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DETROIT, APRIL 10, 1920

CURRENT COMMENT

The Farm Labor Situation

COMMENT on the scarcity of available farm labor at the present time is superfluous. This lack of farm help is in no sense theoretical. It is a condition which is almost universal, but particularly acute in our own state. This condition will, of necessity, modify production plans on many Michigan farms. The acreage of crops requiring a large proportion of hand labor will have to be reduced in favor of crops which can be handled largely by the aid of machinery; and the method of handling some of these crops may have to be modified in order to keep farm production at the optimum point from a profit standpoint under present conditions. Many farmers will pasture larger areas, and more farmers will "hog down" a portion of their corn crop or finish their lamb crop on standing corn than ever before, and in many ways labor economy will be practiced to a greater extent than has heretofore been attempted, simply because this will be a matter of necessity.

While this great shortage of available labor is a great handicap to Michigan farmers, this may be another case where small gains will largely offset an apparently inevitable loss. Under normal conditions a good deal of labor is wasted on the average farm, due to poorly considered production plans. Many an ambitious farmer has undertaken large scale production of special cash crops on land not well suited to their production and without the special equipment needed to produce them economically, simply because some farmer of his acquaintance had made good profits from their production. Others have taken a chance on the weather by planting poorly drained fields to crops which would not endure "wet feet," or at the other extreme have planted dry, thin lands to crops which are best adapted to heavier soils, only to have their labor come to naught through unfavorable seasonal conditions.

The present high value of labor will be a potent influence for economy in its use. Through well considered production plans, the growing of crops best suited to their soil and conditions and which they are best equipped to handle, the careful selection and testing of seeds to secure good stands of the crops they grow, the planning for the seasonable performance of the various operations required by each crop, and similar economies will undoubtedly increase the average per man production on many farms and may maintain if not increase the net

profit made by many Michigan farmers.

If this desirable end is to be accomplished it must be by better head work, rather than by more hand work; by the better direction of personal efforts and the available extra labor, rather than by increasing the demands on a perhaps already overworked body. Many farmers have followed a certain routine in their work until it has become a habit. If they can find a better way to do any farm operation with a smaller expenditure of labor they will abandon the habitual method this year. Suggestions along this line are particularly valuable at this time and should be passed along for the benefit of others whenever possible.

Registered Dairy Cattle Pay

DAIRY farmers of Livingston county, Mich., have found the sale of purebred dairy cattle one of their most profitable sources of income during the past few years. There are many factors entering into the problem of making a dairy farm pay and one has to study the business from many angles before arriving at definite conclusions. A survey of more than sixty dairy farms in Livingston county indicates that purebred dairy cattle, more particularly young cows, have contributed greater net profits to the owners of these farms than the sale of milk. Besides it has made it possible to regulate the number of cows and young stock kept on the farms to the amount of labor available. The farmer who has purebred cows always has an advantage in this respect, inasmuch as he is not compelled to sacrifice some of his cows at beef prices when his supply of home-grown feeds or labor fails.

The reputation which Livingston county has gained as a source of purebred dairy cattle has also made it possible for breeders of high-grade cows to sell them at from twenty-five to fifty dollars per head more than is the case in communities where only a few good grade cows can be had for shipment. The most economical and the most satisfactory way for the average dairy farmer to conduct his dairy business is to buy a registered bull of one of the leading dairy breeds, and a few good females. Care should be taken to see that they are good individuals and that they come from popular lines of breeding. It is always better to have a few good females than to make a mistake of attempting to spread the initial investment over too many inferior ones. In this way the grade cows can gradually be replaced with purebreds, and the sale of milk will furnish sufficient current income to keep the business going. It is one of the few ways in which the farmer can "eat his cake and have it left."

It is remarkable how quickly a good dairy herd can be built up from a few foundation cows and a suitable sire. Most of the famous Holstein-Friesian herds in Livingston county have been built up in this way, and today there are more than two hundred farmers in the county who are actively engaged

in breeding black-and-white purebreds. Probably more than a hundred others have made a start. Not only are these men finding it more profitable to produce milk with pure-bred cattle than with grades, but they are finding that the sale of their surplus breeding stock has added a new source of income that has encouraged them to take a greater interest in their business.

