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## Farm Home Sewerage Plant

By Earle W. Gage

A NEW form of septic tank for farm homes has been designed which presents so many advantages over those commonly in vogue as to merit a wide adoption, and to remove the excuse that homes lack comforts because of the expense or labor necessary to possess them.

The illustration shows how the tank is constructed, being made of two columns of twenty-four-inch vitrified pipe, which gives sufficient capacity for a family of four persons the year round, although Professor Ives, of Ohio University advises that this design might suffice for a larger family, due to the fact that it possesses superior design and construction and the liberal factor of safety in the ordinary calculations of septic tank capacity.

Among the numerous advantages of this design are: It is made entirely of vitrified pipe, shapes of which can easily be secured at any building supply yard. No piercing of pipes or special treatment of the material is required other than the breaking of a few lengths of small pipe for purposes of shortening. The problem of baffling, or directing the flow of the liquid below the scum line, has been accomplished by introducing the sewage and drawing it off through a special descender and ascender, connecting with the columns two feet below the flow line. A dosing chamber has been constructed of a twenty-four-inch double "T" section of vitrified pipe, equipped with a Miller siphon.

The action of this tank is the action of the double chamber type of tank. In fact, it has three chambers, but the first two, consisting each of an upright column of twenty-four-inch pipe, act alike and correspond to the first chamber of a tank of the box type. It has this advantage, however, that the passage from one column to another has the effect of an additional baffle and aids sedimentation. By means of the dosing chamber, the accumulated sewage is discharged forcibly at intervals so that it will carry to the farthest extent of the distributing lines of tile. This point is very important.

This tank is relatively deep in proportion to its capacity, which is in keeping with the latest approved practice for septic tanks, and it is also relatively easy to construct. The excava-

tion for the main portion of the tank should be about eight feet below the flow line and sufficiently large to admit both columns and afford working space besides.

The concrete bottom is first poured for the two columns, and the two lower sections of twenty-four-inch pipe

short section of six-inch vitrified drain tile or sewer pipe shortened for that purpose.

The joint should preferably be of bituminous compound, poured with flex-form mold. In joining the larger sections of pipe, the upturned bell of the lower section can be filled either

that the inlets come opposite to each other. The upper sections are plain twenty-four-inch pipe.

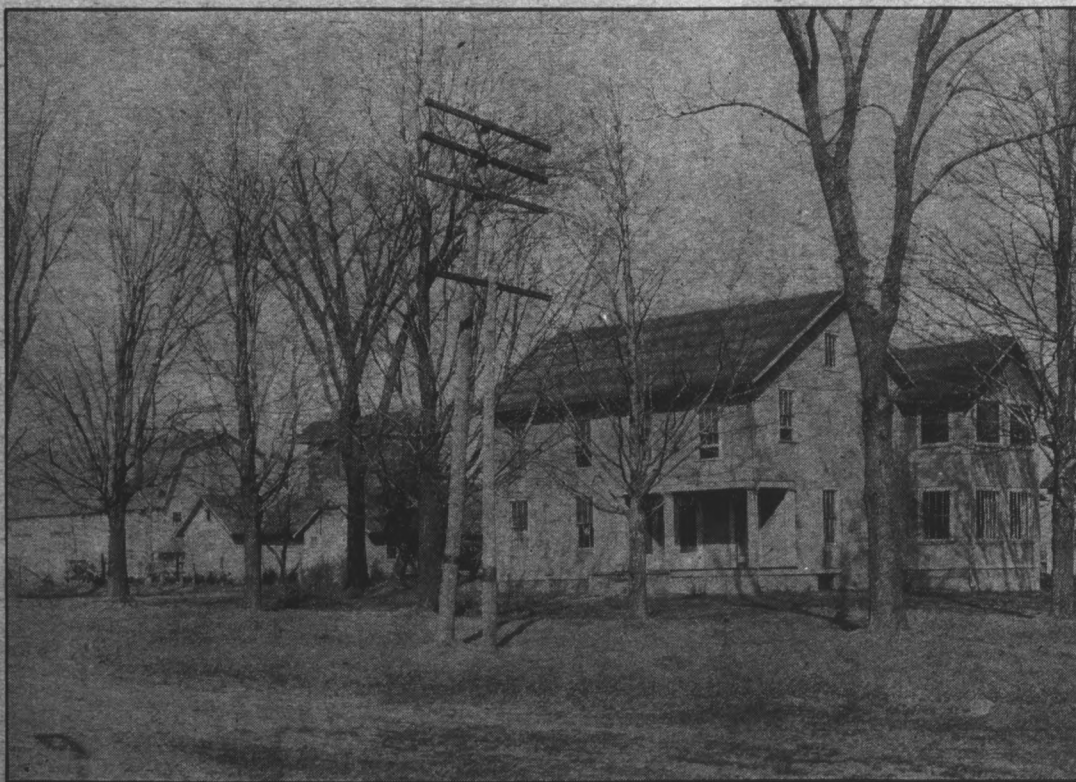
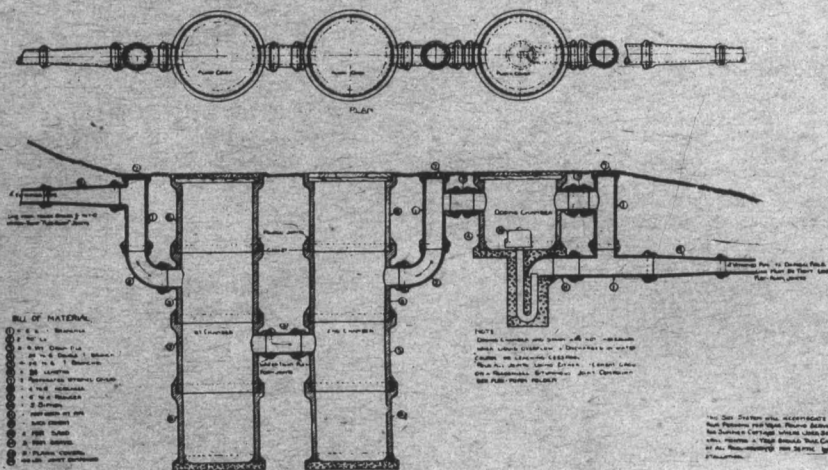
The illustration assumes a ground level that is only about six inches above the flow line. In case the ground level is higher than that assumed in this case, the columns can be extended up to the ground level, or no harm would result if earth were filled in above the plank covers, provided it was so located that it could be removed once a year for the purpose of pumping out and cleaning.

The design of the inlet and outlet is succinctly indicated in the illustration. The pieces required in each case are a quarter bend of six-inch pipe with a six-inch "T" above it. There is perforated vent cover at the top of this "T." In case of greater depth, it might be necessary to add one or two sections of pipe above the "T," in order to bring the vent to the surface.

All joints in the smaller pipe should be made preferably with the flex-form apparatus. The dosing chamber is a single section of twenty-four-inch pipe provided with double "T" branches and with a Miller siphon at the bottom encased in concrete. The vent, overflow and outflow are of six-inch pipe, reducing to a four-inch sewer extending to the disposal field.

A person ordinarily skillful in the use of building materials should easily be able to construct this tank, if they adhere closely to the design. The difficulty will come in attempting variations. There is a special danger in the

omission of the required vents, as they produce an air-bound job that will not operate satisfactorily. It also is very important that the siphon in the dosing chamber be installed with precision and full knowledge of how it works. The siphon is so constructed that when the fluid rises to a certain height above the bell the weight of water pressure forces an air seal in the siphon, and the entire contents are discharged. Therefore, it is very essential that the size siphon should fit the length of pipe section and afford the required depth over the bell and up to the "T" openings, for example, in the case of a three-inch siphon, the required depth would be eleven inches above the lip of the bell. In many cases failure has resulted from neglect of these factors.



No Rural Dwelling Is Complete without Proper Sewage Disposal.



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## CURRENT COMMENT

### Wool Market Prospects

DESPITE the attitude of wool jobbers regarding the future wool market outlook, the recent London sales indicate that their apprehensions are not well founded. The London auctions held last week developed a strength for good wools which should encourage every wool grower to anticipate a better future wool market. The fact that the British government upset price had been reduced by seven and a half per cent was emphasized by wool jobbers last week, but the prices at the recent London sale averaged from ten to fifteen per cent above the new government upset figure. A marked improvement was shown in the prices of low-grade wools at this sale as will be noted from a report of same published in another column of this issue. The same was true of last week's Boston sales. The clearing up of the situation with regard to an importation of wool from Australia and New Zealand has also steadied the market. It has become definitely known that this shipment of 300,000 bales of wool is on a contract previously entered into by the government which it has been determined to complete. This wool is said to be of high sorts which are relatively scarce in this country, and is expected to develop sharp competition when offered for sale here.

Altogether the situation is one which should favor the holding of wool by the growers until market conditions become better established. Growers should remember that the apparently large stocks of wool held by our own and the British government represent about all the available world supply; that the war materially increased wool consumption, thus reducing the available supply below the normal point, and that the general inflation of currency has reduced the value of a dollar as measured in other commodities to a point which would seem to be a practical insurance against cheap wool prices, especially when the trend of other values is taken into consideration.

Reports of recent sales of bright fleeces wools, particularly half-bloods, indicate that they are commanding a considerable premium above the government withdrawal price, and in some cases a premium above their cost on the basis of last year's fixed price.

When this condition obtains, farmers should be slow to sell their good wools at a price ranging around twenty to twenty-five cents per pound below last year's prevailing values, simply because low grade wools have sold cheaply at some recent government auctions. This is particularly true in view of the firmness of the London market on which our own government withdrawal price is based.

The most accurate obtainable information with regard to wool market conditions will be given in these columns from week to week.

### The Food Price Outlook

THE trend of food stuffs markets in recent weeks has been such as to inspire general optimism among the farmers of the country. With the wheat market holding steady at a point away above the government guaranteed price; with the hog market at the highest point ever reached and nearly fifteen per cent above the controlled price, and with the price of other food stuffs generally keeping pace, there seems every assurance that there is no great domestic surplus of food products, while the demand from a hungry world seems likely to hold prices at a point which will be compensatory to producers during the coming year at least.

This practical assurance will prove an important factor in stimulating production, notwithstanding the constant agitation for cheaper foods. As time passes it is continually becoming more evident that any post-war lowering of values, must be general, rather than in spots. Due partly to the diversion of industry to war production, and partly to the lowering of money values due to war inflation, prices of all other commodities, as well as of food stuffs have attained an abnormal and in some cases, an unprecedented level. We are simply living in a period of higher values all along the line as measured by currency. With the settlement of present world conditions and a general return to peace conditions, there will be a gradual readjustment of values, but with a world shortage of food stuffs this downward revision of values cannot apply to food products alone.

### The State Warehouse Proposal

SINCE early in the present legislative session, there has been pending in the legislature a proposed amendment to the constitution providing that state funds to the extent of \$5,000,000 may be used, under legislative enactment, for the building of terminal warehouses to be operated under state control, as a means of affording better and cheaper distribution of food products from the farms of the state to the consumers in our large cities. The resolution providing for the submission of this proposed amendment was endorsed by the joint committee of Michigan farmers' organizations and was passed by the senate several weeks ago. Since that time it has reposed in the house committee. Whether it will die there or be submitted to the house in its present or an amended form must be quickly determined, as the session is nearing its close.

While there appears to be a wide difference of opinion among farmers as to the value of state-owned and operated warehouse as a remedy for present market ills, there is undoubtedly a large contingent of Michigan farmers who believe that such facilities would be a distinct advantage to both producers and consumers, and a long

step toward the solution of the vexed and complex marketing problem.

A canvas of the situation indicates that there is a similar division of opinion among the farmer members of the legislature. But the views held by a very considerable element of their constituency are worthy of their serious consideration.

The only practical way to settle the question of the value of state-owned and operated warehouses to Michigan producers and consumers of food stuffs is to try it out, in a conservative way at least. And if a majority of the producers and consumers of the state so desire, they should have an opportunity to try the plan. But in order to make this possible it is necessary to amend the constitution and the legislature should not hesitate to submit a proposed amendment to that end as a means of getting a fair judgment from the people of the state as to their approval or disapproval of the plan. To this end the proposed amendment should be submitted to the voters, who will have plenty of time to render fair judgment as to its advantages before the next general election. If, in the judgment of the legislature, the plan could be given a fair trial by limiting the appropriation for the experiment to a smaller sum than that named in the proposal as it passed the senate, a reduction in the limit would be preferable to the killing of the proposal.

If the proposal were submitted in a form which would provide for the establishment of suitable experimental warehouses in, say, our two largest cities, this would, in case of its approval, give the plan a fair trial which would enable the people of the state to better judge of its advantages and the desirability of its extension, hence the above suggested solution for the apparent legislative deadlock on the proposal.

### Death of W. R. Goodwin

THE death of William R. Goodwin, managing editor of the "Breeder's Gazette" of Chicago, removes one of the most familiar figures in the pure-bred live stock industry in the United States. Mr. Goodwin had spent thirty years of active service with the "Gazette." His sympathies and interests lay largely with the improved live stock industry and his pen pictures of great animals and vigorous writings on better herds and flocks have been a big factor in influencing American breeders to practice constructive methods.

Among the many positions of honor which he held at the time of his death were vice-president of the American Saddle Horse Breeders' Association and president of the National Society of Record Associations. He was also head of the American Cat Association and director of the National Dairy Show Association. For many years he had been closely identified with the International Live Stock Exposition Association.

A native of Indiana, and born at the town of Brookville, August 19, 1863, the deceased on attaining school age entered the Indiana Asbury University and was graduated in 1883. In 1889 he joined the editorial staff of the "Gazette."

## News of the Week

Wednesday, April 2.

THE German government announces itself prepared to meet any extreme radical movement and warns that uprisings will be suppressed with ruthless severity. President Wilson urges the delegates at the Peace Conference to crowd work with all haste. French sentiment appears to be that hard and undesirable conditions are being forced upon the country by the conference. Australia is demanding the German colonies in the Pacific, reimbursement by Germany for some of the costs of the war, and the physical freedom of the commonwealth. Cap-

tain W. J. Meyers, of West Branch, Mich., ranks fourth among Allied aces of the air, having brought down twenty-six enemy planes. Powder mills near Birmingham, Alabama, blow up, causing damage estimated at twenty thousand dollars.

Thursday, April 3.

SPAIN is the first neutral nation to declare her desire to enter the League of Nations under the amended covenant. It is announced that Italy's claims have been settled favorably to that country. The first meeting of the financial commission of the supreme council with German financial delegates takes place. Nearly five thousand Michigan soldiers dock at New York City. Rioting continues in Korea. American cavalrymen attack Mexican bandits and kill five.

Friday, April 4.

ENGLAND is rushing troops to aid the allied forces opposing the Bolsheviks in northern Russia. The energetic action of German troops ends strikes at Stuttgart and in the Ruhr district, and also halted a "Red" drive in east Prussia. Over 1,500 members of the 85th Division land in New York. More than \$37,000,000 for building construction and extension of plants is to be spent in carrying out the plans of the General Motors Corporation. It is predicted that the Canadian government will secure possession of the Grand Trunk Railway system. The perfection of a trolleyless street car by the Henry Ford interests is announced. Count Karolyi, head of the socialistic government of Hungary is reported to be fleeing into Switzerland from Budapest.

Saturday, April 5.

ADDITIONAL evidence of the dangerous positions occupied by the allied troops in northern Russia is flashed to Paris and Washington. King Albert of Belgium warns that promises can no longer sustain his country while the Peace Conference is delaying its decisions. Berlin will open the way for Polish troops to land at Danzig. Charles R. Page of the United States Shipping Board resigns. Prices on steel for shipbuilding purposes will be cut. The California legislature asks the federal state department whether the discussion of anti-Japanese legislation by the California legislature at this time would embarrass the president and other representatives at the Peace Conference.

Sunday, April 6.

AN attack by Bolshevik forces on Allied troops in northern Russia is repulsed with heavy losses. Minister Lenin of the Russian government announces that he is anxious for peace. Plans for an uprising and the establishment of a Soviet government in Berlin are uncovered and drastic action is to be taken to suppress the movement. Polish troops in France will leave April 15 for Poland; they will pass through Danzig under arrangements made with Germany by Field-Marshal Foch. Bolivia makes a proposal to peace conference which it is believed will end the dispute between Chile and Peru. The Omzk government in Russia is steadily extending its control and limiting the territory of the Bolshevik government. Final figures on the total force of the central powers on November 11 showed 7,630,000 troops under arms as against 13,366,000 of allied troops.

Monday, April 7.

THE United States sends one hundred ice breakers to open the way for aid to the Allied troops in northern Russia. Premier Lloyd-George of Great Britain states that the Allies will call the central powers to sign the peace pact by May 1. President Wilson is confined to his bed with a severe cold. A British aviator flies over the Andes mountains at a height of 18,000 feet. Rumors have it that the Hungarian Soviet government has been overthrown. Serbia is stated to be under martial law. King Albert of Belgium has not been heard from since leaving Paris yesterday, in an aeroplane for Brussels. Secretary of War Baker takes passage for France.

Tuesday, April 8.

LATEST news from Paris indicates that President Wilson intends to compel the Peace Conference to make peace immediately upon terms which the governments have already accepted, or failing in this, the president proposes that the United States shall agree on its foreign affairs in its own way and upon its own initiative. Authority in Bavaria is now claimed by two factions. Early election returns indicate that the beer and wine amendment will be lost by a majority of over one hundred thousand, and that the good roads question will pass by an overwhelming majority, and that the republican state ticket has been elected.



DEVOTED  
TO  
MICHIGAN  
VOLUME CLII.

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A Practical Journal for the Rural Family

QUALITY  
RELIABILITY  
SERVICE

NUMBER FIFTEEN

## Fitting 1919 Crops to Farms

NEVER in the history of Michigan agriculture has there been a time when the study of crop plants in relation to their environment would prove of as great value to farmers as at present. Every practical farmer realizes that there are differences in the requirements of different crops and different varieties worth recognizing, if he would get the best results from his soil and climate. Among the important things in the environment of plants are soil, moisture, temperature and light. How these things determine the presence and success of different species and varieties of plants are some of the things the study of this subject should determine. Plants do not grow indiscriminately in different areas regardless of one another or of conditions for growth. Each hillside, prairie and swamp contains an association of plants which characterize it. Into each of these groups of plants certain plants thrive and from each group certain plants are crowded out. That is, certain plants are naturally associated because they grow in the same conditions of soil, moisture, temperature and light.

The adaptation of plants and varieties to peculiar soil and climatic conditions is one of the most subtle of nature's many adjustments. This suggests the possibility of farmers increasing the yield of farm crops by getting in harmony with nature and fitting their farm crops and special varieties to different conditions of soil and climate. It has become too much of a habit to cultivate the same crops on different soil types regardless of the conditions for growth. Poor crops of corn are grown in many fields that are naturally adapted for grass because it has become a habit to break up sod land and grow corn; and the same applies to every crop. As a result the total yield of farm crops is not the maximum yield from each field, but the average yield of good and bad fields.

The study of plant environment, or adaptability, shows that for each kind of farm crop there are favorable climatic and soil conditions, in which the yield is largest. A poor field for corn may be ideal for grass. Land not suitable for wheat may yield a bumper crop of oats. A field that will yield a large crop of alsike clover may fail to yield a good crop of red clover. The further study of the adaptability of crop plants will include much more than soil conditions, which may be controlled to some extent, for we must reckon also with the peculiarities of climate. A locality ideal for wheat,

*Some Important Factors to Consider in Choosing This Year's Field Crops. By Lester J. Meredith.*



oats and clover may have frosts too early for the corn and bean crops to mature successfully. When every field is planted with crops, or varieties, that it can produce best the total yield of farm crops will be increased immensely. It will pay every farmer to determine experimentally what crops and varieties give the best returns on certain fields, and not follow blindly the selection of crops, or rotation of crops, that might prove very appropriate on some other farm.

The field upon which crops are grown offers conditions for growth which may be likened to an extensive bill-of-fare. The more nearly related plants are identical in their demands upon the bill-of-fare, therefore competition is so keen for certain kinds of food that some of the plants do not get enough to make satisfactory development. On the other hand, plants that are not nearly related make somewhat different demands upon the bill-of-fare without using up the kinds of food needed by the other crop plants.

This explains why crop plants that make a varied demand for their food are an economic aid in securing large crops and also in leaving an abundance of plant food for succeeding crops when grown in proper rotation, or association, with one another. No two crop plants root at the same depth. Wheat is shallow rooted. Corn is deeper rooted than wheat, and clover is still deeper rooted. Each feeds upon an area of its own. Then the roots of most crop plants feed other plants. Each crop has its peculiar way to gather nitrogen, phosphorus and potassium. In the decay of the roots of a plant that can get potassium easily, another plant that cannot so acquire it will find it prepared at hand. Clover affords an excellent example of helpfulness in supplying nitrogen to other plants that do not possess the ability to get it from

the atmosphere. Different plants demand different amounts of the materials needed for growth from the soil and atmosphere. Where potatoes take thirty-five pounds of potassium they use but eleven pounds of phosphorus. Yet the wheat crop removes more phosphorus than potassium. If potatoes follow potatoes the soil will be quickly depleted of potassium. A judicious alternation of crops exhausts the soil equitably of the plant food.

Closely associated with the problem of growing crops that will use up the supply of available plant foods evenly and leave the soil in good condition for succeeding crops is that of keeping up an adequate supply of organic matter, or humus, in the soil. Organic matter is the life of the soil. Some crops produce humus, others consume it. The grasses and clovers belong to the former class, and most field crops and grains to the latter. These two classes of crops should therefore be alternated in the rotation. The use of manure, either plowed under or as a top-dressing, also helps to maintain the supply of organic matter. On sour soils plowing under organic matter and manures will not improve conditions materially unless lime is plowed under to correct soil acidity and aid in making the plant food in the organic matter into a form available for the growing plants. The increasing of the organic matter in well-sweetened soils, also increases the amount of available plant food. For this reason it is well to follow the grasses and clovers with vegetables and grains which are not so naturally fitted to gather their supply of food under the more unfavorable conditions as are the stronger feeding sorts. Giving the potato, corn, bean and vegetable crops the favored places in the crop rotation—after the plowed-in crops and manure—will greatly increase the returns without affecting to any extent the yield of small grain

crops, so long as sufficient organic matter is plowed under to last well through the alternation of cultivated crops.

The adaptation of crops to the soil types and crop rotation practiced will not only aid materially in producing larger crops for the one year, but it will leave the soil in better physical and chemical condition for the succeeding crops.

After deciding what crops are best adapted to the soil and climatic conditions of the farm the next question is that of the adaptation of varieties. The farmer cannot change the character of his soil or modify the climate, but he can increase the yield of his farm crops by selecting varieties adapted to his soil and climate. There are two ways of doing this; by breeding hardy and early maturing crop plants and by the introduction of new varieties adapted by nature to the new locality. This serves to emphasize a truth which we are sure to realize more fully as we reach an agricultural maturity; that in all crop plants market varieties must be adapted to local environment. If this is true then there is need for farmers to make careful study of some of the best varieties already at their doors; those which have been grown so many years that they have adapted themselves to that particular locality. It is such varieties that should be improved and developed until they are superior to varieties imported from other localities.

The difficulties of adapting crops to climates increases as we proceed from south to north, for the length of the season for growth diminishes, so that farmers in the north must select only early varieties that will mature before cold weather comes and checks their growth. The work of the experiment stations and of individuals in breeding grain, forage and vegetable crops and in perfecting fruit plants has been of great benefit to farmers in the northern states. However, the workers in this field are just skimming the surface, touching the high places, while the fertile valleys yet to be developed are the farms of the better class of farmers the country over. To secure maximum benefits from these experiments and investigations one must make a close study of plants that are adapted to soil conditions and climate of his farm, and by careful selection of nearly perfect plants, intensify the early-maturing tendencies until he has plants that will mature a good crop during the normal growing season in his locality.



Good Crops Are Not an Accident, but the Result of Intelligent Selection of Varieties Adopted to soil and Climatic Conditions.



# Why a National Farm Bureau?

THE demand for food products does not end with the war. The question of supplying the demand at home and abroad during the next few years will be even greater than it has been during the war. Fighting between the opposing forces may have ceased, but hunger grants no armistice. It is going to take time for Europe to get busy—and even then there will be many things produced at a disadvantage—especially dairy products and meat. In the meantime there is sure to be a demand for these products from America, and our people must compete with the people of European countries in the purchase of these products.

Now, there is no longer the excitement and stimulus of war and patriotism—nothing but the question of profit. The farmer has the right to demand the figures of cost production gathered by the agricultural experts of the country to tell him which crops and products will give him the best returns. A comparison of the cost production figures on different crops and finished products will give him a good idea of how to plan his crop rotations and stock feeding during the reconstruction period. These figures, from the standpoint of food production alone are vitally important at the present time. Why should the great United States Department of Agriculture withhold them from the farmers?

Another reason why the farmers of this country should have these cost of production figures at the present time is because of the fact that the idea of cost of production plus a reasonable profit, put into operation during the war, worked so satisfactorily for other industries that it is going to be continued in force during the period of industrial reconstruction. Every industry, except agriculture, is presenting its cost of production figures to the Industrial Board of Commerce so that intelligent action may be taken on the proposed reduction of prices on a number of raw materials such as steel, food stuffs, building materials, fuel and the like. There is no doubt but what there is a demand for certain reduction in prices all along the line and if certain products from our farms are selling at prices far above cost of production plus reasonable profit, the farmers are willing to contribute their share toward the general prosperity of the country. But how can justice be handed out in the matter of fixing food prices by any board composed of a representation made up of capital 6, labor 1, agriculture 0, and with no committee, backed with adequate production cost figures to enforce their claims for fair prices? Other interests have figures and data to back up their claims of fair prices, while agricultural production cost figures are locked up at Washington where the farmers cannot make use of them.

Committees representing a dozen different industries have conferred with the board during the past few days. In practically all instances the committees came fully fortified with data tending to show that present prices represent but slight margins above the cost. Sympathy with the general scheme invariably has been expressed, but each industry has wanted the other industries to make the big cuts, and all seem to feel that the price of food should be cut first; then labor and then, with cheap food and cheap labor, there would be little difficulty in keeping the people busy and contented.

The people of the country are not generally familiar with this new movement to cut prices in order to restore industrial equilibrium because they have had no means of being kept informed of its doings; but we have

## To Put Oil Where the Squeak Is

followed its work from the beginning and feel that now is the proper time for the farmers to claim representation on the Industrial Board of Commerce and have the opportunity to present reliable facts and data upon the cost of production of staple food crops.

Close observers of American industrial and agricultural conditions have for the past two years or more felt confident that upon steel and food products are based prosperity and active business conditions. These two branches of industry are regarded as funda-

the farmer, and let the other industries bear their portion of the loss, they claim is so essential, to reduce food prices and restore industrial equilibrium. If, then, some reasonable arrangement can be made by which the farmer can market his products at the normal price, the government and industries to make good the difference between fixed price and the actual cost of production, a normal market will be established and the business of the country can go on unhampered by the high cost of living. Admitting the right

whole stabilization program is involved in the attitude of the government in buying steel at fair prices. Here we have it: Steel at fair prices. Every other interest claiming fair prices and government aid, except agriculture, and an Industrial Board made up of Capital 6, Labor 1, Agriculture 0, doing the price tinkering.

Price fixing is only one of the many vital problems confronting the American farmer. There are other equally important problems which cannot be neglected if the farmer is to do justice to himself and to the people he is supplying with food stuffs and clothing. American agriculture is facing world conditions, and the farmer, like the manufacturer and the business man, must be prepared to meet these great international problems intelligently. If he fails to take advantage of this great Farm Bureau movement and make his voice heard he is going to find it impossible to derive the full benefits of the new markets that are to be opened up for his products; and to meet the competition of foreign countries that is sure to develop as our commerce grows.

What about the present railroad situation? Are the railroads going to be turned back to private ownership and what is going to be done with them in regard to rate control and more efficient service in moving farm products to market? How about government regulation of the packers? Most farm organizations have gone on record as favoring certain legislation. The great mass of farm sentiment is in favor of such regulation, but at the present time we need some organization to make a careful study of the situation, to the end that there may be a crystallization of farm sentiment in a form to present to the government officials. In other words, the farmers must agree among themselves before they can come to an agreement with other interests.

The farmer, unless thoroughly organized, cannot go into conferences with other interests, and stand on an equal plane of efficiency with them, until he has worked out his problems beforehand, formed a clear-cut idea of just what he wants, and is capable of expressing himself in a voice that will be recognized. At present there is too great confusion of tongues among the many farm organizations to present the farmer's side of the case.

These questions must be settled within the next few months. Delay in getting ourselves in a position to express our views vigorously and authoritatively as soon as we can agree what our views are is sure to result in agriculture being left out of consideration in reconstructing the great interests of the country. Now is the time for every county farm bureau to call meetings, discuss these subjects and get a formal expression of the farmer's views. As the largest producer and shipper of the nation the farmer ought to present his case just as soon as he can arrive at fairly definite conclusions in his own mind.

An Industrial Board of Commerce made up of a representation of Capital 6, Labor 1, Agriculture 0, sitting to regulate prices of steel, food stuffs, fabrics, building materials and other raw materials is simply a new brand of "taxation without representation" imposed by industrial instead of political kings. The American farmer asks no special privileges, nor does he desire to shirk any responsibilities in the readjustment of prices or government regulation of industries, but he does demand a square deal with other industries and proper representation in deciding the great issues that have a direct bearing upon his future welfare.

## Chas. A. Bingham Tells a Michigan Farmer Representative Why the Farmers of Michigan Should Get Back of the Farm Bureau Movement

TIME past has taught us that individual effort is gone forever. When President Wilson in his message to congress on the points of reconstruction failed to recognize the greatest of all industries—agriculture—it is time for us, as the active operators of this industry, to determine why these conditions exist.

"People have criticized the President for this untimely omission. But we must remember the chief executive of a country like ours must deal with organizations, not individuals. As we have had no such organization in the past to adequately represent our interests, no one is to blame for this deplorable condition but ourselves.

"Since, we must acknowledge, these conditions exist, it is time for the farmers to awaken to the fact, in order to get the recognition we desire, strengthen agriculture in general, help solve our labor situation, which at the present time is serious. Save our farms from more depletion, it is the duty of every citizen interested in the welfare of our country to get behind this movement and help complete an organization that will be representative of America's greatest industry.

"It has been suggested that our Department of Agriculture at Washington, D. C., was representative of our agricultural interests. It is politically, but we can never be properly recognized by politics.

"What we need is such representation as the present Farm Bureau system, composed of farmers whose governing officers shall be men or women actively engaged in the raising of agricultural or horticultural products; citizens who can keep themselves above the petty policies of greed and graft, be broad-minded in their views, and solicitors of the welfare of their fellow men.

"What we need most at the present time is the support of every person actively engaged in the raising of the food products of this country. If one

half of the people who are farming on forty acres or more could be made to see where the benefits were to be derived from such a movement, and support the same with a stipulated membership fee of, say, \$1.00 per year, which would in reality be an insurance on their business, our problem of financing such an organization would be solved.

"The greatest difficulty is, we are looking for miracles, for some Moses to lead us out of the wilderness. We must learn that our community problems are different. One section of county or state do not understand just what the problems are or remedy should be for those problems which exist in the other section.

"Everyone seems to imagine their own difficulties are the very worst. It is therefore, necessary that every community organize as some definite center, where their particular troubles and difficulties can be taken up among themselves. First to be analyzed and such remedies suggested as they themselves think practical. In this way we can get at the fundamental principles of reconstruction. They can be brought together by our county Farm Bureau organization, with a good live practical man as county agent in every county of the state working for the better agricultural condition, we would soon be in shape to complete our state and national organizations. Thus being able to get in touch with every phase of country life.

"It has been said, and justly so, that the farmer has never received his share of the wealth he assisted in creating. He has worked early and late taking what was offered and paying the price that was asked, having no other choice it was the best he could do. The farmer is up against the labor situation because he cannot compete with the manufacturer who has a set price on his finished product, knowing exactly what it costs to produce the

(Continued on page 582).

mental in the plans of reconstruction now confronting the people of America. Should there be a heavy demand for steel and its manufactured products, and should there be a demand for food stuffs, one dependent upon the law of supply and demand, other American products are sure to follow this lead.

Reasoning along these lines it would seem very unwise to reduce food prices to a basis below that of the law of supply and demand. If such a thing is to be done why not fix a fair price to

of an Industrial Board of Commerce made up of a representation of Capital 6, Labor 1, Agriculture 0, to fix the prices of food products wherever they see fit, we feel it our duty to point out that this is a mistaken course to follow in bringing general prosperity to the country.

The fact that since the government took over control of the railroads and ship-building business, it is the purchaser of more than one-third of the steel produced in the country the steel men claim that the success of the



# Self-Feeders Add Profits

By Earle W. Gage

FARMERS have found the self-feeder their friend. This method of finishing stock saves sixty per cent of the labor; reduces waste of feed to the minimum; prevents digestive troubles due to over-feeding—pigs, sheep and cattle have full access to the grain or roughage at all times, and therefore eating in small quantities frequently rather than suddenly overloading the stomach two or three times a day. Many animals may be fed from a small feeder space, as they do not all feed at the same time. All have an equal chance; the weak benefits as well as the strong.

Raising live stock is a year-round business, and the self-feeder works every day of the year, making it possible for the farmer to handle twice as many animals as with the hand-fed method. Therefore, the self-feeder presents the most economical and efficient means of feeding.

Hogs do specially well when self-fed. Experiments comparing the self-feeder with feeding by hand have been made at a number of stations, and the majority show not only that the self-feeder is a time saver, but that more pounds of pork will be produced with a given number of pounds of grain by using this method. This applies not only to the use of corn, but to ground and mill feeds, such as tankage, shorts, middlings, peanut meal, soy bean meal, etc. By using the self-feeder in feeding the ground and mill feeds the feeder does away with the laborious work of feeding slop to hogs.

Young pigs from ten weeks of age onward may be safely and economically fed with the self-feeder. Until this age is reached it is generally wise to feed by hand, although experiments have proved that even suckling pigs may be benefited by the feeder. Shoats of all ages, and in fact all classes of pigs to be finished quickly for market may be most profitably "self-fed." The young breeding stock, similarly, are benefited, provided the ration is one of the bone and muscle-forming type. In general, the feeder should avoid self-feeding with aged sows, especially as farrowing draws near.

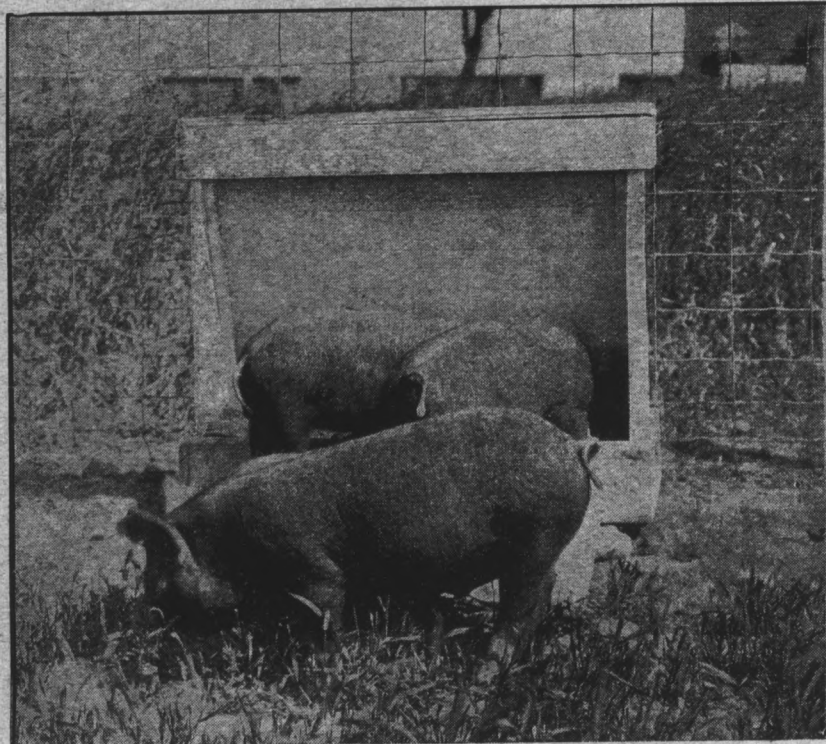
From a mechanical standpoint practically any mixture of whole or ground grains or other mill feeds may be successfully fed this way. Corn, for example, is very frequently fed alone with alfalfa and clover pasture, for short finishing periods. For young pigs or shoats any of the following rations will be found good, provided all hulls are fairly finely ground: 1. Shorts, fine ground oats, fine ground barley, equal parts. 2. Shorts, four parts, either of above grains four parts, ground peas two parts. 3. Shorts or wheat two parts, barley two parts, peas one part. Skim-milk may with profit be fed with any of the above to young pigs. Where whole corn is used, one pound of tankage should be added to every five of corn.

