn't a store in New York that can match these petticoats at a dollar. We know, because we have tried them. Made especially for us by the best maker in the country from the beautiful and long-wearing "Hydegrade" fabrics. Cut to fit smoothly and comfortably; put together the way you'd do it yourself if you were an expert dressmaker and were making the garment for your own wearing.

Sent, Postage Paid, for \$1.00. Your money returned and stamps sent for return of garment if it doesn't please you when you get it.

Write us now. Send \$1 and give style-number, length and color desired. We sell nothing but standard, tested and proved goods, and guarantee everything we sell.



No. 1144.—Petticoat of "Hydegrade" percaline; firm, soft, silky; deep embroidered flounce and dust ruffle. Colors: black, brown, blue, purple, and green. \$1.00, postage paid.

Perry, Dame & Co., Merchandise Distributors  
BROADWAY AT 34th STREET, NEW YORK CITY

O. F. 201



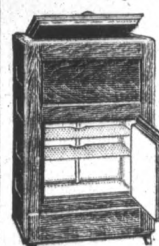
## VIOLIN FREE

This is a fine, handsome, clear toned, good sized Violin of highly polished, beautiful wood with ebony-finished pegs, finger board and tail piece, one silver string, three gut strings, long bow of white horse-hair, box of resin and Fine Self-Instruction Book.

Send us your name and address for 24 packages of Bluine to sell at 10 cents a package. When sold return our \$2.40 and we will send you this beautiful Violin and outfit just exactly as represented.

BLUINE MFG. CO.  
210 Mill St., Concord Junction, Mass.

## Don't Buy a Common Refrigerator



It will soon become a vile smelling, disease breeding thing. Our free booklet tells why. BUY THE

### Leonard Cleanable

Lined with real porcelain enamel on sheet steel, all one piece. You can't break, scratch or mar it, easily cleaned as a china dish, nine walls to save ice; odorless, sanitary and durable; style shown in beautiful satin walnut case, 29 1/2 x 22 1/2 x 47 1/2 only \$18.90; freight paid as far as Mississippi and Ohio rivers, 50 other styles and sizes up to \$75.

Write today for catalog, booklet and free samples of the porcelain lining.

GRAND RAPIDS REFRIGERATOR CO.

149 Clyde Park Avenue Grand Rapids, Mich.



## HERE IT IS! and only 50 Cts!

Complete with Burner and Indestructible, Concealed

### STEEL MANTLE

Giving a brilliant light Equaling Electricity from an ordinary No. 2 oil burner. No Soot! No Odor! No Subsequent Expense! 3 for \$1, for a limited period.

PERFECTION LAMP LIGHTING COMPANY,  
Dept. C, 58 West Congress St., Detroit, Mich.



## Sanitary Dumbwaiter

Saves time, labor, money. Simple in design—Small expense to install—Small cost \$15 and up.

For old or new HOUSE. FREE!

THIRTY DAYS' TRIAL. Send card today for circular. Address Box 948, Van Fleet & Waffle, Ewart, Michigan.

## AGENTS 100% PROFIT 15 In One



Just out. Patented. New Useful Combination.

Low priced. Agents aroused. Sales easy. Every home needs tools. Here are 15 tools in one. Essex, Conn. N.Y. agent sold 100 first few days. Mechanic in shop sold 50 to fellow workmen. Big snap to hustlers. Just write a postal—say: Give me special confidential terms. Ten-inch sample free if you mean business. THOMAS MFG. CO., 5845 Wayne Street, DAYTON, OHIO

## I Want Men

Like YOU, Who Want to Make \$3,000 A Year or More

We need a good live man right now in your territory to handle real estate deals for us. No experience or capital necessary. I will teach you the Real Estate Business. Also Commercial, Law and Business Methods, then appoint you representative in your locality. Easy work; large profits. Write for free book.

MORDEN LAND & LOAN CO.,  
315 Palace Bldg., Minneapolis, Minn.

## LIGHTNING

Safeguard your home. The DODD SYSTEM of protection is the standard. Only system endorsed by 2000 Insurance companies. Lowers insurance rates. Agents wanted. Fine, large Lightning Book with vivid lightning scenes, free. Address DODD & STRUTHERS, 429 6th Ave., Des Moines, Ia.

WANTED FOR U. S. ARMY—Able-bodied, unmarried men, between ages of 18 and 35; citizens of United States, of good character and temperate habits, who can speak, read and write the English language. For information apply to Recruiting Officer, 212 Griswold Street, Detroit, Michigan; Heavenrich Block, Saginaw, Michigan; Corner 1st & Saginaw Streets, Flint, Michigan; Dwight Building, Jackson, Michigan; corner Huron Avenue & Quay Street, Port Huron, Mich.

## Let Me Start You in Business!

I will furnish the advertising, matter and the plans. I want one sincere, earnest man in every town and township. Farmers, Mechanics, Builders, Small business men, anyone anxious to improve his condition. Address Commercial Democracy, Dept. D 30, Elyria, Ohio.

Wanted Agents—to sell farmers account book. Quick addition. Address, L. L. Syphers, Fort Wayne, Ind.

Law On Any Subject and full advice. Save money and write at once. RICHARDSON LEGAL BUREAU, Box 662, Detroit.

Music—Send Addresses of music teachers for our latest publication, song or instruments tal. Geo. L. Pfeiffer, Music Publisher, Columbus, O.

Please mention the Michigan Farmer when writing to advertisers.



# THE GATES OF BAKAPPLEIN

By { ELIZABETH JEWETT BROWN  
and SUSAN JEWETT HOWE.

## Chapter XVIII.—The Home-Coming.

Many times during the first week that Ned Jackson worked with Roy he wished that he had learned to drive the oxen on his cousin's farm when he had had the chance, for, as that was the lightest part of the clearing of the land, it was his to do. He could no more roll and lift the heavy logs to their places than could a child, and the necessary tramping in a circle, in driving the horses around when the "stump puller" was used, made him weak and giddy, so the ox-driving of necessity was his share of the work. But, although he was awkward the first few days, he was so eager to learn to drive them well that soon he felt as if he had earned a degree in that branch of labor, at least.

"I've changed my mind about a good many things," he said one day to Roy after the oxen had obeyed his voice so perfectly that the big charred log had been yanked to its place without a hitch. "I used to think that any fool could drive oxen; now I've found, as old Joe Green said, that it takes a sharp fool to hit both bar posts at once. An ordinary fool can only hit one. Gee whiz! I remember the jawing Ben Baker gave me when I tore down both bar posts, because the confounded things wouldn't 'haw' or 'gee' the way I told them to. I was so mad I never drove them again. I never thought then that I'd come down to being glad that I had them to 'haw' and 'gee' around."

"You mean you have 'come up' to them," observed Roy. "It looks to me as if you was getting about as severe a drubbing into learning to work as any guy I ever heard of."

"If Merle knew that I did not have one red cent she would help me out of this fix," began Ned, grumblingly.

Roy stopped suddenly with his cant hook poised above the big log he was about to grapple. "Do you mean to say you would take money from a girl?" he demanded scornfully.

"Why not?" asked Ned, surlily. "Guess I need it bad enough."

"Well, if you would you are lower down than I thought for," continued Roy, witheringly. "Here you are earning money all the time and yet would write to your sister for some. Well, I'll be blowed!"

Ned's face flushed. "You act as if I was stealing it," he snapped.