We all know of certain grade herds that are making more money for their owners than some pure-bred herds in the same communities, but every locality has examples of men in the purebred business who never should have invested money in registered cattle. But whenever we visit the farm of a man who is making a success with a herd of grade cows we cannot help but think of what a success he would have made of his business had he devoted the same effort to the work of building up a herd of purebred cattle. As a business proposition the dairy farmer who knows good cows and how to feed them to get results cannot afford to waste his time and money with grades or scrubs. The risks are too great for him to depend upon one source of income when it is possible to double his profits without adding more cows to his herd or more acres to his farm. And that is just what the dairy farmers of Livingston county are doing with their herds of purebred dairy cattle.

Killing The Goose

It is surprising to many people to hear that many dairy farmers right here in Michigan are selling all of their milk and buying oleomargarine for use on their tables—thus reducing the consumption of dairy products when a decreasing demand threatens a rapid decline in prices. The man who owns a dairy farm and buys butter substitutes deserves mighty little sympathy when prices for dairy products hit the toboggan. Such a man takes no pride in the quality of his products and his example furnishes no inspiration to other men engaged in the same business.

The farmer owes it to his children, for health's sake, to use as much milk and butter as he would like to see his city cousin's children use. He owes it to his business to use his own products on his own table. In this way he not only advertises them as superior to substitutes, but he avoids paying toll to the manufacturers of substitutes which are his competitors in business. By using dairy products he helps to keep up the demand, using part of the surplus, and, thus, does his part toward maintaining prices.

The farmers make up a large portion of the consuming public, and if every farm family used as much milk as it should use there would be no big surplus to deal with. If dairy farmers have not learned the food value of milk and butter, and have not pride enough in their business to use them, how can they expect the city people to buy them?

Do these men feel no moral responsibility for the health and normal development of their children? The large sums of money that are being spent for advertising milk, cream, butter and cheese in our large cities is being worse than wasted if the dairy farmers themselves refuse to drink and eat the products they are advertising. The advantages are just as numerous, the necessity just as great, and the opportunity to encourage the wider use of all kinds of dairy products in the country as they are in the city. It is time that many dairy farmers developed a greater spirit of pride in their business.

News of the Week

Tuesday, March 30.

DEMANDS are made by socialistic leaders for the establishment of a Danish republic.—Bituminous coal operators and mine workers agree in a joint conference held in New York to advance miners' wages twenty-seven per cent to become effective April 1.—America's position on the Irish question is resented on the floor of the British House of Commons.—The New York Assembly majority report urges the unseating of five suspended socialist members.—The draft of the treaty between the allies and Turkey is nearing completion.

Wednesday, March 31

GENERAL destruction of property by the rebels in the Ruhr district of Germany precedes the expected advance of government troops—New York state upholds the daylight saving law.—President Wilson urges in his rejoinder to an allied note that the Turks be eliminated from European politics.—It is stated that the allies have accepted Holland's last note on assurances on the guardianship of the former German emperor.—Coal prices advance throughout the United States.—Herbert Hoover becomes a candidate for President on the republican ticket.

Thursday, April 1.

GERMAN government troops are pushing forward in the Ruhr region as the time limit of the government's ultimatum is reached.—The suffrage amendment is again defeated in the Mississippi house of representatives.—A joint resolution declaring the state of war between the United States and Germany to be at an end is introduced in the House of Representatives.—The British House of Commons passes the Irish home rule bill by a vote of 348-94.—Ex-Governor Warfield, of Maryland, dies.—Eighty persons are reported to be starving in an icebound ship on the Arctic coast of Siberia.

Friday, April 2.

SECRETARY HOUSTON estimates that the guarantee provisions of the new railroad law will cost the government approximately \$175,000,000.—Around ten thousand New York ferry-men quit work when their demand for an eight-hour day is refused.—The United States will not participate in the peace conference at San Remo, Italy, during this month.—The lower house of the Delaware legislature defeats the equal suffrage amendment to the federal constitution.—Four persons are indicted by a federal grand jury on charges of securing advance information on United States Supreme Court decisions and using same for speculative purposes.—Washington officials are worried over the increasing domination of the military party in southern China.