The self-feeder to be successful must be cheap, strong, capacious, portable, easy to construct, weather-tight, easy of regulation for various texture meals and, most important of all, so arranged that the contents will feed into the troughs with minimum stoppage, caused by the blocking of the meal in the hopper. Further, the troughs must be constructed to insure the minimum amount of waste such as might be caused by the animals nosing the meal over the sides or soiling it by standing in the troughs. While several plans of feeders are in use, the following presents a type of feeder of real value to the average farmer, which can be easily made in the farm workshop.

The base rests upon two pieces 2x4 running lengthwise, placed flat. These may act as runners. On these lay pieces of 2x4 to carry the structure. Make the sides of 2x4 pieces, sheathed inside by seventh-eighth-inch dressed lumber, as shown. The illustration shows two arrangements for the feed gate, which is the most important part of the feeder. To insure constant feeding of the meal, some means of agitation is necessary. Otherwise the contents will block close to the bottom. Therefore, make the iron bands (two on a side) connecting the control slide at the bottom, with the thumbscrew at

root against, causing it to break any meal stoppage. Possibly the first will be found best for the average farmer. The front of the feed troughs consists of one piece 4x4, if feeder is for old pigs, and 2x2 for pigs. From this front are placed 2x2-inch divisions, twelve inches apart, running up to a 1x3 piece laid along the sides as shown in illustration. For general use, a trough width of no more than nine inches is best.

The roof is laid on 1x3 battens, and covered with ready roofing. The hinging arrangement shown is simple, and prevents leaking at the peak. A prop



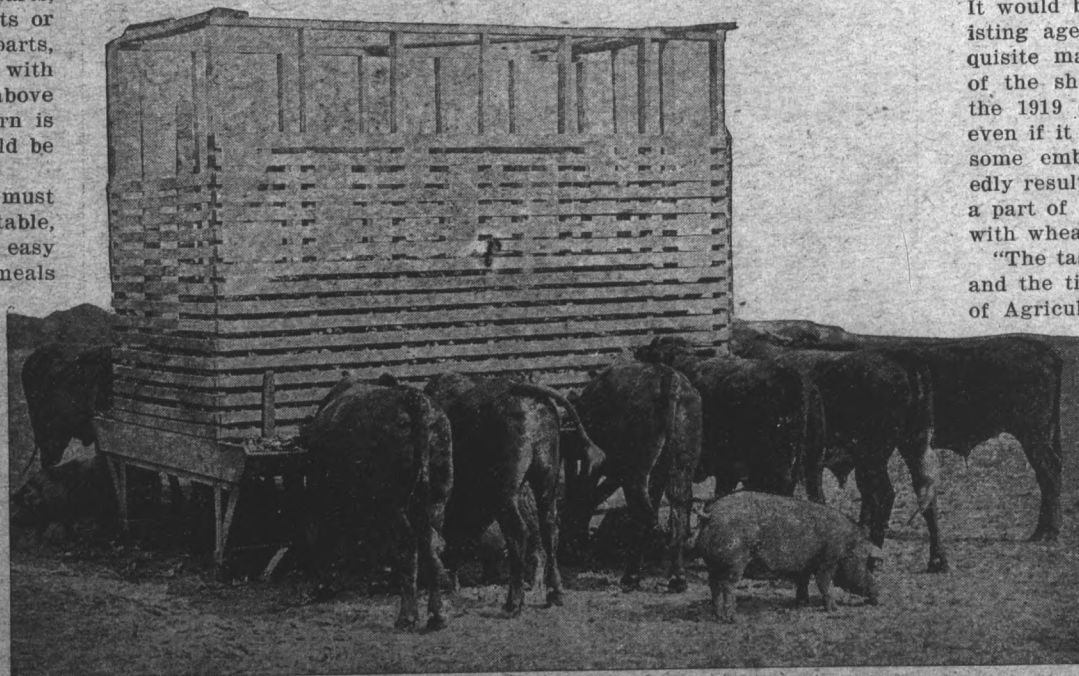
This Self-Feeder Gave Better Pork with Less Labor.

the top, of light strap-iron one-eighth of an inch thick by one inch wide. When the meal ceases to flow, the pigs will naturally root or nose toward the source of supply, and being able to move this flexible slide, which in turn presses upon and breaks the meal blockade, they are rarely left with a "dead" self-feeder. To prevent the pigs forcing the board too far in, it is, of course, necessary to place a cleat inside at either end of each slide. Allow about a quarter of an inch play between the slide and the cleat. The other arrangement is simple, as shown, consisting of a section of the gate hinging inward. This the pigs may

should be supplies to hold up the door, or roof when filling. It is best to continue the overhang of the cover so that the drop may not affect the troughs in wet weather.

The width is shown in the drawing. The length will depend on the number and size of the pigs to be fed. A six-foot feeder, which means twelve feet of trough, is a common length, and will care for upwards of twenty-five pigs. Twice as many trough feet will be needed for older hogs.

Self-feeders are adapted for use in feeding roughage to sheep and beef cattle. Practical beef raisers have adopted two methods to permit them



A Producer of High-grade Beef Cattle Found this Feeder a Money-maker.

to carry more stock with the same labor cost. They allow their calves to nurse their dams in the pasture instead of bringing them to the barn lots, and stack roughages in lots from which the cattle may help themselves instead of rationing them. They also use self-feeders in fattening cattle for market instead of rationing the feed to them once or twice a day. The various feed stuffs are therefore fed whole instead of cutting, crushing, grinding, etc.

The illustration shows a good type feeding rack used by a raiser of high-grade beef cattle. This self-feeder accomplishes a double purpose, reducing the labor cost because the stock help themselves, and reducing the waste because hogs run around the feeder and eat any roughage dropped onto the ground.

## HOUSTON DISCLAIMS DESIGNS ON WHEAT.

STATEMENTS appearing in daily and grain trade papers indicating that the Department of Agriculture is anxious to take charge of the work of carrying out the guaranteed price on the 1919 wheat crop were held to misrepresent the attitude of the department, according to an announcement recently made.

"The Department of Agriculture, after this country entered the war, took the position that emergency food activities of a commercial nature should be directed by an emergency agency," said a statement by the department, "and therefore participated in framing the food control act giving the President power to create such an agency. The food administration and its grain corporation were set up under the act, and they have handled the wheat guarantee from the beginning.

"The Secretary of Agriculture has assumed until recently that these agencies would, without question, continue to handle the wheat guaranties until the emergency passed and the law ceased to be in operation. He still believes that it would be desirable for the grain corporation to continue the function and close out the matter. The corporation has gained much valuable experience during the war, and should be able to deal with the problem as effectively as any other establishment.

"The recent wheat guaranty act seems to contemplate that this agency would continue to act. Among other things, it authorizes the President to use any existing agency or agencies and to utilize any department of the government, including, of course, the food administration grain corporation. It would be difficult for any other existing agency now to set up the requisite machinery, especially in view of the short time intervening before the 1919 crop movement begins, and even if it were to undertake to do so, some embarrassment would undoubtedly result, because two agencies, over a part of the period, would be dealing with wheat.

"The task is one of great magnitude and the time is short. The Secretary of Agriculture recently cabled to the

President, pointing out the necessity for immediate action and urging that the present machinery, that is, the food administration grain corporation, be maintained and utilized. As a matter of course, if the President should designate the Department of Agriculture as the agency to handle the 1919 guaranty, it would assume the task and discharge it to the best of its ability."



# News of the Agricultural World

## A NEW WHEAT PROGRAM.

**J**ULIUS H. BARNES, president of the grain corporation of the food administration, issued recently a statement in which he said he could not understand why any grower of wheat should hesitate to take advantage of present wheat prices, ranging in some markets from twenty to forty cents a bushel higher than the government price level, in view of the outlook for an enormous new crop due to begin to move into the markets within ninety days.

In an effort to control the price of flour in the United States at a reasonable level, the grain corporation has adopted a new program. Neutral governments have been advised that America will be unable to furnish any more wheat or wheat flour to them, but that they must send their ships to other sources of supply for wheat. The neutrals are free to buy of our surplus of rye, barley and oats in our markets.

Beginning next week the grain corporation will buy for shipment rye flour, corn flour and barley flour for the relief of liberated countries in Europe, thus reducing the corporation's current purchases of wheat flour.

If all this doesn't work to control the price of flour in this country, thereby showing that there is less wheat in the United States than figures apparently indicate, Mr. Barnes says, then a move will be made to permit the importation of wheat and wheat flour from Canada, Argentine and Australia into this country.

Mr. Barnes's statement was made as the result of opinions expressed by the industrial stabilization board at Washington that lower food prices could be expected in the near future, and the apparent contradiction presented by the recent continuous advances in wheat prices in western markets, with a corresponding moderate advance in flour prices within the last four weeks.

"It is quite true," Mr. Barnes said, "that in all the primary wheat markets of the United States most varieties of wheat are selling at premiums above the government buying price; in some markets and for some varieties extending to twenty, thirty and forty cents a bushel. The reason for this seems to be that current deliveries of wheat from the farm have been insufficient for milling needs, and, although the Grain Corporation has resold from its accumulated holdings within the last two weeks virtually 40,000,000 bushels of wheat, the price has been only moderately held in check.

"It should be realized, however, that there is no likelihood of any scarcity of flour for use in this country and no reason for a wise baker or dealer to anticipate his needs beyond his current requirements."

## SAID TO BE GERMAN PROPAGANDA.

**C**ABLE advises from The Hague that five thousand tons of German potash would be shipped to this country in the near future were received with feelings of doubt by prominent members of the potash industry in this city recently. There was a decided tendency to discredit reports to the effect that the Germans were preparing to send potash here, and in some quarters these advices were regarded as propaganda.

According to dispatches which have been received in The Hague from Hamburg, the American harbor master in the latter city has decided that several American food ships now at the German port shall be used for transporting five thousand tons of potash on their homeward journey. This pot-

ash is expected in Hamburg in the near future.

One dealer, who is in close touch with the potash industry, said he did not believe the potash would be shipped from Germany for the simple reason that it was not needed here. He pointed to the fact that there are approximately 100,000 tons of potash in storage here. This potash comes from the mines in Nebraska, which have been under development for some time, and also from California.

He said no foreign products would be required until next fall if they were needed at all in this country. When asked why so much potash was held in storage, he replied:

"The farmers have not used as much potash as was expected for fertilizer purposes and the reduction of the cotton acreage to the extent of at least twenty-five per cent has been responsible in a large measure for the curtailment in the use of the domestic potash. It is, therefore, plain that any statement that the Germans have been preparing to ship potash to this country must be taken with a grain of salt."

It was said elsewhere that statements emanating from Hamburg bore evidence of propaganda circulated by the German potash syndicate. It was declared that there had been considerable talk since last January of large quantities being sent from Germany, although nothing appeared to have materialized.

In connection with this the assertion has been made by a member of a prominent potash house that the reason there was so much potash in storage was because farmers had refused to pay six dollars a ton for the material to be used as fertilizer. It was added that potash interests were simply holding out with the result that the farmers might be obliged to wait for foreign potash.

## PACKERS SEEKING NEW COMBINE.

**I**T is a reasonable deduction that the leading packing companies of Chicago are contemplating a combination of their interests in other parts of the world. They cannot combine here, even if they want to, for the government has more eyes on them than on any other interest in the United States. But they hold properties in South America, Australia, New Zealand and other remote countries running far up among the millions of dollars in value, and

there might be an advantage in a combination similar to that which has been attributed to them by their critics in this country. "Community of interest" can be spelled out in the Spanish language as easily as in English.

One of the evidences is the reported purchase by the Armour of a large amount of Swift International stock, in which the trading in Chicago lately has been larger than in any other stock for many years. The extremely rapid development of the Swift interests may have suggested to the more conservative Armours that something new must be done; moreover, there are corporations in the packing trade now forming that are suggestive. The International Products Company, capitalized in \$4,030,000 seven per cent bonds bought at par by the American International Company, \$3,247,200 seven per cent cumulative preferred and 93,579 shares of common stock recently thrust its head above the surface in Boston and is to sell its product through the Armour Company. Its directorate includes J. Ogden Armour, G. F. Sulzberger, Theodore Vail, E. J. Berwind and Percival Farquhar.

The company operates in Paraguay and one of its principal products is quebracho, a wood the bark of which is used in tanning. Thus, the wood is a factor in the business of companies slaughtering cattle. The Armours, having a large interest in the Central Leather Company, need this material, which is found in great quantities in Paraguay.

It is claimed that there is a shortage of leather, and we all know that the material for tanning produced in the United States is a decreasing quantity. It is necessary to go to other parts of the world, not only for meats, but for means of producing leather for our use. The packers foresaw this years ago, and their great opportunities are now becoming visible. From the day when Cody killed buffalo for the builders of the Union Pacific Railroad to the present time the meat supply has failed to keep up with the American demand. The less-developed countries are now undergoing a careful search for material to meet our lack and the increasing European demand.

It would seem that something should be done for the corn crop, out of which meat is made, by the government, if that potency is to continue its policy regarding wheat and other commodities in the interest of the people. Corn

has sold in Chicago this week at the highest price on this crop and the outlook for the yield of 1919 is not the best because wheat has pre-empted the land.

## RAILROADS TO HELP.

**A**GRICULTURAL development work throughout the country, which was curtailed by the railroads on account of the war, will be resumed by the railroad administration with the cooperation of the Department of Agriculture. With this end in view a call has been issued by the agricultural section of the railroad administration for a general meeting of about two hundred representatives of railroads at Memphis, Tennessee.

The problems considered at the meeting included those of marketing, agricultural extension methods, raising of more and better live stock and poultry, dairying, fruit growing, information for home-seekers, best methods for assisting new settlers, farm credits and cooperation of local organizations.

## POTASH TO EXPORT.

**L**ACK of domestic demand for American potash has left fairly large stocks of the product in the hands of the manufacturers in this country, as a consequence they are today in a position to sell to foreign buyers. Eugene Suter, head of a large chemical export concern, is enthusiastic over the possibility of selling American-made potash abroad.

"The progress of the American potash industry," he said recently, "has been so rapid that this country is actually in a position to export potash salts in cargo lots at short notice.

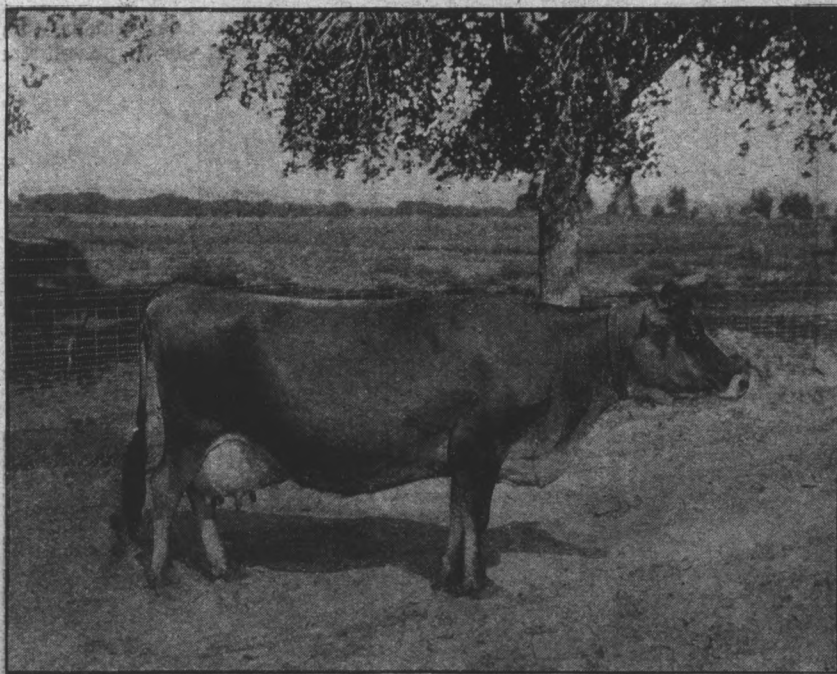
"The domestic demand for this spring fell somewhat short of expectations because of the efforts of the planters in the cotton belt to reduce their acreage for the next crop by about twenty-five per cent. There is at present enough potash in this country to take care of the requirements for next fall's business, so that little or no foreign potash need be imported into this country for some time to come.

"Whether or not the domestic fertilizer industry will be able to compete in price with the Alsatian and German potash in six or eight months from now remains to be seen. This may be entirely possible for some of the domestic plants that are advantageously located and which work at a low cost of production. Some works in California and Nebraska, however, have recently discontinued the production of potash.

"One of the most hopeful signs for the growth of American potash exports is the inquiry which comes regularly from foreign countries. I believe that a good foreign trade in this product could be developed if ocean freight rates were brought down to a more reasonable level."

## AGRICULTURAL CENSUS.

**T**HE government has decided to take the fourteenth census on farms as of January 1, 1920, instead of collecting this data as of April 15, as was done in 1910. The date was changed because farmers ordinarily are busy with the rush of spring work about the middle of April, also because April 15 is in the midst of the breeding season when the number of young stock is not comparable between northern and southern regions and finally because the returns on the crops obtained during the winter are more accurate than those obtained later and comparable with the December estimates of the Bureau of Crop Estimates.



**New Mexico Presents a Star.**—Last year New Mexico was visited by almost every known variety of weather, from the extreme heat of 108 degrees in the shade to a blizzard with the thermometer hovering about zero. But even these handicaps did not prevent Rochette's Princess, a Jersey cow, from producing 17,891 pounds of milk and 933 pounds of butter-fat.





## Better Seed Potatoes

*Success Will be Limited by the Quality of Seed Used*  
By C. W. Waid

THE Michigan potato growers are much more keenly interested in the subject of better seed than they have ever been before. This is due in a large measure to the fact that they begin to realize that in many cases seed which has been used in the past has not given good results. Diseases are much more common and taking a much heavier toll of the crop at the present time than was the case several years ago. In some of the counties of the state in which the writer made careful field inspection last season, it was not possible to find a single field of potatoes which was sufficiently free from disease so that we cared to recommend the use of any of the potatoes for seed purposes. Some of the diseases which are doing a large amount of damage can be controlled in a measure at least, by seed treatment. The common scab, black scurf, or rhizoctonia, and black leg, are controlled to a considerable extent when the seed is treated before planting with a solution called corrosive sublimate. All county agents have specific directions for the use of this material, or, if the growers prefer, they may secure these directions direct from the agricultural college.

There are many diseases which are more or less serious in the state, which cannot be controlled by any form of seed treatment. One of the most common of these diseases is fusarium wilt. This disease can be detected by cutting off the stem end of the potato. If when this is done a broken ring-like marking is seen about one-fourth of an inch beneath the skin, the disease is present in this particular tuber. Such tubers should not be used for seed—at least, none of the tuber which shows the discoloration. The best way to overcome this trouble, as well as mosaic, spindling sprout, curly dwarf, and leaf roll, is to secure seed from healthy productive hills.

A very large number of growers throughout the state are going to plant seed plots the coming season. In a number of cases the seed for these plots was selected last season from high-yielding hills. This is the best way to start a seed plot, but those who did not hill-select any potatoes last season need not wait until another year before starting this kind of work. Select some of the best shaped tubers from the stock on hand, treat them before planting, and plant them on some of the best potato soil which is available. They may be planted in the field with the main crop or in a

separate piece of ground if such a location is available. It is a good plan to plant a seed plot rather late, from the middle of June until the first of July, depending upon the section of the state in which the farm is located. The longer the season of growth which the potatoes will have, the later the planting may be done. When very late planting is practiced, of course, the yield may not be as heavy as would be the case with an earlier planting, but the quality of the seed will be superior to that which is planted earlier. It has been proven that late potatoes which make a steady and constant growth until the frost kills the vines, will be superior for seed purposes to those the vines of which have died before the frost has occurred.

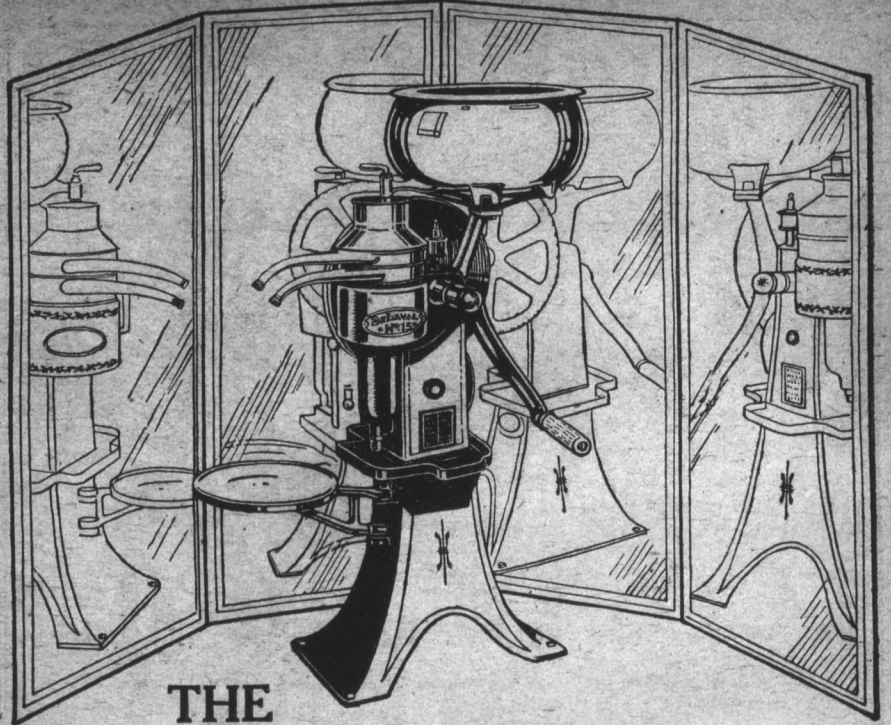
Potatoes planted for seed purposes may be planted much closer than is frequently done where table stock is grown. On soil which is rich the hills may be twelve to fifteen inches apart and the rows from thirty-two to thirty-six inches apart. When the seed plot is planted in fields in which the potatoes are rowed each way, it would not be practical to plant those in the seed plot closer in the rows than the others are planted.

The seed plot should be given thorough cultivation, and the vines should be sprayed to protect them from insect and disease injury.

An effort will be made during the coming season to have extension men or county agents inspect as many seed plots at least once during the season and as time will permit. The purpose of this inspection will be to remove the diseased hills from the plots. In some cases field meetings of growers will be held where the work is done, in order that the growers may become more familiar with the diseases and methods of control. In all cases the individuals on whose farms the seed plot is located, will be shown the nature of any disease which may be found in their particular seed plots or fields. At digging time an effort will be made to encourage hill selection of potatoes from the seed plots. Comparative yields will be secured between the hill selection of potatoes from the seed plots. Comparative yields will be secured between the hill selection portion of the field and that which was planted from seed which was not hill-selected. When this work is recorded for all counties of the state, a summary will be made and published if the data secured is of sufficient value.



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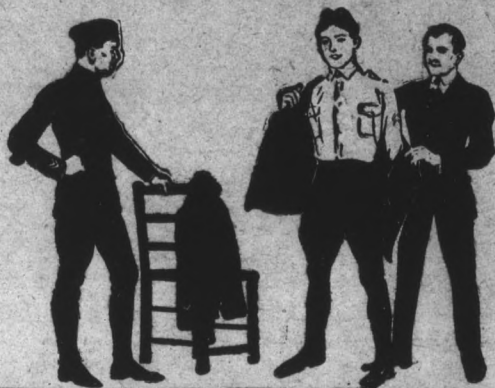
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STAFFELD BROTHERS,  
15 Merrill Building, Saginaw, Michigan

**Wanted** To hear from owner of farm or unim-  
proved land for sale.  
O. K. HAWLEY, Baldwin, Wisconsin

### 131 Acres \$3800, with Pr. Horses, 10 Cows and

All farming implements, wagons, carriages, hay, fod-  
der, near R.R. town, easy drive city 100,000. 75 acres  
heavy cropping tillage, 25-cow pasture, mile creamery,  
wood, timber, fruit, berries. Good 12-room house,  
large barns, silo, granary, corn houses. To settle,  
quick buyer gets equipped money-making farm \$3800,  
easy terms. Details page 42 Spring Catalog Bargains  
19 States, copy free. STROUT FARM AGENCY,  
814 B. C. Ford Bldg., Detroit.

### 255 Acres Good Land

for sale between towns of Remus and Mount Pleasant,  
Isabella County. In a beautiful farming district, well  
settled. Owner removing from state will take \$15.00  
per acre and make easy terms. Anybody acquainted  
with that country knows this is a bargain. If you have  
\$500.00 the place can be bought. Write  
E. HALL CHANEY, Rockwood, Mich.

**For Sale** To close administrator's estate, will sell John  
J. Foster farm of 70 acres for \$3000.00. Good  
frame house, barn, and out-buildings; about 1 1/2 miles  
from Greenville. Call or write Greenville Gas Com-  
pany, Greenville, Michigan.

**IF YOU WANT** to sell or exchange  
your property write me.  
John D. Black, 106th Str. Chippewa Falls, Wis.

## Suggestions

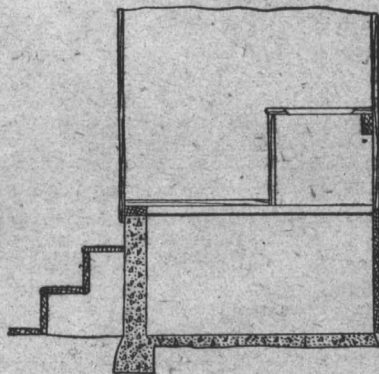
### MOVING A STOVE.

HERE is how my neighbor moved  
a big stove alone. He made a  
plank frame for the range to rest upon.  
Underneath the frame he fitted a roll-  
er crosswise, just a single roller. In  
moving the range he simply placed the  
device under it and balancing it upon  
the roller it was moved through the  
yard upon the wagon over boards, and  
unloaded similarly. With this device  
one man can do more than four men  
lifting at the corners.—Warner E.  
Farver.

### AN EASILY CLEANED VAULT.

AS a measure of economy and of  
safety to public health, every un-  
derground vault in city, village, and  
country, ought to be cleaned out and  
then filled up with clean earth, never  
to be used again. And when I say  
"cleaned out," I mean cleaned out, and  
not filled up with earth, while the  
night-soil remains in them. With the  
underground vault, there is no escape  
for the contents except to decay and  
form gases that produce a continual  
and terrible stench, and to be carried  
down through the ground by the rain  
water that frequently enters the vault  
thus almost certainly contaminating  
all nearby wells, making them obnox-  
ious, if not dangerous. Even if they  
are cleaned out occasionally, the dan-  
ger and the bad smell are not mate-  
rially lessened.

Instead of an underground vault, a



cement vault, open at the back for  
cleaning out, which may be done once  
or twice a year, and with a cement  
bottom even with the surface of the  
ground should be used. It can be  
made of a sufficient height, say two or  
two and a half feet, as not to need too  
frequent cleaning. Steps up to the  
door would, of course, be needed; and  
a lid in the rear, hinged to the back  
of the privy, could be used to cover  
the back of the vault, to be raised up  
whenever the vault is to be cleaned  
out. The lower edges of the lid may be  
held close up in place by a light bank-

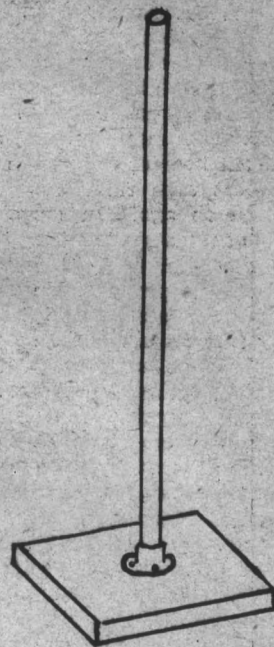


ing of earth—which would also keep  
out the wind—or by stakes or stones.  
Since rain water cannot run into this  
vault, the contents are never very wet  
and are not very disagreeable to re-  
move and do not produce a very bad  
odor. The mineral contents of the  
night-soil produced annually is worth  
something on farm land and should  
not be allowed to go to waste; and  
with vaults of this description it would  
all be utilized. I have a vault made  
after this plan and I like it. I am not  
sure but that a ventilating pipe ex-  
tending from the vault up through the  
seat and through the room, and per-

haps having a revolving hood, would  
remove much of the odor without it-  
self proving to be a nuisance outside.  
—Lewis B. Avery.

### A GOOD PRACTICAL TAMPING BAR.

THIS simple tamping bar will be a  
great help to the man who is try-  
ing to improve the front lawn. It is  
made with a piece of one-inch iron  
pipe fitted with a flange and steel or



iron plate at the end. The pipe should  
be made as smooth as possible to pre-  
vent blistering the hands. The screws  
that project through the base should  
be ground off flush with the bottom.

### BEST WAYS TO CONTROL HOG LICE.

LICE on hogs can be controlled in  
various ways, but complete eradica-  
tion is best secured by the use of  
dipping vats, experiments conducted  
by the United States Department of  
Agriculture show.

Medicated hog wallows and rubbing  
posts, the experiments showed, kept  
the number of parasites reduced so  
that they caused little or no damage,  
but neither of these methods destroyed  
all the lice. Crude petroleum was used  
on the rubbing posts and the wal-  
lows were medicated with coal-tar cre-  
osote dips, pine tar, crude petroleum  
and bland oils. Crude petroleum and  
coal-tar creosote dips proved to be  
more effective when applied from an  
ordinary sprinkling can than when used  
in wallows or on rubbing posts.

### BETTER HOMES FOR BEES.

THE state law requiring sanitary  
quarters for honey bees, enacted  
two years ago by the state legislature  
for the protection of the bee-keeping  
industry, will be enforced after July 1.  
After that date an announcement  
from the office of Inspector Kindig de-  
clares, inspectors will be supplied with  
warrants for the immediate arrest of  
individuals still keeping their bees in  
box hives, log gums, skeps, or in mod-  
ern hives with crossed combs.

"The enforcement of the law has not  
been pushed heretofore," declared In-  
spector Kindig, "because it was assum-  
ed that bee-keepers should be allowed  
some time in which to transfer their  
colonies into other equipment. All the  
necessary changes should be made by  
July 1, after which date all inspectors  
will carry with them blank warrants  
for the arrest of every bee-keeper  
found housing his colonies in unlawful  
hives."

A bulletin telling how bees can be  
transferred has been published by the  
experiment station of M. A. C.



# REO

## "Oh! You'll Get There All Right —With That Reo!"

**A CERTAIN LADY**—you know a large percentage of Reo owners and drivers are women—a certain Reo Lady was making a long, cross-country trip accompanied by three other ladies.

**WEATHER WAS AWFUL**—no other word would describe it. Roads accordingly.

**AT MANY PLACES** there were detours where modern roads were being built.

**YOU KNOW THE KIND**—a mile to the south, then a mile to the west, north a mile again to the main road.

**HEAVY TRAFFIC** on what was never a road, but only a trail, cut ruts hub-deep in the slippery clay and sticky mud.

**AND IN THE RUTS** were chuck-holes that, concealed from view by mud and slush, had to be ever guarded against.

**TO HIT ONE** at speed were to throw the passengers out of the seats. To drive at more than a snail's pace were to take risks.

**TO MAKE MATTERS WORSE**, she frequently had to drive off the road and into the ditch in order to pass other cars that were hopelessly stalled.

**AT TIMES OUR LADY** was dismayed by the look of things ahead, and as she plowed through, drip-pan awash and gears in low, she would stop and ask other wayfarers if it was any worse ahead.

**INVARIABLY**—so fond are most folk of imparting bad news!—they would say, "Oh, yes—what you have gone through is good beside that next clay hill!"

**THEN, CRITICALLY LOOKING** at the car, the informant would exclaim confidently, "But you'll get through all right—with that Reo!"

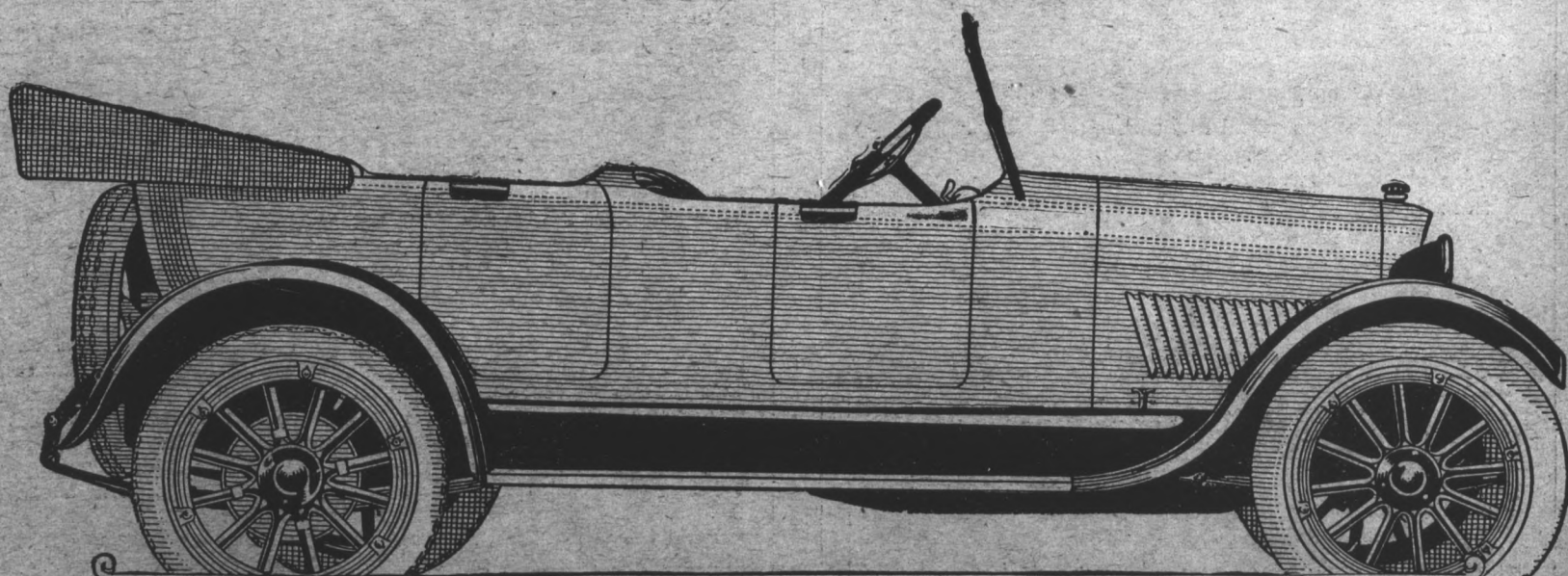
**EVERY ONE SHE ASKED** knew the Reo on sight—and every one voiced the conviction that, with her Reo, she'd get through all right regardless of how great the distance or how bad the roads.

**AND SHE DID**, which is merely to chronicle what every Reo owner knows and every owner of every other car concedes.

**YOU'LL ALWAYS GET THROUGH**—if you have a Reo.

"THERE ARE LOTS of good automobiles—but the man who owns a Reo is lucky."

**Reo Motor Car Company, Lansing, Michigan**



" THE GOLD STANDARD OF VALUES "



Every Member of the  
Family Can Wear

**Lee Union-A-lls**

ENJOY the comfort and satisfaction provided by this wonderful new suit for work and play. It's made for men, women and children—special garments for each. It means a big saving in clothing bills as well as ease and freedom for the body. Ask your dealer or send for descriptive pamphlet. Address Department 2234

**The H. D. Lee Mercantile Co.**

Kansas City, Mo.,  
Trenton, N. J.