"It is just as mean as if you was. You told me that she did not earn money; that is, was not working for money, but had an allowance and everything she needed. Yet, if you had a cent you would write to her a whining card and tell her a hard luck story, expecting that she would fork up a few dollars and send you. Well, I'm mighty glad you haven't got a cent if that is what you would do with it, and if I had ten I would not lend you one," he cried hotly.

Ned did not answer. Roy saw things so differently from what he did, but he was already viewing life differently since he had become a companion of this sturdy outspoken boy who had but two standards in life to measure things by; one was, what was right; the other, what was wrong, and there was no half-way about either. His perspective had but two points and he was uncompromising in regard to both of them.

For a few moments Roy worked away industriously at his log pile until the blaze was wrapping the heap in a fiery mantle, then he said abruptly:

"Probably I was a little rough, Ned, but I can't help thinking a man is pretty low down if he will go to a woman for money. Why, man alive, it is a man's place to support the woman, whether it is his wife, his mother, or his sister—not for them to support him. Suppose you did write such a letter and she sent the money, out of her love for you and her kindness of heart, she would despise you just the same for not earning it yourself; and even if you was sick she would have the feeling that you ought to have saved your money when you had the chance to earn it; and she would despise you for needing help. Yes, she would; and whenever I hear of a girl or woman supporting a man I feel like going up and kicking the man and telling the woman she is a fool. No, sir, I never wanted my mother to do for me after I was twelve years old and could begin to earn something all the time I was out of school. I felt as if it was

my place, and I did earn pretty near everything we had until she went; and then it was my money that gave her a decent show at last, even if I didn't have one cent after I had rustled together a few things and set out on my tramp. That's the kind of a hairpin I am, and if you are low-down enough to let a girl support you, why, you are no chum of mine," he finished, fiercely.

Ned choked an angry flood of excuses which rose to his lips. The old Spanish proverb that "He who excuses himself, accuses himself," came to his mind, and he did not care for any more of Roy's cast-iron opinions at that moment. But as he continued his work his conscience told him that Roy had spoken the truth. All of his life he had gone to Merle for money when he was short, which had been nearly always from the time when, as little children, they had been given pocket money. True, he was always ready to divide with Merle himself when she had asked it, which had been seldom, as she had never had the ways and desires of spending money which he possessed. Probably Merle did despise that part of his nature, even if she did not wholly despise him; and with the better part of his nature awakened again he resolved to never appeal to her for aid, no matter what happened. He would have a little of Roy's self-respect and independence and either sail his own ship or go down with it.

November was a cold, stormy month, yet day after day, as Ned worked out of doors doing the rough, dirty work, he realized that he was growing stronger, and as life flowed more freely through his veins the desire to see his home grew with each hour and he felt as if he could not wait until the money was earned so that he could buy decent clothing and start for the east. And when he would pause in his work, resting idly on his cant hook, or sit at night by the fire with unseeing eyes, he was suffering the tortures of the Heimweh, and at such times Roy would either let him alone or else break into his melody song, ringing out the words with such cheer and faith that the mood would pass and Ned would return to the prosaic duties of the every day.

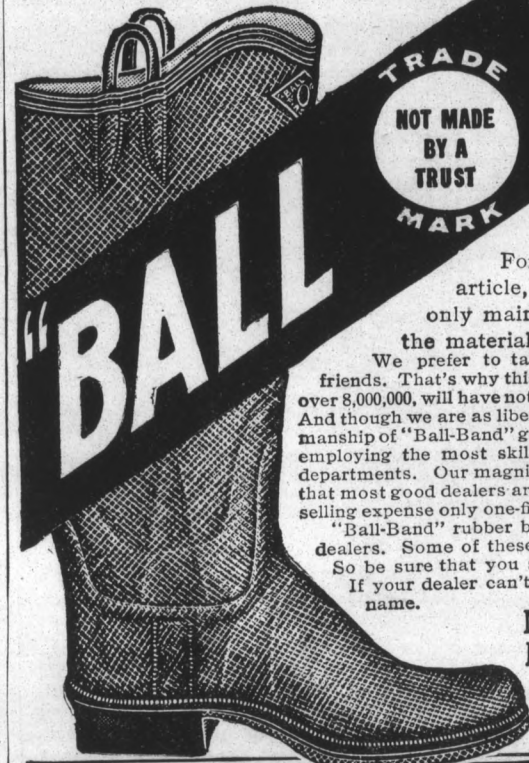
But with his desire for home was mingled the fear of King. He knew now that that man would never let him live in the same town with him, and he doubted whether he would be welcome at Searls' home. Manning, he knew, would take him in there, but he had not the slightest idea where he could find work nor what he would do to support himself. Brooding on such thoughts caused him keen misery, and once when they were working hastily in the bleak lot, trying to get a certain amount done before a coming storm, Ned was so down-hearted that Roy asked him, wonderingly, what was troubling him. "You look as if you expected to be arrested for sheep stealing as soon as you reach home," he said, banteringly.

Ned started. Roy had spoken his exact thought; he was afraid of arrest, and almost before he realized what he was saying he was confessing the whole account of King's meanness; the profits he made as middleman with the farmers; also how he, Ned, had tried to get ahead of him in sharp dealing, and what the result had been. When he had finished, the expected outburst from Roy was not delayed: "You were a chump!" he said, contemptuously. "As dirty and mean a chump as ever walked, and a fool in the bargain. I read once that all sharpers and criminals were idiots in some ways, and I believe it. You thought you was like the woodchuck that crawled in his hole and pulled it in after him; that is, you thought you did, but you see you didn't. Well, all I've got to say is, that you must do as Miss Amidon told you to do—you must pay every cent of that money back to John King (though I agree with you that he don't deserve it), before you ever step your foot in that town again. He has got the drop on you and he will never let up, so to save your own neck you must do it. What a bloomin' fool you were not to see the other end of your little game when you tried it. I should have thought you would have had more sense."

Ned winced at his words. "That is what I mean to do—pay it all back, but I am blamed if I can see how I am going

# Rubber Boot Time is NOW!

This is the time of year when outdoor work is impossible without the proper foot protection. You get this protection in the famous "Ball-Band" Rubber Boots. They defy the wet, slush or snow and keep your feet warm and your health good. 8,000,000 satisfied wearers testify to their superiority over common rubber boots.



Quality alone has built up all of this enormous business. We make but a small fraction of the profit that we might have if we skimped in materials and workmanship. For crude rubber is a very costly article, and many manufacturers can only maintain themselves by cheapening the materials.

We prefer to take less profit and make permanent friends. That's why this tremendous growing patronage, now over 8,000,000, will have nothing but "Ball-Band" rubber footwear. And though we are as liberal as possible in the quality and workmanship of "Ball-Band" goods, using only the best materials and employing the most skilled labor, we cut expenses in other departments. Our magnificent selling organization and the fact that most good dealers are eager to handle our goods makes our selling expense only one-fifth that of some manufacturers.

"Ball-Band" rubber boots are for sale by 45,000 first-class dealers. Some of these dealers also handle ordinary brands. So be sure that you see the RED "Ball-Band" trade-mark. If your dealer can't supply you, write us, mentioning his name.

**Mishawaka Woolen Manufacturing Co.**  
**Mishawaka, Ind.**

"The House That Pays Millions for Quality" (41)

Established 1752.

## When you need a Pill, take

### a Brandreth's Pill

PURELY VEGETABLE.  
ALWAYS EFFECTIVE.

BRANDRETH'S PILLS purify the blood, invigorate the digestion, and cleanse the stomach and bowels. They stimulate the liver and carry off vitiated bile and other depraved secretions. They are a tonic medicine that regulate, purify and fortify the whole system.