Saturday, April 3

INDIRECT negotiations between China and Japan on the Shantung question are reported to be completed and direct negotiations will be opened at an early date.—Grain dealers who claim to have lost several million dollars through the action of the federal food administration are demanding reimbursement.—The general strike in Denmark for a republic is reported to be spreading.—Six vessels are trapped in an ice pack near the Ludington harbor.—Large irrigation projects are being planned for southern Alberta.—Live stock trade in Chicago is practically crippled by the strike of live stock handlers employed at the stock yards.

Sunday, April 4.

ACCORDING to the reports of the Secretary of State there are 325,813 autos in Michigan.—All American Red Cross workers held prisoners by Bolshevik troops in Siberia have been liberated.—Northern Illinois and portions of Indiana and Michigan are in

(Continued on page 618)

Farm Bureau Aids Wool Pool

IN order to provide adequate facilities for pooling the wool produced by farmers of Michigan, the State Farm Bureau has just closed the deal for a completely equipped warehouse and office building situated in close proximity to the New York Central Railroad tracks in Lansing. Arrangements are being perfected for pooling several million pounds of wool this spring and summer. The handling of the wool will be done on a cost basis which has proved so satisfactory to the farmers of Illinois and Ohio. The warehouse will also be used by the seed department of the Farm Bureau in handling and distributing Michigan seeds in large quantities.

The Maintenance of Soil Fertility

The Functions of Lime and Phosphorous are propounded by Dr. Chas. E. Thorne, Eminent Soil Authority of the Ohio Experiment Station.

THE ultimate purpose of the growth of vegetation used for food is the nutrition of the animal organism, using the term animal in its comprehensive sense, as distinguished from vegetable, and in order that this purpose may be served the food plant must contain the various elementary substances required for animal nutrition.

In the young plant these substances are distributed throughout the plant, and the herbivorous animals find in pasture grasses everything necessary for their sustenance; but as the plant approaches maturity a partial separation takes place, the larger part of its phosphorus being transferred to the seeds, while most of the lime and potash remain in the stem and leaves. When the grain is sold off the farm there is therefore a relatively large removal of phosphorus, while if the entire plant is removed, as when hay is sold or both grain and straw, there is a rapid removal of all the elements of fertility.

The young grazing animal builds its skeleton out of the lime and phosphorus contained in the grasses, while the dairy cow converts these grasses into milk, which must contain all the elements—phosphorus and calcium—under all ordinary systems of agriculture.

Many farmers believe that the keeping of live stock, feeding to such stock the larger part of the produce of the farm, and returning the manure to the land, will indefinitely maintain its fertility; but consideration of the facts above quoted shows that this cannot be true, even with the most careful saving and use of manure, unless feeds be purchased in sufficient quantity to replace the losses of lime and phosphorus, while if the manure is allowed to lie for months in the open barnyard before it is taken to the field, or if it be left in small heaps in the field to be scattered when convenient, it will have lost a very large part of its fertilizing value.

Lime.

The superiority of limestone soils has become proverbial, and the assumption that such superiority is due to the lime contained is supported by a test at the Wooster farm of the Ohio Experiment Station, the soil of which is a silty loam, derived from shales and sandstones. The experiment is a five-year rotation of corn, oats, wheat, clover and timothy, each crop being grown every year. Since 1900 the corn crops have received two tons per acre of powdered limestone, applied to half the land just before planting the corn, the other half being left continuously without lime. Part of the land has received no other treatment than the liming. The average yield per acre on this part since this treatment was begun has been as shown below:

	Unlimed	Limed
Corn, bu.....	25.7	31.3
Oats, bu.....	30.1	35.2
Wheat, bu.....	12.2	15.7
Clover, lbs.....	1,168	1,781
Timothy, lb.....	2,207	3,050

If we value corn at \$1.00 a bushel, oats at seventy-five cents, wheat at \$2.00 and hay at \$20 a ton, the average total value of the crops grown on the unlimed land has been \$111, and of those on the limed land \$137, a gain of \$26 for the

liming. When the land in this experiment has been dressed with ordinary open-yard manure, applied to the corn and wheat at the rate of eight tons per acre on each crop, the yields have been as below:

	Unlimed	Limed
Corn, bushel	55.5	60.8
Oats, bushel	46.8	48.3
Wheat, bushel	29.1	32.6
Clover, pounds	3,374	4,301
Timothy, pounds	4,190	5,485

the whole having a total average value of \$224 per rotation on the unlimed land and of \$260 on the limed land, a gain for liming of \$36.