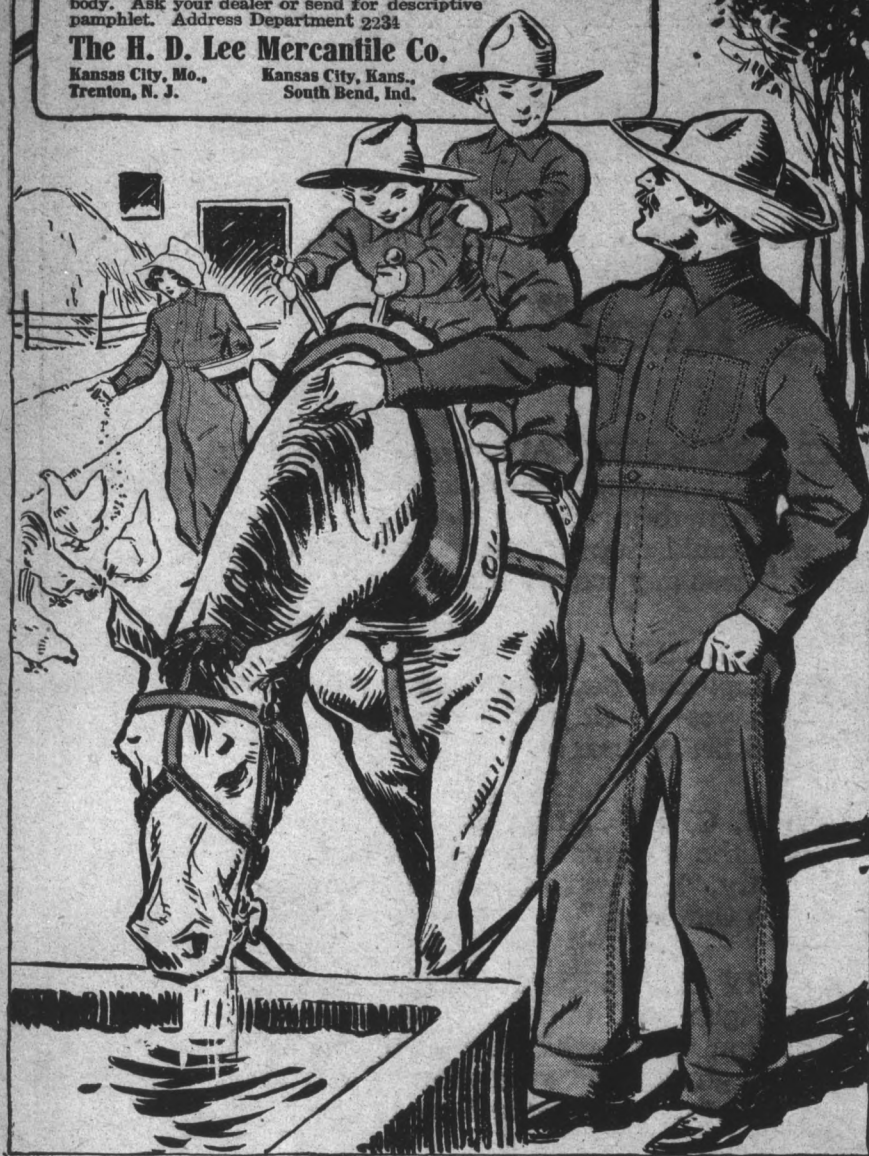
Kansas City, Kans.,  
South Bend, Ind.

UNION **Lee** MADE  
**Union-A-lls**  
TRADE MARK REG. U. S. PAT. OFF.

One Piece Like Your  
Union Suit

Lee  
Union  
A-lls

That's a genuine  
LEE UNION-A-LLS  
when the design  
is cut into the  
bottom. Look  
for it. Remember  
there is only one  
Union-A-lls the  
LEE.



## The Spring Seeding Problem

PROBABLY the most puzzling problem on Michigan farms this spring is that of seeding the clover and grass crops. Clover, alfalfa and grass seeds are abnormally high, as everyone who has these seeds to buy well knows.

How to maintain the usual acreage of productive meadow lands with a minimum amount of these seeds is an economic problem on many farms. Every farm should have a fixed acreage devoted to meadows and pastures. Valuing grass for its own sake, without considering its incidental virtues as a soil builder, we should try and improve it for hay and pasture until it heads the list of our reliable, money making crops.

On many farms it will unquestionably pay to reduce the acreage to be seeded this spring to a minimum, as low as is consistent with real economy. By top-dressing all the old meadows with manure and fertilizers and reducing the acreage of new seeding, one can maintain the average production of hay with a minimum expense for clover and grass seeds. If, however, the land is deficient in humus, don't put off seeding it at the expense of the land. This only increases the difficulty of securing a satisfactory stand of clover and grass in the years to come. On many farms it is advisable to shift the rotation so as to get along with a minimum acreage where it can be done without seriously interfering with the general system of crop growing and stock feeding being practiced. A few such changes are much more practicable than attempting to reduce the amount of seed an acre.

In many cases the hay crop can be greatly improved by more thorough preparation of the ground before seeding. By early plowing and harrowing several times before seeding the grain and grass crops a fine, compost seed-bed will be established. If we make the clover and grass crops do their best work for us we must make the conditions favorable for them to make good growth from start to finish.

Many a farmer has neglected the grass and clover crops on account of his soil being wet, sour, peaty, thin or otherwise unfit to produce profitable crops of hay and pasturage. Under rigid business systems of farming such lands have been found just as great sources of loss as unprofitable cows in the dairy herd. No farmer can afford to pay taxes, interest, and fence idle land. If he has pride in his farming he will do his best to bring such unproductive land under a profitable system of crop growing, and the easiest way to obtain these ends is to get it in shape to grow crops of clover and grass.

On many fields lime is needed to put the soil in condition to grow good crops of clover and timothy, and secure maximum benefits from the manure and fertilizing materials used. If the soil is thin and rather deficient in humus it is often necessary to increase the humus content before good crops of any kind can be grown. This can be accomplished by securing a growth of clover, grass or any other growth by the use of manure or fertilizers. If the drainage conditions are favorable the use of lime, manure and fertilizers will soon get any ordinary land in shape to produce good crops of hay, and once we get these lands in shape to produce clover and grass crops it is a comparatively easy mat-

ter to maintain the advantage thus gained.

At present prices of red clover and alsike less seed is required per acre; red clover and more alsike than has been the practice in former years. On low lands that contain a high percentage of clay this will tend to improve the stand, and on sandy lands that are slightly acid the alsike will succeed where red clover has failed to make a uniform, vigorous stand. In seeding alsike less seed is required per acre; the seeds being only about one-half the size of the red clover. Many farmers claim that a good stand of alsike may be obtained by using only half the quantity of seed used in seeding red clover, but I doubt this claim, for on most types of soil where alsike is seeded the conditions are less favorable for the seeds to germinate. Perhaps, on well-prepared, mellow loam soil where the small seeds find more congenial conditions the lighter seeding would give as good results.

In seeding grass lands, it is my judgment that better and more economical results will be obtained by seeding clover and timothy mixed and allowing the mixed hay crop to occupy the land two or more years. In this way we have a place for the farm manures where they may serve a two-fold purpose; encourage the growth of more manurial substances to plow under and act as a direct fertilizer to the crops. Clover being the more active factor in soil improvement will perform its function the first year, and then the timothy coming on will give us a thicker sod, a more substantial base of humus, to work with during the following years. Again the hay crop is one of the best crops in this latitude, and here is where the second and third cuttings, which are largely timothy, comes in. The high price of clover and timothy seed are sure to result in a smaller acreage and this fact barring an unusually favorable season and a yield far above the average which is unlikely because of the poor condition of present meadows and seeding, is sure to result in high prices for hay for the next few years. Looking at it from any standpoint it is poor economy not to keep our meadows and seeding up to the average production of the past few years.

L. J. MEREDITH.

### PULVERIZED LIMESTONE.

What amount of pulverized limestone should be used per acre, also the best way to spread it on land.

Wayne Co. SUBSCRIBER.  
Not less than one ton of pulverized limestone should be used at one application on land. It would be better to use two tons per acre because the extra cost would be little, then you would not have to apply lime so soon again.

The best way to apply it is with a lime spreader, a machine on purpose for distributing lime. This can be set to sow one ton or two tons per acre. Of course, if you haven't got a lime spreader the lime can be spread by hand. You can do a pretty good job in spreading lime with a shovel from a wagon box if you have a man to drive, one man on the hind end of the load and one on either side. Drive the team slowly and all three men spread with a shovel, then by cultivating the land the lime will be fairly evenly distributed.

C. C. L.

## Dissatisfaction in the Quality or Price of Coffee

is easily remedied by changing your table  
drink to

## THE ORIGINAL POSTUM CEREAL

Boiled just like coffee—15 minutes\* after boiling  
begins—you are certain of uniform quality.

The price doesn't fluctuate from one month to  
the next.

And besides there's only one grade—the best.  
You get it in every package.

There's a greater reason however why you should  
drink Postum—**HEALTH.**

No upset to stomach, heart or nerves—the pen-  
alty many pay for coffee drinking—follows the  
use of Postum. It's a rich, healthful, invigorating  
drink, and—

**"There's a Reason"**





SILAGE FOR YOUNG STOCK.

SEVERAL years ago a breeder called my attention to the value of corn silage for the rearing and developing of young stock. Having two farms, one equipped with silos and the other not, he had an opportunity to see the advantage of silage for this purpose. I was greatly surprised to note the difference in size and quality of the young stock that were liberally fed corn silage with alfalfa hay. They were not only larger but were in better condition. This convinced me that the silo should be used more for this purpose, and I have since that time often found examples to prove the value of silage for young growing animals. The breeder of pure-bred stock, whether dairy or beef cattle, has much need for silage in the economic development of his herd. The cost of the product, whether beef or milk, is the principal item of expense for the breeder to consider and in this age of high-priced hay and grain, the cost of the ration becomes the most important item and the one on which depends the profit for the breeder.

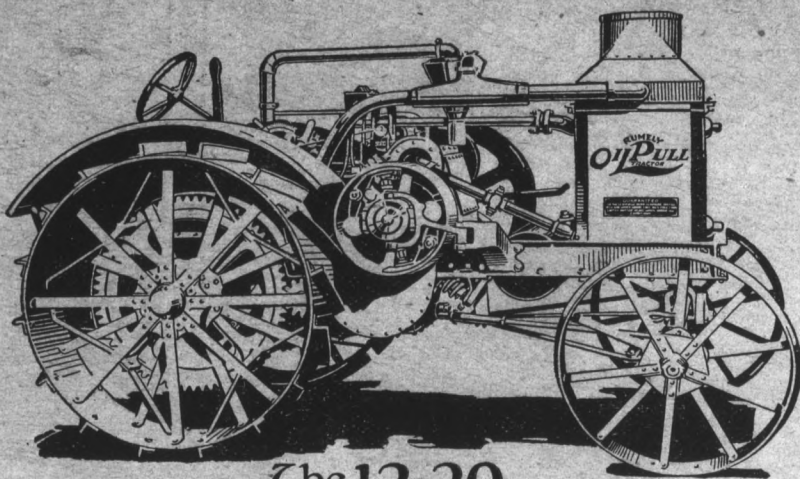
Any man who keeps ten head or more of cattle will find a silo an economic equipment on his farm. It is necessary for nine-tenths of our milk and cream producers to grow and develop their young stock and the silage which furnishes the succulent ration to the milch cows will also form the best kind of ration for the young stock.

Liberal feeding is the only profitable kind for there is no money in half feeding stock. An animal must be boarded and if only a boarding ration be given there is no profit but really a loss. It is that part of the ration which is over and above the food of maintenance, or board, from which we derive our profit. On this basis, an animal will earn money in proportion to the amount of food she consumes, and this is largely true. Good feeding is supplying animals with their required nutriment at the lowest possible cost. Anyone with plenty of money can feed an animal well, but to feed an animal well and economically requires knowledge of the subject. The two great food elements which are necessary are known as carbohydrates, and protein. Corn silage is our cheapest form of carbohydrate, and clovers, or the legumes, furnish our protein in the cheapest forms. Young stock, from the time they are weaned, will make a splendid growth and development on corn silage and clover or alfalfa hay without any grain, and this ration is a cheap one and within the reach of practically every breeder.

The silo will prove of great economy not only in the growing and developing of young stock, but also the growing of colts or maintenance of idle horses. Silage has been likened to pasture and it is very properly considered from this viewpoint when used for the growing and developing of all our live stock.

A. L. HAECKER.

Official standards of four numbered grades and one sample grade for oats, following closely the tentative standards approved by the grain trade were established recently by the Department of Agriculture under authority of a law recently passed. The standards were made effective June 16, 1919, when the new crop movement begins.



The 12-20

**Capacity**—Pulls three plows—operates 22-inch thresher.

**Fuel**—Guaranteed to burn kerosene successfully under all conditions.

**Cooling**—Oil cooled—no evaporation—non-freezing.

**Motor**—Heavy duty. 2 cylinder 6 in. x 8 in.—560 R. P. M.

**Crankshaft**—Built to U. S. Naval Specifications.

**Frame**—Hot riveted steel members—no bends—no splices.

**Transmission**—Cut steel gears, enclosed and running in oil.

**Bearings**—Hyatt roller bearings in transmission and rear axle.

**Governor**—Fly ball throttling type—automatic speed regulation.

**Belt Pulley**—19 inch diameter—running directly off crankshaft—no intermediate gears.

**Lubrication**—Force feed and splash.

**Speeds**—Two forward—one reverse.

**Drawbar**—Adjustable spring drawbar.



## A New OilPull in a 3 Plow Size

"Build us an OilPull in a 3-plow size."

That was the call from farmers everywhere—and the 12-20 is our answer—the latest and smallest of the OilPull line, an all purpose outfit built on the proved OilPull design and construction.

Into the 12-20 are built all the features that during the past ten years have established the unequalled OilPull record for economical, dependable operation and long life—plus those improvements that only long experience can teach.

Like all sizes of the OilPull the 12-20 is backed by a written guarantee to burn successfully all grades of kerosene under all conditions, at all loads to its full rated brake horsepower.

In the 12-20 the weight distribution is absolutely correct—no danger of turning over, or the front wheels raising off the ground. The 12-20 "stays put" on rolling land as well as level.

The 12-20 is a light weight, big power outfit—its rating based upon only 80% of its maximum efficiency—a 20% reserve power when you need it.

The 12-20 is oil cooled, which means that the radiator will not freeze in the coldest weather nor boil in the hottest—that it will go indefinitely without refilling—that instead of clogging the circulating system with sediment it keeps it always open—that instead of rusting the cooling system parts, the oil preserves the

metal. The OilPull cooling system eliminates a cooling fan—it keeps the motor at the right temperature at all loads. The harder the OilPull works—the cooler it runs.

All transmission gears are cut gears—all shafting and parts such as the cylinder, piston, rings, etc., are ground to the thousandth part of an inch—a guarantee of a perfect fit and greatest efficiency. The OilPull is built complete in Advance-Rumely shops.

The 12-20 is as efficient on the belt as on the drawbar. The belt pulley is just where it ought to be, on the right hand side, up within full view of the operator. The 12-20 can be lined up with a belt machine, backed into the belt and the belt started and stopped from the platform. The belt pulley is driven direct off the crankshaft—no loss of power. The hand wheel is extra large and by driving through a cross belt allows the use of a looser belt.

The 12-20 will pull three 14-inch bottoms under average conditions, operate a 22-inch thresher fully equipped, and handle all the various drawbar and belt power jobs.

All OilPull tractors are not only backed by a guarantee that assures you the most economical operation—they are also backed by an organization big enough to guarantee you efficient service at all times. Advance-Rumely maintains 27 branch offices and warehouses.

Ask for the catalog describing this new 3-plow OilPull.

ADVANCE-RUMELY THRESHER COMPANY, Inc.

La Porte, Indiana

Battle Creek, Mich.

# ADVANCE-RUMELY



## Turn stump land into Money

Increase your acreage and thereby increase your income.

Clear your stump land cheaply. No expense for teams or powder.

One man with a can output 16 horses. Works by leverage—same principle as a jack. 100 lbs. pull on the lever gives a 48-ton pull on the stump. Made of the finest steel—guaranteed against breakage. Endorsed by U. S. Government experts.

Write today for special offer and free booklet on "Land Clearing"

Works equally well on hillsides and marshes where horses cannot operate

WALTER J. FITZPATRICK

Box 14, 182 Fifth St., San Francisco, Cal.



This \$4.50 Garden Plow with four tools as shown \$3.35

Order quick at this price while supply lasts. You can do much more work and more pleasantly than with a hoe.

Everything for the Farm and Home at WHOLESALE PRICES TO THE PEOPLE

HURST & CO.

32-34 Hurst Block INDIANAPOLIS, U. S. A.



## Some Special Clubbing Offers

No. 7.

Michigan Farmer, 1 yr., wk. .... \$1.00  
Woman's World, mo. .... .50  
Boys' World or Girls' Comp., mo. .... .50

Regular price ..... \$2.00

OUR PRICE ONLY \$1.60

No. 8.

Michigan Farmer, 1 yr., wk. .... \$1.00  
Breder's Gazette, wk. .... 1.50  
Woman's World, mo. .... .50  
American Boy, mo. .... 2.00

Regular price ..... \$5.00

OUR PRICE ONLY \$3.90

No. 9.

Michigan Farmer, 1 yr., wk. .... \$1.00  
Green's Fruit Grower, mo. .... .50  
American Bee Journal, mo. .... 1.00  
Every Week ..... 1.00

Regular price ..... \$3.50

OUR PRICE ONLY \$2.50

The Michigan Farmer, Detroit





## FINCK'S "Detroit-Special" UNION OVERALLS

They stand the hardest, roughest work about the farm because they are made right, of the right materials. Over 2,000,000 satisfied wearers.

A one-piece suit with no loose ends to catch, is an absolute necessity around power machinery.

The best dealers everywhere handle them. Get a suit from yours today, and look for the little pig on each garment.

**W. M. FINCK & COMPANY**  
DETROIT, MICHIGAN

### BRANCHES:

ST. LOUIS DALLAS SAN FRANCISCO SEATTLE and LIVINGSTON, Mont.

## Save Money on Newspapers

Many rural readers have bought their daily and the Michigan Farmer in combination at a price that saved them money.

### The Michigan Farmer---One Year Your Favorite Daily---One Year

On rural routes only at prices specified below in "Our Price" column.

	Regular Price.	Our Price.
Free Press, Detroit.....	\$5.00	\$4.50
Journal, Detroit.....	5.00	4.50
Times, Detroit.....	4.00	3.50
Herald, Grand Rapids.....	5.00	4.50
Press, Grand Rapids.....	5.00	4.50
News, Grand Rapids.....	5.00	4.50
News-Courier, Saginaw...	5.00	4.50
News-Statesman, Marshall.	4.00	3.25
Journal, Flint.....	5.00	4.50
Gazette, Kalamazoo.....	5.00	4.50
News, Cadillac.....	4.00	3.50
Enquirer, Battle Creek....	5.00	4.50
Evening News, Monroe....	4.00	3.50
Pioneer, Big Rapids.....	4.00	3.50
Blade, Toledo.....	5.00	4.50
News-Bee, Toledo.....	5.00	4.50

The above combinations give you an average saving of Fifty Cents.

### To Save \$1.00

Remit the first column prices and you will get one year of the daily and two years of the Michigan Farmer—\$6.00 value for \$5.00 with \$4.00 dailies—\$5.00 value for \$4.00 with \$3.00 dailies—a saving of the price of one year's subscription to the Michigan Farmer.

**The Michigan Farmer,**  
Detroit, Mich.



## Experience Counts

Especially in producing a thresher and engine that will go into the hands of the farmer or thresherman and do the very best in threshing, saving and cleaning the grain.

To design and build a good thresher a man must know by experience what is needed. Nichols & Shepard Company, builders of the famous

## Red River Special

has devoted its whole lifetime to the building of threshers and the power to drive them.

Mechanics and experts have grown old in its service, and in passing, their sons have grown up to take their places.

For nearly three-quarters of a century the resources, ability and energy of our organization has been devoted to the building of threshing machinery.

For this reason this Company was able to produce the great Red River Special line, and are able to maintain it as the best, most capable and effective threshing machinery that the world has ever produced.

The Red River Special has the only true principle of taking the grain away from the straw—that of *beating it out*. It's big cylinder, the Man Behind the Gun, the Beating Shakers enable it to save more grain than any other machine made. It saves the farmers' thresh bill. Write for special circular.

**Nichols & Shepard Co.**  
In Continuous Business Since 1848  
Builders exclusively of Red River Special Threshers, Wind Stackers, Feeders, Steam and Oil-Gas Traction Engines  
Battle Creek Michigan

## MICHIGAN GROWN SEEDS

for Michigan growers. Ask for catalog. Harry E. Salter, Seedsmen, 11-119 E. Ottawa St., Lansing, Michigan.

## Buying the Farmers' Products Below Cost of Production

SOME very careful estimates have been made covering a wide area of territory with regard to the cost of producing some of our staple products—corn and oats, for instance. It is estimated that on the average acre where the expenditure was \$23 the crop of 1918 was 28.6 bushels, or a cost of approximately \$0.81. December 1, 1918. This is equivalent to \$0.93 in value in May, or \$0.98 in Chicago in May, or \$1.08 or \$1.09 in July. The 1918 crop has been selling decidedly above the cost of production until quite recently. Now it is possible that the price may go below the cost of production. If it is possible to force the 1918 crop down below the cost of production, what will happen to the 1919 crop in case it should be a large crop because everybody knows the 1918 crop was a short one?

The average cost of producing an acre of oats in the twelve north central states in 1919 it is figured will be about \$19 per acre on the same basis that corn cost \$23. If the crop turns out to be a good one this will mean a cost of \$0.63, or about \$0.65 per bushel at Chicago. Present indications are that grain traders are figuring on buying the new crop of oats, providing it turns out to be a big crop up around \$0.55 per bushel at Chicago, or about \$0.10 below the cost of production. At the present time last year's crop of oats is selling below cost.

There seems to be a determination of a few thousand men, backed by enormous wealth, to force the price of agricultural products down even below cost. Presumably they feel that the consumer should have the benefit of lower prices, but why should the consumer be benefited at the expense of the farmer? It is short-sighted policy, because if prices are forced down so that the farmer loses money then the farmer must finally turn to something else, and the result will be a lessening of production and this necessarily will lead to higher prices yet. The only way to get the American farmer or any farmer, for that matter, to produce maximum crops is to pay them a just price, one that gives them the cost of production plus a profit. That is all they ask and no one can afford to do less. We do not ask manufacturers to sell for less than the cost of production and a profit, and why should the farmer be asked to, and even compelled to?

It is absolutely wrong and with proper organization among the farmers it need not happen. The trouble is that we haven't got business organization among the farmers sufficient so that they can put a stop to such high-handed measures as this. This new organization, the Farm Bureau, starting among the farmers of a county, extending to a state organization and from a state organization to a national organization of farm bureaus, if it is handled on business principles, I believe will be able to put a stop to things of this sort. This is an organization that will not be controlled by any fraternity or social organization. Politics and religion will not figure in it. It is a farmers' business organization purely and simply, and it must never be anything else if we want to accomplish the results that need to be accomplished.

One trouble at the present time is that this organization is not complete so far as state and national organization is concerned. Michigan has a state farm bureau association and if every state of the Union had as complete an organization as Michigan, with such a splendid business man as Roland Morrill as president, and these could be united into a strong national association which could put the cost of production before the people,

the consumer, the high court of public opinion, and then whisper back down the line to all the ramifications of the national farm bureau and associations that corn ought not to be sold at less than such and such a price, that oats ought not to be sold for less than such and such a price, if the farmers got the cost of production and a profit, those men who represent great wealth and control the prices of farmers' products would find that they would simply be up against a stone wall. The farmer would have control of the situation and could keep it if he did not ask anything only what was right and just. I believe this farm bureau movement is going to result in just such a beneficial business organization as this and that the farmers will have something to say with regard to the price of food products which they produce.

C. C. L.

## CORN PRODUCTS MONOPOLY DIS- SOLVED.

DISSOLUTION of the Corn Products Refining Company, which is required to sell to competitors before 1921 all but three of its manufacturing plants, was ordered by Federal Judge Learned Hand. The decree, following a dismissal by the Supreme Court a few hours earlier of the corporation's appeal from a previous judgment dissolving the concern, was the result of a compromise agreement between the defendant and the government, which charged that the company was a monopoly.

The decree was agreed upon in order to avoid long continuation of the litigation, whose initial step was a decision by Judge Hand in June, 1916, ordering dissolution of the company, which was a merger of several independent concerns. In view of the permission to retain the Argo, Pekin and Edgewater plants, he said, the directors considered the compromise judgment "a reasonably fair settlement," particularly as it did not destroy the organization nor take from the concern its trademarks.

The factories to be sold, he stated, would reduce the corporation's daily grinding capacity by 35,000 bushels.

The company owned one hundred per cent of the stock of its subsidiaries, manufacturers of candy, starch, glucose, and other corn products. The merger was effected in 1906. At that time the company's output was more than eighty per cent of the country's total, but it now is only fifty-eight per cent.

The subsidiary concerns include the National Starch Company, at Oswego, New York, and the Novelty Candy Company, with plants at Chicago and Jersey City. The other factories bear the name of the parent company. The original parties to the merger were the Corn Products, New York Glucose, Warner Sugar Refining and St. Louis Syrup and Preserving Companies.

Judge Hand's decree of 1916 entailed distribution of the corporation's properties among separate owners, in order to bring about resumption of competition among the several companies which it had absorbed. The court held that the Corn products concern was a combination in restraint of trade, that it had sold some of its products below cost to force losses upon its competitors and that it had influenced railroads to increase freight rates on commodities figuring in the industry, to the detriment of rival concerns.

The compromise decree, drafted jointly by counsel for the government and the corporation, requires that the five plants to be disposed of be sold to "actual" competitors.





#### BUILDING UP PERMANENT PASTURES.

**F**ERTILIZING pastures should be looked upon as a permanent investment, in a class with fences and buildings, rather than a reason for expecting full pay and a profit the season they are applied, says a department specialist. No system of farming maintains fertility, once in a soil, as does grazing with beef cattle or sheep. There are many pastures in the blue grass region which have been grazed continuously for from fifty to one hundred years and to all appearances are better than ever now.

Lime, phosphates and stable manure are the materials which give the best and most lasting benefits. They are also the cheapest fertilizing substances. A liberal use of these at the start is advisable rather than small applications at frequent intervals. Scattering a little seed among weeds and brush is usually a waste of time and money. The results obtained are not at all comparable to those where a seed-bed with fertilization has been prepared before seeding.

#### FERTILIZER FOR ASPARAGUS.

What is the best fertilizer for a four-year-old asparagus bed. The soil is sandy. J. A. D., Sr.

It was formerly believed that the use of common salt had a stimulating effect on the asparagus crop. Experience has shown, however, that kanit, the crude potash salt, which is one-third salt, though its market price is based solely on its potash, is the most economical way to apply the salt.

The use of a fertilizer containing nitrogen, four per cent; phosphoric acid, eight per cent, and potash, 12 per cent, should give good results on your sandy soil. Such a fertilizer should be applied at the rate of one thousand pounds per acre and thoroughly worked into the soil at the time of the setting of the crowns.

The best growers apply in addition two hundred pounds of nitrate of soda, three hundred pounds of acid phosphate and kanit, equal to one hundred and fifty pounds of actual potash. These amounts are minimum rather than maximum, as many growers find extra amounts profitable.

W. M. K.

#### PEAS AND OATS AS A SOILING CROP.

I am going to be short of pasture, and would like to put more of my pasture in crop. Would it pay me to plow up the pasture and depend on oats and Canadian peas, sown together? How would an acre of those peas compare in feeding value to June clover?

Huron Co.

L. T.

If you could get a good crop of peas and oats their feeding value would compare very favorably with a good crop of clover. As soon as they are large enough to cut you can soil the cows, that is, feed green stuff, and if the crop gets too far along you could harvest the rest and make it into hay. However, I would not advise plowing up all the pasture. Probably the feed we secure from pasture is cheaper than any feed we can get, taking the price of labor into consideration at the present time. Many practical farmers are considering the question of putting more of their land down to pasture because it takes much less labor.

C. C. L.

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Modern times demand modern methods—this is just as true in the hog raising industry as it is in the plowing of your fields or the cultivation and harvesting of your crops.

The old fashioned wasteful method of shoveling bushel after bushel of corn into the mud in the feed lot—much of it to be tramped into the ground—is no longer followed by the progressive hog raiser—it's too expensive. To get your hogs to market quicker with less feed and with least labor, try

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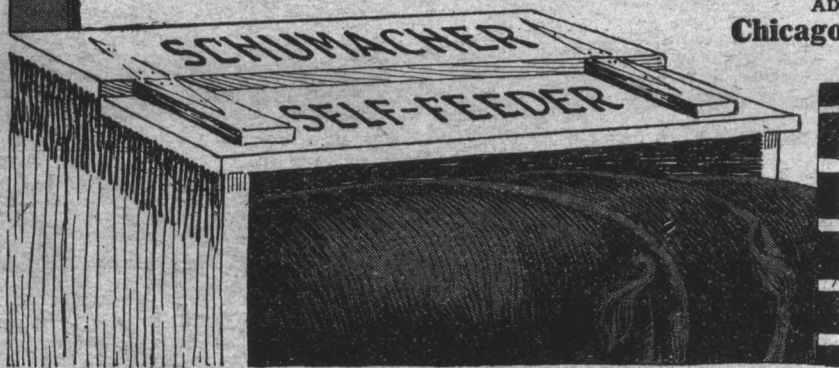
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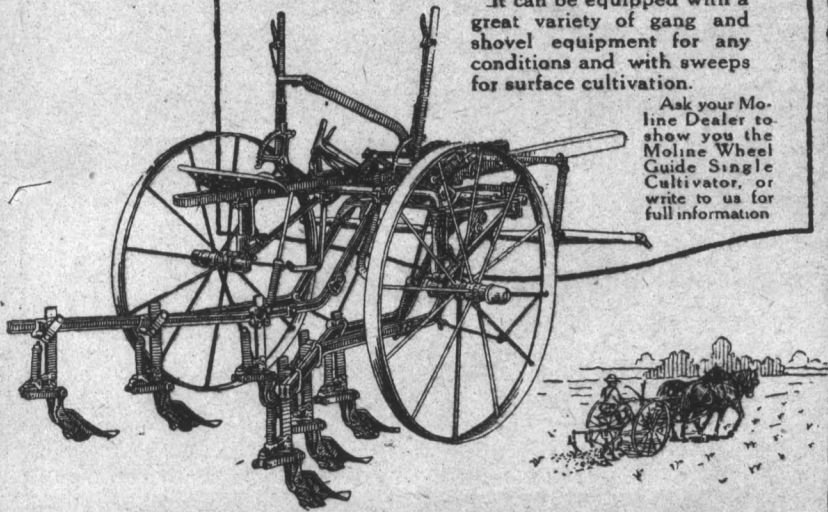
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## Our Service Department

### MEASURING HAY IN STACK.

What is the right way to find the number of tons of hay in a stack by measurement? I have a stack that measures fifty-two feet long, sixteen feet wide and thirty-five feet over, which I would like to know how many tons it has in it at 512 cubic feet to a ton.

A. B. C.

The common rule for measuring alfalfa hay in a stack of that shape is to multiply one-fourth of the "over" (8 1/4 feet) by the width (16x3 1/4=140), multiplied by the length (52x140=7,280 cubic feet). At 512 cubic feet to a ton this would equal 14 1/2 tons. Alfalfa hay that has settled six months should go 450 cubic feet to the ton, which would be sixteen tons.

### SEEDING ALFALFA.

I have five acres of wheat summer-fallowed and top-dressed with well rotted manure before sowing. I would like to get a catch of alfalfa on this. Would it be all right to inoculate seed and sow in the spring same as clover, then sow lime after wheat is taken off? It does not test sour. What do you think of billion-dollar grass as a hay crop; is it better than millet?

Hillsdale Co.

F. F.

As a general proposition you will find it safer to plow your land after harvesting the wheat crop, apply the lime, give it proper tillage and seed the alfalfa about the tenth of August.

Billion-dollar grass is inferior to millet as a feed for live stock. It is simply an overgrown type of Japanese millet or barnyard grass.

W. M. K.

### AMOUNT OF PEAS AND OATS TO SOW.

I am going to try Canadian field peas and oats, mixed equal parts by weight as he suggests, for hay. How shall I set the drill to get two and a half bushels of the mixture sowed? For instance, should the drill be set for three bushels of oats, or how?

Eaton Co.

S. K. B.

If you will mix the peas and oats equal parts by weight, and set your drill to sow two and a half bushels per acre of oats, you will get about the desired amount.

To produce a good crop of hay, oats and peas ought to be sown fairly thick; it makes better hay and you will get a larger yield. They ought to be a little thicker than they would be if you were raising them for seed. Many times when we grow a crop and get the seed too thick the yield of grain is limited on that account, but in this instance we are not waiting for the seed to fully develop before cutting it for hay and we can stand a heavier seeding with profitable results.

C. C. L.

### SEEDING SWEET CLOVER WITH RYE.

I would like a little advice on the following question: I have sowed five acres to fall rye. Now I would like to seed it with sweet clover this spring. Have just top-dressed it by hand with stable manure. Would you advise running the disc harrow with the discs straight and then seed and let the spring rains wash the seed in, or seed it and run it over with a spike-tooth drag? I thought with a drag it might drag the manure over the rye.

Leelenau Co.

SUBSCRIBER.

If you would sow the seed at once before the ground stops freezing and thawing, the action of the frosts on the soil would cover your seed. I think that is a splendid way to seed grass seed of any kind. A good way, however, on sandy soil is to do as you say, only I would sow the seed on and then run the disc over. This will cover some of the seed, or you can run the disc over, sow the seed and run the disc over again which would cover it.

The trouble is, if you harrow this land that has been top-dressed that you will bunch the manure as you say. The easiest way, and I think as good a way as any, is to sow the seed at once and trust to nature to cover it.

### WHY JOIN STATE FARM BUREAU?

(Continued from page 572).

same, and what the final profit will be.

"If we can have an economical production assured with a reasonable amount of profit, the labor situation would within a reasonable time adjust itself? Such conditions as the survey made in one of the best agricultural counties of our state last summer brought to light is not very encouraging to the average farmer. After allowing these farmers five per cent on their investment and two per cent up-keep on their farm buildings, they had less than one and one-half cents per hour left for their own labor and management.

"Labor is organized, capital is organized, in fact, every other important branch of industry is organized, why not the farmer?" Some reasons in the past have been, lack of finance. When you solicited the farmer for a dollar for his membership he immediately became suspicious, and justly so, for having been gold-bricked and high-browed so many times he became like the man from Missouri, you had to "show him."

"He became accustomed to following the regular routine from one year to the next, always living in hopes of something better. If he failed this year to accomplish his purpose he always hoped to do better next year, never giving thought that the condition under which he was living and laboring had anything to do about it.

"The farmers are already an organized force, they are going to take a stand for the Farm Bureau organization, with an honest price and a square deal. Or he will line up with the Non-Partisan League and selfish interests with class legislation.

"For months the old-time politician laughed at the fliver campaign, took it as a joke, but today they have a membership of over two hundred thousand with a political organization in thirteen states, represented in the United States Congress and complete control of the government of North Dakota. Through this organization North Dakota has become the most important political laboratory in the United States. It has been referred to as the political prairie fire, which is spreading all over the country.

"We surely do not wish such methods of dictatorship, which very closely approaches kaiserism. Ex-President William H. Taft predicts failure for the Non-Partisan League because it is a class movement and therefore un-American.

"We make this appeal to every farmer who cares for better living conditions, and wishes to see the whole agricultural structure building on a firmer foundation, to all other people who have the vision of a pure democracy, to support your community and county organization. For, through these, will our state organization be completed, and the foundation laid for the national organization.

"We appeal to the better part of man. Put your selfish interests one side. Although we may have been the under-dog, think that no one has really been to blame excepting ourselves. The business man, the laborer, the manufacturer, the miner, are all as necessary to our existence as our products are to his. Let us, therefore, get

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### SEEDING ALFALFA WITH BARLEY.

I have a piece of land of about three acres, one end of piece is a sandy loam and the other clay soil, and it is now a clover sod and I want to seed this to alfalfa as soon as practical. Thought I could plow early and put on from one to two tons of lime. Would you advise sowing one bushel of barley or oats to the acre and cut for hay or grain, or would you sow the alfalfa alone? How is the best way to sow the seed without a drill? Is the growing of soy beans in ensilage corn for the silo a success? Please publish a little information on this matter, such as time of planting and amount of seed to use, etc. G. N.

I think it would be somewhat difficult to get this clover sod in good condition for alfalfa this spring. Alfalfa wants a fine seed bed but the subsoil ought to be quite compact and there ought to be capillaries connected between the plow furrow and the subsoil. If this field had been plowed last fall it would have been in better condition in this respect. Plowing it this spring and rather hastily preparing a seed-bed leaves a too loose top soil with a rather faulty connection between the plow furrow and the subsoil. In other words, it is quite a job to roll and harrow clover sod plowed in the spring and get perfect capillary connection with the subsoil. It would take a lot of work and alfalfa needs just this sort of seed-bed. Of course, if we would have quite a wet summer, plenty of moisture, it wouldn't make very much difference, but on the other hand, if we had dry weather, especially following the seeding of alfalfa and barley, I think you would stand a poor show of getting a catch.

I would suggest that you defer your seeding of alfalfa until another year and I would plant this field to corn, putting on lime after the ground is plowed and working it in, giving it good cultivation to destroy the weeds, and then next spring without plowing I would use the disc and the spike-tooth harrow and roller to make a very fine, firm seed-bed and then seed to alfalfa with a light seeding of barley. It gives the alfalfa a much better chance if you will cut this barley early for hay, but ordinarily you can allow it to ripen if you wish to. Which ever way you do you should see to it that the seed are thoroughly inoculated with alfalfa bacteria.