Constipation, Biliousness, Headache, Dizziness, Bad Breath, Pain in Stomach, Indigestion, Dyspepsia, Liver Complaint, Jaundice, or any disorder due to impure state of the blood.

FOR SALE BY DRUGGISTS throughout the world.

## Alcock's PLASTER

The World's Greatest External Remedy.

Apply Wherever there is Pain.

Established 1847



## Crooked Spines Made Straight

If you are suffering from any form of spinal trouble you can be cured in your own home without pain or discomfort. A wonderful anatomical appliance has been invented by a man who cured himself of Spinal Curvature. Its results are marvelous. It is nature's own method. Eminent physicians are endorsing it. The Sheldon Method relieves the pressure at the affected parts of the spine, the whole spine is invigorated and strengthened, all soreness is taken out of the back, the cartilage between the vertebrae is made to expand, the contracted muscles are relaxed and the spine is straightened.



PHILO BURT MFG. CO. 318 3rd Street, JAMESTOWN, N. Y.



to do it. Why, all I am earning now, breaking my back with this hard work, wouldn't pay it and I've got to have clothes. I'm almost barefoot. King can go to thunder till I have the money, that's all. Merle wouldn't stand for it—"

"There you go again, falling back on your sister as if you didn't have backbone enough to hold yourself up. I tell you, you have got to cut Merle out of this proposition, and if I hear you quoting her again I'll dig out and let you paddle your own ship alone. I'll stand by you if you do the square thing. I'll help you and take your word as a gentleman that you will pay me back when you get a chance; but you've got to send that money on to the old cuss. It's right and just you should; you don't have to answer for his conscience, and once your sin is off yours, you'll be free. I wouldn't have the tag of dishonesty on me for all the money this side of Kingdom Come. It is worse than a tin can on a dog's tail."

Ned hesitated. His personal needs were so strong. Clothing he must have or he could not work. His desire for home was urging him on to his daily work, thinking that each day's money was bringing him nearer and nearer to the goal of his desires, but to be obliged to send what little he had to King, go without himself, and postpone returning home indefinitely, was a little more than he could stand. "I won't do it," he said, gruffly. "He doesn't need the money and I do; he is a thief and has been for years. If he dares prosecute me I can show him up, but I won't go hungry and naked for him, or you either. When I can afford to send him that money I will, and not till then. No one could expect me to do anything else, and I'll be hanged if I will."

"You may be hanged if you don't," remarked Roy, good-naturedly. "See here, Ned; there never will be a time when it is easy. Right is right and wrong is wrong, and you can't get around it. A man is either honest or dishonest, and if you are not honest, why, you are the other. If you will do the square thing we will hang together. But you act to me as if you had a wishbone instead of a backbone all the time. When we get our money, after we get what clothes we must have, we will put away what we have left towards sending to him. Then we will find another job. I can get work anywhere. I'm big and husky, and what's more, I know how to work; and what I get you will have, too. Come, that's fair. I'll help you get enough together to send to that old skinflint, just for the sake of going home with you and have you get me in with your folks. I have no home—no place on earth now—I'm alone; and I want a home mighty bad. So you see I'm selfish about this, for I am looking out for Number One. About all we ever leave in this world is our tracks," he continued earnestly, "and it is up to us to keep our feet as clean as possible. We won't always have mothers to follow us up and wipe the dirt off our shoes or scrub up the muddy tracks we've made on the clean floor. We will have to do that ourselves if we wish to leave a clean path behind us, but most of us who step in the mud get in so deep that no amount of scrubbing will take the dirt out of our tracks. It isn't the part of men to expect the women folks to clean up after us and forgive us for what we have done unless we prove ourselves worthy of forgiveness; so, as I have made up my mind to go east I shall stick by you if you prove you are not a rascal."

"I'm not a rascal," blurted Ned.

"Humph! Ask King whether you are or not," said Roy, stoutly. "Come, Ned, I want to settle this thing for good and all. I'll do my part; will you pony up with your shekels till that old wretch who is after your pound of flesh gets his claws off your throat, or won't you?"

"I suppose I'll have to," said Ned, ungraciously, "though it hurts like the devil to go without for the sake of him. Look at my overalls. Mrs. Wood has patched them till they look like the map of the United States. I can't tell for the life of me, what the original color was."

"Same here," agreed Roy. "But who cares for patches? She is a good old soul to take such an interest in two tramps like us. Heigh, ho! I'll be sorry to go, for we may not strike as good folks in a year as they are. Hustle the oxen along. That storm will catch us before night and the sooner we finish this job the sooner we'll get our cash, for it's hustle and rustle and bustle and jostle till we get another job. For jobbing and nobbing, no other man robbing."

Will keep us on the bob,

he improvised as he sang the words lust-

ily, pitching into the work as if it was the biggest joke in the world.

Both were sorry when at last they left to look for other work. In the nearest town they bought a supply of garments and then Roy, with calm assurance of finding work, started out hopefully. Although refused several times, at night he found a month's employment for both of them in a livery stable, and so, without losing a day's time, they were at work earning King's money again. Little by little the pile accumulated, for their pay was not very large, and after they had started to save money for that object Ned was as eager as Roy to have the matter settled, for, as the boy said, "Ned, with that hanging over his head was no more independent than was a pig with his head in a poke, but once free of that burden he would be able to hold up his head with anyone."

It was a proud day for both of them when at last they sent the money. In all that time Ned had not written to Merle. He could not bring himself to write that he was having ill luck and, not suspecting her anxiety, he planned on surprising her as soon as he could possibly return home.

He wrote a brief letter to King saying that as he returned the money he had refused to pay the year before, he hoped for an immediate acknowledgment of it, when he would drop the subject for all time. He added those words so that King would have no fears of his telling the basket story when he returned to West Winthrop. The acknowledgment came back immediately bearing the single word, "Thanks," but it was enough, and both Ned and Roy executed a war dance in their little smelly room above the stable, though they had less than a dollar between them and no more work.

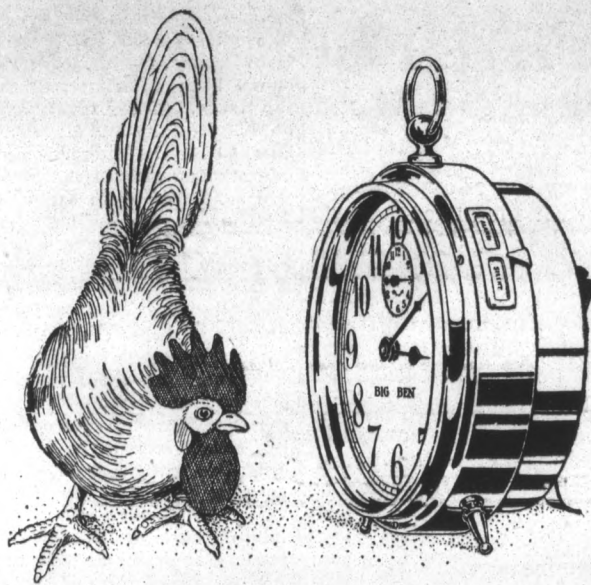
Ned felt a trifle discouraged, for they had both been searching diligently for more employment, but Roy was as hopeful as ever. With all their belongings stored in Roy's "turkey," they started out again looking for work, tramping on the railroad which ran towards the east. They reached a large town at night and while exploring the yards for a box car in which they could sleep for that night Roy fell in with a man who was loudly swearing because a couple of men who were to take a number of cars of cattle east had gone on a spree and failed to show up at the time the cars were to start. That was all the encouragement Roy needed, so he at once applied and secured the position for himself and Ned. At midnight they had started east, for the cars were billed to Boston.