Because it pays so well to lime this land, however, it does not follow that it will pay to lime everywhere. The

in raw phosphate rock, it does not appear that they are always utilized by the plant in this combination, since phosphatic fertilizers seem to increase the yield irrespective of the demand for lime. Thus in the experiment at Wooster, 320 pounds of fourteen per cent acid phosphate, distributed over the cereal crops, has produced the following increases per acre over the yield of the unfertilized land:

	Unlimed	Limed
Corn, bushel	8.6	8.4
Oats, bushel	11.6	10.9
Wheat, bushel	8.0	9.2
Clover, pounds	407	608
Timothy, pounds	307	768

The increase would have a total value of \$40.44 on the unlimed land, and



Muck Land, Ottawa County. Reclaimed a Few Years Ago by Drainage. Now Growing Sugar Beets.

western half of Ohio is floored with limestone, and in this area, at Germantown, Montgomery county, the experiment station owns a farm located on a typical Miami clay loam, derived from the decomposition of limestone gravel, on which a three-year rotation of corn, wheat and clover has been in progress since 1905. Liming here has produced a definite increase in alfalfa, but other crops have not justified its use.

Phosphorus.

While phosphorus, oxygen and calcium are combined in lime in the substance known as phosphate of lime, and are found in a similar combination

of \$48.72 on the limed land, equivalent to \$12.24 per hundred pounds of acid phosphate on the unlimed land and of \$15.22 per hundred pounds on the limed land. At Germantown 240 pounds of the same grade of acid phosphate, divided equally between the corn and wheat, has produced the following increase per acre:

	Corn Bush.	Wheat Bush.	Clover Lb.	Value, Dollars.
Germantown	6.7	5.1	684	23.74

This value would be equivalent to \$9.89 per hundred pounds of acid phosphate.



Produce of equal areas (one-twentieth acre) of land, all manured alike at the rate of eight tons per acre each on corn and wheat. Left hand, no lime, 2,012 pounds of hay per acre; right hand, limed, 3,268 pounds, showing that manure alone does not satisfy the demand for lime on acid soil. There was not only less hay but a much larger proportion of weeds on the unlimed land. Plantain, sorrel and other weeds grow luxuriantly without lime.—Ohio Experiment Station.

The Ohio Experiment Station is operating fourteen experiment farms, located in as many different counties, and on soils typical of all the principal soil formations in the state. On nine of these farms experiments have been in progress for from four to twenty-five years, in the average of which every hundred pounds of acid phosphate has produced more than four bushels of wheat, with increase enough in the clover following the wheat to much more than pay for the fertilizer.

At the Ohio Experiment Station an experiment has been running since 1894 in which corn, oats, wheat, timothy and clover are grown in a five-year rotation, each crop being grown every season. Part of the land has been left continuously without fertilizer or manure of any kind, while the other part has received fourteen per cent acid phosphate, used at the rate of eighty pounds per acre each on corn and oats, and one hundred and sixty pounds on wheat. Since 1900 half this land has been cross-dressed every five years with powdered limestone, applied to the surface and harrowed in at the rate of two tons per acre, while the land was being prepared for corn. Charging \$6.00 a ton for the limestone, spread on the land, and \$30 a ton for the acid phosphate, also spread on the land, and computing the values of the crops at the prices above used, the seventeen-year average outcome of this work for each five-year period has been as below, using the crop yields given in Bulletin 336 of the Ohio Experiment Station:

Treatment.	Value of produce.	Cost of treatment.	Gain for treatment.
None	\$106	12	19
Limestone	137	5	41
Acid phosphate ..	152		
Limestone and acid phosphate.	187	17	64

In another article it is proposed to discuss the use of fertilizers carrying nitrogen and potassium.

EMPLOY EXPERT AT THE STOCK YARDS.