I think one can safely say that the growing of soy beans in ensilage corn is satisfactory but one mustn't expect that he is going to get as heavy a crop of beans as he would if they were grown by themselves. It is satisfactory because you are getting the beans extra and if you don't get more than a third or half as much per acre as you would if grown by themselves it would be fully as profitable because it costs nothing to harvest them; they are grown on the same land with the corn and they are beneficial rather than detrimental to the corn. The beans should be planted at the same time as the corn. You must not allow the corn to come up and get started ahead of the beans because this will prevent the beans from getting a start. From four to six quarts of beans per acre will be about right. C. C. L.

The Sixty-fifth Congress did more to discourage government ownership than all the propaganda ever sent out by scheming stock and bond speculators. This was done when the most dignified body of that congress allowed the railroad appropriation bill, an emergency measure, the merits of which no party questioned, to fall into the gears of a party squabble and be destroyed. How shall government owned utilities be insured against such tactics?



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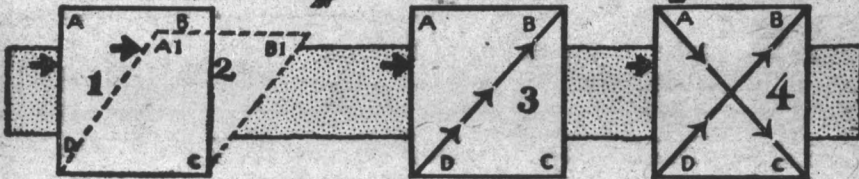
1/2 bu.	-	-	-	\$2.50
1 bu.	-	-	-	3.25
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## The A-B-C of The Cross Truss used in The Saginaw Liberty Silo.



When pressure is applied to any side of the above figure it changes shape, as shown by figure 2, indicating lack of strength.

Put a cross piece in the same figure as illustrated above and it's perfectly plain that any change in shape will be resisted. Pressure on one side AD creates a tension in the cross piece. A figure thus braced is stronger by far than No. 1.

But in figure 4 pressure is resisted equally on both sides, one truss with-stands compression, the other tension—the figure cannot change its shape.

This is the principle of the cross-truss as it is applied to bridges, steel towers, buildings of all kinds and to the Saginaw Liberty Silos—the greatest achievement in silo construction.

The series of cross-trusses in the Saginaw Liberty Silo start at the bottom, continuing to the top. The holding power of the base anchors extends to the top of the silo—so solid and perfectly anchored is this silo that no cable anchors are necessary. Pressure and shock are distributed throughout the entire structure. The Saginaw Liberty is solid, rigid and immovable.

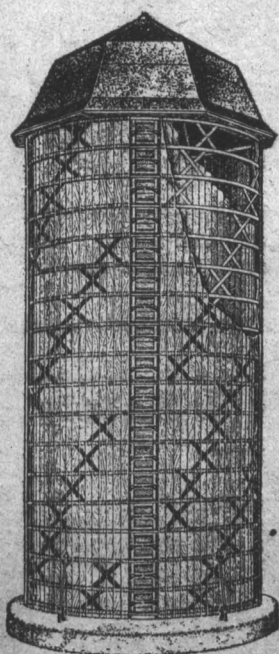
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## Shall Land Owners Pay all Taxes?

(Continued from last week).

As before stated, the state and county taxes are now assessed alike on both city and rural communities, and I am sure that the assessed valuation of the city of Detroit for the year 1918 is much larger than it could possibly be if the land values only were assessed. Mr. W. O. Hedrick, head of the Economic Department, M. A. C., tells us that personal property alone in 1917 paid over \$15,000,000 tax, and this personal tax was entirely outside and exclusive of all improvements in both country and city which Mr. Gage terms "man or labor values," and which under present tax system are now assessed with the land and help to raise our taxes, and according to Mr. Gage's statement, constitute ninety-five per cent of the source of all taxes now received from real estate, as he says a farm worth, or assessed at \$10,000 has land value of \$500 only, or five per cent, then the balance must represent ninety-five per cent, this would more than hold true in the city.

Mr. Gage refers to a farmer in Alberta on one hundred and sixty acres of a land value of \$500 only, who has buildings, and equipment valued at \$18,000, stock \$10,000, wheat crop all ready to harvest worth \$12,000, alfalfa \$2,500, and flax \$2,000, or a total valuation of "man or labor values" or personal property of \$44,500 on land value of \$500. (In this case, land values represent about one per cent and man values about ninety-five per cent). And this man pays a tax of \$35, and receives "social service" of privileges worth \$200. Who pays the other \$165? Someone must, as schools, bridges, roads, etc., are not built and maintained for nothing. In the beginning of his article Mr. Gage says a man should pay for what he receives. Does this man? No, according to Mr. Gage's own statement. Here is clearly a case where a "man gets something for nothing."

Now, for argument's sake, let us agree to take ninety-five per cent of the assessed valuation of rural districts and add it to the assessed valuation of cities and incorporated towns, (we all agree that we must keep up the total valuation, or else raise the rate), what will be the effect? Do we need cities and villages? I will quote Mr. Gage again: "The high rents of our cities have a ruinous effect on the city dweller's ability to purchase farm produce in the quantities he should, etc. Evidently Mr. Gage thinks that we do need cities. Does he think that doubling or tripling city taxes will lower rents? Would it not tend to raise rents and still further impair their ability to buy produce? In fact, would it not stop the growth of cities and villages? I quote again from Mr. Gage: "We should raise public revenue from the area benefited by social utilities and not from private production. If we follow this principle, it will relieve the farmers of a great burden they now carry and make the men pay who are in reality best able to pay, because they get the most from society." From this we infer that Mr. Gage thinks that the man in the city, who is buying a home for \$4,000, owing for the most of it, working in a factory, paying five cents each way for the privilege of riding to and from his work, and has the benefits of electric lights, water, gas, paving, sewers, and walks, only when he pays for them at a high price and in addition to his regular taxes, is better able to pay, not only his own tax, but also \$165 of the Alberta farmer's \$200 tax, than the Alberta farmer is to pay it himself. Do you think so? Undoubtedly the facts are that the man in the city has a hard time to live, and pay for his home, and either walks with his family on Sunday for an outing or

pays street car fare, while the farmer in Alberta owns his home, his auto, his auto truck and several teams of horses and wagons and receives much more use of social service than the city man, and is abundantly more able to pay his \$200 tax.

The more I read Mr. Gage's article, it sounds like the arguments used by certain elements found in every community that are continually asking for "something for nothing;" in some places they are called socialist, in others anarchists or I. W. W.'s, and in other places Bolsheviks. I do not believe the farmers of Michigan want to be classed as such. If we could be shown that a change to a single tax system would give us the same public improvements and social service we are now getting, at a less cost, or lighter taxation, we would all be interested in it; but if it would not decrease the entire cost, but simply result in taking a part of the expense voted by the people of a certain community for social service in that community and spread it upon a people in another community, not particularly benefited, then I for one, feel it to be unjust and unfair and un-American and I believe it would result only in trouble and disappointment.

Let me quote another paragraph of Mr. Gage's: "What is the fruit of this evil tree that we have planted and nourished all these years? Idle men, and idle capital, low wages and low interest, the streets filled with beggars, the homes of the workers with poverty, the lives of business men and hard-working farmers, with care." Does this describe true conditions in Michigan today? It does not. It was never more untrue than today. Now, let us keep the issue clear and not become befogged by insinuations, or careless statements, or inconsistent illustrations. We as farmers do feel that our taxes are reaching an alarming amount, and that they are becoming a burden hard to bear, but is it because of our present plan of assessing taxes? If not, then we will not blame our present tax system. Is it because of the class of officials whom we elect to handle and expend large amounts of our monies placed in their hands? Do we always get "value received" in the expenditure of our tax money for public improvements? Do we get one hundred cents on the dollar from our public servants in service? I am inclined to think not, and in my judgment, these are some of the reasons for our high taxes.

I think I see a new day dawning for the farmer. We are organizing and acting concertedly more than ever before and we can do, and are doing, greater things in a public way, than ever before. We can, if we will, handle this tax matter, as four-fifths or more of our taxes are spent right in our own townships. We vote them or they would not be raised. When we get value received for our tax money and we know it, we do not "kick." Then, first let us know whether or not we are getting value received; then if we are, don't kick. If we are not, let's kick the right official until we do get what we pay for and not try to shift the burden we are responsible for onto the shoulders of one not responsible, and often less able to pay than we are.

I do not know if this article has been interesting, or of any use to you, reader; but I can assure you that the study and preparation of it has firmly convinced me that I cannot look to the "Single or Site Tax" as a panacea for our tax burden, but I have faith that in the very near future we farmers will be able to set in motion some force that will change very materially for the better, our present very perplexing tax problem.

When You Write to Advertisers Please Mention This Paper.





## KILL THE POTATO BUG EARLY.

KILL the Colorado Potato Beetles, or potato "bugs," early in the season before they start raising their family of hungry little buglets. The parent beetles spend the winter months in the ground at a depth of from two to several inches. These emerge in the spring about the time the potato plants come through the ground. Early in spring they may be seen flying through the air looking for a suitable place in which to lay their eggs. They feed on practically all plants of the potato family, attacking potato, tomato, eggplant, ground cherry and jimson weed, as well as other weeds of this family. The female deposits her eggs on the under side of the leaves. These eggs are yellow in color and are laid on end, in bunches. A single female is capable of producing between eighteen and nineteen hundred eggs. As soon as these hatch the small larvae or "slugs" feed on the plant until full grown, when they drop to the ground and enter the soil where they change to a naked, yellowish colored pupae. Within a short time these pupae change into the hard-shell beetles. These climb out and begin eating the leaves of the plant along with the larvae. These insects eat a quantity of food out of all proportions to their size.

It has been estimated that the potato crop of the country is reduced each year more than one hundred million bushels as a result of attacks by insects and diseases. If spraying were not practiced at all this figure would be much larger. The total number of bushels lost every year to the above two causes can be considerably reduced by the right methods of spraying. Nearly every community, where potatoes are grown, contains those who either do not spray at all or else do not spray as thoroughly as they should. Think of the female beetle with her eighteen hundred eggs and spray early before they hatch and the young begin to satisfy their enormous appetites.

## Control Measures.

The Colorado potato beetle is not a difficult insect to control if begun in time. The use of a good arsenical, properly applied, will keep this pest from doing very much damage. Spraying should begin when the plants are about six or eight inches high and should be repeated about every two weeks as long as the plants are growing. During the past few years arsenate of lead, or lead arsenate, has been the most universally used poison, supplanting Paris green. It has the advantage of containing less soluble arsenic, and it is this latter which causes the burning of the foliage. The lead arsenate will also stick much better and be less liable to be washed off. Calcium arsenate, or arsenate of lime, is now being put on the market and is a very good poison for the potato "bugs." It is cheaper than arsenate of lead and requires less of the poison to do the same work. This poison can be applied with water or else put right in the Bordeaux mixture. The Kedzie mixture is a good reliable spray and can be made very cheaply. Formulas for making this poison are contained in all of the spray bulletins of the state.

DON B. WHELAN.

Export buyers are little in evidence in the canned goods market and are apparently still waiting for steamship space before placing their orders for more goods.

The War Department announces the release to the Department of Agriculture of 150,000 tons of nitrate of soda for use as fertilizer. The chemical was purchased for use in making high explosive shells.

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THERE is frequently a difference of from \$4 to \$10 per ton between choice hay and hay that grades No. 3. It is to your interest to raise the best grade of hay possible. You can do this by applying the Dain System of air-curing hay. This requires only the use of the Dain System Rake.

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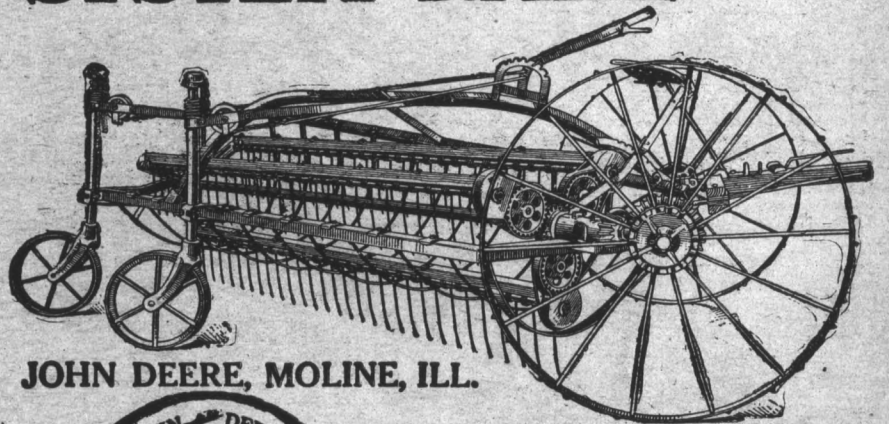
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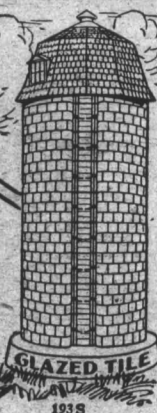
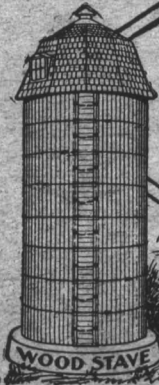
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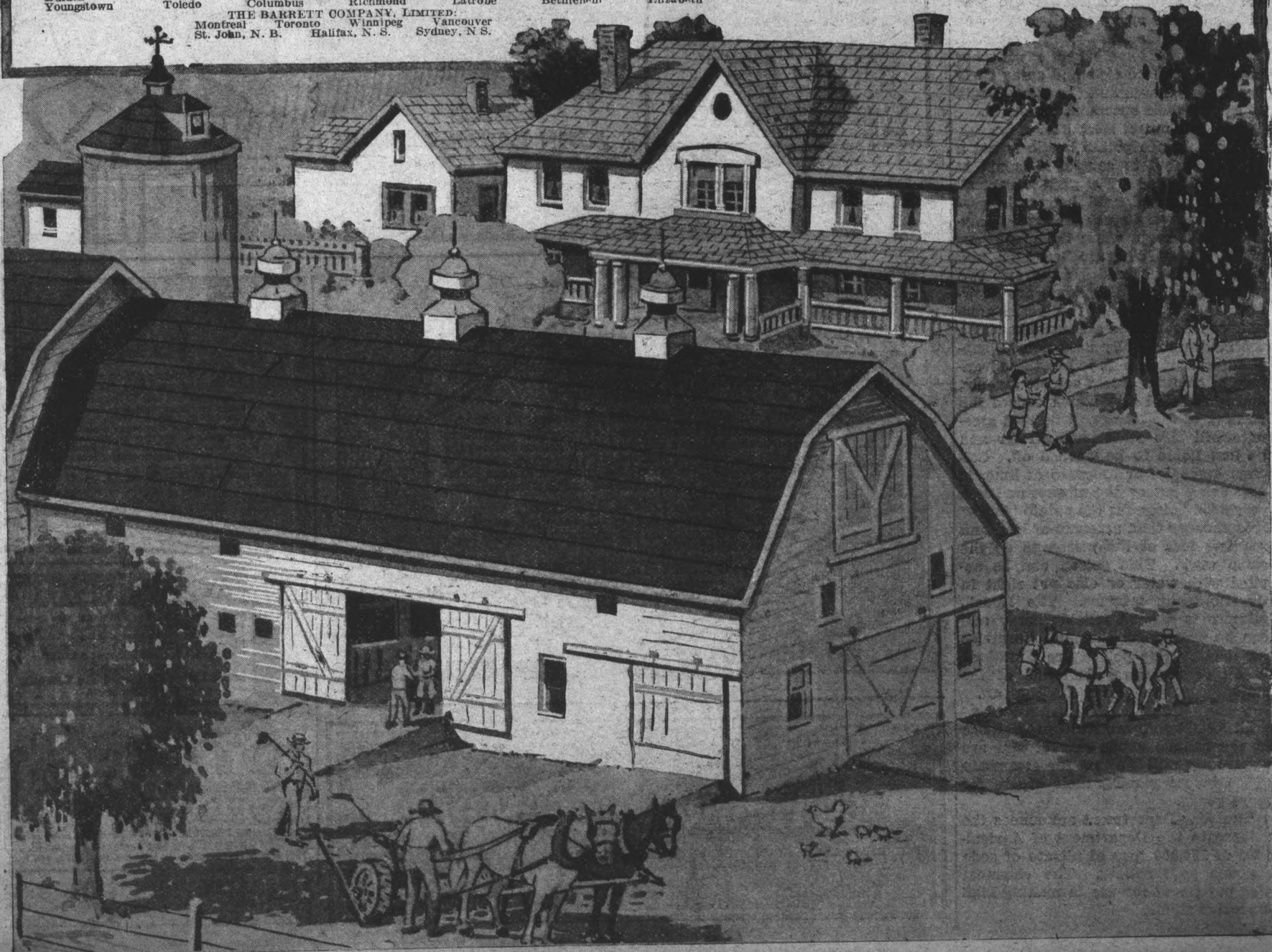
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# WORLD EVENTS IN PICTURES



She will Attempt to Make Japan "Bone Dry." The Photo is of Mrs. Yakima, who Founded the Women's Christian Temperance Union in Japan.



Mary, Queen of Rumania, Visits the Ruins of Historic Noyon, upon her Recent Visit to the French Fighting Front. There is a Possibility of the Queen Paying a Visit to the United States in the Near Future.



Looks Comfortable, Doesn't he? Nevertheless Premier Clemenceau is Eager to be up and about. Photo taken Five Days After he was Shot.



First Continental Hospital Train Conveys Wounded Soldiers to their Home Towns. The Red Cross Attendants Accompany each Train and Remain there, Distributing Cigars, Cigarettes, Magazines and Newspapers, and look after the Boys' Comfort Generally.



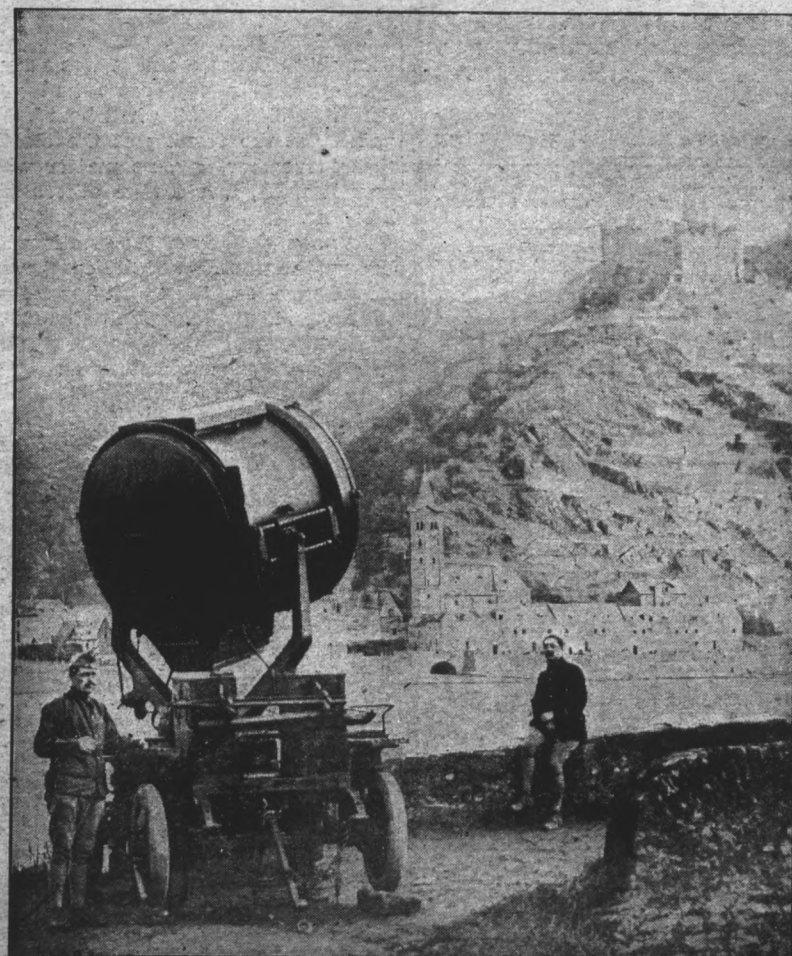
Yes, we'll Take One, Mr. Glass, About April 21. The Photo Shows Secretary of the Treasury, Carter Glass, as he is Removing the First Victory Loan Bond from the Press. To the Right in the Rear of the Lady is Director of Engineering and Printing, James L. Wilmeth.



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The Monster Searchlight, Manned by the French, on the Rhine North of the Village of St. Coar, Facing the Historic Village of Wellnich, and Throwing into Brilliant Illumination at Night, the old Mouse Castle.



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seems to meet the requirements, as it was established at the right time and is now starting its fifth year of successful business. It has issued since its organization 43,000 policies and settled 1,420 claims; has a cash surplus on hand of \$65,000.

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If you have an automobile accident in which a person is either seriously injured or killed, you will want the protection of a company that has had experience in handling these matters and has sufficient money on hand to pay the claim at once if just and fair, or to defend you against the unreasonable claim. No other mutual company in the State of Michigan is prepared with the organization or cash assets to take care of the serious claims. Investigate before you take the insurance, and you will insure in the **BIG PIONEER MUTUAL.**

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# The Stingers By Earl R. Rice

**A**TENSE silence filled the room when Mrs. Morrison arose and announced that the moment had arrived for the election of officers. The other business of the Blandon Church Ladies' Society had been but preliminary to this, the really outstanding event of the year. Every lady member but two had answered "Present," at roll-call. No one on the list would have willingly absented herself from this annual meeting.

The exceptionally fine reports had elicited only feeble applause, although the Bazaar committee had out-done previous years. Calling committee, civics and reform, literature and tracts, committees special and committees standing, as well as secretary and treasurer had all felt themselves hopelessly in the background of interest on that day, however important at other times. For in this meeting, as in former years, the society was to determine its leadership for the next twelve months.

The turn of the election meant either victory or defeat to its two well defined factions, accordingly as it inclined in one or the other direction. No one could have told just how the factions came to be, but as to their reality all could testify.

Ordinarily victory or defeat for either party meant little more than a new distribution of honors or minor offices. As a matter of fact, the winning party must accept responsibility for work done. And thus far nothing very serious had come from the strife, if a few "injured feelings," or "insulted intentions," might be excepted. But this year it was different.

Since its history began Blandon had boasted of but one church. The "Old Church" had satisfied all longing hearts and filled all prayerful aspirations. The good "Old" pastor had given counsel and comfort to all, and the activities of the "Old Church" had been the channels through which the outward expression of the religious life of the town had flown. One might as well have become a barbarian, and would probably have been considered worse than a heathen, if he had gone elsewhere. For there had been no other place to go heretofore.

But now all was changed. A "New Church" had come and it was easy to "go over." Indeed, some had gone. And the "Old" pastor had heard, with pain, that the turning of the election that November day, no matter which way it went, would take others from his care.

At noon, the day of the meeting, Mrs. Brown, the mistress of the comfortable farm-house on the outskirts of the town, in which the annual meeting was to be held, had voiced to her husband her despair over the situation.

"I do wish something would turn up to bring us to our senses today," she said. "But goodness only knows what it could be."

Shrewd John Brown pushed back his plate and reflected a moment, before answering.

"How would it do for all of you to forgive and forget?" he suggested.

"But how could we?" she returned. "A part of us might forgive but nobody could possibly forget the way those folks have acted. Why, last year—"

"Yes, yes, I know," said John, who had heard the story many times. And then he finished rather hopelessly, "You might begin by trying."

Mrs. Brown said nothing.

"At any rate I'll put on a good fire in the furnace for you before I go to work," her husband said, "I must hurry, too, for we must finish picking those late apples."

"By the way," he called back as he went out, "if any children come send

them down to the orchard. That may help you some."

Good as his word he put an extra shovelful of coal into the furnace and carefully adjusted the drafts and dampers. The short days of late November were fast putting chill into the air and down in the orchards the frost lingered all day.

By two o'clock the ladies had begun to arrive. Mrs. Brown greeted all alike, as a courteous hostess should, and tactfully guided those friendly to each other to the same upper room to put aside wraps, and afterward to places congenial in the spacious rooms below. To her delight all went along smoothly. She was a little dismayed when she saw that Mrs. Morrison had brought her hopeful son Jimmy, a lad of nine years and in high reputation for mischief. Thankfully she recalled her husband's invitation to send the children down to the orchard and availed herself of it.

And thus events had run on to the moment announced in the first paragraph.

After the preliminary motion that the society proceed with the election of officers there came a little pause. Mrs. Brown glanced over the assembled company and noted that though the lines of opposition were rather closely drawn there still existed a little uncertainty as to the result of the voting.

Some old members had dropped out during the year and several new ones had come in. Just how these new ones would vote no one could tell, though both sides claimed them.

"Are there any nominations for president?" asked Mrs. Morrison, the chairman, herself an active partisan. She

## THE TREE.

BY JOYCE KILMER.

Who Gave His Life in France.

I think that I shall never see  
A poem lovely as a tree.

A tree whose hungry mouth is prest  
Against the earth's sweet flowing breast.

A tree that looks at God all day  
And lifts her leafy arms to pray

A tree that may in summer wear  
A nest of robins in her hair;

Upon whose bosom snow has lain,  
Who intimately lives with rain.

Poems are made by fools like me,  
But only God can make a tree.

knew very well that she was to receive this honor from one of her followers. Nor was she disappointed.

But scarcely was her name put in nomination than a lady of the opposition named Mrs. Benjamin, her closest rival, for the same honor. The battle was on.

The candidates were both estimable women. Had not fate—or something else—put them into rival camps they would have been, doubtless, warm friends and co-workers. Each secretly admired the other, and, perhaps—who can tell—could pride and stubborn self-will be put aside, each would have gladly dropped all differences. So near do fine folks get to harmony and goodwill—and yet stay so far apart. Mrs. Morrison and Mrs. Benjamin had not worked together for years.

With nominations closed balloting should have followed immediately. Mrs. Brown prayed fervently that it might be so. But, no. One of Mrs. Morrison's supporters claimed the floor on a question of privilege and bluntly challenged the election of Mrs. Benjamin on the ground that she had

heard that in the event of defeat Mrs. Benjamin's faction would go over to the "New Church" in a body. All this was hotly denied and Mrs. Morrison's good faith attacked in return.

Just as the discussion promised to become warm there came a momentary diversion. Jimmy Morrison ran excitedly into the room with a prize in his hand.

Out in the orchard the men had found a huge hornets' nest high up on an apple tree branch and had given it to him. More than a foot in diameter, its cone shape, cunningly devised, had been the home of a vigorous colony during the summer. But the inhabitants were now probably scattered far, and cold and lifeless.

Now Jimmy had often heard his Uncle Jack, who lived in the city, say that he would like one of these cones for decorating his den. He had even offered Jimmy a dollar to find him one.

Jimmy ran straight to his mother who stood near the center of the room. "Here, mother," he said, "keep this for me 'till we go home."

With a sigh of relief, for she had expected some teasing request, Mrs. Morrison took the beautiful cone and held it a moment in her hand. As Jimmy went out she turned and hung it on the chandelier at the side of the room.

But the diversion had had its effect. The talk momentarily subsided and the tellers soon were busy counting the ballot. It proved a tie. Another ballot was ordered.

Thanks to John Brown's furnace the room was warm. If the ladies noticed it, however, they gave little sign of the fact. But up near the ceiling the warm air pressed and there presently produced some startling effects.

It is a fact in nature that hornets and yellow-jackets are numbed by the first cold nights of autumn. Later they revive and for a few warm days are active. As the cold increases most of them in a colony die, and only a few survive the winter to reproduce their kind.

In Jimmy's cone the hornets were by no means lifeless, though completely chilled. As they hung in the overheated atmosphere they came back to life—back to summer days and stirring activities.

Had the ladies of the society been less occupied with other things, they would have noted a gentle hum that presently proceeded from the cone. But while the tellers counted the second ballot the chatter of many tongues arose.

"Br-r-r-r, hm-m-m-m-mm."

The tellers finished their counting and gathered the ballots in two places.

"Buz-z-zzzzz, buz-z-zzzzzz."

"Are the tellers ready to report?"

"We are," was the response.

"Buzzzzz-zzzzz::zzz-z-zzzzz," said the hornets.

"We will listen to the result of the ballot," said the chairman.

One of the tellers arose, cleared her throat, and began—but she never finished her report.

At that moment a very much alive yellow-jacket poised in the entrance to the cone, and with a note clearly audible throughout the room launched out toward the nearest resting place, which happened to be Mrs. Morrison's devoted head. Other yellow streaks followed him. Hither and yon they flew, and wherever they lighted a wild waving of hands beat the air. Timid ladies screamed and dodged. Pandemonium ensued. Rout indescribable followed.

Out of the room the ladies fled, each bent on seeking friendly cover.

A door in the hall stood open and into it plunged Mrs. Benjamin. Mrs. Morrison followed her and as the door



slammed shut they were in total darkness.

"O, dear, what shall I do?" shrieked the former.

"O, please take that thing out of my hair," wailed the latter.

With mutual assistance they found and crushed their tormenters. And then as silence reigned outside they ventured to open the door a crack and peer out. While they hesitated valiant Mrs. Brown, with a fly swatter in either hand, came back to combat the hornets. Others came, too, and with windows open waged a brave fight. Presently every member was in the midst of the conflict.

Many hornets died in battle and the rest were driven outside and gassed by the cold.

When the victory was complete the ladies looked a moment at each other. Everywhere was the disorder of strife and here and there a swelling casualty. Then someone laughed.

A perfect storm of merriment broke loose. It continued till the last bitter feeling in the society had vanished.

With order restored Mrs. Morrison made a new kind of speech.

"Ladies," she said, "this is the first fight in a long time in which we have all been on the same side. From now on let's have but one side in this society."

Mrs. Benjamin led in vigorous applause. After that it did not seem to matter which way the election went.

## "By the Way"

### THE LIKENESS.

"Success is like a cherry pie,"  
The sage old farmer said.  
"I've never known the time when you  
Could pick it ready made."

### VERY PROMISING.

They had just become engaged.  
"What joy it will be," she exclaimed,  
"for me to share all your griefs and  
sorrows."  
"But, darling," he protested, "I have  
none."  
"Perhaps not now," she answered,  
"but when we are married you will  
have."

### A BREAK.

Farmer—"Do you mean to say that  
it has taken you a whole day to do  
that?"

Hired Man—"There's no such thing  
as a whole day; it always begins by  
breaking."

### HOW IT HAPPENED.

Owner—"How did you come to puncture  
the tire?"  
Chauffeur—"Ran over a milk bottle."  
Owner—"Didn't you see it in time?"  
Chauffeur—"No; the kid had it under  
his coat."

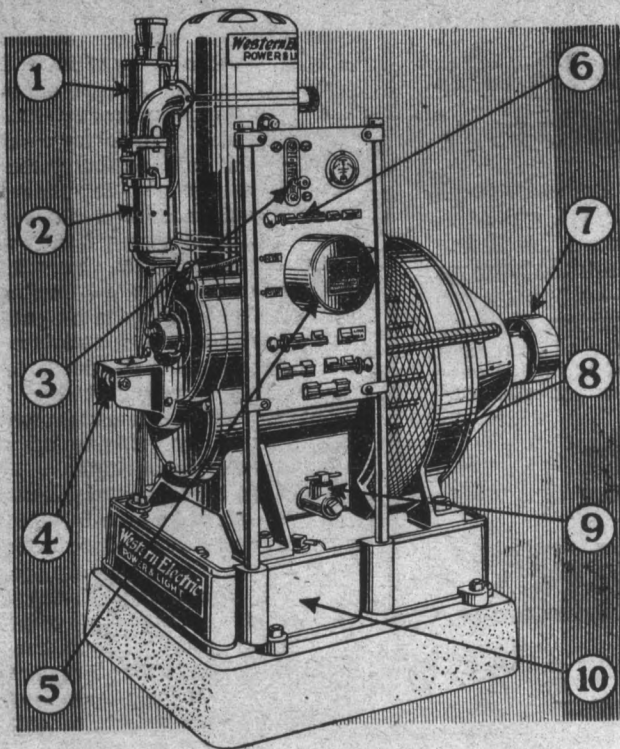
### PLAYING THE MARKETS.

"My wife watches the sugar market  
closely."  
"Speculating?"  
"In a small way. She borrows when  
it's high and pays back when it's low."

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hardly a success. The darky who first  
sallied forth with the stool returned,  
bruised and battered, and with an empty  
pail. "I done my best, sah," he explained,  
"Dat stool looked all right to  
me, but de blamed cow she won't sit  
on it."

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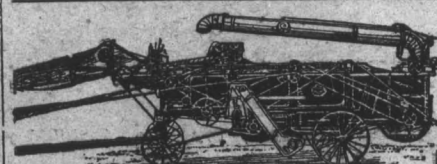
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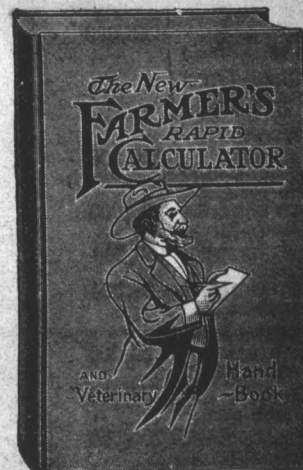
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## "Beyond the Frontier"

"You would have us desert you?" answered shortly. "I take my chance, but shall not be far behind."

We clasped hands, and then, as Barbeau advanced to the corner, I followed, my only thought now to do all that was required of me. I did not glance backward, yet was aware that De Artigny was close behind. My heart beat fiercely, but I was not conscious of fear, although a moment later, I could perceive the dim figures of savages. They were but mere vague shadows in the night, and I made no attempt to count them, only realizing that they were there grouped together in the trail. I could not have told how they faced, but there was a faint sound of guttural speech, which proved them unsuspecting of danger. Barbeau, lying low like a snake, crept cautiously forward, making not the slightest noise and closely hugging the deeper shadow of the bank. I endeavored to imitate his every motion, almost dragging my body forward by gripping my fingers into the rock-strewn earth.

We advanced by inches, pausing now and then to listen breathlessly to the low murmur of the Indian voices, and endeavoring to note any change in the posture of the barely distinguishable figures. There was no alarm, no changing of places, and the success of our approach brought to us new confidence. Once a savage form, appearing grotesque in its blanket suddenly stood erect, and we shrunk close to the ground in terror of discovery. An instant of agony followed, in which we held our breath, staring through the dark, every nerve throbbing. But the fellow merely stretched his arms lazily, uttered some guttural word, and resumed his place.

Once the gleam of a star reflected from a rifle barrel as its owner shifted position; but nothing else occurred to halt our steady advance. We were within a very few yards of them, so close indeed, I could distinguish the individual forms, when Barbeau paused, and, with deliberate caution, rose on one knee. Realizing instantly that he was preparing for the desperate leap, I also lifted my body, and braced myself for the effort. De Artigny touched me, and spoke, but his voice was so low it scarcely reached my ears. "Do not hesitate; run swift and straight. Give Barbeau the signal."

What followed is to me a delirium of fever, and remains in memory indistinct and uncertain. I reached out, and touched Barbeau; I heard the sudden roar of De Artigny's voice, the sharp report of the soldier's rifle. The flame cut the dark as though it was the blade of a knife, and, in the swift red glare, I saw a savage fling up his arms and fall headlong. Then all was chaos, confusion, death. Nothing touched me, not even a gripping hand, but there were Indian shots, giving me glimpse of the hellish scene, of naked bodies, long waving hair, eyes mad with terror, and red arms brandished, the rifles they bore shining in the red glare.

I saw Barbeau grip his gun by the barrel and strike as he ran. Again and again it fell crunching against flesh. A savage hand slashed at him with a gleaming knife, but I struck the red arm with my pistol butt, and the Indian fell flat, leaving the way open. We dashed through, but Barbeau grasped me, and thrust me ahead of him, and whirled about, with uplifted rifle to aid De Artigny who faced two warriors naked knife in hand.

"Run Madame, for the fort," he shouted above the uproar. "To my help Barbeau!"

**CHAPTER XXV.  
Within the Fort.**

I DOUBT if I paused a second, yet that was enough to give me glimpse of the weird scene. I saw De Artigny lunge with his knife, a huge sav-

age reeling beneath the stroke, and Barbeau cleave passage to the rescue, the stock of his gun shattered as he struck fiercely at the red devils who blocked his path.

Outnumbered, helpless for long in that narrow space, their only hope lay in a sortie by the garrison, and it was my part to give the alarm. Even as I sprang forward, a savage leaped from the rock, but I escaped his hand, and raced up the dark trail, the one thought urging me on. God knows how I made it—to me 'tis but a memory of falls over unseen obstacles, of reckless running; yet the distance could have been scarce more than a hundred yards, before my eyes saw the darker shadow of the stockade outlined against the sky.