Days later, when the January snow was sparkling on the hillsides and the stone walls were covered with smooth, beautiful mantles of white which hid their jagged outlines, the two travelers, having received their money and indulged in baths and a general clean-up, turned their faces towards Bakapplein, for Ned had now not the slightest fear but that he would be welcome. He had a clean conscience, for no one could say that he had robbed them; and with all desire to get ahead by sharp dealing gone from his nature, he was impatient to see his cousin and tell him that at last he had learned to work with his hands and would do anything honorable whereby he could earn his way in the world.

They reached Winthrop on the late train at night. It was only a matter of a dozen miles from there out to Bakapplein, and when Roy suggested that they walk out there in the early morning, so that he could see what the real New England hillsides were, Ned agreed. They had tramped so much the past few months, and as Ned was strong again, they started early so as to get to the place for breakfast.

It was over the same road that Ned had driven with Joe a year before. He saw no great changes, and as they walked they whistled and sang along the way. They met no one, for the milk teams had passed over the road before they reached the Three Bridges, a mile from Bakapplein. They quickened their steps then, for they were hungry, and as they reached a place on the road where they could see the old white farm house of Old Beverly standing in its group of trees, the sun shining on its eastern windows, just as it peeped through the old, old trees on the large Eastern Knoll which they called the Sunset Knoll. Ned pointed out the place to Roy and told him of Grandfather Beverly's love for those trees and the veneration in which they had been held for generations of Beverlys who would never have them cut down.

As they reached the Gates of Bakap-



## It's the Early Bird that gets the worm

I'm BIG BEN—King of the Alarm Clocks—and I've chased the old rooster out of his job for I get you up in the morning more reliably.

But I don't "go off" with a Whir-r-r and scare you out of bed and into a bad humor like most alarm clocks. I've a cheerful, mellow, "Good Morning" sort of voice. I ring at intervals for 15 minutes or steadily, according to how you set me.

I keep watch-time. I look like a big watch.

I have a regular watch escapement, which is the part of a watch that makes it tick and on which its time-keeping quality depends.

I have to run with watch-accuracy for six days and nights, under constant inspection, before I'm allowed

to go to your jeweler, and thence to you.

I tick like a watch—lightly, evenly and fast; not slowly and heavily like ordinary alarm clocks.

I've a "thin model" case like the newest watches.

In fact I'm called the "big watch with a breakfast bell" by people who own me.

I'm reinforced with an inner casing of steel, so I'm strong and dust-proof. Drop in at your jeweler's today and hear me ring "The National Call to Breakfast."

\$2.50 is my price and it's about one dollar too little.

If you want to be "first in the field" have me—Big Ben—wake you in the morning.

## BIG BEN

Care of WESTERN CLOCK COMPANY, La Salle, Ill.

If your jeweler doesn't sell me I'll come express prepaid on receipt of \$2.50

(20)

## CLOTHCRAFT

TWO men were speaking of a \$16.50 suit of Clothcraft Clothes. It was being worn by one of these men, who for years before had worn only custom suits at \$45 to \$60. It was being examined by the other man—also a wearer of custom clothes. "What a fine, soft piece of cloth!" the latter exclaimed. And it was!

The quality and taste represented in the fabrics are but two of the noteworthy features of Clothcraft Clothes, for men and young men—the only guaranteed all-wool line at \$10 to \$25. Another very desirable feature is the really remarkable fit—close-fitting collar, shapely shoulders, non-breakable coat-front, heel-hugging trousers. And back of these is the protection of the definite Clothcraft guaranty, backed by dealer and maker. It assures absolutely all-wool, first-class trimmings and workmanship, lasting shape, service and satisfaction.

Clothcraft Scientific Tailoring gives you these advantages at a saving of \$5 to \$10 a suit. Go to the nearest Clothcraft Store, or write us direct. We'll gladly send you the Clothcraft style-folder for spring, and a booklet picturing the clean, light shop where Clothcraft Clothes are made, together with the name of the nearest Clothcraft dealer. He's a man who believes his customers are entitled to honest clothes, honest treatment and an honest guaranty. That's why he sells Clothcraft.

### THE JOSEPH & FEISS CO.

Founded 1850—Oldest American Manufacturers of Men's Clothes

623 St. Clair Ave., N. W.

Cleveland

REG. U.S.

PAT. OFF.

## LOVELY EASTER CARDS FREE

We will send 5 lovely Easter Post Cards, printed in colors and gold, for 2-cent stamp to pay postage. This remarkable offer made to introduce our post cards in your vicinity. Write today. A. PORTER, 107 Clinton Street, Chicago, Ill., Dept. 764.

## Choice Virginia Farms Along the C. & O. R'y

as low as \$15.00 PER ACRE. Abundant rainfall, rich soil, mild winters, nearby Eastern markets. Write for illustrated booklet, "COUNTRY LIFE IN VIRGINIA" (100 pages) and low excursion rates. Address K. T. CRAWLEY, Indus. Agt. Chesapeake & Ohio R'y, Box NX, Richmond, Va.



## GUARANTEED ALL WOOL





## AMERICAN Steel Fence Post Cheaper Than Wood and More Durable

Many years of experimenting with metal fence posts have developed this post. It is now thoroughly practical, filling every requirement on the farm, in the town, for railroads and wherever fence posts are used.

Made of tough steel, heavily zinc coated. Durability proven by us—ten years' actual use showing good as new. Means a big reduction in fence cost and maintenance.

40-page catalog sent free, fully illustrating and describing. Send for it.

Sold by dealers everywhere. Ask dealer to show samples and quote prices, or write us direct.

**American Steel & Wire Co.**

Chicago: New York:  
115 Adams Street 30 Church Street  
Denver: San Francisco:  
First Nat. Bank Bldg. 16th and Folsom Sts.

## P. & B. Fence Anchors

Keep hogs from going under wire fence. Hold fence down in crossing depressions. Protect stock from lightning by ground connection. Hold in any soil. By their use you can set your

**Posts 35-40 Ft. Apart**

Simple, cheap, easy to use. No digging necessary. Special driving tool free with orders of 100 or over. Ask your dealer or write to

**J. M. PEEL & BRO., Box 102 Marysville, Ohio**

**BROWN**

WE PAY THE FREIGHT

Heaviest Fence Made  
Heaviest Galvanizing  
We make 16 styles. Horse  
cattle, sheep, hog, and bull  
proof fences made of No. 9  
double galvanized wires  
and absolutely rust proof  
Bargain price 35¢

14 cts. per Rod Up  
Poultry and Rabbit Proof  
Fences, Lawn Fences and  
Gates. Send for Catalog  
and Free sample for test.  
The Brown Fence & Wire Co.  
Dept. 49 Cleveland, Ohio

**FENCE**

**WHITE WIRE FENCE**

and gates. For lawns, gardens, parks, cemeteries, etc. Inexpensive, but neat, durable and effective, made of No. 9 galvanized crimped wire and coated with a special white paint. Shipped in rolls any length, any height. Booklet on request.

THE ACME WIRE FENCE CO., 6830 ATWATER ST., DETROIT, MICH.

**FENCE** For Lawns, Churches, Cemeteries, Public Grounds. 100 Patterns. Write for special offer and our free Pattern Book.

THE WARD FENCE CO., Box 943 Decatur, Ind.