IOWA is the first state to have a representative at the Chicago Stock Yards whose business it will be to look into every phase of the industry relating to the producers back on the farm.

The Corn Belt Meat Producers' Association supported by the Iowa Farm Bureau Federation, is behind the movement and C. L. Harlan of Atlantic, is the man who will look out for their interests here.

It is planned that the office here will be a clearing house for suggestions and complaints offered by Iowa shippers when they arrive on the market with consignments of stock. Claims will be taken up and the proper information given to the person desiring this knowledge. General information will also be given and the Iowa shipper can go into Mr. Harlan's office, which will probably be in the Exchange Building, and chat and meet other shippers from his home state and feel decidedly at home.

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Agricultural News

URGE STANDARDS FOR BEANS.

STANDARDIZATION of the California beans placed on the market was one of the things advocated by officials of the California Bean Growers' Association in meetings of growers held throughout the Sacramento Valley recently. Attention of the growers was called to the fact that beans grown in other states are hand-picked and are much more carefully cleaned than California beans, resulting in a bigger demand for the beans from other states.

FARM WAGES IN ILLINOIS.

CENTRAL Illinois farmers are facing the problem of an increase in pay for all farm laborers this year.

Demands from farm hands already are being filed and the farmers who fail to meet the new terms may be forced to do the work themselves. Many are asking \$120 to \$125 a month, including board and washing, and insist that they will not leave the cities for any less.

The section men of the railroads are now being paid \$90 a month for eight hours. The farm laborers say that the hours on the farm run close to twelve hours a day and that \$125 a month is not any too much.

Farmers are disposed to pay \$100 a month, but this is said to be their limit.

TO REDUCE SHIPPING LOSSES.

A SPECIAL representative of the Indiana Federation of Farmers' Associations is to be stationed at the Indianapolis Stock Yards to look after the interests of shippers of live stock as a result of action taken recently at a meeting of directors of the organization. The plan, which had been favorably discussed before by the live stock committee, received the indorsement of the directors.

It will be the duty of the representative to see that the stock shipped reaches the yards in good condition, that it is weighed properly, that it goes to the pens properly cleaned, and that feed and water are provided as needed.

The proposition will be financed on the basis of one cent a head for hogs, sheep and calves, and four cents a head for cattle. Under this plan, it was pointed out, the cost to each shipper will be comparatively small.

SOUTH DAKOTA WOOL GROWERS ORGANIZE.

OFFICERS elected by the newly organized South Dakota Sheep and Wool Growers' Association, which met recently at Huron, are: J. G. Rogers, Midland, president; P. F. Buche, Henry, vice-president; J. C. Holmes, Brookings, secretary; directors, Paul Murphy, Hermose; Robert Dailey, Flan-dreau; Peter Gudhl, Oldham; H. S. Vernon, Presho and C. M. Bell, Doland.

Sixteen South Dakota wool pools, operating in cooperation with farm bureaus, were represented at the organization meeting in addition to a number of individual sheep men. Among the speakers were Tom C. Stone, recent organizer and secretary of the Iowa and Ohio State Wool Growers' Associations, and Theodore Wade of the bureau of markets.

These facts were brought out in the discussion: That prior to last year the small wool producer generally sold wool like junk and old iron, regardless of honest package and quality and that a good state association to help in marketing was the only remedy for this condition.

Wool had a very poor, if any, established open and free market like other commodities.

One-half the wool used in the United States was imported, and by proper handling much of this could be produced at home.

The association hopes to have a state wool expert go to market with all consigned wool and see it graded and sold, thus aiding in establishing a sounder and more even market. The organization adopted the following resolutions:

Resolved, that the National Wool Growers' Association take such steps as are deemed expedient to secure prompt settlement for wool purchased by woolen mills, so as to eliminate the delay of sixty to one hundred and twenty days before settlement is made under present conditions.

Resolved, that the county wool growers' association urge their members to assist in establishing a reputation for South Dakota wool by putting up an honest package of wool, by removing all manure tags and sweat locks and that each fleece so prepared be tagged with a tag that is uniform for the state. All fleeces are recommended to be tied with paper twine.