Crying out with full strength of voice I burst into the little open space, then tripped and fell just as the gate swung wide, and I saw a dozen dark forms emerge. One leaped forward and grasped me, lifting me partly to my feet.

"Mon Dieu! a woman!" he exclaimed in startled voice. "What means this, in Heaven's name?"

"Quick," I gasped, breaking away, able now to stand on my own feet. "They are fighting there—two white men—De Artigny—"

"What, Rene! Ay, lads, to the rescue. Cartier, take the lady within. Come with me you others."

They swept past me, the leader well in advance. I felt the rush as they passed, and had glimpse of vague figures ere they disappeared in the darkness. Then I was alone, except for the bearded soldier who grasped my arm. "Who was that?" I asked, "the man who led?"

"Boisrondet, Francois de Boisrondet."

"An officer of La Salle's? You then are of his company?"

"I am," a bit proudly, "but most of the lads yonder belong with De Baugis. Now we fight a common foe, and forget our own quarrel. Did you say Rene de Artigny was in the fighting yonder?"

"Yes; he and a soldier named Barbeau."

The fellow stood silent, shifting his feet.

"'Twas told us he was dead," he said finally, with effort. "Some more of La Barre's men arrived three days ago by boat, under a popinjay they call Cassion, to recruit De Baugis' forces. De la Durantaye was with him from the portage, so that now they outnumber us three to one. You know this Cassion, Madame?"

"Ay, I traveled with his party from Montreal."

"Ah, then you will know the truth no doubt. De Tonty and Cassion were at swords points over a charge the latter made against Rene de Artigny—that he had murdered one of the party at St. Ignace."

"Hugo Chevet, the fur trader."

"Ay, that was the name. We of La Salle's company know it to be a lie. Sacre! I have served with that lad two years, and 'tis not in his nature to knife any man in the back. And so De Tonty said, and he gave Cassion the lie straight in his teeth. I heard their words, and but for De Baugis and De la Durantaye, Francois Cassion would have paid well for his false tongue. Now you can tell him the truth."

"I shall do that, but even my word, I fear, will not clear De Artigny of the charge. I believe the man to be innocent; in my heart there is no doubt, yet there is so little to be proven."

"Cassion speaks bitterly; he is an enemy."

"Monsieur Cassion is my husband," I said regretfully.

"Your pardon, Madame. Ah, I understand it all now. You were supposed to have been drowned in the great lake, but were saved by De Artigny."



"Twill be a surprise for Monsieur, but in this land, we witness strange things. Mon Dieu! see, they come yonder; 'tis Boisrondet and his men."

They approached in silence, mere shadowy figures, whose numbers I could not count, but those in advance bore a helpless body in their arms, and my heart seemed to stop its beating, until I heard De Artigny's voice in cheerful greeting.

"What, still here, Madame, and the gate beyond still open," he took my hand, and lifted it to his lips. "My congratulations; your work was well done, and our lives thank you. Madame Cassion, this is my comrade, Francois Boisrondet, whose voice I was never more glad to hear than this night. I commend him to your mercy."

Boisrondet, a mere shadow in the night, swept the earth with his hat.

"I mind me the time," he said courteously, "when Rene did me equal service."

"The savages have fled?"

"'Twas short, and sweet, Madame, and those who failed to fly are lying yonder."

"Yet some among you are hurt?"

"Barbeau hath an ugly wound—ay, bear him along, lads, and have the cut looked to—but as for the rest of us, there is no serious harm done."

I was gazing at De Artigny, and marked how he held one hand to his side.

"And you, Monsieur; you are unscathed?"

"Except for a small wound here, and a head which rings yet from savage blows—no more than a night's rest will remedy. Come, Madame, 'tis time we were within, and the gates closed."

"Is there still danger then? Surely now that we are under protection there will be no attack?"

"Not from those we have passed, but 'tis told me there are more than a thousand Iroquois warriors in the valley, and the garrison has less than fifty men all told. It was luck we got through so easily. Ay, Boisrondet, we are ready."

That was my first glimpse of the interior of a frontier fort, and, although I saw only the little open space lighted by a few waving torches, the memory abides with distinctness. A body of men met us at the gate, dim, indistinct figures, a few among them evidently soldiers from their dress, but the majority clothed in the ordinary garb of the wilderness. Save for one Indian squaw, not a woman was visible, nor did I recognize a familiar face, as the fellows, each man bearing a rifle, surged about us in noisy welcome, eagerly questioning those who had gone forth to our rescue. Yet we were scarcely within, and the gates closed, when a man pressed his way forward through the throng, in voice of authority bidding them stand aside. A blazing torch cast its red light over him, revealing a slender figure attired in frontier garb, a dark face, made alive by a pair of dense brown eyes, which met mine in a stare of surprise.

"Back safe, Boisrondet," he exclaimed sharply, "and have brought in a woman. 'Tis a strange sight in this land. Were any of our lads hurt?"

"None worth reporting, Monsieur. The man they carried was a soldier of M. de la Durantaye. He was struck down before we reached the party. There is an old comrade here."

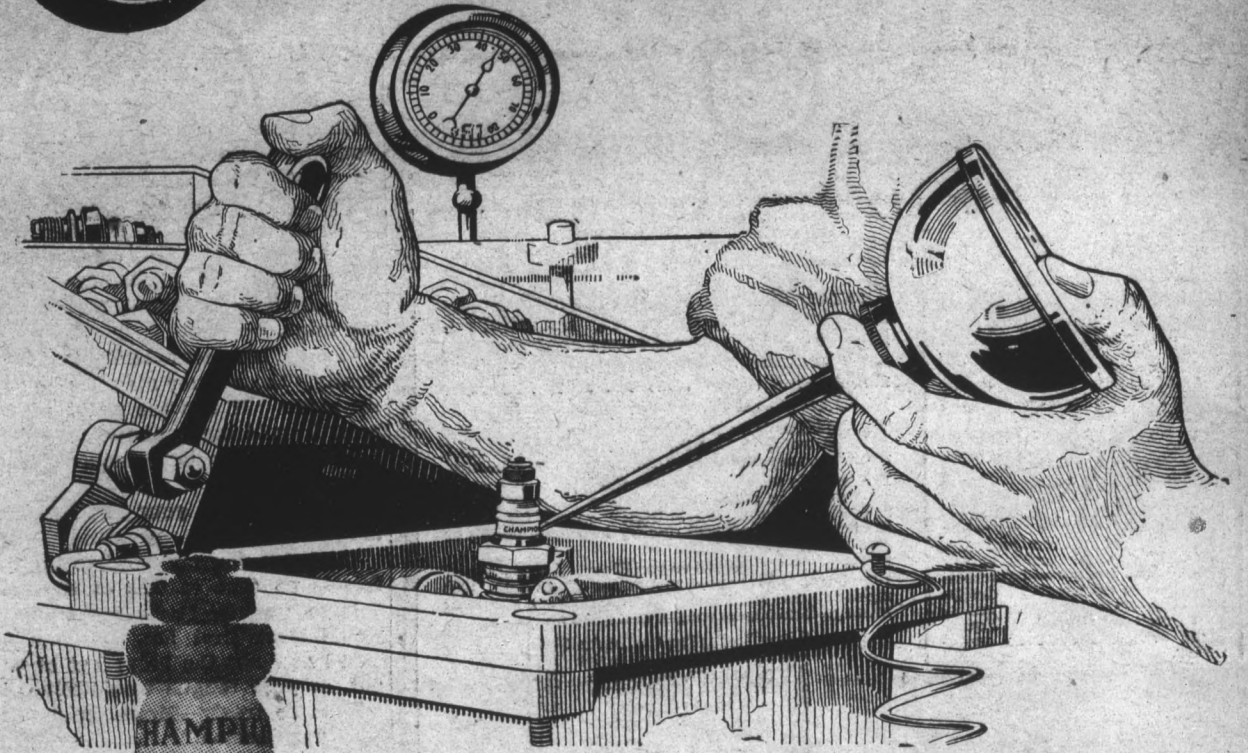
"An old comrade! Lift the torch, Jacques. Faith, there are so few left I would not miss the sight of such a face."

He stared about at us, for an instant uncertain; then took a quick step forward, his hand outstretched.

"Rene de Artigny!" he cried, his joy finding expression in his face. "Ay, an old comrade indeed, and only less welcome here than M. de la Salle himself. 'Twas a bold trick you played tonight, but not unlike many another (Continued on next page).



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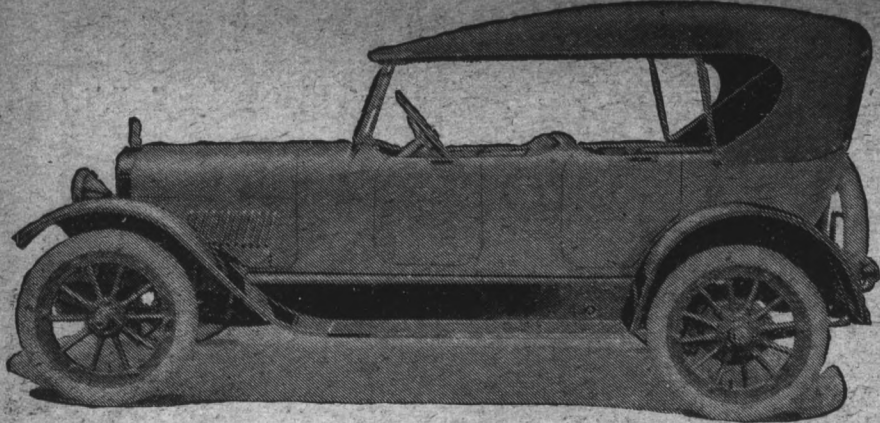
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I have seen you venture. You bring in the dim light, his face flushed from me message from Monsieur."

"Only that he has sailed safely for France to have audience with Louis. I saw him aboard ship, and was bidden to tell you to bide here in patience, and seek no quarrel with De Baugis."

"Easy enough to say; but in all truth I need not seek quarrel—it comes my way without seeking. De Baugis was not so bad—a bit high strung, perhaps, and boastful of his rank, yet not so ill a comrade—but there is a new-comer here, a popinjay named Cassion, with whom I cannot abide. Ah, but you know the beast, for you journeyed west in his company. Sacre—the man charged you with murder, and I gave him the lie to his teeth. Not two hours ago we had our swords out, but now you can answer for yourself."

De Artigny hesitated, his eyes meeting mine.

"I fear, Monsieur de Tonty," he said finally, "the answer may not be so easily made. If it were point of sword now, I could laugh at the man, but he possesses some ugly facts difficult to explain."

"Yet 'twas not your hand which did the deed?"

"I pledge you my word to that. Yet this is no time to talk of the matter. I have wounds to be looked to, and would learn first how Barbeau fares. You know not the lady; but of course not, or your tongue would never have spoken so freely—Monsieur de Tonty, Madame Cassion."

He straightened up, his eyes on my face. For an instant he stood motionless; then swept the hat from his head, and bent low.

"Your pardon, Madame; we of the wilderness become rough of speech. I should have known, for a rumor reached me of your accident. You owe life, no doubt, to Sieur de Artigny."

"Yes, Monsieur; he has been my kind friend."

"He would not be the one I love else. We know men on this frontier, Madame, and this lad hath seen years of service by my side." His hand rested on De Artigny's shoulder. "'Twas only natural then that I should resent M. Cassion's charge of murder."

"I share your faith in the innocence of M. de Artigny," I answered firmly enough, "but beyond this assertion I can say nothing."

"Naturally not, Madame. Yet we must move along. You can walk, Rene?"

"Ay, my hurts are mostly bruises."

The torches led the way, the dancing flames lighting up the scene. There was hard, packed earth under our feet, nor did I realize yet that this Fort St. Louis occupied the summit of a great rock, protected on three sides by precipices, towering high above the river. Sharpened palisades of logs surrounded us on every side, with low log houses built against them, on the roofs of which riflemen could stand in safety to guard the valley below.

The central space was open except for two small buildings, one from its shape a chapel, and the other, as I learned later, the guardhouse. A fire blazed at the farther end of the enclosure, with a number of men lounging about it, and illumined the front of a more pretentious building, which apparently extended across that entire end. This building, having the appearance of a barrack, exhibited numerous doors and windows, with a narrow porch in front, on which I perceived a group of men.

As we approached more closely, De Tonty walking between De Artigny and myself, a soldier ran up the steps and made some report. Instantly the group broke, and two men strode past the fire and met us. One was a tall, imposing figure in dragoon uniform, a sword at his thigh, his face full bearded, the other whom I recognized instantly with a swift intake of breath, was Monsieur Cassion. He was a stride in advance, his eyes searching me out

in the dim light, his face flushed from excitement.

"Mon Dieu! what is this I hear," he exclaimed, staring at the three of us though doubting the evidence of his own eyes. "My wife alive? Ay, by my faith, it is indeed Adele." He grasped me by the arm, but even at that instant his glance fell upon De Artigny, and his manner changed.

"Saint Anne! and what means this? So 'tis with this rogue you have been wandering the wilderness!"

He tugged at his sword, but the draagoon caught his arm.

"Nay, wait, Cassion. 'Twill be best to learn the truth before resorting to blows. Perchance Monsieur Tonty can explain clearly what has happened."

"It is explained already," answered the Italian, and he took a step forward as though to protect us. "These two, with a soldier of M. de la Durantaye, endeavored to reach the fort, and were attacked by Iroquois. We dispatched men to their rescue, and have all now safe within the palisades. What more would you learn, Messieurs?"

Cassion pressed forward and fronted him, angered beyond control.

"We know all that," he roared savagely. "But I would learn why they hid themselves from me. Ay, Madame, but I will make you talk when once we are alone. But now I denounce this man as the murderer of Hugo Chevet, and order him under arrest. Here, lads, seize the fellow."

### CHAPTER XXVI.

In De Baugis' Quarters.

DE TONTY never gave way an inch, as a dozen soldiers advanced at Cassion's order.

"Wait men," he said sternly. "'Tis no time, with Iroquois about, to start a quarrel, yet if a hand be laid on this lad in anger, we, who are of La Salle's Company, will protect him with our lives—"

"You defend a murderer?"

"No; a comrade. Listen to me, Cassion, and you De Baugis. I have held quiet to your dictation, but no injustice shall be done to comrade of mine save by force of arms. I know naught of your quarrel, or your charges of crime against De Artigny, but the lad is going to have fair play. He is no courier du bois to be killed for your vengeance, but an officer under Sieur de la Salle, entitled to trial and judgment."

"He was my guide; I have the authority."

"Not now, Monsieur. 'Tis true he served you, and was your engage on the voyage hither. But even in that service, he obeyed the orders of La Salle. Now, within these palisades, he is an officer of this garrison, and subject only to me."

De Baugis spoke, his voice cold, contemptuous.

"You refuse obedience to the Governor of New France?"

"No, Monsieur; I am under orders to obey. There will be no trouble between us if you are just to my men. La Barre is not here to decide this, but I am." He put his hand on De Artigny's shoulder. "Monsieur Cassion charges this man with murder. He is an officer of my command, and I arrest him. He shall be protected, and given a fair trial. What more can you ask?"

"You will protect him! help him to escape, rather!" burst out Cassion. "That is the scheme, De Baugis."

"Your words are insult, Monsieur, and I bear no more. If you seek quarrel, you shall have it. I am your equal, Monsieur, and my commission comes from the King. Ah, M. de la Durantaye, what say you of this matter?"

A man, broad shouldered, in the dress of a woodsman, elbowed his way through the throng of soldiers. He had a strong, good-humored face.

"In faith, I heard little of the controversy, yet 'tis like I know the gist of it, as I have just conversed with a wounded soldier of mine, Barbeau, who



repeated the story as he understood it. My hand to you, Sieur de Artigny, and it seems to me, Messieurs, that De Tonty hath the right of it."

"You take his side against us who hath the authority of the Governor?"

"Pah! that is not the issue. 'Tis merely a question of justice to this lad here. I stand for fair trial with Henri de Tonty, and will back my judgment with my sword."

They stood eye to eye, the four of them, and the group of soldiers seemed to divide, each company drawing together. Cassion growled some vague threat, but De Baugis took another course, gripping his companion by the arm.

"No, Francois, 'tis not worth the danger," he expostulated. "There will be no crossing of steel. Monsieur Cassion, no doubt, hath reason to be angered—but not I. The man shall have his trial, and we will learn the right and wrong of all this presently. Monsieur Tonty, the prisoner is left in your charge. Fall back men—to your barracks. Madame, permit me to offer you my escort."

"To where, Monsieur?"

"To the only quarters fitted for your reception," he said gallantly, "those I have occupied since arrival here."

"You vacate them for me?"

"With the utmost pleasure," bowing gallantly. "I beg of you their acceptance; your husband has been my guest and will join with me in exile."

I glanced at DeTonty, who yet stood with hand on De Artigny's shoulder, a little cordon of his own men gathered closely about them. My eyes encountered those of the younger officer. As I turned away I found myself confronted by Cassion. The very sight of his face brought me instant decision, and I spoke my acceptance before he could utter the words trembling on his lips.

"I will use your quarters gladly, Captain de Baugis," I said quietly, "but will ask to be left there undisturbed."

"Most assuredly, Madame—my servant will accompany you."

"Then good-night, Messieurs," I faced Cassion, meeting his eyes frankly. "I am greatly wearied, and would rest, tomorrow I will speak with you, Monsieur, permit me to pass."

He stood aside, unable to affront me, although the anger in his face was evidence enough of brewing trouble. No doubt he had boasted of me to De Baugis, and felt no desire now to have our true relations exposed thus publicly. I passed him, glancing at none of the others, and followed the soldier across the beaten parade. A moment later I was safely hidden within a two-roomed cabin.

Everything within had an appearance of neatness, almost as if a woman had arranged its furnishings. I glanced about in pleased surprise, as the soldier placed fresh fuel on the cheerful fire blazing in the fireplace, and drew closer the drapery over the single window.

"Madame will find it comfortable," he said, pausing at the door.

"Quite so," I answered. "One could scarcely anticipate so delightful a spot."

(Continued next week.)

#### TODAY'S RIDDLE

WHEN ARE  
FACES LIKE  
WIGS?

WHEN



## Show Me Facts!

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When I plowed I covered from eight to ten acres a day with a two-bottom gang and covered about 40 acres a day with the harrows.

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In July I used the Cleveland in loading hay, and got in the crop from 140 acres at the rate of about 35 tons a day.

Besides these things, I used my Cleveland for a great many belt jobs—put in 300 tons of ensilage in 32 hours, on 30 gallons of kerosene, for instance.

I now keep six horses, instead of the fourteen I had before and need two men less than previously.

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## Woman's Interests

### The Comfortable Bed

By Josephine E. Toal

SINCE the night's rest or unrest has everything in the world to do with the quality of the day's work, comfortable beds for all the family should be the care of every good housewife. Sagged springs and lumpy mattresses are the worst foes to bed comfort; it doesn't pay to tolerate them. A claw hammer or a wrench may be all that is necessary to tighten up that slacked wire which plays havoc with the comfort qualities of your bedsprings.

The best thing for a lumpy mattress is to send it directly to the renovator or to the junk man. If, however, it be but slightly uneven, a folded blanket placed upon the springs under the depression will correct the unevenness. Good, well-made mattresses are cheapest in the long run. The comfort features of the shoddy article are short-lived. Having invested in the good article, the next thing is to use it well. Turn it frequently, end for end, and if wool padded on both sides, turn over as well. Don't shake it. Shaking tears the ticking and disarranges the padding. Puff up the mattress by gentle blows or bringing the ends together.

It is a good plan to cover the springs with an old quilt or blanket, that in damp weather they may not rust the mattress. Always use a substantial protector on top of the mattress, something that can be tubbed without too much trouble yet thick enough to afford satisfactory protection. The quilted ones are highly serviceable in that respect.

Remembering that your motto is "bed comfort," do not have your pillows extremely large, nor stuffed too full. Even goose-down pillows can be made uncomfortably hard by crowding too many feathers into the ticks. The immense pillow may give the bed a luxurious appearance, but the small pillow which does not unnaturally bolster the neck and shoulders is more comfortable. It is well to enclose the pillow tick proper in a second tick made easily removable for laundering—this in addition to the outside muslin slip—because of the difficulty of washing feathers. The muslin slip does not afford sufficient protection to the

tick, which will in time become soiled.

It is possible to wash feathers in the tick, but it is a tedious task to dry them thus. When so washed, they should be hung on a line outdoors where the air will circulate freely through them, and allowed to remain for several weeks, care being taken to bring them indoors in rainy weather. Feathers will dry more quickly if washed in a large bag, though this means the added labor of emptying and refilling the tick. In such case the best way to transfer the feathers is to rip carefully one end of the tick and sew the open end of the bag closely to that of the tick. No feathers will escape in the transfer. Next rip tick and bag apart and sew or tie up the bag securely. When feathers are washed and thoroughly dried, replace by the same method and, with care, you will not have lost a feather.

The old-fashioned tacked comfort is not a sanitary affair. It does not admit of easy tubbing. Even though it be ripped up and the outside covering

washed, the batting cannot be cleaned and there is all the labor of retacking. If the tacked comfort be used, care should be taken to keep the top end—which is soonest soiled, coming in contact with hands and face—covered with a strip of white cheesecloth extending about eight or ten inches on either side of the comfort. The cheesecloth can be removed when soiled, washed and replaced. The old quilted coverlet was an advantage as a washable affair; but quilting is laborious and even at best the quilt is a thin cover.

Blankets, wool or cotton, and as many as the season requires, are good substitutes for the comfort. They can be washed as often as occasion requires. Wool blankets should be washed in plenty of clean lukewarm suds—never in hot water, which brings out the oil in the wool and gives the blanket a greasy feeling when dry—well rinsed in slightly soapy warm soft water and dried on a windy day. This treatment leaves them soft and fluffy.

The cotton blanket is very satisfactory. (Continued on page 596).

## A Woman's Success with Poultry

By Mrs. E. M. Anderson

NESTLED among the hills almost in sight of the Chautauqua Assembly grounds is one of the most profitable, though not the best known or most widely advertised, buff Leghorn plants in western New York. It is owned and managed by Mrs. M. E. Gifford. Several years ago Mrs. Gifford came so near dying with plural pneumonia that it was deemed best for her to leave the farm, and her husband moved to a small village, but her love for outdoor work brought her back in a year or two. She had regained her health, but her lungs were too weak to permit a return to steady housework and out of these circumstances grew her poultry industry.

She began with a very ordinary farm flock of Buffs, but by purchasing high-grade cockerels from the most reliable breeder to be found, she soon built up a fine flock of prize stock. The first year after introducing this breeding stock she took several prizes on birds

entered in the nearest county poultry show, and the following year placed a full line of exhibits in the Jamestown poultry show, taking the silver cup and innumerable blue ribbons.

At first she used but one or two incubators, gradually increasing until now she keeps several running at once from January to June. She specializes on day-old chicks and sells thousands of them every year. These, when raised from her common stock, sell for ten cents each, but those from her prize breeding pens bring much more. Many of the latter are shipped to customers all over the country, though she does comparatively little advertising.

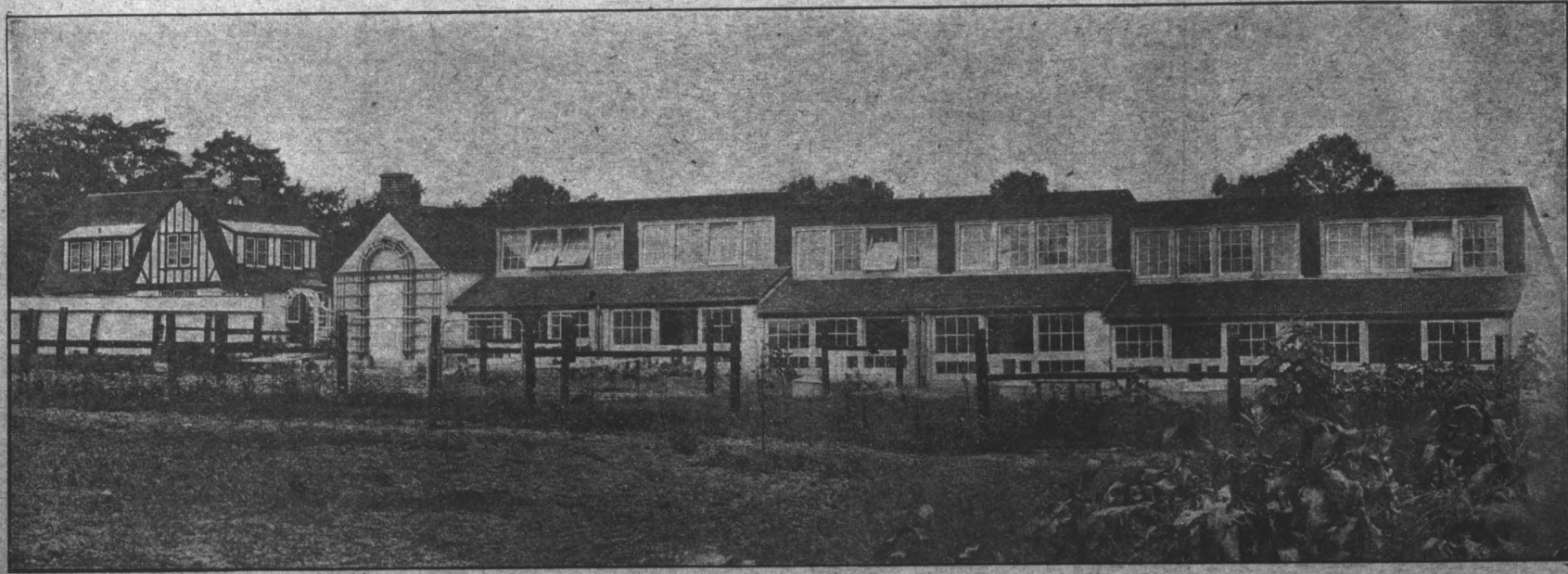
She has the incubator business reduced almost to a science, has very few infertile eggs and consequently wastes few, nearly always getting good hatches. For this reason, hundreds of baby chicks are sold right at home to

less experienced neighbors, even though the eggs could be bought much cheaper than the chicks. Mrs. Gifford ships large numbers of cockerels, pairs and trios for breeding purposes, and of course, sells many more that are not shipped.

Her prime object, however, is eggs, and she usually gets them in abundance. At present she has between five and six hundred pullets for winter layers. Nearly all her eggs are shipped to city hotels or otherwise contracted ahead, the large white egg of this breed being a first-class seller in almost any market. Her location so near the lake resorts assures a good summer market at home, which is decidedly advantageous both for eggs and meat. The process of raising so many pullets of course necessitates the production of a good many surplus males; these are sold to the summer resort dealers

or left until later for the holiday trade if they do not get heavy enough in midsummer.

Until this winter she has depended entirely upon several small, inconvenient and widely separated houses for winter quarters for her flocks, but last fall she built a fine new poultry house twenty by one hundred feet, facing the south, with nearly the entire front occupied by windows. Several of these are supplied with cloth shutters on hinged wood frames instead of glass windows. All windows are covered with wire netting. In mild weather the cloth is left down, but in colder weather the shutters are hooked above the windows. Over each cloth window is a tin awning to prevent the rain from beating in. At the back of the poultry house the whole length of the laying pens are rows of roosts with tight matched dropping boards below and nests underneath the dropping boards. The bottom of the nests consists of a



This Laying House of the Open Front Type is Large Enough for Five Hundred Hens.



long strip of tin about sixteen inches wide, the front end of which is turned up an inch or two to prevent the eggs from rolling out. This laying pen occupies the entire space except a few feet at one end for the feed room and a similar space at the other end for a breeding pen. The building is warm and well ventilated, and the fowls seem comfortable.

Instead of commercial dry food hoppers Mrs. Gifford prefers shallow wooden boxes with narrow cleats nailed around the edge to prevent waste. Fresh water is piped into a small reservoir and kept constantly available. Cabbages, beets and numerous vegetables are left before the fowls, suspended by strings within easy reach, and a supply of shells is always at hand. Oats are soaked in tubs, sprouted in shallow boxes and fed in small quantities every day. Any available material such as chaff, dry leaves, shavings and sawdust is used for litter.

This little woman, despite her delicate health, is paying for all this and much more, with the profits from her poultry, and is doing it all simply because she enjoys the work, while her health is much better than when doing housework exclusively. She never intends to overwork, and I don't think she does. When necessary she hires help, has her laundry work done, and manages to have as little housework as possible to do. Her husband is a dairy farmer with a fine herd of pure-bred Guernseys, so the poultry plant is not a necessity, neither is it a recreation. It means lots of work, but it is healthful and pleasant work.

#### RECIPES.

##### Stuffed Steak.

- 1 pound round steak
- 2 cups boiled rice
- 2 tablespoons chopped parsley
- Seasoning—onion juice, salt and paprika.

Blend the rice with the seasoning. Pound the steak until thin. Spread the steak with a layer of the rice stuffing about three-quarters of an inch thick. Roll and tie in shape or fasten with skewers. Put in a covered pan with enough water to keep from burning and cook in the oven for thirty minutes. Take off the cover and brown before removing from the oven. Thicken the stock left in the pan for gravy. Tomato juice makes a nice addition to the gravy.

##### Dixie Pride Ginger Cake.

- 1 cup molasses
- 2 teaspoons ginger
- 2 cups flour
- 1 teaspoon soda
- $\frac{1}{2}$  cup butter
- $\frac{1}{2}$  cup sugar
- 2 eggs
- $\frac{1}{2}$  cup water.

Mix ginger and molasses; sift soda with flour. Cream butter and sugar. Add molasses. Then add water and flour a little at a time alternately. Bake in bread tin in moderate oven forty to sixty minutes, or until cake leaves the sides of the tin.

##### Bread Crumb Griddle Cakes.

- $1\frac{1}{2}$  cups fine bread crumbs
- $\frac{1}{2}$  cup white or graham flour
- 2 cups sweet milk
- 2 tablespoons fat
- 1 egg
- $\frac{1}{2}$  teaspoon salt
- 1 teaspoon baking powder.

Sift together flour, baking powder and salt. Add bread crumbs, milk, fat and beaten egg. Beat thoroughly.

##### Breakfast Dish for Invalid.

Butter slices of toasted bread. Separate the yolk and white of an egg, beat the white to a stiff froth, turn over the buttered toast and place yolk of the egg in the center. Sprinkle with a little pepper and celery salt and set in a moderate oven until the egg is cooked enough to be palatable.



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No. 2719—Girls' Dress. Cut in four sizes, 4, 6, 8 and 10 years. Size eight requires  $3\frac{1}{2}$  yards of 27-inch material. Price 10 cents.



No. 2732—Girl's Dress. Cut in five sizes, 2, 3, 4, 5 and 6 years. Size four

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No. 2724-2734—Ladies' Costume. The waist, 2724, cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt, 2734, cut in seven sizes, 22, 24, 26, 28, 30, 32 and 34 inches waist measure. To make the dress for a medium size will require 6 $\frac{1}{2}$  yards of 36-inch material for the entire costume. The skirt measures 1 $\frac{1}{2}$  yards at the foot. Two separate patterns, 10 cents for each pattern.



No. 2569—Ladies' House Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires for a 38-inch size, 6 $\frac{1}{2}$  yards of 36-inch material. The dress measures about 2 $\frac{1}{2}$  yards at the foot. Price 10 cents.

No. 2711—A practical Apron. Cut in four sizes, small 32-34; medium 36-38; large 40-42; extra large 44-46 inches bust measure. Size medium will require 3 $\frac{1}{2}$  yards of 36-inch material. Price 10 cents.

Send all Orders to  
**The Michigan Farmer, Detroit**



**Dalion**  
"It Reanimates Music"



## Never a Misplaced Record with This Wonderful File

**RECORDS** constantly misplaced, mixed up by guests or children, scratched or broken by careless storage—what a nuisance they are to take care of unless you own a Dalion, the only phonograph with

### "The Auto-File"

This wonderful convenience saves many a wasted minute and prevents many a spoiled record. Extremely simple and entirely automatic in action. It keeps your records always in order without the least thought on your part.

An exclusive feature of the Dalion. Our handsome booklet, sent free, tells you how it works.

Write for name of nearest dealer and hear the Dalion play all makes of records without the use of extra attachments.

**Milwaukee Talking Machine Mfg. Co.**  
Milwaukee, Wis.



No. 2F



## PREVENT

lightning from striking your property and destroying buildings, animals, high-priced crops and human life. *There's one sure way to do this—at reasonable cost.*

### Security Lightning Rods Give Guaranteed Protection

They've been making good for more than 25 years. Don't take chances—equip your buildings with Security 99.8% Copper Rods—endorsed by National Board of Fire Underwriters.

**Our Patented Security Water Ground Connection insures permanently moist grounding under all conditions.**

Write for free book—Stop Lightning Losses

**Security Lightning Rod Co.**  
505 Pine St. Burlington, Wis.

**Only \$2 DOWN**  
**ONE YEAR**  
**TO PAY**

**\$38** Buys the New Butterfly Jr. No. 27.  
Light running, easy cleaning,  
close skimming, durable.  
**NEW BUTTERFLY**  
Separators are guaranteed a life-time  
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ship. Made also in four larger sizes all sold on  
**30 Days' FREE TRIAL**  
and on a plan whereby they earn their  
own cost and more by what they save. Postal  
brings Free Catalog Folder. Buy from the  
manufacturer and save money.  
Albaugh-Dover Co. 2165 Marshall St. Chicago

# A Cooperative Family

**O**UR family has passed through an experience similar perhaps to that of hundreds of other families since the "flu" began its devastating course across the country. Seven of us, five children, mother and grandmother, were down "at once and together," as baby says; only the good man of the house escaped.

A kind neighbor came in twice a day and looked after us while he did the chores at the barn which, because of fire, is almost a third of a mile from the house. After frantic efforts, renewed every day for a week, he was able to secure a short visit from a doctor, as the only two within a radius of twelve miles were rushed to death night and day and almost unavailable.

An experience of this kind cannot but stir up these sluggish brains of ours and set them to thinking along new lines. I might write columns of what it taught us of the need of neighborly cooperation and thoughtfulness at such times, for if ever families needed the "sick-and-ye-visited-me" kind of people, it has been through these last terrible months. But just now I should like to tell you of an aspect of illness which concerns the children, and which came to me as I lay helpless for three weeks.

I was the first one to be taken ill, and had been in bed for four days when grandma and the two babies followed my bad example. Then it was that the three older children, a girl seven years old and two boys ten and

eleven years, slipped willingly into hardness, and oh, how anxious those little people were to be really helpful. I could hear them discussing as to who should wash the dishes, sweep, bring in wood, etc. But the greatest of all discussions was when father was at the barn and they thought the sick people should have something to eat. They did so want to fix and serve things themselves, and almost quarreled as to who should carry the toast or tea to the sick-room, though every effort was made to keep them out and away from danger of the disease.

Then, too, came up the question of their own meals. Oh, that first breakfast! Just a combination of warm water and rolled oats, but father saw that it didn't happen a second time. How carefully my tea was boiled! So I lay on my bed, and when my brain would work at all, decided that on that glad day when I should be well again, I would teach my little people to prepare and serve a few simple things both for themselves and for sick folks. Crisp toast, a poached or coddled egg, a drinkable cup of tea, good breakfast cereals, escalloped potatoes and perhaps corn bread.

Of course, the girls learn these things when they are a little older than my seven-year-old girlie, but why not the boys, too? Surely the knowledge would never come amiss, and I believe that all boys would enjoy learning. No more cereals served as "raw material" either to themselves or patients.

A hint that the very prettiest dishes in the house should be used for sick people, dishes and medicine bottles removed as soon as used, all such little details which in themselves are really nothing, but which sometimes make for the comfort or discomfort of the patient, may be discussed with the children, and they will be half hoping someone may get just a little sick, so they may practice. They are so eager to do, why not teach them the right way?

Just another word. When we began to convalesce, a well-grown thirteen-year-old girl came in after school every night to ask how we were getting along. Usually the dinner table stood as we had left it, the effort of getting the simple meal sending mother and grandmother to bed for a few hours, the floor unswept and supper unprepared. It never entered this girl's head that she might have offered to wash the dishes or pick up a little bit. And so I added another resolve, I shall teach my children, no matter how young they are, that if they can see an opportunity to help a person in need, to "go to it." My boys shall not be ashamed to handle a dishcloth or broom for somebody else's mother. And if this experience of the past six weeks shall be the means of instilling a spirit of greater helpfulness in the whole family, I shall feel that the good coming out of evil was worth it all.

Mrs. B. B. L.

## The Comfortable Bed

(Continued from page 594.)

tory in all ways. It is well suited to the beds of people with sensitive skins who cannot sleep in wool blankets and who, yet, occupying unheated rooms, find sheets uninvitingly cool in winter time. It is just right in weight and warmth for an outside covering in summer time. It is not hard to wash and is inexpensive.