**FENCE Strongest Made**

Made of High Carbon Double Strength Coiled Wire. Heavily Galvanized to prevent rust. Have no agents. Sell at factory prices on 30 days' free trial. We pay all freight. 37 heights of farm and poultry fence. Catalog Free.

COILED SPRING FENCE CO.  
Box 21 Winchester, Indiana.

**13½ Cents a Rod**

For 18-in. 14 3/4-in. for 22-in. Hog Fence; 15¢ for 26-in.; 18 3/4-in. for 32-in.; 25¢ for a 47-in. Farm Fence. 48-in. Poultry fence 28 1/2¢. Sold on 30 days' trial. 80 rod spool Ideal Barb Wire \$1.45 Catalogue free.

KITSELMAN BROS.  
Box 278 MUNCIE, IND.

**LAWN FENCE**

Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Churches and Cemeteries. Coiled Spring Fence Co.

Box 1 Winchester, Ind.

**CEDAR FENCE POSTS & SHINGLES** at wholesale prices. Can ship mixed carloads. **H. ROSE, Mecosta, Mich**

plein, Ned's heart was too full for words. The gates were wide open, and there were many fresh sleigh tracks in the snow, both entering and returning from the house. "They must have had a party here last night and haven't got up yet," laughed Roy as they saw no signs of anyone stirring around the house. "Thought you said they were early risers."

"They used to be," returned Ned. Wouldn't it be a joke if we got in without their seeing us. It will be a wonder if Ben doesn't; I'll bet it is the first time that anybody ever entered without his knowledge," he chaffed as they walked rapidly up the winding driveway.

"Come," he said, boyishly, "what do you say to sneaking in the back way, going up through the cellar and surprising Mary. It will be the biggest lark of all. She will holler like a loon when she sees us pop into the kitchen, and then they will all rush out to see what she is having such a fit over," he chuckled, leading the way around the front of the house, then along the north side, bending low so as not to be seen from the windows and coming stealthily around to the east end just as the first exhaust of the gasoline engine broke on the air.

Ned hesitated. "They are going to saw wood, so our fun is spoiled," he whispered, "but come, we will whoop 'em up anyhow," he added as they darted around the corner to the wide open cellar door, near which the gasoline engine was standing, already started for work, but no man in sight.

It was scarcely a half dozen seconds since they had heard the first exhaust, but one startled glance showed them what had happened. Someone had filled the tank too full, it had run over on the outside and then, in priming, more gasoline had run down on the muffler under the machine. Then, without waiting for it to evaporate, someone—and Ned knew it must have been young Joe—had started the engine, and as the exhaust had come out the waste gasoline had caught fire and was already wrapping the muffler in a ring of flame, circling the pipe and lapping up on the sides of the tank.

Not one second did they wait. Ned grabbed the axe, broke the ice in the rain barrel and filled an old pail with water; then, crawling down by the side of the engine he commenced throwing water on the blaze while Roy dashed, like a madman, through the cellar, up the back stairs and into the kitchen where he seized the pail of water from the sink before Mary's astonished eyes and was back again to the engine, throwing it on the last flicker of the blaze just as Ned crawled out from under the engine, blackened, burned and dirty, but content, for he had saved Bakapplein.

It had taken but a few seconds. The sound of the exhaust had brought them all there, the men rushing from the barn, Mary and Merle from the house, while young Joe shambled out from the cellar, too tipsy to realize what he had done. For a moment they did not recognize Ned; then as Bruiser leaped upon him with joyous, frantic barks, Merle's cry of recognition rang out, and she sprang into his arms, kissing his black, dirty face over and over again, while Searls wrung his hand for joy. "You don't know what you have saved, Ned," he said, huskily, "you have saved my boy who was born this morning."

(To be continued).

### THE YEARS.

BY LALIA MITCHELL.

The father watched them at their play—  
A little lad and a blue-eyed lass—  
And he said how bonny and happy and gay

These two, that are mine, at their sports today;

And the flying years, how quick they pass,

And my boy shall grow to a man's estate,

And my daughter marry with one grown great.

But the mother patted each tousled head—

The blue-eyed lass and the little lad—

And, bonny and bright they grow, she said;

But, deep in my heart of hearts, I dread

The passing of days that are so glad,

When my boy shall grow to a man's estate,

And my daughter marry with one grown great.

And each of them loved, in a loyal way,

The little lad and the blue-eyed lass,

And each of them watched them, day by day,

Proud in their pride and glad in their play.

But, watching the years so quick to pass,

One's was a prayer that each grow great,

And one's was a sigh that Time would not wait.

## Higher Cost of Living Does not Include Fence

**AMERICAN  
FENCE**

Ten years ago it took 2 bushels of corn to buy 1 rod of fence. Today 1 bushel of corn will buy 2 rods of better fence.

### Price Low—Quality Better Than Ever

Within ten years farm products have greatly advanced in market value while the price of woven wire fence has been reduced. These are the reasons: Newer and improved methods of digging the ore, shipping to the furnaces, melting into steel and making into finished products are in force. Ten years ago operations were on a small scale. Today the plan of operation is vast. The manufacturer is able to deliver the finished goods quickly, of better quality and at a lower price.

American fence is made better than ever. It is a thoroughly galvanized square mesh fence of weight, strength and durability. Large wires are used and the whole fabric is woven together with the American hinged joint (patented)—the most substantial and flexible union possible. Both wires are positively locked and firmly held against side slip and yet are free to act like a hinge in yielding to pressure, returning quickly to place without bending or injuring the metal.

**Dealers Everywhere** Stocks of American Fence are carried in every place where farm supplies are sold. The Fence is shipped to these points in carload lots, thereby securing the cheapest transportation, and the saving in freight thus made enables it to be sold at the lowest prices. Look for the American Fence dealer and get the substantial advantages he is enabled to offer. He is there to serve the purchaser in person, offer the variety of selection and save the buyer money in many ways.

**FRANK BAACKES, Vice-President and General Sales Agent**

## American Steel & Wire Company

Chicago New York Denver San Francisco

Send for copy of "American Fence News," profusely illustrated, devoted to the interests of farmers and showing how fence may be employed to enhance the earning power of a farm. Furnished free upon application.

## Is Your Farm Spick and Span?

Lumber is growing more and more expensive every year. Don't let valuable buildings go to pieces for a little paint. Keep your farm buildings spick and span with Moore's Paints.

## MOORE'S Roof and Barn Paints

There is no better paint than Moore's House Colors, for better paint cannot be made. Your dealer probably has them. If not, write to us.

**MOORE'S Paints and Varnishes for every Purpose.**

Don't fail to use MURESCO to brighten and beautify your rooms.

Write for descriptive literature.

**BENJAMIN MOORE & CO.**

Brooklyn, N. Y. Cleveland, O. Chicago, Ill. Carteret, N. J. Toronto, Can.



**We Want to Send You Our New Catalog**  
and Style Book Will Save You Nearly 1/2

on Groceries, Clothing, Furniture, Shoes and Other Household Supplies

Contains 100 pages of money saving items. Write a postal for it today and see how you can get our Guaranteed Groceries at a saving of one-half. For instance: Laundry Soap at 2½¢ a bar; Baking Powder, 12½¢ a can; Toilet Soap (3 bar box), 12½¢; Starch, 5¢ a box—everything at ½ usual cost.

**1500 Premiums Given**  
with orders for these Guaranteed Products. Thirty days trial—no money in advance—money back if not satisfied. Write for Catalog and learn how to furnish your home throughout without a cent of extra cost on our money saving Factory-to-Home Plan.