Resolved, that the State Wool Growers' Association recommend that the state college hire an expert in sheep husbandry to do extension work in South Dakota, and that a bulletin or pamphlet be prepared for distribution on the care and handling of wool for market.

Resolved, that we express our appreciation of the efforts of the South Dakota marketing department and of F. O. Simonson in particular for assistance given in marketing last year's wool clip.

URGE WATERWAY IMPROVEMENT.

THE Farmers' Grain Dealers' National Association, in session at Chicago, decided to get behind the Great Lakes-St. Lawrence tidewater project, according to the plans of the delegates.

The association represents four thousand companies with an investment of more than \$80,000,000 in grain elevators, coal houses, lumber yards and warehouses.

These companies do \$1,000,000,000 worth of grain business or more every year and handle more than \$140,000,000 worth of farm supplies, lumber, coal, flour, feed, fertilizer and building material.

Herman W. Danforth, president of the Federal Land Bank of St. Louis, is president.

Action will be taken today on the waterway. The plan is to widen the canal to the St. Lawrence river so that boats can start from Chicago and go direct to Liverpool. This will bring Chicago seven hundred miles closer to Liverpool. It is pointed out by the delegates that this would greatly relieve the transportation problems of the whole United States.

There was a big car shortage this year because of the congestion at the terminals, which has affected the marketing of wheat. This is one of the problems that the delegates are considering. Thirty-five per cent of the 1919 wheat crop is still in the bins in Kansas, Oklahoma and Nebraska, according to the officials of the organization, and it is there because of car shortage.

The fact that wheat growers are unable to market their grain brought up important questions at the meeting concerning the government's price guarantee, because the authority to buy in protection of the guarantee ends June 1.

This means that farmers who have not been able to market their grain will have to sell it after June 1 at whatever they are offered, prices being regulated according to conditions, for there will be no guarantee.

Feed Prices and Prospects

By Sanders Sosland

A RUNAWAY bran market has upset the calculations of trade interests who had forecasted a steadily downward trend of prices for feedstuffs. But the action of millfeeds has not influenced to any important extent the fluctuations in other commodities used in feeding operations. On the whole, the feed market still shows signs of weakness, though to a far lesser degree than was apparent a month or more ago. That element in the market which had placed a bearish construction upon prices gave too much consideration to fundamental conditions, or at least erred in their judgment as to the time when those conditions would actually influence values.

With the single exception of the short period immediately following the removal of maximum price restrictions by the United States Food Administration, bran has advanced to the highest level in market history. An advance of about eight dollars a ton has been recorded within the past month, the market having reached a level which replaces the mill offal at a sharp premium over other feedstuffs, particularly on the basis of comparative feedstuff values. For instance, alfalfa hay, which is closely related to bran with about the same feeding value, is selling at a discount of approximately fifteen dollars a ton under the millfeed. Despite such an anomalous situation, millers have been able to supply only a very small portion of the enormous demand for bran on the upward trend of prices.

Probably the most important factor in the scarcity of offal is the sharp reduction in activity of flour milling plants the past thirty to sixty days. Ability to sell millfeed is not a consideration in the least in the percentage of activity of a milling plant, bran and shorts being merely an offal and a minor factor in the flour milling industry. The volume of buying in the flour markets and the success of millers in placing orders for flour influence the activity of mills. And in the past sixty days mills have shared an extremely quiet demand for flour. The changed condition in the flour market is not surprising, however, domestic consumers having bought on an abnormal scale the preceding five months of the crop year. The trade overbought on flour, and when the break in wheat prices occurred, many found themselves with heavy stocks on hand and showing a great loss. The result was a sudden disappearance of flour buying and a consequent falling-off in new production.

The trade is just now recovering from the slackened flour buying, but

demand has not yet reached a point requiring full capacity operations among milling plants of the United States. Also, it must be remembered that mills have accumulated a large stock of flour which must be worked off into consuming channels before production will increase rapidly. The belief had prevailed in feed market circles that the enormous production of offal, estimated for the entire United States thus far on the crop at approximately 4,250,000 tons, was not being consumed as rapidly as produced, but it is easily apparent that the sharp rise in prices after the slackening in mill activity that the feed has been really absorbed.