In making a bed, the under sheet should be tucked well down under the head of the mattress, as all the strain on this sheet is from the top. Tuck the upper sheet well under the foot of the mattress, the strain on this sheet being from the foot. Always lay the sheets with the wide hems at the top, the smooth sides of hems coming together. The practice of some housekeepers of making sheets with hems of equal width top and bottom is not a good one; it admits of turning the sheets end for end in making the bed. It is not desirable that the same end of the sheet should be used alternately next feet and face.

As with the upper sheet, the strain on quilts and blankets is from the foot, consequently in making the bed they should be tucked well under the foot of the mattress.

Elaborately embroidered pillow slips are not the most comfortable to sleep on. It is best to make such creations in the envelope style, into which the pillow, in a plain slip, can be tucked during the day, the pillow being divested of its mantle for night service.

The thoroughly comfortable bed is the well aired bed. However carefully ventilated the sleeping room at night, beds should not be made up in the morning without first being conscientiously aired, frequently sunned. Open wide all the windows; spread the bedclothes on chairs in such manner that each piece will be exposed to the fresh air; turn back the protector from the mattress. The sleeping-porch and the sun-parlor are ideal for such purposes. Where they are lacking, frequently hang the bedclothes on a line out of doors where they will get the bright sunlight. Sunshine is a wonderful

germicide and deodorizer. Mattresses especially need to be often sunned. This practice will be more easily carried out if the two-piece kind is used. The mattress in one piece is awkward to lift and for that very reason generally does not receive the airing it should have. Always select a dry day for putting the mattress out, and never make up the bed with damp mattress or coverings. Not only does careful attention to this detail make for bed comfort, but neglect of it invites serious physical ills.

Cleanliness throughout is one of the first necessities to the comfortable bed. Soiled pillow slips, dirty bedclothes, dingy spreads, spoil the attractiveness of any bed, and consequently detract from comfort. The dainty bed invites to a night's repose.

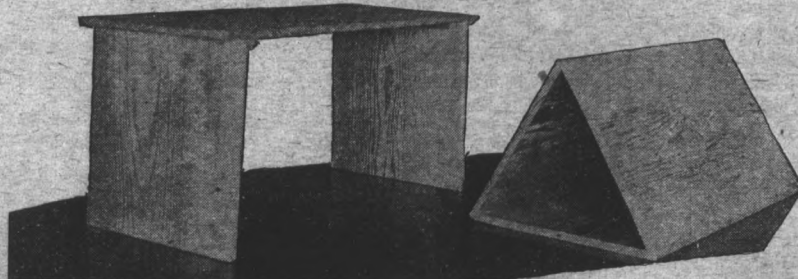
The single bed is preferable to the double bed. Even where there are two occupants of the same room, it is bet-

ter to have two cots than one large bed. Rarely will a person be found who can rest just as well with a bedfellow as he can alone; and if he can, it is not likely that his bedfellow can. Seldom will two people be equally comfortable under the same amount of bed covering and with the same method of ventilation; and unless committed to the same hours of rising and retiring, one must disturb the other.

The doctors tell us that, if we are to have healthy bodies, we must sleep eight hours out of the twenty-four. Some few favored individuals may be able to spend more time than that in bed, but most of us find it difficult enough to allow ourselves the stipulated eight hours. Therefore, we cannot afford to waste any part of the precious moments in sleepless unrest because of uncomfortable beds.

Let the assertion be repeated: It is the duty of every good housewife to see that all the beds in the house be made just as comfortable and as sanitary as circumstances will permit.

## An Invalid's Table



**E**VERY home at some time or other has its share of sickness, and let us hope, a convalescent to make comfortable. Two helps towards the ease of those who can not be about are shown in the illustration. One is a table for the tray, and as the picture shows is simply made of three boards, the top just long enough so that, with the sides nailed into position, it will fit nicely over the patient's knees. If you have no boards suitable an orange case with the sides and top knocked out, leaving the bottom and two ends

to form the table, will do nicely. Of course, in this case your improvised table will need a little home decoration in the way of lunch cloth or tray cloth to hide its rather inferior timber which might also be painted or stained.

The triangular-shaped article is a knee rest. Three boards are nailed together to form a triangle, and when the patient, as so often happens, wants to draw his knees up to change positions for awhile, this rest, covered with a blanket or pad, is slipped under the knees to support them.





### TRACTOR PRODUCTION INCREASES.

A PRODUCTION of 314,936 tractors in the United States in 1916 is estimated by manufacturers reporting to the Office of Farm Equipment Control, United States Department of Agriculture. The reports obtained in a special inquiry by the department show a production of 132,697 tractors in 1918. The manufacturers gave the number of tractors of different sizes manufactured last year and estimates of the number of each size that will be made this year. The figures for 1919, of course, are merely estimates and represent the aggregate of the estimates submitted by the tractor manufacturers in January and February of this year. A summary of these reports follows:

Number on hand Dec. 31, 1917...	15,525
Number manufactured during 1918 .....	132,697
Number sold in United States during 1918 .....	96,470
Number sold for export during 1918 .....	36,351
Number on hand Dec. 31, 1918...	15,401
Manufacturers' estimate of production for 1919 .....	314,936

#### Number of Tractors of Different Horse Power Manufactured in 1918.

Makers' Rating.	No. of Tractors.
Belt Horse Power.	
9, 10 and 12 .....	1,141
16 and 18 .....	20,629
20 and 22 .....	72,238
24, 25 and 26 .....	20,616
27, 28, 30 and 32 .....	6,959
35 and 36 .....	2,212
40 and 50 .....	131
60, 65, 70 and 80 .....	913
Not given .....	6,658

#### Number of Tractors of Different Horse Power which Manufacturers Estimate they will Produce in 1919.

Makers' Rating.	No. of Tractors.
Belt Horse Power.	
9, 10 and 12 .....	8,220
16 and 18 .....	48,545
20 and 22 .....	157,671
24 and 25 .....	40,875
27, 28, 30 and 32 .....	27,465
35 and 36 .....	5,435
40, 45 and 50 .....	1,780
60, 65, 70, 75 and 80 .....	1,536
Not given .....	23,409

### OILING THE WAY.

FUEL oil is to be one of the cornerstones of commerce. Here and there it forms deep pools in which the uninitiated fish for easy money, and sometimes are drowned. But the search for oil continues because demand calls long and loud. There are other kinds of oil, hitherto little exploited, of which the United States imports vast quantities. Japan sends about ten million dollars worth every year, mostly soja bean oil and the Philippines more than that of coconut oil alone. China is the principal producer of these raw materials. Even Japan buys from her, then presses and ships the oil. We are constantly talking of increased exports to debtor countries of Europe while across the Pacific lies the way for increased exports to creditor nations. But profitable exports are conditioned upon full return cargoes. The Orient wants our goods. It has unlimited supplies of oilseeds. We have 278 cottonseed mills and the civilized world is calling for vegetable oil as well as for fuel oil. Logic of the situation seems to be to bring back oil seeds, crush them here, and consume or sell the oil and meal. Foreign trade means goods going and coming.

HOGS are being shipped to the Chicago market as soon as matured, the muddy country roads having been the only obstacle of late, and they average extremely well in quality, few underweights showing up. Recent receipts have averaged in weight 235 pounds, comparing with 229 pounds a week earlier and 237 pounds a year ago. Their quality is extremely good.

WALLIS

## MODINE SPIREX RADIATORS

### When Plowing Demands the Utmost from the Motor

Pulling—straining—exacting every ounce of power from the toiling motor, difficult plowing conditions quickly test the stamina and dependability of the cooling system.

The SPIREX Radiator successfully meets these tests.

In the majority of the higher grade tractors manufactured for farm use, and in the army caterpillar tractors, SPIREX Radiators have been adopted as standard equipment.

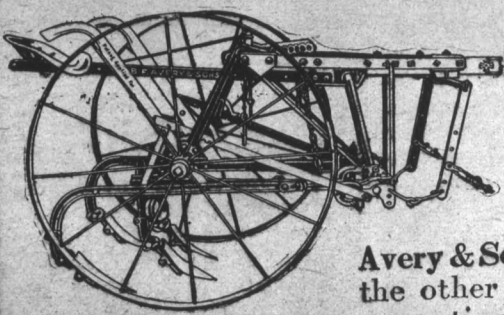
All conditions taxing a tractor motor to the utmost—heavy gumbo soil—hills—a capacity load of gang plows—merely prove SPIREX superiority in motor cooling.

Make sure that the tractor you buy is SPIREX-equipped.

MODINE MANUFACTURING COMPANY  
Racine, Wisconsin

## This Happened at a Farm Auction Sale

In February, 1919, Mr. Martin Thompson, a farmer living near Millard, Neb., auctioned off his farm implements, household goods, etc.



He had on hand two leverless riding cultivators, both bought last Spring. One of them was a B. F.

Avery & Sons Leverless; the other a well-known competing cultivator.

The opening bid for the Avery was \$40.00, and it was sold for \$53.00 to Mr. Gus Biels, whose address is Station B., Omaha, Neb. The other cultivator was sold for \$25.00.

Moral: Do as Mr. Biels did—get an Avery Leverless for this Spring's work. If your dealer does not carry the Avery, write

B. F. AVERY & SONS, Founded 1825, Incorporated 1877 Louisville, Ky.

### HORSES

#### Pure Bred Belgian Draft Horses

We have some extra good Belgian Stallions for sale, coming three and four years old. They are heavy, of good conformation and sound. You can see their sires and dams. They are raised in Michigan and acclimated. We have no agents on the road for which you or we would have to pay. You cannot buy them any better nor cheaper in the world. Our studs and mares carry the best blood Belgium has produced. We prove this by their pedigrees. We invite you to see our stock before buying. You can see them any day of the week except Sunday. Write for particulars and catalog to the OWOSSO SUGAR COMPANY, Prairie Farm, Alicia, Mich.

#### Stallions and Mares

For sale. Two Registered English Shire Stallions 2 and 3 yrs. old also some Registered and high grade draft mares in foal and colts of all ages.

HOWARD KUHN, R. 1, Clinton, Mich.

For Sale a matched pair of registered Percheron mares both black rising 5 & 10 yr. old weight 3200 lbs. the 10 yr. old an imported mare in foal now and mother of the 5 yr. old. Will sell them at farmers' prices.

HENRY S. ROHLFS, R. 1, Akron, Mich.

For Sale or trade. Imported stallion, black horse, imported in 1914, extra nice horse low down blocky kind, weighs 2080 lbs., is sound in every way, sure foal getter and a grand stock horse. Sell right for cash or will trade for good draft horse. Address DAN S. DWYER, 110 Mulberry St., St. Clair, Mich.

#### Horses Will Be Horses Soon

We have on hand at all times a choice selection of young Percheron Stallions.

PALMER BROS., Belding, Mich. R. R. Orleans.

Percherons, Holsteins, Angus, Shropshires, Durocs  
DORR D. BUELL, Elmira, Michigan.

Percheron Stallions and mares at reasonable prices. Inspection invited.  
F. L. KING & SON, Charlotte, Mich.

## Salesmen Wanted

We pay salary to good subscription getters, who can devote their entire time to our work. The offer our salaried men handle is especially attractive to farmers.

The Michigan Farmer, Detroit

## TILE

Immediate or future shipments any quantity highest quality. Prices will not come down, so get in your order now and save money. Quotations made immediately on request. Address

HARRY L. HULBERT, Warden, Mich. State Prison  
JACKSON, MICHIGAN



for Comfort



President Suspenders

Bend over, or raise your arm, move your body any way, and President's comfort feature adjusts in unison with every movement. No squeezed-in waist, no pull on shoulders or strain on buttons; great for wear; the all-brass trimmings will not stain or rust.

Demand "Presidents." Be sure the name "President" is on the buckle. Then you're safe. "Presidents" are guaranteed—ALL WAYS RIGHT—or money back. All dealers.

President Suspender Co.  
Shirley, Mass.



HONORBILT



They Fit and They Last-

Mayer's

HONORBILT  
WORK SHOES

Ask your dealer for Mayer Shoes. Look for the trade-mark on sole.

F. Mayer Boot & Shoe Co.  
Milwaukee, Wis.



Bee Supplies

Bee Hives, Sections, Comb Foundation, Smokers, etc. Send for catalog. Can supply beginner's outfit either with or without bees. Circular on request. Beeswax wanted.

Berry Baskets

Standard quart, wood berry baskets, and wax-lined paper baskets, 16 quart crates in flae. Send for price sheet.



M. H. HUNT & SON  
Box 525 - Lansing, Michigan

HONEY HONEY

Send \$2.50 with name of your grocer and receive a 5-lb. pail of GRIGGS BROS. PURE HONEY, delivered at your door.

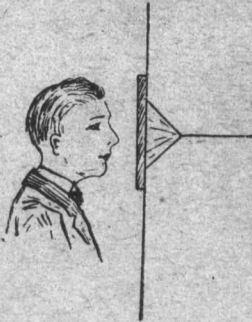
BEE SUPPLIES

FREE CATALOG SENT ON REQUEST  
S. G. GRIGGS & COMPANY  
DEPARTMENT 29 TOLEDO, OHIO

## Our Boys' and Girls' Department

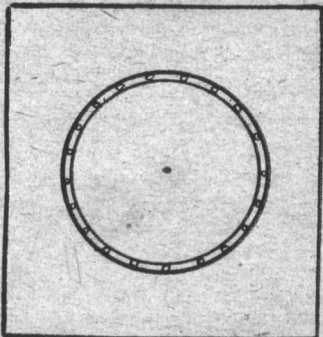
### A Telephone You Can Make

A TELEPHONE from the house to the barn or to some other out-building or to a not too distant chum's house, is oftentimes both a great convenience and lots of fun. To make



a real telephone is a somewhat difficult task, but we can make a good telephone which, under favorable conditions will enable us to speak up to a quarter of a mile away, with very simple materials.

The materials needed include two boards about fourteen inches square



Showing Board with Bladder in Place.

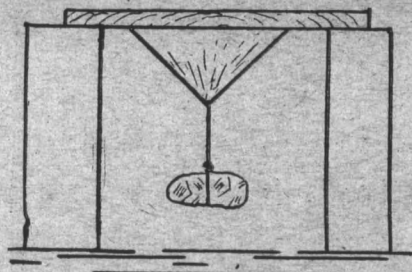
and one-half to three-quarters of an inch thick. The boards may often be

obtained by breaking up an empty box and sawing up two of the boards to the required sizes. Then get a plate about eight inches across, lay it face downward in the middle of each board and mark the wood around the edge of the plate with a lead pencil. Cut out these circles with a key-hole or fret saw. Having done this, the boards are ready, and we can put them aside until we have the other parts of the telephone ready.

Now we want two fresh beef bladders. Blow them up hard, tie the necks with string, and put away for a



thread through the center of the bladders. Hang a weight of six or seven pounds on each wire and place boards in some position so that the weights can pull down the bladders. Leave



This Illustration Shows the Method of Stretching the Bladders.

few days to stretch, but do not leave them so long that they get dry. When they have stretched cut off the necks and soak the bladders in warm water until they are white and soft. Then stretch evenly and smoothly over the holes in the boards already prepared.

Take a thin leather strap or pieces of leather, and tack firmly all around the holes over the bladder, as shown in illustration, next cut away the edge of the bladder outside of the leather strips.

Attach two buttons to thin wires and

them in the sun until they are dry and hard.

All that remains now is to fix up the two telephones in the positions desired, and connect them by fixing a wire to the two wires attached to the buttons. The wire used should be of fine copper or tinned iron wire. If the distance is great enough so that the wire needs to be supported, this may be done by hanging loops of leather to the branches of trees or poles that may be in the way.

Then we may speak from either end of the line and the words should be



Attach Buttons to Thin Wires.

heard distinctly at the other end. To ring up, tap the bladder with a pencil or a piece of rosin drawn over a short piece of fish line attached to the button in the bladder makes an excellent alarm.

## The Farm Boy's Side Lines

By E. L. Vincent

They talked of many things besides the farm work. The mother had been a teacher and a young woman of a good deal of intellect before she was

married, and somehow the boy had inherited a little of this from her. The mother knew it, and one day in the spring of the year while she and her boy were gathering sap for maple sugar with a neckyoke, she listened to him as he told stories "out of his own head," and finally said to him: "Keep on writing your stories, son. When you are out around the farm at work, keep thinking of them and then when you have time write them down. I'll help you all I can."

And she did help her boy. Her encouragement kept him bound to do his best, and the day came when he went away to work in a newspaper office. Then finally he went back to the farm, and I know he has written a number of books, good books they are, too, and hundreds of stories and short articles for young folks. And those hours back on the farm when he was a boy gave him the start for it all.

Yesterday while in town I saw on one of the doors I passed, a big sign, "Division Engineer" and the name of the railroad was given just below. Quickly my mind went back to another farm home, where a boy not so very many years ago was working away every spare hour he had, on a correspondence course in engineering. I never saw a boy more interested in any such study than he was, and he made good. The big sign on the door shows where that boy now has his office, and he is one of the most trusted employees of a great railway system in the eastern part of this country.

Still another farm boy of my acquaintance wanted to improve his pen-

### Our Prize Contest

TO the boy or girl writing the best letter, of less than 250 words, on each of the following subjects, the Michigan Farmer will give a cash prize of \$1.00.

(Subject of letter to be mailed by April 21):

"How I earned my first dollar."

(Subject of letter to be mailed by April 28):

"The best war story I ever heard."

(Subject of letter to be mailed by May 5):

"The best hike I ever took."

We desire to make this contest a permanent feature of our Boys' and Girls' Department. A new subject will be added each week.

Write neatly with ink on one side of the sheet only. Give your age, full name and address.

Address your letters to The Boys' and Girls' Dept., Michigan Farmer, Detroit, Mich.

MANY things which are rather outside the regular work of the farm appeal to the boy, and to the girl as well. Trapping in winter affords no end of pleasure, and at the same time brings in considerable profit, particularly of late on account of the high price of all kinds of furs. Gathering nuts and selling them is another source of revenue in its season. I might speak of a number of other ways by which the young folks may interest themselves and at the same time gain a bit of pocket money.

It is not of these I have it in mind to speak just now, however; but I would like to have the many boy and girl readers of the Michigan Farmer think along with me of some matters which may at first seem more serious, and yet, which concern life at its best, and really have just as great an appeal to a great many as anything that can be done in the way of sports or diversions out in the field.

Just why it comes to my mind at this time I do not know; but I have been thinking a good deal for a day or two about a farm boy I knew a good many years ago. That boy's father went into the great Civil War in our country and never came back. His mother was left with six little fellows, of which the one I have in mind was the oldest. They had a small farm, were in debt, and times were hard. We have not known anything like the pinch of that war in the United States since the war in Europe began.

Naturally, because he was the oldest of the boys and girls, this lad was with his mother much out on the farm.



manship, for he was a very poor writer. He got some slips in penmanship and began working away when he could get a few minutes of spare time. The day came when he wrote a beautiful hand and it helped to gain for him a position in one of the departments at Washington. The spare moments did it. He might have been out doing the things which never would have counted, but he made the most of his aspiration to become a good penman.

The wife of a young farmer I know has all the music pupils she can attend to, just because in the days of her girlhood she learned to play the piano. This was the thing she loved most to do when a girl. Every moment she was not busy about something else she gave to her musical studies. And now years afterward, she is reaping her reward.

Still another girl in our neighborhood dreamed out a plan for making herself librarian in some city library. She borrowed every book she could that would help her; she studied the languages with a farmer's wife nearby, and although she has not yet realized her dream, she has been for some years a teacher in a great city school. It may be some day she will reach the goal of her ambition.

Now, some of these boys and girls are men and women whose homes are not on the farm; but some of them still do live in the country; but wherever they live, they are better men and women, more useful citizens than they would have been if they had not taken up these little "side lines." Every subject we master, no matter what it may be, makes us better fitted for the work that comes to us in later life, be that life lived where it may. We are better farmers because we know as much as possible about things not directly related to the country. I know of men and women who are still thinking and studying, so that they will be as well educated in as many ways as they can.

What are your "side lines," boys and girls? Is there anything you love to think about and to do? Make the most possible of that thing. Work hard to gain the mastery of it. We cannot tell into what paths life will lead us. That will not matter so much, for all we learn of good will make our lives more complete and more useful to the world. Let's make every hour count for something good.

#### PROMOTE CALF CLUBS FOR BOYS AND GIRLS.

A MOVEMENT is afoot in Grand Traverse county for the organization of calf clubs among boys and girls. The young people are being formed into associations, each member of which is furnished with a pure-bred Shorthorn calf. The idea is to interest young people in agricultural endeavor and to build up the pure-bred live stock industry in Michigan.

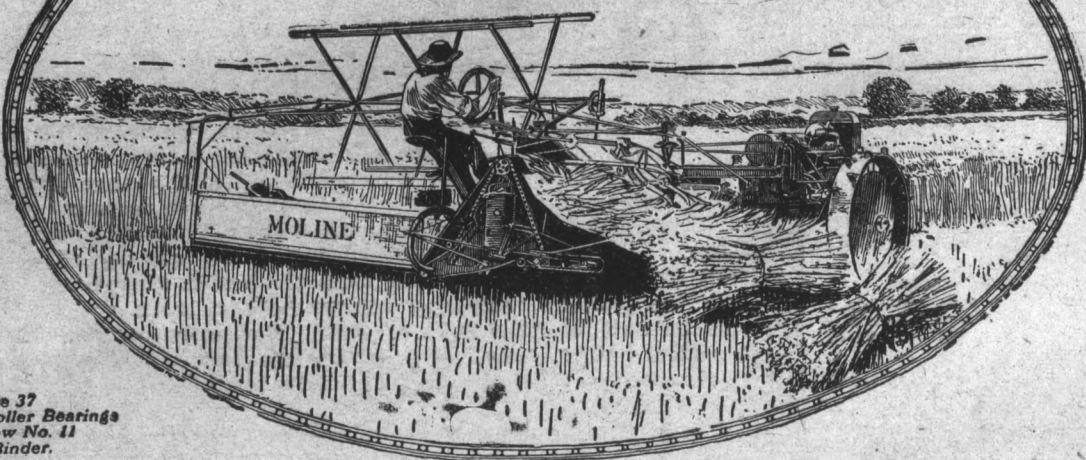
The Boys' and Girls' Club Department of M. A. C. is cooperating with the Shorthorn breeders in the furtherance of the work. Twenty-five head of pure-bred stock have already been placed, it is reported.



Winner in the Menominee County Calf Club Contest and Calf She Won.

# HYATT

## ROLLER BEARINGS For Binders



There are 37 Hyatt Roller Bearings in the new No. 11 Moline Binder.

## The Greatest Improvement in 39 Years

Since the perfection of the March harvester in 1864 and the Appleby knoter in 1880, there has been no basic change in the construction of grain binders.

Today the use of Hyatt Roller Bearings throughout the Moline No. 11 binder marks the greatest improvement in binder construction in 39 years.

The use of Hyatt Roller Bearings reduces friction to such an extent that it is possible to pull a 10-ft. Hyatt equipped binder with the same power that is required to pull a 6-ft. binder equipped with ordinary bearings.

Hyatt Roller Bearings require oiling but once a season—a

saving of at least two hours a day of precious harvesting time!

Furthermore, the use of Hyatt Roller Bearings makes it possible to operate the binder at a higher speed. Thus, with this Hyatt equipped 10-ft. binder one man can cut twice as much grain per day as with the standard 6-ft. plain bearing binder.

These are some of the far-reaching benefits given to agriculture by the use of Hyatt Bearings in the construction of grain binders.

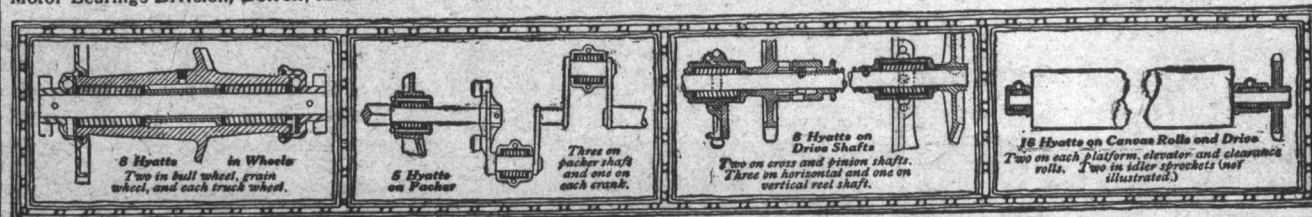
And such are the qualities added to farm tractors, threshers, plows and other farm machinery in which Hyatt Non-Adjustable Roller Bearings are used.

### HYATT ROLLER BEARING COMPANY

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THE Government desires the farmers of this country to produce a Billion Bushels of Wheat in 1919. With such a crop the use of the Grain-Saving Wind Stacker will save 10,000,000 bushels that would otherwise be lost—a cash gain to farmers of \$22,000,000.

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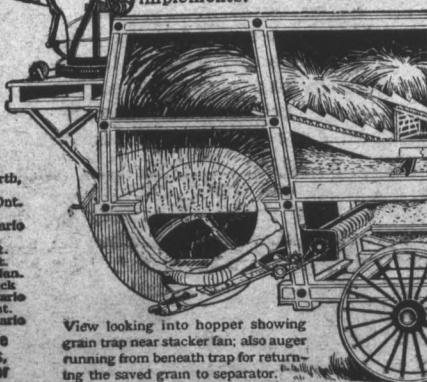
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Get your share by insisting that the machine which threshes your grain is equipped with the Grain-Saving Stacker.

This improved stacker returns to the separator the grain blown to the stack in the ordinary process. It saves more than enough to pay the threshing bill.

Get the facts from any one of the makers of North America's standard threshing machines. Many of these are also familiar to you as makers of the leading tractors and farm implements.



View looking into hopper showing grain trap near stacker fan; also auger running from beneath trap for returning the saved grain to separator.



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"The Fruit Jar of the Field"

SPECIAL OFFER to those who write now.

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Long, heavy coats of hair on horses are a nesting place for parasites, causing itch and mange, which irritate the horses and keep them from doing best work. Prevent these troubles by spring and fall clipping with a Stewart No. 1 Ball Bearing Machine. Only \$9.75. Send \$2—pay balance on arrival. Write for catalog.

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Michigan Wonder Beans, also known as Early Michigan, and 120 to 1. Choice hand picked seed, free from disease. A. JENSEN, Greenville, Mich.

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Dr. HESS & CLARK  
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Double the weight and double the price per lb. So great has been the demand for these practical, ready-to-use caponizing tools that most dealers exhausted their stocks. The fact that the Pilling factory was working 100% on Government orders for surgical instruments prevented us from refilling their shelves.

But next Spring we shall be able to supply dealers who order early. Get your order in now—any poultryman with Pilling caponizing tools and our complete illustrated instructions can make each dollar's worth of feed produce four times as many dollars as with roosters. Capon Book FREE.

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Hot-Water, Copper Tank, Double Walls Fibre Board, Self-Regulated, With \$6.35 Hot-Water 140-Chick Brooder—both only \$15.95.

Freight Prepaid East of Rockies. Allowed on express. Guaranteed. My Special Offers provide ways to earn extra money. Order Now, or write for book, "Hatching Facts." It's Free and tells all. Jim Rohan, Pres. Belle City Incubator Co., Box 14, Racine, Wis.

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Prevention is better than cure. Keep away blight and mildew and destroy insect pests with a

#### Brown's Auto-Spray

Our No. 1, shown here, operates by compressed air. Half a million have been in use from 1 to 18 years. Write for free Spraying Calendar & 1919 Catalog. THE E. C. BROWN CO. 852 Maple St., Rochester, N.Y.



### Fine for Little Chicks

"Please send me your White Diarrhea Remedy. I used it last year and it is fine." Mrs. C. D. McMurray, Ansonville, Pa.—If you want the same kind of success, write for free Poultry Book to P. J. KELLY, 55 N. 2nd St., Minneapolis, Minn.

#### Chickens Sick or Not Laying?

Most poor layers are "OUT OF CONDITION" or have Colds, Roup, Bowel trouble, Sore head, Chicken pox, etc. GERMOZONE is the best remedy for all these disorders. At dealers or postpaid 75c, with 5 book Poultry Library. GEO. H. LEE CO., Dept. 480 OMAHA, NEB.

**Wanted** Bees. State how many colonies, style of hive used, and name lowest cash price. A. W. SMITH, Birmingham, Mich.



## Finds Protection Profitable

### Birds Do Better and the Land Serves Double Purpose

THE flocks of poultry which are forced to graze on land that is unprotected from the sun and wind, will not thrive as well as the birds which are furnished with protection. The combining of poultry and fruit is desirable because the birds help the fruit by destroying insects and the fruit furnishes the birds with a natural protection from the hot sun of summer and the chilly winds of fall and spring.

Plums grow rapidly and form a dense shade around poultry houses in a short time. In the fall they shed their leaves and plenty of sun can strike the house during the winter. Fruit trees are better near a poultry house than evergreens which keep the sun away from the house in the winter when it is greatly needed. Peaches do very well in poultry yards in sections where they are not easily winter-killed. Pears are first-class for fenced-in yards as they grow upright and do not take as much space as the broader spreading apple trees. Apples are not generally planted for shade in poultry yards because of their slow growth. However, if a poultry range can be located in or near an apple orchard it is fine, as the broad spreading trees furnish abundant shade for the birds. Fruit trees should not be planted too close to poultry houses or houses built too close to large fruit trees. The trees will have to be sprayed to insure a quantity of marketable fruit and the appearance of the poultry building is not benefited by a bath with lime-sulphur solution.

Small fruit like red raspberries often do very well on a poultry range. The dense shade furnished by the leaves gives the birds a cool moist earth in which to dust and scratch even on the hottest summer days. It is a common supposition that when a hen dusts she seeks a dusty place such as a dry hot road. Observation will prove that the hen likes to dust the best in a moist garden soil and such are the conditions in the shade of the berry patch.

Poultry will not injure raspberries at marketing time as the dense foliage seems to prevent the birds from seeing the fruit. Blackberries can be raised on a poultry range but the berries stand out in plain sight of the flock and some may be picked. If only the young poultry range in a patch of blackberries very little trouble seems to result. Berry bushes form an ideal protection from hawks for as soon as a hawk appears the birds will scurry out of sight and it is an unusual hawk with the nerve to dive down into a patch of brambles and seek its prey. It is not the nature of the hawk to capture poultry in that way and so the young stock will seldom suffer any casualties if they are able to find such a hawk-proof shelter.

Some poultrymen have found that it pays to allow flocks of poultry to range over their strawberry patches after the fruit has been harvested. The birds help to keep down small weeds and grass. They gather many bugs and beetles and do not injure the strawberry plants. A potato field is benefited by being located where it can be used as a poultry range. The poultry will pick up many small potato beetles before they grow hard backs,

and thus increase the efficiency of the spraying. In some cases where poultry have had the range of potato fields it has not been necessary to spray to control the Colorado potato beetle. However, the hens do not seem to trouble the beetles after they have developed the hard backs.

Evergreens can be used to advantage as windbreaks for poultry yards. In some sections the profit from the flocks will be increased by protecting the range so that the birds can be outside even when strong winds are blowing. Often the sun will be warm and the wind cold and then the hens will usually stay in the houses. They can stand the cold if the air is quiet but if the wind blows, their feathers are ruffled and blown away from the skin and when the cold air strikes the warm skin, the wise hen seeks for shelter and stays there. The evergreen windbreak will increase the number of days each year that the poultry flocks can stay outside and hunt for bugs and seeds in comfort.

Many poultrymen raise corn on parts of their poultry range and this furnishes shade and protection from hawks during the summer, and later furnishes valuable feed at harvest time. Of course, it is necessary to fence the birds away from the corn until it obtains a thrifty start. Sunflowers can also be planted on the poultry range by isolating the hens from that part of the range until the sunflower stalks are about one foot high. Then the sunflowers will furnish shade during the summer and in the fall the heads can be broken over and the poultry will harvest the seeds just at moulting time when they are very desirable in the ration to help in the growing of more feathers.

#### FEEDING FOR EGGS.

I am feeding my hens oats and buckwheat screenings, a little bran and the usual amount of shells and charcoal. I can hold them at about eight eggs a day for fifty hens but can't increase them. They are running at large now. What ought I to feed them that will balance the ration?

Possibly the lack of animal food in the ration is the main reason for low egg production. Try feeding the hens plenty of sour milk in clean crocks. If the milk is not available it will pay to feed beef scrap. The beef scrap is sometimes placed in a hopper without being mixed with other material and the hens have access to it at all times. Other breeders use from ten to twenty per cent of beef scrap in the dry mash. Probably it will be safest for you to use the beef scrap in the mash. The following dry mash is first-class: Three hundred pounds of fine ground oats; 100 pounds of wheat bran; 100 pounds of gluten meal and 100 pounds of beef scrap. Corn should be included in the scratch grain along with the oats and buckwheat screenings. At least half of the scratch grains should be corn at this time of year and it must be fed in a deep litter to induce exercise. The exercise improves the health and vigor of the flock and this is a necessary factor in egg production. If plenty of sour milk can be used along with the meat scrap in the dry mash, then the birds are sure of enough animal food to stimulate maximum egg production.

### Ring Necked Pheasants

Lay 40 to 50 eggs each per year. Why raise chickens to eat when these are much more profitable and raised as easily? Weigh 8 pound at six months, and bring \$1.00 a pound in the market. Set the eggs under chickens—feed and care for the young the way you would chickens. Are economical as they only require one-half as much food. Are very hardy and not subject to disease. Best eating bird in America. Eggs guaranteed from vigorous, healthy unrelated stock.

\$ 6.00 for 15 eggs  
35.00 for 100 eggs

### Genuine Wild Mallard Ducks

Lay 50 to 60 eggs per year. We guarantee our breeding stock to be the best in the country as they are entirely wild trapped Mallards and not the coarse semi-wild strain.

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25.00 for 100 eggs

### Giant Bronze Turkeys

Have a wonderful flock, headed by prize-winning 55 lb. tom.

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### Bloomfield S. C. Rhode Island Red Chickens

Fine laying strain of prize birds

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Get order in early and send check with it. Send for free booklet and instructions.

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By Parcel Post Prepaid. Delivered To Your Door. Guarantee Live Delivery.



Strong chicks from pure bred farm stock that are hatched right. Have chicks of Utility and Exhibition quality. Bred to Lay. S. C. White and Brown Leghorns \$12.00 and \$14.00 a 100; Barred Rocks, \$15.00 and \$17.00 a 100; Rose and Single Comb Reds and White Wyandottes, \$15.00 and \$18.00 a 100; S. C. Anconas, \$14.00 and \$17.00 a 100; S. C. Buff Orpingtons, \$18.00 and \$21.00 a 100; S. C. Black Minorcas, \$18.00 a 100; Odds and Ends, \$12.00 a 100. Eggs for hatching, \$7.00 to \$8.00 a 100. Combination offer on chicks, Hovers and brooder stove. Give us your order and we will make you a satisfied customer the same as hundreds of others. Before ordering elsewhere get our free illustrated catalog. Get your order in early.

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EAST HIGH ST., FOSTORIA, OHIO.

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A Federation of Interests

Our new Catalog of Pure Breed Practical Poultry is now ready. Some breeds are sold out for a number of weeks. Orders for chicks are still being booked for

Barred and White Rocks.  
Rose and Single Comb Rhode Island Reds.  
White Wyandottes.  
Single Comb Black Minorcas.  
Single and Rose Comb White Leghorns.  
Single and Rose Comb Brown Leghorns.  
Single Comb Anconas.  
White Orpingtons.

Eggs for Hatching  
Eggs from any of the foregoing breeds for settings or in quantities for incubators. Special price for 500 to 1000 eggs during season; and on eggs for broilers.

Eggs from White Pekin Ducks, and from Gray Toulouse Geese.  
Hares—Belgians and Flemish Giants.

Orders should be sent now, in advance, so that your order will not be crowded out by orders that have been sent earlier. Send for catalog.

BLOOMINGDALE FARMS ASSOCIATIONS,  
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### BABY CHICKS

The average cost of producing a BABY CHICK under the hen is 22 1/2 cents. We will supply you with the breeds listed below at 12 1/2 cents to 20 cents.

Barred Rocks  
White Rocks  
Buff Rocks  
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Buff Leghorns  
White Wyandottes  
Rhode Island Reds  
Black Minorcas

Anconas  
White Orpingtons  
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Assorted, for Broilers

Two millions for 1919, delivered anywhere by Parcel Post. Catalog free.

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100,000 This Season. 10 varieties, best pure blood stock hatched right and guaranteed to reach you in right condition. Hatching eggs prepaid. Pekin duck eggs. Illustrated catalog free.