**CROFTS & REED CO., Dept. 8307, Chicago**

Given Free with \$10 worth of Products.



## FARMERS' CLUBS

### THE FARMER OF THE FUTURE.

Paper read by J. C. McDowell, of the U. S. Department of Agriculture, before the State Association of Farmers' Clubs. (Continued from last week).

The farmers' bulletins issued by our department, and which may be had for the asking, are full of information concerning practical and durable systems of farming; and the bulletins and other publications of your own state experiment station here in Lansing include much of the best that is known in agriculture. My trip to Lansing on this occasion will not have been in vain if I can bring the farmers of this state a little closer to the conscientious workers who are toiling diligently on the farm of the Michigan State Experiment Station. There is no way that I know of in which your state legislature can spend money more wisely than in being liberal with this institution, because the station will undoubtedly return this money to the state a hundred fold by increasing the productiveness of Michigan farms. Such increase of production is not for the benefit of the farming class only, but the making of two blades of grass grow where only one grew before enriches all the people, and adds to the wealth and prestige of the state.

The past century has seen great advancement in all the arts and sciences, and the past twenty years have seen a rapid application of all branches of human knowledge to farming. All who are interested in agriculture are busy studying the great book of nature, and especially that part of it that relates to agriculture. The book is intensely interesting, and the part that relates to agriculture is particularly so, but we are as yet able to read only a small part of it. While the great book of nature has always been open before us, it is rather a difficult book to translate accurately. We are trying to translate its pages into English, and we are making some progress, but sometimes our translations are not correct. For example, only a few years ago our western wheat farmers translated one passage as follows: "Burn your straw and do not manure your land for wheat, because, if you do you will dry it out and thus decrease your yields." Some farmers had plowed under coarse manure and had thus broken the capillarity, and, of course, the soil became dry and unproductive. The same passage in the book of nature is now translated to read: "Use your straw, and add humus to your soil because straw is rich in plant food, and humus adds greatly to the moisture-holding capacity of soils." Western farmers have recently discovered that soils that are rich in decaying organic matter have a very great moisture-holding capacity. Two years ago last summer as I traveled over the central part of North Dakota making a preliminary agricultural survey of that section for the United States Department of Agriculture, I gave particular attention to the moisture-holding capacity of the soils. Early in July of that year the crops all looked well and appeared to have plenty of moisture, but by the middle of the month there were large areas where the dry weather and hot winds had taken almost all the moisture out of the soil. As I drove along one day during this drouth, I noticed that the wheat, corn, potatoes, and all other crops were withering rapidly under the scorching heat of the sun and the hot, drying wind. For miles and miles it appeared as though there was no chance for any of the crops to recover. Imagine my surprise as one day I passed a well kept farm on which all the crops were green, and on which even the pastures seemed to have plenty of moisture.

I was so surprised and pleased with what I saw that I drove in to meet that farmer and to study his system of farming that had brought about such results. I wanted to find out what this farmer was doing that his neighbors were not doing. His solution of the problem was very simple. On a farm of moderate size he kept over a hundred head of live stock, and by so doing he was able to keep his soil rich in humus. He went all over the farm with me, and we examined the soil in all the different fields. Everywhere the soil was full of organic matter, and everywhere it was well supplied with moisture. On close examination I could not discover that any of his crops were suffering from the drouth, and I after-

ward learned that he harvested a big crop that fall.

Just before I left, his farm he said to me: "You know the farmers all over this western country say that you must not manure the soil, because if you do you will dry it out. I am putting into my soil all the manure I can get hold of, and you notice the results." I noted the results on his farm and I have seen similar results since, as I have traveled over North Dakota and other states, but I do not know that I have ever seen the contrast quite so marked as on that hot day in July in 1908.

Here was a case in which the farmer was reading the book of nature carefully, and he was putting his knowledge into practice right on his own farm. To the farmer of the future this great book of nature will be comparatively clear, and he will not grope in the dark as we have done in the past and are still doing to a large extent.

(Continued next week).

### CLUB DISCUSSIONS.

**Mens' Day** at the Central Farmers' Club, of Ionia Co., with Mr. and Mrs. Ed. Miller, proved a very great success. Never in the history of the Club was there a larger or more enthusiastic meeting. The men donned big gingham aprons and cooked and served an oyster dinner to nearly 80 people. After dinner the new president called the meeting to order and here, also, the men had full sway. A. S. Harris presented a paper on "Conservation of Natural Resources." He thought the soil the greatest resource for the farmer and every effort should be made to conserve its fertility. Said many of the old countries, whose soil had been in cultivation before this country was discovered, show a higher state of fertility than our own. Frank Burch gave a good paper on "Orchards." His work as census enumerator has enabled him to observe how fast the old orchards are disappearing and very few new ones are being set. Thought if farmers did not reset and trim and spray that in this section, at least, we would be without this king of fruits. The ladies gave the gentlemen a rising vote of thanks for their excellent dinner and fine program. So well pleased are they that they are willing to let them try it again some time.

**The Farmer as a Business Man.**—The Washington Center Farmers' Club met at "Shadeland," the pleasant home of Mr. and Mrs. O. J. Campbell, on Feb. 9, which was a bright winter's day. The jolly crowd gathered to the number of 65 members and visitors. Mr. and Mrs. Campbell are royal entertainers. The forenoon session was opened with singing by the Club, followed with reading of minutes and miscellaneous business. Under this head the president presented a proposition for getting binder twine at a very low rate. A paper was circulated and a small shipment was subscribed for. The first question discussed at the afternoon session was, "Is the average farmer as careful in the management of his business as those of other occupations?" J. Kochensparger thought the average farmer was not as careful in his business as those of other occupations. Mr. French said it was just as necessary for a farmer to take an inventory of his farm crops, and tools, as it was for the business man in his business. Mr. Cammet thought that the average farmer was neglectful in caring for his machinery. This would cause a loss in his business. Mr. Crowel thought that the average farmer was careless in the management of his business. He thought if the business man was a careless in his business as the average farmer he would go to the wall in a very short time.

**Woman's Work vs. Man's Work.**—The next question in order was a debate. "Resolved, that woman's work in the house is more monotonous than man's work on the farm," led by Mrs. George Hill and W. E. Long. Mrs. Hill thought it very monotonous for a woman to have to get three meals a day for 365 days in a year, and Mrs. Long thought it would be very monotonous for a man to have to eat these three meals a day for 365 days in a year. This question brought out a lively discussion, as most of the Club members and visitors took an active part. The women being a little the best talkers on this subject, the affirmative side won out. To decide the question it was necessary to take a vote of the house. Then the Mouthcomb Orchestra played several selections. Mrs. O. J. Campbell read a very interesting letter from one of the former Club members, who now resides near McMinnville, Tenn., giving a description of her home and the country there. The little folks favored the Club with some very good recitations.

**Helps and Hindrances on the Farm,** was led by C. N. Curren. He said that tilling was one of the greatest helps and neglecting the machinery, by not having it repaired before the season opened, was a hindrance. Mr. French agreed with Mr. Curren and Mr. Kochensparger thought that tilling was the most essential help on the farm. The question box contained some very good questions. Among them was the good road law and the reciprocity agreement with Canada. Mr. Kochensparger gave the Club an excellent talk on the good roads law. Also Messrs. French, Campbell, Crowel, Cammet and others gave some good suggestions for improving the roads. The Club thought the tariff law should be left as it is at the present time. The other questions were ably discussed by different members of the Club.—Mrs. Cora Kaiser, Cor. Sec.

## GRANGE

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

### A PROMISING FIELD FOR JUVENILE WORK.

Boys and girls' agricultural clubs and the Juvenile Granges of the Order of Patrons of Husbandry are evidence of a new order of things. In the agricultural clubs this interest in farm matters very often has its beginning in competitive contests for prizes of one form or another, and sometimes the clubs have been an outgrowth of such contests, and so it is that we have in many different states, clubs for corn growing, potato growing, fruit culture, live stock study, home culture, etc.

The first state wide movement of this kind began about 1898 in New York under the auspices of the College of Agriculture of Cornell University as a development from its nature study lessons. This work has now gone over the whole state and has taken a variety of forms, such as corn growing, potato growing, fruit growing and garden contests, with special prizes to girls for the best work in sewing and breadmaking. The Cornell Farm Boys and Girls' club now has a membership of 75,000. In Nebraska this club work has been very thoroughly organized, and nearly every county is included in the movement. Early in the fall a local contest is held in each school, the prize winning exhibits and the best three essays being then taken to a township show, then to a county exhibit and finally to the state corn growing and corn cooking contest at Lincoln. This meeting includes a grand "corn banquet," which gathers from 2,000 to 3,000 boys and girls from over the state.

Similar work in Ohio under the direction of the agricultural extension department of the state university has reached practically all the rural boys and girls in the schools of the state. In Illinois this work began under the initiative of certain county superintendents of schools and the farmers' institutes. The exhibits of these young people are frequently the most interesting at our county fairs and state fairs as well.

The work which is being done by these boys and girls' agricultural clubs is just the work that the Juvenile Granges are doing or should do, and in the Juvenile Grange even more can be accomplished. Juvenile Granges are constituted of boys and girls under fourteen years of age whose parents are members of the subordinate Grange, and at every meeting they have their literary programs, all being under the supervision of a matron appointed by the subordinate Grange.

It would appear to be quite practicable for these Juvenile Granges to incorporate the work of a corn growing club or others of a similar nature into their own general plan of work, adopting, so far as circumstances would permit, the rules and regulations of the boys and girls' clubs relating to these contests as outlined in a bulletin issued by the Department of Agriculture within the past year.

### KALKASKA POMONA DISCUSSES UP-TO-DATE TOPICS.

It was the writer's privilege to attend a meeting of Kalkaska County Pomona Grange, in the city of Kalkaska, Tuesday, Feb. 21. Eight of the twelve Granges were represented at the meeting and, though the number in attendance was small, a splendid program was rendered. Canadian reciprocity was discussed by Bro. W. S. Palmer from a liberal and intelligent viewpoint. "The apple growers in some parts of the east, and some of the men operating greenhouses, might profit by reciprocity with Canada," he said. "But the ordinary farm crops would probably bring less money than they do now." The worthy master said there were always men coming out from the city to tell the farmers something about their business. But in this instance the farmer had been doing his own thinking and some people at Washington were beginning to realize that he had reached a definite conclusion with regard to the matter of reciprocity with Canada.

A splendid discussion upon the value of farm machinery followed. The Grange was unanimous in its appreciation of the value of machinery on the farm. For a wonder there was not a man there who even objected to the corn-binder. The sisters took part in the discussion, urging the use of machinery to lighten the work in the house. The washing machine, the electric flat-iron, or the gasoline or denatured alcohol iron, the bread mixer and the food chopper were all

named as means of lessening the hard work in the home, thus giving more time for enjoyment and helpful study.

The county road system was quite fully discussed. Kalkaska county is noted for good roads and the Grange has done its part in creating public sentiment along this line. R. D. Bailey, of Gaylord, was present and spoke in the interest of the state traveling libraries. Mr. Bailey makes a good talk and has been instrumental in placing many circulating libraries in Granges, clubs, schools and Sunday schools throughout the state.

Kalkaska Pomona is to be congratulated upon having so many members who are able and willing to assist in the programs. The strength of a Pomona Grange lies mainly in the lecturer's program. It is there that discussions are carried on, opinions exchanged and public sentiment created. Through the influence of these meetings, plain ordinary farmers become leaders of men and better conditions result. It has been the writer's privilege to address many Pomona meetings and he enjoys nothing better, but the effort of the state speaker is always a less important factor than a good, strong local program, and I have sometimes feared that a few of our Pomonas were buying too large a part of their entertainment outside and were failing on this account to develop their local talent.—W. F. Taylor.

### AMONG THE LIVE GRANGES.

**Gun Plain Grange,** of Allegan Co., in observing lecture hour at the meeting of Feb. 7, gave special attention to woman's suffrage. The subject was thoroughly discussed, pro and con, the weight of argument being in favor of woman's rights. The potato was the subject of interest at the last meeting of the month. Its history, cultivation, uses and commercial value were well brought out in able papers and intelligent discussion. Our Grange is steadily increasing in membership and shows much activity along many lines.—E. T. W.

**A Contest for Membership** is being conducted by Tipton Grange, of Lenawee Co. The sides in the contest are captained by Miss Lottie Simmons and Miss Lucy Harrison, and altogether more than 50 names have been presented for membership. Forty-three were received at the last meeting and put through the first and second degrees. A lunch was served at the conclusion of the work, and about 100 enjoyed the pleasant occasion. The dining-room was soon turned into a ball room and the young folks made a merry party until 12 o'clock. Next meeting they hope to entertain the Madison degree team and have them confer the third and fourth degrees on this splendid class. This Grange has bought a new piano and these entertainments are a means to supply the price of this most needed addition to the hall. Tipton Grange hall is now equipped with the best facilities for both lodge work and pleasurable entertainment.

**Sumner Grange Observes Anniversary.**—On Thursday, Feb. 23, Sumner Grange, of Gratiot county, observed its tenth anniversary and it was the writer's privilege to address a large company at their hall in Sumner village. Some good recitations were rendered and the Sumner Grange Band discoursed excellent music. The audience listened to some good vocal selections. This Grange is prospering and, indeed, it could hardly do otherwise, being located in one of the liveliest Grange counties of the state. The worthy master, Bro. Peter Klees, is a hustler, and the presence of so many young people in this Grange is largely due to his efforts.—W. F. T.

**Laingsburg Grange,** of Shiawassee Co., at a recent meeting held with Mr. and Mrs. Gilbert Austin, gave most of its attention to the proposed reciprocity agreement with Canada. The general opinion was that it is class legislation and all against the interests of farming. It was considered inconsistent that the administration should advocate it when there have been so many efforts made to develop and advance agricultural interests, such as the commission appointed by Ex-President Roosevelt, teaching agriculture in the rural schools, etc. The next regular meeting of this Grange will be held Thursday afternoon, March 16. An invitation has been extended to the members of Victor Grange to be present.

**Rome Grange,** of Lenawee Co., is already preparing to entertain Pomona on April 6. At its meeting on Feb. 13 a committee was appointed to assist the lecturer in preparing a program for that occasion. A petition was drawn up by the legislative committee and adopted by the Grange favoring the passage of the tonnage tax bill, also the initiative and referendum amendment. This was sent to the senate.

**Ironton Grange,** of Charlevoix Co., had 63 members present at its first meeting in February. This Grange is steadily growing, four candidates being put through the first and second degrees and two through the third and fourth degrees at this meeting.