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### 100,000 BABY CHICKS

for 1919, sent safely everywhere by mail or express. Single Comb White and Brown Leghorns and S. C. Anconas. Grand laying strains. Strong, vigorous, hatched right kind. Tenth season. Satisfaction guaranteed. Order now for spring delivery. Prices right. Free catalogue. W. Van Appledorn, R. 7, Holland, Mich.





## Feeding the Farm Flock

I would like some information on the feeding of baby chicks, incubator-hatched and hen-brooded. How often and what should I feed them? Also, how should I feed pullets until they are ready to be placed in winter quarters? What would be a good ration to fatten broilers on? The following feeds are obtainable: Corn, oats, wheat, middlings, bran, oil meal, corn meal, beef scrap and sour milk. Am feeding a ration for winter egg production taken from your paper, which is giving fine results.

Leelanau Co.

Mrs. L. B.

Good results can be obtained with chicks by feeding rolled oats for the first week, about five times each day. Then fine chick scratch feed can be substituted and used until the chicks are large enough for whole wheat, cracked corn, etc. Plenty of sour milk induces a rapid growth. Little chicks cannot eat too much bran and it can be supplied to them in hoppers from the first day. Green food is important and can be given in the form of sprouted oats or cut clover until the birds can range and collect their own green food. Fresh water, charcoal and grit are needed. On stormy days a little fine chopped onion helps to stimulate young chicks. It is difficult to briefly outline the "best" method of feeding young chicks, as every poultryman and experiment station soon develops its own best method and most of them give satisfaction. It pays to study rations and then through experience work out the system that seems to give the best results on the home farm. We do not like wet mashers for the young chicks, or hard boiled eggs taken from the incubator at testing time. We believe that rolled oats makes the chicks grow and do not think it necessary to bake up any of the various kinds of breads and cakes that are sometimes used for starting young chicks.

Pullets need a good range and plenty of dry mash before them at all times so that they will make a steady rapid growth and be ready to lay at their normal time, which should be about six months for the Mediterranean breeds and eight months for the American breeds. The pullets should be separated from the cockerels as soon as the sexes are easily determined and pullets should not be compelled to range with old hens as the hens will drive them from the feed hoppers and interfere with their growth. Pullets are raised successfully on about the same rations needed for laying hens. When wheat can be used for feeding it pays to use about two parts of wheat to one part corn in the scratch feed. While the wheat was needed for other purposes it was not patriotic to use it for poultry feeding but many poultrymen find that wheat is of the greatest value in developing the bone and muscle of the pullets and making them grow rapidly, and all poultrymen will be glad when wheat comes back as one of our staple poultry feeds. Plenty of sour milk helps to make the pullets grow.

Broilers can be fattened on sour milk and corn meal mixed into a sloppy mash. The main point is to reduce the exercise and increase the feed that the broilers will consume. In growing broilers, it is important to keep them developing rapidly and evenly from the day they are hatched. Broilers cannot be half starved until eight or ten weeks old with the idea of making up for lost time and finishing them properly on a ten-day period of fattening. Twenty to thirty per cent of beef scrap has been used successfully in some fattening rations. Usually broilers can be sold with very little fattening if they have been well fed from the

hatching time and are in good flesh. Fattening poultry at a profit requires careful management and good vigorous young birds for the fattening crates.

Ingham Co.

R. G. Kirby.

### DOUBLE MATING EXPLAINED.

ONE of the most perplexing problems confronting the inexperienced poultry breeder is the so-called "double mating" system used in mating certain parti-colored breeds of poultry. While this system is used with several breeds, the most common breed with which it is employed is the Barred Plymouth Rock. Since this breed is so well known, it will probably serve very well to illustrate just what is meant by "double mating."

"The American Standard of Perfection," which prescribes the requirements of a perfect fowl, states definitely the proper shape, size, color, markings, etc., of the birds of both sexes. Now it so happens that with the Barred Rocks and some other breeds the more or less arbitrary requirements do not follow the laws of nature. For instance if a pen of breeding birds is mated so that perfect cockerels will be produced, the pullets will be far too dark for standard requirements. Such a mating would be called a "cockerel mating" because its purpose is to produce standard exhibition cockerels. The females used in this mating, and also those produced from such a mating, are called "cockerel bred" females.

Now in case it is desired to produce exhibition females an entirely different breeding pen must be selected. Birds will be chosen with wider white bars and narrower black bars, thus making them several shades lighter than those in the first mating described above. While the pullets produced from this mating will meet standard requirements, the cockerels will be far too light for exhibition purposes. Such a mating is known as a "pullet mating" and the males used in such a mating and those produced therefrom are termed "pullet bred" males.

Thus it appears that the whole system really amounts to making two breeds within a breed. If a person wishes to produce standard exhibition birds of both sexes it is necessary for him to keep both strains and maintain two distinct mating pens. Many breeders do not attempt to breed both strains but specialize in one or the other. Thus we often see in an advertisement of Barred Rocks the phrase "dark line only." This means that this breeder keeps only the dark or "cockerel bred" birds.

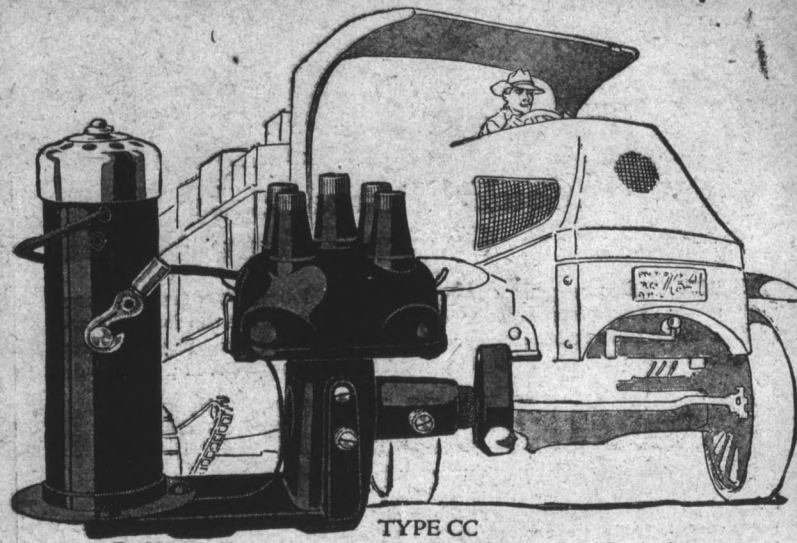
At many of the larger poultry shows after the usual awards have been made for the exhibition bred birds, prizes are also given for "cockerel bred" females and "pullet bred" males. This really makes two complete classes of Barred Rocks and allows the breeder who keeps but one strain to exhibit both his males and females for prizes.

Such in brief outline is the system which explains the existence of such terms as "cockerel bred" and "pullet bred." This article is not a defense of the system nor is it an attempt to change the established order of things. It is merely an attempt to explain very briefly what is meant by the term "double mating" and to show the utter folly of trying to produce both exhibition males and females from the same mating. Probably the wisest thing for the average farmer to do is to choose the strain which he prefers and breed that exclusively.

S. M. POWELL.

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Baby Chicks S. C. White and Brown Leghorns and Barred P. Rocks, by parcel post or express, safe delivery guaranteed. Knoll's Hatchery, R. 3, Holland, Mich.

Baby Chicks Bred to Lay S. C. W. Leghorns \$15.00 per 100. From stock that produced the winners in the state demonstration farm last year. Circular free. SUNNYBROOK FARM, Hillsdale, Mich.

Baby chicks from Bred-to-Lay S. C. White Leghorns \$12 per 100. Thompson Strain Barred Plymouth Rocks \$18 per 100. Safe delivery guaranteed. Send for chick folder and order early. Custom hatching to per egg. Russell Poultry Ranch, Petersburg, Mich.

Baby Chicks Superlative quality 11 cts. each and up. 24 leading breeds. Satisfaction guaranteed. Catalog free. Springfield Hatcheries & Poultry Farms, Box 3, Springfield, Ohio.

Barred Rocks. Selected eggs from vigorous purebred stock of good laying ability. \$2 per 15; \$5 per 50; \$10 per 100. Prepared by parcel post. R. G. KIRBY, R. 1, East Lansing, Mich.

Barred Rocks egg contest winners, eggs from strain with records to 290 a year. \$2.00 per setting prepaid by P. P. Circular free. FRED ASTLING, Constantine, Mich.

BARRED Rocks exclusively. Get your baby chicks and hatching eggs on time by ordering now. Prices and folder free. H. H. PIERCE, Jerome, Mich.

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BABY CHICKS—11 Varieties, \$10 per 100 up, 2 weeks old 25c up, 4 weeks 45c up. Hatching eggs \$1.50 per 15 and \$8 per 100. Brd. White and Buff Rks. Buff and White Orp. S. & R. C. R. I. Reds, White Wyand. S. C. W. Leg. S. & R. C. Br. Leg. Airedale Pups, Cir. free. Sunny Side Poultry Farms & Hatchery, Blanchester, O.

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Baby Chix Barron Strain S. C. White Leghorns. Large healthy vigorous stock farm raised to lay. Aim satisfaction. Bruce W. Brown, R. 3, Mayville, Mich.

**Buff Leghorns** and White Leghorns. Eggs and baby chicks, from great laying strains, order at once, satisfaction guaranteed. Dr. WILLIAM SMITH, Petersburg, Mich.

**Chicks.** We ship thousands, orders booked FREEPORT HATCHERY, Box 12, Freeport, Mich.

Chicks Barron Strain White Leghorns. Pay a little more and get a good start next season. Early hatched chicks are always the best. My cockerels come from hens with an egg record of over 250 eggs their pullet year. March \$18, April \$15, May \$14 per 100. Circular free. Folly Cove Farms, R. 1, Holland, Mich.

### LOOK BABY CHICKS \$11 A 100 UP

By Special Delivery Parcel Post, postage paid 20 different thoroughbred breeds. Utility & Exhibition grades. Live delivery guaranteed. Capacity 100,000 weekly. Catalog free. Nabob Hatcheries, Gambier, Ohio.

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Rose and Single Comb R. I. Reds, Barred Plymouth Rocks. Pure bred stock. Farm raised and of superior quality. Write for catalogue. INTERLAKES FARM, Box 39, Lawrence, Mich.

**CHIX:- S. C. W. Leghorns** \$18 per 100. Full count live chix guaranteed. Pullets of same blood averaged 70% yield through December and January. Morse White Leghorn Farm, Belding, Mich.

### Blue CUSTOM HATCHING Hens

Fifteen dozen eggs incubated and chicks boxed and shipped \$5.50. Less than full compartment 50c per dozen. Order April chicks now. Many varieties send for circulars. Crescent Egg Company, Allegan, Mich.

Barred Rocks S. L. Wyandottes and Light Brahma cockerels for sale \$3 to \$5 each. Eggs in season. C. V. BERRY, Allenton, Mich.

Chicks That Live \$15 per 100 S. C. W. Leghorns Send for catalogue. SNOWFLAKE POULTRY FARM, R. 1, Grand Rapids, Mich.

Chix 15c up 75,000 selected utility, exhibition, trap-nested chicks, always 3000 on hand. Some 10 days old, several varieties. Hatching eggs. Catalogue Beckman Hatchery, 26 E. Lyon, Grand Rapids, Mich.

English Barron S. C. White Leghorn chicks at \$14.00 per 100; \$55 per 500 immediate special delivery. 6,000 chicks each week. Guarantee safe delivery full count of lively sturdy quality chicks that will mature into most profitable and persistent layers. Hatching eggs \$8 per 100. Write us your wants and send for valuable catalogue gives rearing & feeding methods. DEVRIES LEGHORN FARM, Zealand, Mich.

English Barron S. C. White Leghorns, farm raised. Eggs for hatching \$6.00 per 100. Pleasant Hill Poultry Farm, F. A. O'HARROW, Clarksville, Mich.

**EGGS** for hatching from pure bred White Rocks Fishels strain and mammoth White Pe. kin ducks. CHAS. KLETZLEN, Bath, Mich.

Additional Poultry Ads. on Page 607





### Goulds Pumps Make Greater Leisure Possible

ADEQUATE pumping equipment saves labor. On tens of thousands of farms an hour's work in the house and in the feed lots and stables could be saved each day. Don't waste your time lugging water or working the handle of a pump unfitted for the job it is trying to do.

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Goulds "Hi-Speed" Pump shown at the left is made in 13 different combinations for either open or pressure tank water systems. One is operated by a 1/2 h.p. gasoline engine; others by 32-volt electric motors adapted to home lighting systems; still others by 110 and 220-volt motors adapted to the regular commercial currents. It pumps 180 to 360 gallons of water an hour to an elevation of 100 ft.

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### 55 Cows and Heifers

By THE FRICKE DAIRY COMPANY, Perrinton, Michigan

On the Grand Trunk R. R. At the Farm One Mile North of Perrinton

1:00 P. M., FRIDAY, APRIL 25, 1919

King Segis Longfield Korndyke Heads the Herd

- 11 Registered Cows Giving Milk.
- 4 Registered Heifers 1 year old.
- 1 Registered Bull 1 year old.
- 7 Registered Heifer Calves.
- 3 Registered Bull Calves.
- 1 Registered Herd Bull 3 years old.
- 20 High Grade Young Cows Giving Milk.
- 5 High Grade Heifers 3 years old next Fall to freshen soon.
- 3 High Grades, 2 years old next Fall.

All in Fine form and condition. The best producing herd in Gratiot County! 60-day Retest. Inspection of Herd Solicited. Terms Cash, Parties from a distance will be entertained at Hotel Seaver, Ithaca, Mich., on the Ann Arbor R. R. Conveyance will be furnished to the farm. Dinner at Noon. Write for catalog and information.

ARTHUR W. MUMFORD, Perrinton, Mich.  
Manager of Sale

Col. D. L. PERRY,  
Auctioneer

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Ten Days before date of publication

## A bull calf, sired by our imported "EDGAR of DALMENY"

recently sold in Scotland at the Perth Bull Sale for the record price of 2,100 guineas, or \$10,584.00 in our money. This goes to show the quality of the

### ABERDEEN ANGUS

that Mr. Scripps is breeding. He enjoys seeing good stock on "Wildwood" and believes that THE BEST IS NONE TOO GOOD.

"Edgar of Dalmeny" won the Michigan Grand Championship last September at the Michigan State Fair and was a winner in his class at the Chicago International last December.

We have a few females with calves at foot and re-bred to "Edgar of Dalmeny" that Mr. Scripps has consented to sell to reduce the fast growing herd.

Write To

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W. E. SCRIPPS, Prop., Sidney Smith, Supt.

For Sale seven young Aberdeen Angus bulls, sired by Pride's Lad of Rosemere No. 169484. A few cows bred to my good herd bull, Lapeer Black Bird No. 12550.

LONGWOOD FARM, Marshall Kelly, Prop., 11-30, Charlotte, Mich., Eaton Co. Phone 14-35-25.

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Write For 1919 Bull Sale Catalogue

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### Registered Guernseys

Bulls and Bull Calves, good enough for any breeding at prices you can pay. J. M. WILLIAMS, North Adams, Mich.

GUERNSEYS must reduce herd, so offer a few choice females of Glenwood breeding also bulls, all stock of A. R. breeding, herd tuberculin tested. T. V. HICKS, Battle Creek, Mich.

Additional Stock Ads. on Page 604

## A New Interest in Alfalfa

By H. L. Barnum

IT is a common experience that alfalfa fills the hay mow when other grasses fail. A well established field of this legume will furnish more and better hay under almost any conditions than any other forage crop. While grasshoppers and droughts may work havoc with common clovers, alfalfa offers little temptation to insect ravagers and the driest weather seldom causes it to load on the job. For these and other reasons many farmers are giving serious thought to alfalfa culture and many new fields will be seeded during the coming spring and summer.

The 1918 hay crop in Michigan was very small, in fact, less hay was harvested than during any of the preceding four years. The 1918 crop was only a trifle less, while the 1916 crop was almost twice as great and the 1917 crop was larger by more than a million

good cuttings of alfalfa hay in four years. This year his field will be in a cultivated crop in preparation for a new seeding of Grimm alfalfa.

Many fields of common alfalfa were killed out by the severe winter of 1917-18. The picture which accompanies this article shows the superior hardiness of Grimm stock over the common variety. Two years ago the government sent Mr. Hull, of Dimondale, Eaton county, a package of Grimm seed. This was planted at the side of a fifteen-acre field of common alfalfa, all other conditions being the same.

The first year there was no difference apparent, but last summer, after the severe winter preceding, the contrast was so great that several meetings of farmers were held in the field to show the difference. Mr. Farrand, the county agent, says that the common alfalfa was practically a failure and had win-



tons. Of course, there was a well known reason for the reduced acreage in 1918, but crop statistics show that the yield per acre in 1918 was one-third of a ton less than the preceding ten-year average and one-half a ton less than in 1917. The short crop has resulted in exceptionally high prices for hay and a consequent reduction in the amount of stock kept for winter feeding. The whole situation has created not a little uneasiness among thoughtful farmers who see in the shortage of hay one of the most serious problems in successful farming.

Recently a farmer with forty years' experience remarked to the writer that, in his opinion, the growing of more hay constitutes the greatest problem on certain types of soil, referring to the cultivated sands and sand loams. "With little hay," he said, "we have to cut down on the number of head of stock kept, and this is undesirable for several reasons. Mainly we need the stock for a winter income, and more manure is absolutely necessary on our light soils. Red clover is becoming more uncertain every year, but alfalfa seems to succeed if given half a chance." This farmer, with many others, is looking forward to the day when no other hay crop besides alfalfa, or perhaps sweet clover, will be grown on the lighter, well-drained soils.

Another successful alfalfa grower in the northern section of the state gave this advice to farmers who contemplate some change in forage crops this spring. "Do not hesitate about trying alfalfa, thinking it a well-nigh impossible task, for it is not. If given a fair show, it will repay any efforts to get it, and one will bless the day he decided to give alfalfa a trial."

Near Lucas, a farmer whose land is of white pine origin, but which has been built up by the use of manure, lime, and phosphates, reports nine

ter-killed badly while the Grimm was strong and vigorous. The picture shows the common alfalfa barely hiding the feet of Mr. Hull in the foreground, while the Grimm a few feet away is waist high on Mr. Farrand.

Dr. Eben Mumford recently said: "I think that all of us who have been in touch with alfalfa growing in this state have seen the interest in it gradually increase, and the percentage of failures is being reduced because more men are complying with all of the conditions of success." A few years ago farmers in the corn belt were experimenting with alfalfa but with poor success until, through the efforts of Joseph Wing and others, the correct cultural methods were discovered. Now alfalfa is grown in great abundance. Mr. Rupert, a wealthy and very successful corn belt farmer, once told the writer that alfalfa was so prolific now in his section that he expected to see it a drug on the market. Corn belt farmers were simply complying with all the essentials for its successful growth. A few farmers in most every Michigan county have done likewise with equally good results. When all attempts with this crop are based on a knowledge of its requirements, the hay problem in Michigan will be solved.

Dispatches from Auburn, Me., report that a committee of five, representing the New England Milk Producers' Association, has secured a six months' option on the properties of the Turner Centre Creamery Association, and its distributing plants, the latter located at Boston and other New England cities. The sum involved is reported to be \$770,000, and the association will take over all the common stock as well as the property of the creameries, which are located in Maine and New Hampshire.



## SWEET CLOVER WINS FAVOR.

SWEET clover, long regarded as a troublesome weed, has gained favor on many farms in Michigan, where it is now being successfully grown both in rotation for stock feed and as a catch crop to be plowed under to enrich the soil.

It has proved excellent for hay and pasture and is unequalled by any other legume as a soil improver. Mixed with good grasses it makes a pasture of nearly double the carrying capacity of grass alone. On some farms, with proper management, it is profitable.

Success with this legume is rare unless three essentials for its success have been provided. They are lime, inoculation and scarified seed; that is, seed which has been treated to scratch or crack the hard coat and make it easy for moisture to penetrate and hasten germination.

Probably more failures with sweet clover can be traced directly to lack of lime than to any other cause. In some sections a ton of finely ground limestone or half that amount of hydrated lime, well worked into the soil, will be sufficient to prepare it for growing sweet clover. But in other localities more may be needed. While it is true that much of the seed raised is sown locally without having the tough seed coat roughened, and that good stands are secured, generally more seed is required and the practice entails unnecessary risk. Scarified seed usually can be secured through local seedmen at a slight additional expense, or home-grown seed can be sent to seed houses for this treatment at a nominal cost.

## Seed May Bring Cash.

On grain or crop farms usually a small acreage of sweet clover furnishes all the hay and pasture needed, leaving the greater part of the crop to be plowed under to enrich the soil. Usually in the beginning it is better practice to plow under most of the crop rather than attempt seed production. On combination grain and live stock farms sweet clover serves even a better purpose. It promotes the keeping of live stock, because of the hay and pasture it produces as a part of the rotation, and as a mixed seeding with blue grass it furnishes a pasture with greatly increased carrying capacity.

A successful and effective three-year rotation on a grain and live stock farm consists of: First year, corn; second year, oats, barley, or spring wheat with a seeding of sweet clover and timothy; third year, sweet clover and timothy. A good four-year rotation for a hog farm is: Corn the first two years; oats with a seeding of sweet clover, alsike and timothy the third year, which is left for pasture during the fourth year. Another four-year rotation with sweet clover is: First year, corn; second year, oats with a seeding of sweet clover as a catch crop; third year, wheat with a seeding of sweet clover; fourth year, sweet clover for hay and seed.

## OPPOSES MEAT CONFERENCE.

SENATOR KENDRICK, of Wyoming, who introduced a bill at the last session of Congress providing for government regulation of the meat-packing industry, issued a statement tonight opposing the creation of a "conference committee of the live stock industry," as has been proposed for the adjusting of differences among packers, stock raisers and the government.

"The interests of packer, producer and consumer," said Senator Kendrick, "may be conserved only by legislation which shall remove grounds for misunderstanding and give full publicity.

"No conference committee can destroy the absolute control which a few packers now exert over the stock markets on the one hand and the distributing systems on the other. It is essential that the packers be divorced

from ownership and control of the stockyards and that the refrigerator-car system of the country be placed absolutely at the service of all shippers upon equal terms."

## STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF AUGUST 24, 1912.

of The Michigan Farmer, published Weekly at Detroit, Michigan, for April 1, 1919.

State of Michigan,  
County of Wayne.

Before me a Notary Public in and for the state and county aforesaid personally appeared I. R. Waterbury, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the Michigan Farmer, and that the following is to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:

Publisher, The Lawrence Publishing Co., Detroit, Michigan.

Editor, I. R. Waterbury, Detroit, Mich.

Managing Editor, M. J. Lawrence, Washington, D. C.

Business Manager, I. R. Waterbury, Detroit, Mich.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding one per cent or more of the total amount of stock).

M. J. Lawrence, Washington, D. C.  
Carrie J. Lawrence, Washington, D. C.

P. T. Lawrence, New York City.  
Olive M. Lawrence, Cleveland, Ohio.  
Estate of M. L. Lawrence, Cleveland, Ohio.

F. H. Nance, Lakewood, Ohio.  
Neff Laing, Philadelphia, Pa.  
E. D. Pope, Cleveland, Ohio.  
Nellie B. Lawrence, Cleveland, Ohio.  
Citizens' Sav. & T. Co., Cleveland, Ohio, Trustee under the will of M. W. Lawrence, (Beneficiaries, Nellie J. Lawrence, Mary Lawrence and Mortimer Lawrence).

Nellie J. Lawrence, Guardian, Cleveland, Ohio, Guardian of Gains J. Lawrence.

Mrs. G. B. Rogers, Cleveland, Ohio.  
Lillian Cotton, Cleveland, Ohio.  
R. M. McConville, Cleveland, Ohio.  
Kate E. Munsell, Detroit, Mich.  
J. F. Cunningham, Lakewood, Ohio.  
I. R. Waterbury, Detroit, Mich.

3. That the known bondholders, mortgagees, and other security holders owning or holding bonds, mortgages, or other securities are: (If there are none, so state).

None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is. (This information is required from daily publications only).

(Signed)

I. R. WATERBURY,  
Business Manager.

Sworn to and subscribed before me this Twenty-seventh Day of March, 1919.

CLARENCE E. HAMLIN,  
Notary Public.

(My Commission Expires October 12, 1921).

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20 lb. two year olds up to 29.31 lb. three year olds bred to King of the Pontiac Segis.

Daughters of King Walker Champion No. 125062, A 30 lb. Bull out of a daughter of K. S. P. Alcartra.

Grand daughters of Pontiac Korndyke out of A. R. O. Dams up to 26.74 lbs.

Great grand daughters of Pontiac Korndyke out of A. R. O. Dams up to 26.74 lbs.

Daughters of King Lunde Pontiac Korndyke bred to King Korndyke Orinsky Pontiac whose nearest Dams average 37.76 lbs.

Daughters of King Lunde Pontiac Korndyke also grand daughters of Sadie Vale Concordias Paul DeKol, bred to King Korndyke Orinsky Pontiac.

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831.43 lb. butter in 305 days 30.2 in 7 days; gddam, Johanna Heng-Lad, gdsire, 21.73 lb. dam of bull calf 1/2 white, 3 heifer calves 27 lb. sire not related. Terms easy.  
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## Pulling Together

NEW BULL FOR CHINA.

ELEVEN stockmen of China township, St. Clair Co., have united in the purchase of a highly bred Holstein bull at Flint. The breeding and individuality of this young sire places him in a class by himself. His pedigree enables him to rank with the leading bulls of the state, being high in weekly and yearly milk and butter records. Five of his six nearest dams each have semi-official records averaging 1,193 pounds of butter and 24,573 pounds of milk in a year. Four of these cows have each year produced on semi-official test over 1,200 pounds of butter and 25,000 pounds of milk in a year. All have official records exceeding thirty pounds of butter in a week, averaging better than 100 pounds of milk per day.

The men who have taken this step in the improvement of the live stock of the community are Peter Distelrath, Albert Butlin, Edwin Rankin, Frank Layle, John Reynolds, Albert Schroepel, Louis Schroepel, Leonard Theisen, Frank Allor, Russell Balfour and Fred Allington. They met at the home of Mr. Distelrath, on Thursday morning, and organized the China Holstein Breeders' Association. The county agent submitted articles of association and by-laws which were adopted and the following officers were elected: President, John Reynolds; vice-president, Louis Schroepel; secretary-treasurer, Albert Schroepel.

Albert Schroepel was hired by the association to keep the sire, and the members are arranging a "bee" when they will all turn out and build a paddock on the Schroepel farm.

Not only have these men taken one of the most important steps for breeding up the live stock of the county, but also each member is planning to buy one or more pure-bred cows, have his herd tested for tuberculosis, and improve his methods of care and feeding in general. These results have been accomplished through the Community Committee of the St. Clair County Farm Bureau appointed last year, and show the great good that can be realized by working together. Through this association the members are able to secure one of the very best bulls of the breed at an average investment of less than forty dollars.

### GRANGERS MEET.

CENSURING Secretary of Agriculture Houston for suppressing the Spillman estimates on cost of production; discussing thoroughly and adopting by unanimous rising vote the submission of the terminal warehouse bill to the people; sewing carpet rags for rugs for the county seat's new rest-room—attained after long and arduous farm efforts—and collecting \$10 to weave the rugs; taking in a class of about a dozen members; enjoying the Pomona Orchestra, and eating Pittsfield-Scio-Webster's sumptuous dinner—thus Washtenaw's county Grange "drove dull care away" at its March meeting.

The program proper offered a rich feast, well, in the shape of a racy talk by Mrs. Edith M. Wagar, Lecturer of Wayne Pomona Grange. Mrs. Wagar talked in a pleasant, conversational way upon women's new political duties and related her attitude toward them from the standpoint of what farmer women have been doing during war times. She rehearsed food accomplishments and raised the question of

how many know what it costs to feed the city cousins who "run out over the week end." That she had made an effort to ascertain the actual cost of food used in her own home during a period of one week, she showed by quoting costs of the various foods used during a week of beet harvest on their farm last fall. These meals were for three adults—all working in the beet field—and, as she was one of the three, the meals were hastily prepared but ample for working persons. The conclusion of her experiment was that it had cost about forty-five cents a day per person, exclusive of labor and all "overhead" charges. This raised the neat little question of "how much is a farm woman's time worth, anyhow?" She knows what her husband would have to pay a foreigner to do the work she does in the field, but what is she worth working in her own home? This, and many other pointed queries, Mrs. Wagar thrust upon her audience. Especially did she amuse the men by urging that women take the middleground of non-partisanship in politics for awhile at least. She showed good in both of the dominant parties, but pointed out, also, some tremendous weaknesses in both. She urged women to think things out for themselves and not be classified on their husband's record on party lines. Altogether Mrs. Wagar made a "hit" with a very attentive audience and it is hardly possible that those who listened will forget all the points that she sent home with such delicious humor.

An unusual pleasure was granted this Pomona in that two editors of the Michigan Farmer were present and made short addresses. Both were very welcome and I venture to predict that many wondered why we do not oftener have the privilege of exchanging opinions with the leaders of our farm papers. Certainly nothing but the best sort of good results can come from such interchange of ideas and plans.

JENNIE BUELL.

### WOMEN JOIN FARM BUREAUS.

IN more than two-thirds of the states the farm bureaus now include women as well as men in their membership. Boys and girls also have their place in the county organization. As a consequence, women are taking an increased interest in community work. Committees and bureaus which have the benefit of feminine as well as masculine judgment on farm questions have a basis for a broader viewpoint than do those composed of men only. The men are said heartily to approve of having the bureaus open to their sisters and wives, and in many instances they seem to be even more enthusiastic than their wives are about women joining.

### LIVE STOCK NEWS.

THE foreign demand for lard and cured hog meats is enormous, and there is no danger of over-production of hogs in the United States. During a recent week exports from the Atlantic ports embraced 29,707,000 pounds of lard, comparing with 34,441,000 pounds a week earlier and 11,989,000 pounds a year ago. For the same time exports of cured hog meats amounted to 69,815,000 pounds, comparing with 42,511,000 pounds a week earlier and 28,222,000 pounds for the same week last year.

Another high record for the year for wethers was made a few days ago in the Chicago market when two carloads of Wisconsin fed western wethers brought \$17.15. They were fancy and averaged 167 pounds.



## LANGHURST FARM SALE

45 Registered Holstein Friesian Cattle 45  
At Sebawaing, April, 24, rain or shine

Young females, mostly fresh, bred to 33.34 lb. sire. Tuberculin tested. Mostly out of A. R. O. dams. Free trans. from depot.

Auct. Meckelowny & Luther. Wood in Box. Write for catalog.

F. J. LANGE, Sebawaing, Mich.

## BULL CALVES

Sired by Korndyke  
No. 112849. The sire's dam at 2½ years, grand-dam at 3½ years, and great grand-dam have semi-official records averaging 842 lb. butter in 1 year. Dams of calves have A. R. O. records up to 19.23 lb. butter in 7 days. Write for breeding and prices.

PEACELAND STOCK FARM  
Three Rivers, Mich. Chas. Peters, Herdsman  
C. L. BRODY, Owner Port Huron, Mich.

Registered Holstein Bull calves from A. R. O. cows up to 23.32 lbs. butter in 7 days, grandsons of the \$50.00 bull.  
C. H. GIDDINGS, Gobleville, Mich.

For sale a fine registered Holstein bull calf from large producing ancestors, born Dec. 18, 1918. Would make a fine sire for improving a grade herd. Price reasonable.  
A. F. LOOMIS, Owosso, Mich.

For Sale Registered Holstein bull calf, born Feb. 18, 1919, mostly white. Dam daughter of 30 lb. sire. Sire Grandson of Pontiac Korndyke, write for pedigree and price delivered.  
E. E. STURGIS, St. Johns, Mich.

A Good Note accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach of all. Write.  
GEO. D. CLARKE, Vassar, Mich.

Bulls All Sold, have two Reg. Oxford ewes at \$50.00 each. Due to lamb soon.  
J. ROBERT HICKS, St. Johns, Mich.

\$150 Buys one reg. heifer two months old and one bull calf one month old. Not akin. Pontiac breeding. Both light colored. B. B. Reavey, Akron, Mich.

WANTED a Reg. Holstein Bull dam better than 30 lb. PARHAM'S PEDIGREE STOCK FARM, Bronson, Mich.

## JERSEYS

THE dollar mark is part of a Jersey heifer cause she is a real money maker. Costs less to keep than any other cow and her milk is worth more. She gives the prosperous touch to your farm. Compare Jersey butterfat records with any other breed and you will not be satisfied with anything but Jerseys—the profit breed.

Ask breeders for prices and pedigrees and let us send you valuable facts, free.  
THE AMERICAN JERSEY CATTLE CLUB  
346 West 23rd Street New York City

Maple Lane R. of M. Jersey herd. Bull and heifer calves sired by a nephew the new World's Champion. Sophie's Agnes. Also R. C. Red eggs and chicks.  
IRVIN FOX, Allegan, Mich.

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

JERSEY BULLS  
Ready for service FOR SALE  
WATERMAN & WATERMAN, Ann Arbor, Mich.

The Wildwood Jersey Farm.  
Bulls for sale by Majesty's Oxford Fox 13214 and Emment Lady's Majesty 150934, and out of R. of M. Majesty dams.  
ALVIN BALDEN, Capac, Mich.

LILLIE Farmstead Jerseys. Young bulls ready for service from R. of M. cows. A few bred heifers and cows.  
COLON C. LILLIE, Coopersville, Mich.

For Sale Registered Jersey bulls ready for service and bull calves.  
SMITH & PARKER, R. 4, Howell, Mich.

Lakewood Herefords Strong in the blood of that breeds true to type and predominates the leading show and sale rings of the country. A few high class young bulls for sale. Come see, and compare. Farm adjoins town. City, Phone 25.  
E. J. TAYLOR, Fremont, Mich.

## HEREFORDS

Both sexes and all ages for sale also horned and polled bulls in service. Governor by Prince Donald by Prime Lad 9th. Militant Farmer by Imported Farmer, Fairfax Farmer by Militant Farmer, Dam by Perfection Fairfax.

ALLEN BROS., Paw Paw, Mich.

Herefords Polled and Horned blood lines embrace Fairfax. Polled Perfection and Prime Lad 9th breeding. Prices reasonable.  
COLE & GARDNER, Hudson, Mich.

Herefords Bob Fairfax 494027 at head of herd. Stock for sale, either sex, polled or horned, any age. Priced right. EARL O. McCARTY, Sec'y. H. B. Ass'n. Bad Axe, Mich.

## BIDWELL SHORTHORNS

Registered bulls, cows and heifers—Good Scotch and Scotch-Topped for sale. In prime condition. Modern sanitary equipment. Farm 10 minutes from N. Y. C. depot. 1 hour from Toledo, Ohio. Automobile meets all trains. Write.

BIDWELL STOCK FARM,  
Box B, Tecumseh, Mich.

Shorthorn Cattle of both Sex for Sale  
W. W. KNAPP, Howell, Michigan.

Shorthorns Scotch and Scotch Topped cows and heifers, all priced right. Come and see them or write.  
W. B. McQUILLAN, R. 7, Howell, Mich.

## Richland Farms

Home of the Mich. Champions. We have just purchased the entire herd of Scotch cattle belonging to the Estate of the late A. D. Flintom, Kansas City, Mo. About Feb. 1st. we will offer a choice lot of young bulls for sale.

C. H. PRESCOTT & SONS,  
Office at Tawas City, Mich. Farms at Prescott, Mich.

For Sale Shorthorns of Quality Scotch and Scotch Topped descendants of Archers Hope, Avondale, Maxwilton Sulton and White Hall Sulton by the Oscola Co. Shorthorn Breeders Ass. JOHN SCHMIDT, Sec. Reed City, Mich.

## Stockers & Feeders For Sale

130 Shorthorn Steers ave. 1065 lbs.  
170 Hereford Steers ave. 950 lbs.  
2 cars of yearling Herefords ave. 750 lbs.  
These steers are dehorned and in good flesh. Wapello Co. Ia. is noted for its good cattle. Write.  
JOHN CARROW, R. 3, Ottumwa, Ia.

Milking Shorthorns Clay bred young bulls 3 to 10 months old.  
DAVIDSON & HALL, Tecumseh, Mich.

Rosemary Farms, Williamston, Mich. young bulls ready for service. Shorthorns bred for milk & beef. Herd estab. by Prof. C. H. Burgess, Mich. Agri. College.

Shorthorns Central Mich. Shorthorn Breeders Ass. offer 37 bulls all ages. 17 females for sale. Write Oscar Skinner, Sec., Gowen, Mich.

Shorthorn Breeder No stock for sale at present.  
CHAS. WARNER, Jr. Imlay City, Mich.

Shorthorns 100 head to select from. Write me your wants, price reasonable.  
Wm. J. BELL, Rose City, Mich.

The Kent Co. Shorthorn Breeders have both males and females for sale. Ask about them.  
L. H. LEONARD Sec., Caledonia, Mich.

Milking Shorthorns of best Bates breeding and O. I. C. swine. Bulls for sale 1 mo. to 1 year old.  
E. H. KURTZ, Mason, Mich.

Hogs all sold, have a nice Shorthorn bull calf, six months old, good individual price \$200 if taken soon.  
JOHN D. WILEY, Schoolcraft, Mich.

Four Full Blood Shorthorn Bulls for sale.  
W. PULVER & SON, Three Rivers, Mich.

Cattle For Sale Stockers & feeders, from 500 to 1200 lb. Write your wants.  
ISAAC SHANSTROM, Fairfield, Iowa.

Registered Red Poll Calves Jersey pigs for sale. Will Cottle, West Branch, Michigan.

## Don't Buy A Bull But Buy This Sire

Here is a very straight 6 months old calf out of a show cow that has an A. R. O. record of 27.09 lbs. butter, 607 lbs. milk in 7 days and a big milker for the year. His sire is a 32 lb. son of the famous \$50,000 bull.

If you want a real sire that will make you money write

LAKE SIDE DAIRY  
LAKE ODESSA, MICH.

HOGS

## Duroc Opportunity

What would the earning capacity of a Brookwater Boar be in your herd? A mid-west breeder states that the Brookwater boar he used added from \$75 to \$100 to every gilt bred to him. It paid this man to use one of our boars it will pay you.

We have several that we are offering at prices which appeal to the small breeder who must of necessity be a conservative buyer. We have a few that are good enough to be used in high class herds at prices in keeping with their individuality and breeding. Money invested in a good herd boar very speedily increases the value not only of what you sell but what you keep. Send for price list or better, visit the farm.

BROOKWATER FARM, Ann Arbor, Mich.  
HERBERT W. MEMFORD, owner.  
J. BRUCE HENDERSON, Manager.

Duroc Jersey's A few extra good fall boars bred by Orion Cherry King Col. 2nd. Bred sows all sold.  
W. C. TAYLOR, Milan, Mich.

## Registered Duroc Gilt

Descendants of the leading strains: Cherry King, Defender, King of C's, The Professor, all bred to Col. Defender the 35th. No. 123705, his sire, Pal's Premier Col. T. No. 31021. Dam, Royal Defender No. 231560, one of the most promising herd boars in Michigan. Prices reasonable. Write for prices and further information.  
THE JENNINGS FARMS, R. 1, Bailey, Mich.

50 DUROC bred sows and 50 fall pigs. You need a litter by Orion's Fancy King the biggest pig of his age ever at International fat stock show. Catalog tells all.  
NEWTON BARNHART, St. Johns, Mich.

## OAKWOOD FARM

Nothing for sale at present booking orders for spring pigs (Durocs). Tax Payer and Gold Medal breeding.  
RUBB BROS., Romeo, Mich.

## DUROC-JERSEYS

E. D. HEYDENBERG, Wayland, Mich.

## DUROC JERSEYS

Gilts bred for June farrow of the heavy boned type also fall pigs either sex pairs not akin.  
F. J. DRODT, R. 1, Monroe, Mich.

Duroc Jerseys. A few choice gilts bred to Brookwater King Special 111467. (A full brother to Brookwater Lass D. the grand champion sow at the 1918 International). Carey U. Edmonds, Hastings, Mich.

Spring Farrow sows all sold. Write me your future wants.  
JOS. SCHUELLER, Weidman, Mich.

For Sale Duroc Jerseys of the big boned type fall pigs of either sex and taking orders for spring pigs.  
CHAS. BRAY, Okemos, Mich.

Hampshires Boars at a bargain bred gilts all sold.  
JOHN W. SNYDER, R. 4, St. Johns, Mich.

## THE WORLD'S CHAMPION

big type O.I.C.S. Stock of all ages for sale. Herd headed by Calloway Edd, the World's Champion O. I. C. boar assisted by C. C. Schoolmaster, Grand Champion boar of Michigan, New York and Tennessee state fairs. Also, C. O. Giant Buster, undefeated Senior boar pig wherever shown and Grand Champion of Oklahoma state fair. Get our catalogue of Orandell's prize hogs, Cass City, Michigan.



I HAVE started thousands of breeders on the road to success. I can help you to place one hog from my great herd in every community where I am not already represented by these fine early developers—ready for market at six months old. Write for my plan—More Money from Hogs.  
G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

Originators of the Famous O. I. C. Hogs

## Breed The Best THE WORLD NEEDS LARGE FAT HOGS

Why lose money breeding and feeding scrub hogs? Two of our O. I. C. Hogs Weighed 2806 Pounds.

We are the most extensive breeders and shippers of pure bred hogs in the world. Write today for the true story of the real O. I. C. Hogs. All foreign shipments U. S. Government Inspected

We have bred the O. I. C. Hogs since 1863 and have never lost a hog with cholera or any other contagious disease.

WRITE—TODAY—FOR FREE BOOK "The Hog from Birth to Sale" THE L. B. SILVER CO. 196 Heights Temple Bldg. CLEVELAND, OHIO

Chesters, March and April pigs in winning stock prices reasonable satisfaction guaranteed.  
F. W. ALEXANDER, Vassar, Mich.

## Shadowland Farm O. I. C.'s

Bred Gilts 200 to 300 lbs. from prize winning stock. A few fall yearlings and 2 yr. old sows, big type, growthy boars of all ages, guaranteed as breeders. Everything shipped C. O. D. Express paid and registered in buyer's name. J. CARL JEWETT, Mason, Mich.

O. I. C. and Chester White Swine Strictly Big Type with QUALITY. I am sold out of everything but fall pigs. These pigs are as good—and I think better than any I ever bred. I am one of the oldest breeders of Big Type in the U. S.  
NEWMAN'S STOCK FARM, R. 1, Marietta, Mich.

O. I. C.'s big type serviceable boars. Yearling sows and gilts bred for spring farrow.  
G. P. ANDREWS, Danville, Mich.

O. I. C. Bred Gilts All Sold.  
H. W. MANN, Danville, Mich.

O. I. C. Boar, 14 months old. Large fall pigs of either sex.  
C. J. THOMPSON, Rockford, Mich.

O. I. C. Gilts bred for summer farrow and a few fall boar pigs any of them good enough to ship. C. O. D.  
F. C. BURGESS, R. 3, Mason, Mich.

O. I. C.'s 2 choice yearling boars, 2 CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C.'s 2 last July and 4 last Sept. boars, good growthy fellows, Farm ½ mile west of Depot.  
OTTO B. SCHULZE, Nashville, Mich.

O. I. C. fall boars and gilts extra large boned. Best I ever raised. Price to sell. Will Thomas, ELM FRONT STOCK FARM, Dryden, Mich.

## FRANCISCO FARMS SHORTHORNS—POLAND CHINAS

Three choice heifers and a few young cows to offer. Also fine good gilts bred for late spring farrow. Prices are attractive.  
P. P. POPE, Mt. Pleasant, Mich.

For 25 Years We have been breeding Big Type Poland China hogs of the most approved blood lines. Our new herd boar Michigan Buster is a mighty good son of the great "Giant Buster" dam "Mow's Miss Queen 2". Some breeding! We are all sold out except a few fall pigs at \$25.00 each.  
J. O. BUTLER, Portland, Mich.

Big Type Poland Chinas A 400 lb. Aug. 29 yearling and a few 250 lb. Apr. gilts. Quality stuff, registered, and cholera immune. Bred for Mar. and Apr. farrow.  
WESLEY HILL, R. 6, Ionia, Mich.

P.C. bred gilts sold. For sale herd boar prospect 17 mo. old, wt. 600 lb. with quality, sire Buster Giant, 200583, dam Nemo L. 545940 an 500 lb. sow in flesh. Sire sold for \$1500, priced reasonably. Free delivery from Farms.  
W. E. LIVINGSTON, Parma, Mich.

Big Poland Chinas with quality. For sale, summer and fall gilts, open or bred.  
G. A. BAUMGARDNER, R. 2, Middleville, Mich.

L. S. P. C. Bred sows all sold, 2 boars ready for service also 1 fall boar, and fall gilts to breed for fall farrow.  
H. O. SWARTZ, R. 1, Schoolcraft, Mich.

MICH. Champion herd of Big Type P.C. Nothing for sale but fall pigs; orders booked for spring pigs.  
E. R. LEONARD, St. Louis, Mich.

Big type P. C. fall boars the big prolific kind, their breeding traces to the best herd in Ill. Iowa, & Neb.  
C. E. GARNANT, Eaton Rapids, Mich.

Large Type P.C. Nothing for sale now. Will be in market with better than ever this fall. If herd stuff counts.  
W. J. HAGELSHAW, Augusta, Mich.

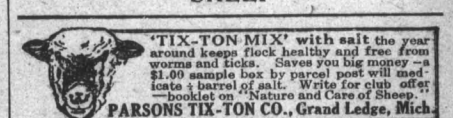
Big Type P. C. boar and bred gilts. Choice Aug. pigs at a bargain.  
A. A. WOOD & SON, Saline, Mich.

Big Type P. C. Choice bred sows from Iowas greatest herds, the big bone prolific kind with size and quality.  
E. J. MATHEWSON, Burr Oak, Mich.

Big Type Poland's all sold out, nothing for sale at present. Booking orders for spring pigs. Thanking my customers. L. L. Chamberlain, Marcellus, Mich.

Mammoth Poland Chinas all sold. General Jones No. 317249, son of Gerstade Jones heads our herd. Clyde Weaver, Ceresco, Mich.

## SHEEP



PARSONS TIX-TON CO., Grand Ledge, Mich.

MORE to the Kids of Mich: I have sold all the ewes that I care to sell, but judging from the many inquiries I have received there are many of you kids who still want to get started in registered ewes. Now then, here is a new proposition: I have selected one beautiful Shropshire ewe, she will lamb in the course of the next month; she is worth at least \$50.00. I will give this ewe, absolutely free, to the boy or girl who gives me in my opinion, the best reasons why they should be the one to get her. I may give away more than one.

S. L. WING, Kope-Kon Farms, Coldwater, Mich.

## SHROPSHIRE SHEEP

We have about 50 ewes in lamb for sale, of best breeding. Registered.  
HARRY E. SAUER, Seedsman, Lansing, Mich.

## BUY A SHEEP

Wait a minute, buy Hampshires. The American Hampshire Sheep Association wants to send you a dandy little booklet with list of breeders. Some near you. Write COMFORT A. TYLER, Secretary, 212 Woodland Ave., Detroit, Mich.

For Sale Bred Reg. Shrop. Ewes at a reasonable price also ewe lambs.  
H. F. MOUSER, R. 6, Ithaca, Mich.

Shropshire Sheep Nothing to offer before June 1-1919.  
ARMSTRONG BROS. R. 3 Fowlerville, Mich.

## POULTRY

Baby Chicks S. C. White Leghorns, Ferris strain \$15 per hundred postpaid. Safe delivery guaranteed. Ralph Totten, Plattsford, Mich.

Fenton Chicken Hatchery, Fenton, Mich. F.M. Milliken, Proprietor. Thoroughbred Day Old Chicks, 25 for \$5.50; 50 for \$10.00; 100 for \$18.00. Single Comb W. Leghorns Tom Barron English Strain. White, Buff and Barred Plymouth Rocks, Buff Orpingtons, Anconas, W. Wyandottes, R. I. Reds, B. Leghorns.

Fowler's Buff Rocks Cockerels \$4 up. Utility eggs for hatching \$2.00 for 15.  
R. B. FOWLER, Hartford, Mich.

For sale "Buy the Best" eggs for hatching from 200 egg strain Barred Plymouth Rock \$2.40 per 15. \$3.00 for 45 eggs.  
H. B. PROCTOR, Grand Haven, Mich.

Hatching eggs Plymouth Rocks, all varieties. Sheridan Poultry Yards, R. 4, Sheridan, Mich.

John's Big Beautiful Barred Rocks are hen hatched. Quick growers, good layers 30 eggs \$3, 100 \$8. Postage paid, Circulars, photos. John Northon, Clare, Mich.

## Laybilt S. C. W. Leghorn

Large, great layers, pure whites, strong day-old chicks. March 15c each; April 15c each. Parcel postpaid. Lots of 25 or over guaranteed delivery alive and lively. Hatch every week after March 15th. No circular. Please book order direct from ad, and orders early.

V. A. MORSE, Ionia, Mich.

Pine Crest White Orpingtons. Egg that will hatch good, strong chicks 3 and 5 dollars per 15. (No baby chicks or eggs by 100).  
Mrs. WILLIS HOUGH, Pine Crest, Royal Oak, Mich.

## Rhode Island Whites

Beat them all and won cup at National Egg Laying Contest. Get your order in early for eggs and chicks.  
H. H. JUMP, 215 Prospect Blvd., Jackson, Mich.

R. C. Br. Leghorn eggs \$1.50 per 15, \$8 per 100. Pekin R. C. duck, \$1.50 for 8. W. Chinese goose eggs 40 cents each.  
Mrs. CLAUDIA BETTS, Hillsdale, Mich.

R. C. Rhode Island Red eggs \$2 per setting from grand type and colored birds. Breeding chicks \$3. Send for mailing list.  
B. J. WILSON, Ohio, Mich.

S. C. Brown Leghorns. Heavy laying strain. Farm S. C. range. Eggs \$1.25; 50 \$2.25; 45 \$3; 100 \$6. Postpaid.  
Floyd Robertson, R. 1, Lexington, Ind.

S. C. Anconas, W. Leghorns. Book orders now for Day Old Chicks and Hatching eggs. Circular free.  
Elmhurst Poultry Farm, Brighton, Mich.

Snowy White Rocks Fishel Strain, dandy layers. Eggs \$1.50-15; \$4.50; \$7.00. All prepaid.  
Mrs. Earl Dehnhoff, Vanburen, Ohio

S. C. B. Minorcas. Eggs from pen 1, \$3.00 per 15, \$1.50 from pen 2, \$2.00 per 15. Incubator eggs \$7.00 per hundred.  
R. W. MILLS, Saline, Mich.

White Wyandotte Free range flock 80 Duxton's Strain hens mated to 7 Martin's Regal Strain Cockerels, 15 eggs by Parcel Post \$2.00 by ex. \$3 per 100.  
VERN MOORE, Hartford, Mich.

White Wyandotte eggs for hatching \$5.00, \$3.00 \$1.50 per 15, \$7.00 per hundred. Pen No. 1, \$10 per 15.  
DAVID RAY, 709 Norris St., Ypsilanti, Mich.

Okah White Wyandotte eggs for hatching, \$2.00 per 15, \$10.00 per 100 prepaid.  
E. W. BANKS, R. 3, Box 178, Lansing, Mich.

Silver, Golden & White Wyandottes from fine quality Satok. Eggs by P. post prepaid \$3.00 per 15, \$5.00 per 30, \$8.00 per 50. C. W. Browning, R. 2, Portland, Mich.

Pekin ducks, either sex, \$4.00 each. Mammoth Bronze turkeys, Toulouse geese, S. C. W. Leghorn cockerels, Berkshire gilts and sows, Chase Stock Farm, Marietta, Mich.



# LATEST MARKET REPORTS

## SECOND EDITION.

The markets in this edition were revised and corrected on Thursday afternoon, April 10.

## WHEAT.

The statistical position of the wheat market does not portend a lowering of values so far as the 1918 crop is concerned. If we export what has been promised by the government there will be no reserve left in this country by July 1, notwithstanding that the crop estimators figure a slightly larger holding by growers than had been anticipated. The present outlook for the coming crop could hardly be more promising. The government estimates winter wheat crop at 837,000,000 bu. the estimates at 1,200,000,000 bushels. The federal grain corporation is asking for bids on flour for export purposes. American grain is also being delivered in Germany. Recent advances in quotations have been sustained. One year ago wheat sold on the local market at \$2.17 per bushel. The visible supply decreased 7,465,000 bushels last week. Present Detroit prices are:

No. 2 red	\$2.45
No. 2 mixed	2.43
No. 2 white	2.43

## CORN.

After April 10 the government will accept weekly bids for supplies of corn products to be exported to Europe; otherwise the movement of this cereal has eased up a little and prices on the local markets are off from the high point reached last week. Shipments from Argentina have amounted to little thus far, however, dealers are using market "dope" from South America as a club to keep down values here. As a matter of fact, the ships in Argentine ports are being loaded with wheat, leaving little or no space to carry corn products. A year ago No. 2 corn sold on the local market at \$1.70. The visible supply has changed little from last week. Present quotations here are:

No. 3 corn	\$1.60
No. 3 yellow	1.65
No. 4 yellow	1.60
No. 5 yellow	1.58
No. 3 white	1.65

Chicago.—The corn market had a fairly strong tone in Chicago, with the prices as follows: No. 3 yellow \$1.60½ @1.61; No. 4 yellow \$1.58 @1.59; No. 5 yellow \$1.55.

## OATS.

The oat market exhibited independent strength, due largely to an improved demand on investment account. The United States visible supply decreases 1,395,000 bushels. Receipts at primary markets have been fairly large. One year ago standard oats were quoted on the local market at 95½c per bushel. Present Detroit prices are:

Standard	70
No. 3 white	69½
No. 4 white	68½

## RYE.

An improvement is noted in this trade, and prices rule above last week's quotations. Rye flour is wanted abroad. No. 2 is quoted at \$1.70 a bushel on the local market.

## BARLEY.

Not only is a large amount of barley being used for feeding, but barley flour is in demand for export purposes. Prices are firm at \$2.15 @2.25 per cwt, for cash No. 3.

## BEANS.

Prices paid for beans in Michigan producing sections have held steady to firm during the past week. The prices to growers are now from \$6 @7 per cwt. The important bean consuming centers report fairly steady demand and movement. There are too few sales on the local market to establish prices. Michigan choice hand-picked pea beans, sacked are jobbing at \$7 @8 in Boston; \$7.75 @8 in New York; \$7.50 @8 in Philadelphia, and \$7.75 @8 in Chicago. On Wednesday, Thursday and Friday of last week there were imported at Seattle 2,335 tons of beans from Japan, of which 950 tons were Kotoshishis, a variety resembling closely the Michigan pea bean.

## FEEDS.

Quotations remain about steady as follows: Bran \$46; standard middlings

\$45; fine middlings \$50; coarse corn meal \$63; cracked corn at \$67; chopped feed \$52 per ton in 100-lb. sacks to jobbers.

## SEEDS.

Prices for seeds remain firm at the advanced quotations given last week as follows: Prime red clover \$29.50; alsike \$25; timothy \$5.15.

## HAY.

Prices continue to advance with the situation acute, consumers failing to find enough to satisfy their needs. Quotations are: No. 1 timothy \$31.50 @32; standard timothy, light mixed at \$30.50 @31; No. 2 timothy and No. 1 mixed \$29.50 @30; No. 1 clover at \$27.50 @28.

Pittsburgh.—Top quotations are being realized here for the better grades. Quotations are: No. 1 timothy \$34.50 @35; No. 1 light mixed \$32 @33; No. 1 clover, mixed \$33 @34; No. 1 clover \$31.50 @32.

## POTATOES.

The potato market is sharply stronger. Prices have generally advanced since the public is beginning to realize that supplies have been gradually decreasing with the prospect of an extended consuming season since a short crop from the southern states is predicted. At Michigan points prices to growers at warehouses now range from \$1.40 @1.62, with the bulk at \$1.45 @

1.55. Wisconsin growers are receiving from \$1.55 @1.65. At Detroit U. S. No. 1 are bringing mostly \$3 per 150-lb. sack; in Cleveland Michigan stock of the same grade is quoted \$3.15 @3.25; in Pittsburgh \$3.25 @3.40; in Columbus \$3.25; in Buffalo \$2.15 @2.25 per cwt; in Indianapolis \$2.20; in Chicago \$1.75 @1.90.

## BUTTER.

Values are generally lower than last week. Business, however, is increasing since the decline, and the markets are now reported steady. At Detroit fresh creamery stock is jobbing at 59 @60c per pound. Chicago trade is on a lower basis, with creamery at 55 @62c. The spread of prices on the New York market is from 63½ @66½c and western extra creamery brings 68c in Philadelphia.

## EGGS.

The egg market is unsettled. At some points trading is firm, while at other places the market is steady to lower. At Detroit prices are unchanged to a fraction above those of last week. Extra firsts in new cases are quoted at 41½c and fresh firsts at 40½c, while storage packed firsts in new cases now bring 43½c per dozen. In Chicago prices are lower, with firsts at 39 @40c; ordinary firsts 38½ @39c; storage packed firsts 41½ @42c. The New York trade is paying 41 @45½c. The Philadelphia trade is job-

bing western extra firsts at \$12.90, and firsts at \$12.60 per case.

## POULTRY.

Poultry trading is dull and steady, with quotations for live as follows: No. 1 springs 36 @37c; stags 30c; fat hens 40c; small hens and Leghorns 37 @38c; roosters 25 @26c; geese 27 @28c; ducks 38 @40c; turkeys 38 @40c.

## DETROIT CITY MARKET

Green vegetables are in active demand at the city markets, with prices well maintained. A few apples are offered, with prices at \$1.50 @4 per bushel; white cabbage \$1.50 @2.50; red do \$1.75 @2.50; potatoes 75c @1.15 per bushel; eggs 40 @45c; country butter 60 @65c; dressed pork 23 @24c; veal 24 @25c; live chickens 34c; dressed chickens 40c.

## WOOL

Every item of news, excepting the opinions of some buyers, points to a strong wool market. The London sales just held showed prices resulting from competitive bidding to have surpassed the levels anticipated by the most optimistic dealers. This was not only true of the high grades which have generally been considered as being in a statistically strong position, but also of the medium and lower grades where the bears thought prices would sag and reduce the average. The last series of auctions in Boston not only maintained prices established at the former government sales, but advanced the figures to new levels. Growers are optimistic and are not inclined to sell at the quotations offered by local dealers. Sheep men should read the account of the London and Boston sales on the following page, also the report of the Detroit meeting of Michigan dealers, and the comment on the editorial page.

## GRAND RAPIDS

Hay is scarce and higher; sales on the city market last week were \$30 a ton for loose timothy. Some farmers are buying to "piece out" the spring pasturage. In some sections of western Michigan indications are for a very short crop this season, due to light seeding the past two years and a poor catch of what was sown. Dealers in lay, unable to get baled in sufficient quantities to fill orders are importing from Canada, three cars arriving in this market the past week. Potatoes are a little higher; prices at various shipping points being \$1.35 @1.50 per cwt. A year ago the price was 60 @80c. United States government agent reports "demand brisk, deliveries light, shipments heavy." There was a fairly good movement of Michigan pea beans the past week, but prices remain unchanged at \$6.50 per cwt. There is a fairly good demand for farm fertilizers, both animal and commercial. Prices in general are higher than last season.

## LIVE STOCK NEWS.

Shed lambing in Idaho was over by the middle of March, with about a 100 per cent crop, most of the lambs being dropped from the tenth of February to the tenth of March, and the youngsters are expected to start for market from two to three weeks earlier than usual. Early Chicago supplies are expected by the middle of July, followed by a large movement by August and western markets will receive larger supplies than in recent years, according to present expectations. About two-thirds of the lambs produced in southern Idaho are shed lambs, and a crop of eighty per cent is expected, breeding ewes having wintered well.

A consignment of seven carloads of cattle from Idaho arrived in the Chicago market on a recent day. Ordinarily such cattle would go to the Pacific coast, but market conditions in that region are reported as unsatisfactory, and it is said that many hay-fed cattle are likely to be shipped to Chicago, Omaha and St. Paul, including not only Washington and Oregon, but also cattle raised in the Big Hole, Montana. The shipment from Idaho mentioned came through on the Northern Pacific, the journey being made in two weeks.

## MILK PRICE FIXED AT \$3.40 FOR APRIL.

The milk commission for the Detroit Area fixes the price for milk for the month of April at \$3.40 for 80 per cent delivered, and at \$2.50 for the remaining 20 per cent at country stations.

## Live Stock Market Service

### Reports for Thursday, April 10th

#### BUFFALO.

On this market today pigs brought \$20 and other grades of swine \$20.75 @21; wool lambs brought \$20; clipped lambs \$17; calves \$19.

#### DETROIT

##### Cattle.

Market rules steady.  
Best heavy steers ..... \$16.00 @16.50  
Best handy wt bu strs.. 12.50 @13.50  
Mixed steers and heifers 12.00 @13.00  
Handy light butchers.... 10.50 @11.50  
Light butchers ..... 8.50 @10.00  
Butcher cows ..... 8.50 @ 9.50  
Cutters ..... 7 @ 7.50  
Canners ..... 6 @ 6.75  
Best heavy bulls ..... 10.00 @12.00  
Bologna bulls ..... 8.50 @ 9.50  
Stock bulls ..... 7.50 @ 8.00  
Feeders ..... 10.00 @13.00  
Stockers ..... 8.00 @10.00  
Milkers and springers... \$ 65 @ 125

##### Veal Calves.

Market five cents lower; culls not wanted.  
Best ..... \$18.00  
Others ..... 10.00 @14.00

##### Sheep and Lambs.

Market dull.  
Best wool lambs ..... \$18.50 @19.00  
Fair lambs ..... 18.00  
Light to common ..... 14.00 @16.25  
Clipped lambs ..... 15.00 @16.00  
Fair to good sheep ..... 13.00 @13.50  
Culls ..... 7.00 @ 9.00

##### Hogs.

Market steady; mixed hogs 10 @15c lower.  
Shippers are taking everything.  
Pigs ..... \$ 19.00  
Mixed ..... 20.00 @20.15

#### BUFFALO.

Wednesday, April 9.

##### Cattle.

Receipts ten cars; best grades are steady; others slow. Prime heavy strs \$17 @18.35; best shipping steers \$15 @16; medium shipping steers \$13.50 @14; best yearlings, 950 to 1000 lbs, \$15 @16; light yearlings, good quality, \$14 @14.50; best handv steers \$13.50 @14.50; fair to good kind \$12 @13; handy steers and heifers, mixed \$12 @13; western heifers \$12.50 @13.50; best fat cows \$12 @13; butchering cows \$9 @10; cutters \$7 @8; canners \$5 @6; fancy bulls \$10 @10.50; butchering bulls \$9 @10; common bulls \$6 @7; best feeding steers, 900 to 1000 lbs \$11 @12.50; medium feeding steers \$10 @11; stockers \$10 @10.50; light, common \$8 @9; best milkers and springers \$75 @150.

##### Hogs.

Receipts ten cars; market is higher.

#### CHICAGO.

##### Hogs.

Estimated receipts today 32,000; holdover 6,968. Market fairly active and 5 @10c lower than on Wednesday. Bulk of sales \$20.10 @20.40; tops at \$20.50; heavy, 250 lbs up, medium, good and choice \$20.25 @20.45; light, 150 to 200 lbs, common, medium, good and choice \$19.80 @20.40; light lights, 130 to 150 lbs, common, medium, good and choice \$18.65 @20.10; heavy packing sows, 250 lbs up, smooth \$19.25 @19.75; packing sows, 200 lbs up, rough \$18.25 @19.25; pigs, 130 lbs down, medium, good and choice \$17.50 @18.75

##### Cattle.

Estimated receipts today 9,000; beef steers, feeders and calves steady; canners and cutters 15c higher; other she stock slow. Beef steers, medium and heavy weight, 1100 lbs up, choice and prime \$17.50 @20.25; do medium and good \$13.75 @17.85; do common \$11.50 @13.75; light weight, 1100 lbs. down, good and choice \$14.60 @18.50; do common and medium \$10 @14.75; butcher cattle, heifers, common, medium, good and choice \$7.50 @14.75; cows, common, medium, good and choice \$7.40 @14.50; bulls, bologna and beef \$8.50 @12.75; canners and cutters, cows and heifers \$5.75 @7.40; do canner steers \$7; veal calves, light and handyweight, medium, good and choice \$14.50 @17.50; feeder steers, common, medium, good and choice \$10.25 @15.25; stocker steers, common, medium good and choice \$8.25 @13.50; stocker cows, and heifers, common, medium, good and choice \$8 @10.50; stocker calves, common, medium, good and choice \$7 @13.

##### Sheep and Lambs.

Estimated receipts today 11,000. Best handy weight lambs 10 @15c higher; heavy lambs dull; sheep steady. Lambs, 84 lbs down, medium, good, choice and prime \$18 @19.65; do 85 lbs up, medium, good, choice and prime \$17.75 @19.60; do culls and common \$14 @17.75; spring lambs, medium, good, choice and prime \$15.75 @18.25; ewes, medium, good and choice \$12.25 @15.50; ewes, dull and common \$6 @12.25; feeder lambs, medium, good and choice \$15.50 @17.



## LONDON WOOL SALES BRING BIG DEMAND.

AUCTION sales in progress in Boston and in London make a situation in the wool markets of the world reminiscent of the distant past. The series begun abroad on April 2 and that started in Boston yesterday are significant therein of progress in the elimination of the control element in trading. The London sale holds the more significance as an influence upon the world conditions in wool and the strength of the opening was surprising to the Boston trade. The total moved by the first sale was 10,300 bales, the attendance was large and the demand strong. The Allies were all represented except the United States.

Prices were in some cases as high as fifteen per cent above the government's upset figures. The Boston trade had been informed that the British experts were looking for a keen demand for all fine wools and the better grades of cross-breds. Forty-fours and below were expected to drag. Cablegrams show that not only were the first grades mentioned active and strong, but that coarse wools were in a similar position. One message states that, with an excellent selection of greasy merino and cross-bred wools, competition was extremely animated for all grades, at prices generally about ten per cent above the revised issue prices. Actual quotations were 76d for 64s to 70s, 64d for 58s and 38d for average 46s on the clean basis. Another source of information says that merinos and fine cross-breds were sold easily at ten to fifteen per cent over April government issue prices, medium wools seven and a half to ten per cent up and coarse five to seven and a half per cent above.

Boston's current series of auction sales of government-owned supplies opened today, with offerings of about 4,000,000 pounds pulled wool. The series will continue to the last of next week, but covers only six days, being broken. Saturday's offerings will be 6,000,000 pounds domestic fleece and 1,600,000 pounds Texas and California wool. For Wednesday and Saturday next week the offerings scheduled are as follows: April 9, about 3,000,000 pounds scoured and April 10 the same; April 11, 4,800,000 pounds greasy Australian wool; 800 bales greasy Australian lambs, 250 bales scoured Australian, 3,250,000 pounds South American, 1,800,000 pounds Cape, and various lots of Iceland wool and wool tops; April 12, 10,000,000 pounds territory wool.

About eighteen per cent of the offerings of pulled wools made at the opening sale were withdrawn and the bulk of this portion comprised the inferior and low sorts. The bidding was keen for all choice lots.

Shipments under the agreement between the British and United States governments for 300,000 bales of Australian and New Zealand wool are to continue until the whole allotment has been received in this country. This is the latest news concerning the consignment which has caused so much conjecture. The decision for completion of this contract has a double reaction—it will have a wholesome effect in this market but offers another obstacle to American operations at London. It is now figured that buyers from this country will not be allowed to compete at London either in the April or May series of auction sales.

On the other hand, it seems that the allotment of colonial wools to the United States government is of high class sorts, and a warm reception here is bespoken for them. As the United States government is stated to have paid an extra penny per pound to secure a preference in selection, the belief is that the lot will be above the average. Such wool has been very scarce here for two years, a fact which will accentuate the interest in the coming lots.

## MICHIGAN WOOL DEALERS ARE CONSERVATIVE.

A well attended meeting of Michigan wool dealers was held last week at the Hotel Cadillac in Detroit. In addition to a good attendance of Michigan dealers there were present several eastern and middle western wool growers. These men reviewed the trend of recent auctions of government wool, emphasizing particularly the sales of low-grade quarter-blood and braid wools, as well as burry and seedy fleeces, to illustrate their contention that there is a much wider margin than usual between the price commanded by these wools and bright fleeces of higher grade. These men were very conservative in their expressions as to the future outlook for this year's clip, and while refraining from naming what they considered a fair price for good wools were unanimous in voicing the opinion that fifty cents per pound, at which the market has been stated at several Michigan points, is not a safe price, as measured by recent market developments.

The conservatism expressed by the jobbers present was quite generally reflected by the Michigan buyers, although a number of those present expressed the opinion that wool growers could not afford to sell wool for less than fifty cents under present conditions, and expressed the hope that conditions might develop which would warrant them in buying at that figure.

Conversation with buyers from various sections of the state indicated that early price quotations at their points would range from forty to forty-five cents per pound. A number of buyers said they would advise their patrons to wait a few weeks until conditions became more settled before selling their clip.

J. N. Weaver, of Milford, Mich., was re-elected as president of the organization, and Frank Knollin was made secretary.

## THE NEW YORK PRODUCE MARKET.

Butter.—While prices have materially changed during the week the changes have been less radical than those of last week. The tendency has been toward a rising market. Although at the close a marked weakness and indications all point to a decided break. The trade has been good all the week but there has been no marked activity. Jobbers and retailers feel that a much lower price will soon materialize and consequently are curtailing their purchases, which has caused a nervous feeling. At the present time it looks that there would be a decline in price today of about two cents. Yesterday's quotations were as follows: Extras 66½¢@67¢; higher scoring than extras 67½¢@68¢; firsts 64¢@66¢; seconds at 62¢@63½¢.

Cheese.—The cheese market has been very quiet during the week. While there has been practically no change in values yet there has been a lack of interest. Reports state that many factories have opened for their season's make but as yet very little addition to receipts have resulted. There is practically no export demand, but what there is for cheap grades. The general price of current make average run cheese is 32¢@33¼¢. Specials are selling at about a quarter of a cent more.

Eggs.—Egg receipts have been high and as a result storage and street holdings have materially increased. The high prices for this season of the year have caused a marked lessening of consumptive demand. The market has been only fairly active and it is expected that a decline will materialize within the next few days. Extra firsts are quoted at 43½¢@44¢. Storage packed extra firsts are selling at half a cent more. Good firsts are selling readily at a range of from 41½¢@43¢.

Poultry.—The approaching Jewish holidays have caused an increased demand for live poultry. Receipts, because of the shipper's knowledge of that fact, have in consequence been greater. The market is firm and prices are high. Fowls find ready sale at 40¢@41¢; chickens of good quality are scarce but stags are quoted at 28¢; old roosters have advanced to 24¢@25¢; turkeys are quoted at 32¢@40¢; ducks at 40¢@42¢; geese 21¢@22¢.



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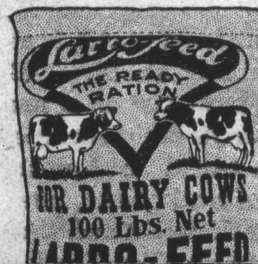
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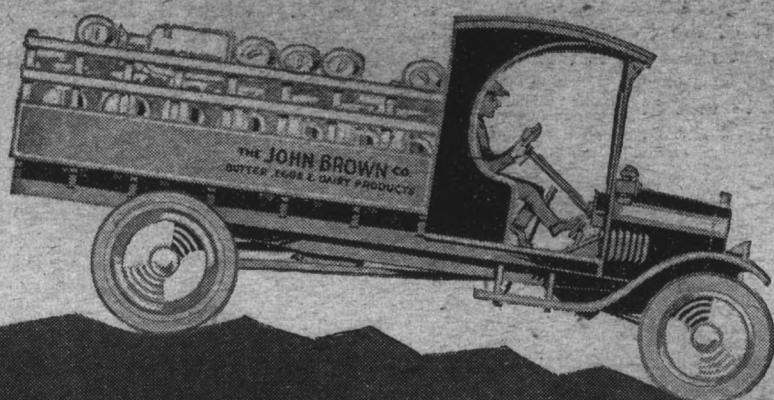
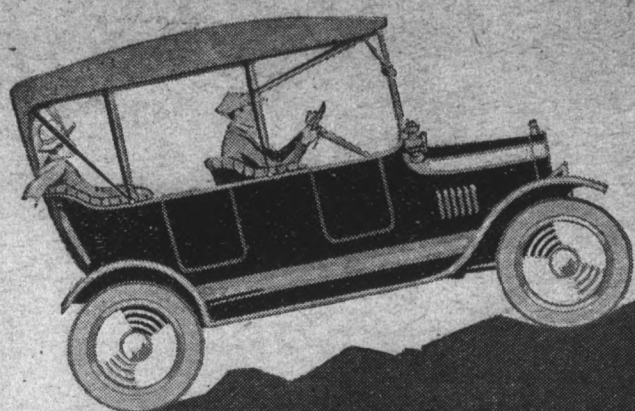
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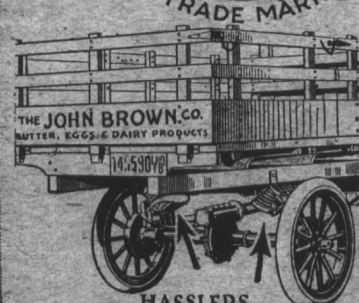


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