### COMING EVENTS.

#### Pomona Meetings.

Emmet Co., with Bear Creek Grange, Friday, March 10.  
Western (Ottawa Co.) Pomona, with Nunica Grange, Friday and Saturday, March 10 and 11. Teachers' and Patrons' meeting, six sessions.  
Washtenaw Co., with Ypsilanti Grange, Tuesday, March 14.  
Ingham Co., with Mason Grange, Wednesday, March 22. Lecturers' conference and conferring of fifth degree.  
Genesee Co., with Davison Grange, Friday, March 24.



Read this amazing special introductory offer to farmers and all owners of live stock everywhere. Send the coupon below and get \$12.00 worth of the finest, purest and best guaranteed goods free



This magnificent Redwood Cabinet is 30 inches high, 20 inches wide and 5 3-4 inches deep. It is highly polished, showing the rich, fine grain of the giant Sequoia Redwood Tree. Cabinet is brass trimmed—brass hinges ornamental shape, brass spring, latch lock and brass spring inner lock. All of the Standard Veterinary Remedies in the cabinet are full size, guaranteed. Cabinet and remedies are free for sending the coupon below.

the coupon. One minute's work and a postage stamp brings this great Free Cabinet offer to you. We want you to test these goods and know what they are. That's why we make this astonishing offer. Send coupon and get these goods free in connection with our great special introductory offer, to test them at our expense.

# \$12.00 Cabinet FREE

This magnificent Redwood Cabinet is free and all of the Standard Veterinary Remedies you see in it are free with the splendid introductory offer we are making. You never had an offer like this before. It is the greatest offer ever made to introduce veterinary remedies to live stock owners of the United States everywhere. Hundreds of thousands of farmers are using the Standard line of goods. We want you to know how good they are.

## Our Guarantee:

We positively guarantee every article of the Standard line to be compounded of the purest, superior quality laboratory tested materials and according to the best formulas as proved by actual use on hundreds of thousands of farms throughout the United States in our twenty-five years of business. This is an absolute money-back guarantee. It means that we will refund the purchase price of every article manufactured by the Standard Stock Food Company that does not do all we claim for it when used according to the plain directions which are printed on every package. You never take any risk—you do not risk a cent when you purchase any article in the Standard line. All of the free goods we give away in connection with this great offer are given to you to introduce these superior high-grade goods.

## Use These Remedies

We want you to have these remedies so that you can use them on your own animals. We want you to know—to convince yourself by using them—that they are the best veterinary remedies. We want you to know it. We give you this magnificent Redwood Cabinet, packed full of the remedies, so you can use this big lot of the remedies and prove to you they are the only kind of remedies you will ever want on your farm as long as you live.

## Send No Money

Be sure to send no money when you send the coupon. The cabinet and all of the goods in it are free. We give you the free goods and the cabinet to introduce the Standard line of veterinary goods to you. The goods are free to you on this big special introductory offer, and you are under no obligations.

## Special

This free offer is especially important to every man owns work horses, milch cows, hogs, sheep and poultry as well as for those who are fattening animals for market and stock breeders. In fact, this is the most sensational offer ever made to all owners of live stock of every kind. Every one of the free articles offered you here will make money for you. The time on this very special offer is limited. Send for coupon Now.

## Free Cabinet Coupon

STANDARD STOCK FOOD CO.,  
Dept. 3633, Omaha, Neb.

Gentlemen—You may send me prepaid free certificate good for one Redwood Cabinet as described, filled with regular sized packages of Standard Veterinary Remedies in connection with your special introductory offer, all of the actual cash value of \$12.00. This puts me under absolutely no obligations whatever, and I am never to pay you anything at any time for these free goods or the Redwood Cabinet.

My Name .....

P. O. .... State ..... R. F. D. No. ....

I own ..... horses ..... cattle ..... cows ..... hogs ..... sheep ..... Poultry  
Here is the name and address of the dealer where I usually buy my veterinary remedies, stock food, etc.

My dealer's name ..... Town .....

# FREE

Yes, FREE—absolutely free to every live stock owner and all farmers—shipped free, a beautiful, highly polished, brass trimmed, Redwood Cabinet filled with Standard Veterinary Remedies. Shipped to you now free. Send us the Free Cabinet Coupon below. You need these free goods. Read the list. Here is the free list:

## List of FREE Goods

One gallon can Standard Stock Dip	- price, \$1.25	FREE
One 2-lb. box Standard Horse Worm Powder	- price, .50	FREE
One bottle Standard Stock Liniment	- price, .50	FREE
One bottle Standard Colic Remedy	- price, 1.00	FREE
One box Standard Veterinary Salve	- price, .50	FREE
One box Standard Gall Salve	- price, .25	FREE
One box Standard Heave Powder	- price, .50	FREE
One bottle Standard Pine Tar Extract	- price, .50	FREE
One bottle Standard Spavin Paste	- price, 1.00	FREE
One one-quart can Standard Fly Shy	- price, .35	FREE
One one-half gallon can Standard Lice Killer	- price, .65	FREE
One box Standard Insect Powder	- price, .25	FREE
One 5 1/2-lb. box Standard Poultry Food	- price, .50	FREE
One 4-lb. box Standard Hog Worm Powder	- price, 1.00	FREE
One Redwood Brass Trimmed Cabinet	- price, 8.25	FREE

Total cash value of free goods - - - \$12.00 FREE

## \$12.00 FREE!

Examine the above list carefully. See the value of every article in the list! Actual value of the goods in the list \$12.00. You get all this value and all the benefit of having these necessary remedies at hand by simply filling out and mailing the coupon. We want you to test these goods and know what they are. That's why we make this astonishing offer. Send coupon and get these goods free in connection with our great special introductory offer, to test them at our expense.

## Free Goods to Prove to You Their High Quality

The free goods you get in the Redwood Cabinet are the purest and finest, the best veterinary and poultry preparations on the market. We know that if you once use the best remedies on your animals you will never again be satisfied with substitutes and poor quality brands. The immense business of the Standard Stock Food Co. has been built on the results produced on animals on hundreds of thousands of farms throughout the United States in the last quarter of a century. Time has proved the superior quality of Standard goods. We sell on quality only. The lot of free goods we give you in connection with this great special introductory offer are all regular size packages. Every package is large enough to give goods a genuine test and prove to yourself that the quality is absolutely the highest on the market today.

## Only One Cabinet to Any One Person

This fine cabinet and the free preparations given only once to any one person. This is an offer for introductory purposes only. We give you these free goods to test. We give you the cabinet to keep the free goods in. We give you a particularly fine cabinet because many persons would like to keep the remedies in the house. Every member of the family will admire the cabinet. The women folks will probably want it because it is such a handsome piece of furniture. The cabinet is handsome enough to go in anybody's home. The cabinet is in keeping with the high quality of the goods that fill it. This amazing offer is limited. Act quickly.

## Send Coupon Promptly

Don't delay a minute in sending the FREE coupon. Send the coupon or copy it on a letter or a postal, but send it now. You need every one of the preparations in the free cabinet. The dollar bottle of Standard Colic Remedy may save the best horse in your place any day. The dollar box of Standard Hog Worm Powder may save a good many hogs for you. The gallon of Standard Stock Dip may save all of your hogs, or your sheep, or perhaps a diseased cow. The box of Standard Insect Powder or Standard Lice Killer may add a good many dollars to your chicken profits. Every one of the 14 remedies you get free with the cabinet, in connection with this great Introductory Offer, is absolutely the best. You need every one of these articles. You need them every day. You can get them all free now in connection with this great limited offer—one time to any one person. Send the coupon now before you lay the paper down, because we want you to have these goods to test them.

STANDARD STOCK FOOD CO. Dept. OMAHA, 3633. NEB.