Country demand for bran in practically all large milling districts was heavy during the late winter and early spring period, and many plants that had reduced operations because of a lack of flour demand were forced to enter the open market for supplies to meet their local requirements. This, of course, not only absorbed the bulk of the output of interior mills, but developed a demand which previously was a source of large supplies. Another factor in the millfeed trade was the eagerness of mills to dispose of flour by offering a portion of feed in the car.

Some close observers of bran price fluctuations claim that the right situation was created by enormous speculative transactions. While doubt is expressed on this point, the artificial influences resulting from the activities of re-handlers have been felt to an extent. Speculators who were bearishly inclined on the offal "went short" on large quantities, contracting with other handlers, possibly consuming interests, to deliver at a certain time at an agreed price. One western handler accumulated a short interest of more than eight thousand tons, and there are other instances of heavy selling on the part of the so-called "shorts," that the feed could be bought on the open market at a figure under the contract price. But the handlers failed to obtain the feed contracted, many dealers went into the open market and bought for the account of those with whom they contracted to purchase. The short interest continue to pile up, and with a lack of offerings from mills, values were naturally forced up. The March short interest was very heavy, and some fear is manifest in trade circles over the possibility of another tight situation in the April deliveries. If this develops, then little hope prevails for any sharp reaction in prices.

Bran in Minneapolis is selling around \$48 to \$49 a ton, sacked, in carlots, at this writing, with Chicago quoting around \$49 to \$50, St. Louis up to \$52

Rescuing the Waste

THE Standard Oil Company (Indiana) renders a vital service by giving multiplications of value to that portion of the crude oil left, after gasoline, kerosene, and lubricating oils have been extracted, through the production of innumerable by-products, each supplying a definite need.

Thus have been developed products such as Parowax, which serve such useful purposes as a protective coating for cheese, meats, and sausages; for match ends; for water-proofing milk bottle caps, ice cream pails, and paper drinking cups; and for sealing preserved vegetables, fruits and jellies against bacteria, ferments and mold.

These are but a few of the uses of one of the more than 2000 products manufactured by the Standard Oil Company (Indiana), covering needful commodities from asphalt to candles.

So vast a program could not be carried out except by a highly specialized organization, developed to maintain numerous contacts with the world of production on one hand, and with the consuming public on the other.

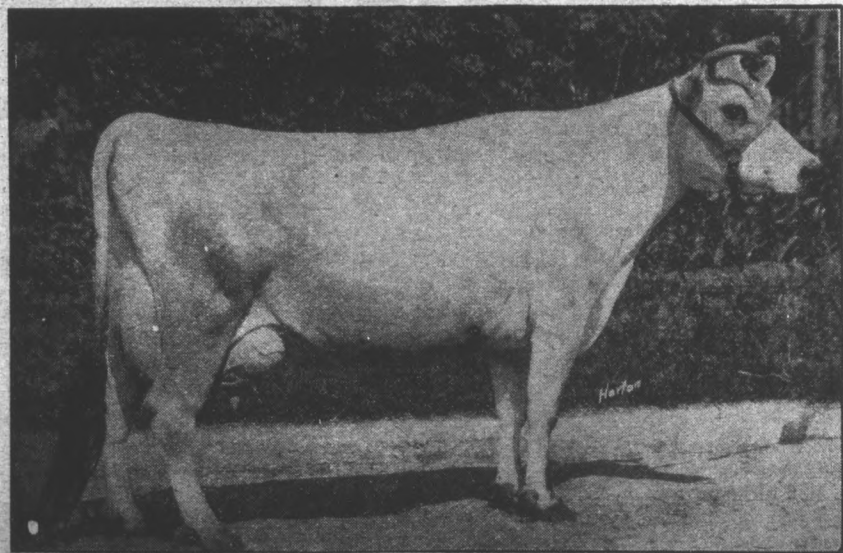
It was the need for such a specialized organization which led to the great development of the Standard Oil Company (Indiana). No single function of this great organization has come into being without a definite call to service.

Today the Standard Oil Company (Indiana) is big only because the need of its service is great; because the ways in which it is able to serve are continually multiplying as the complexities of modern industrial life increase.

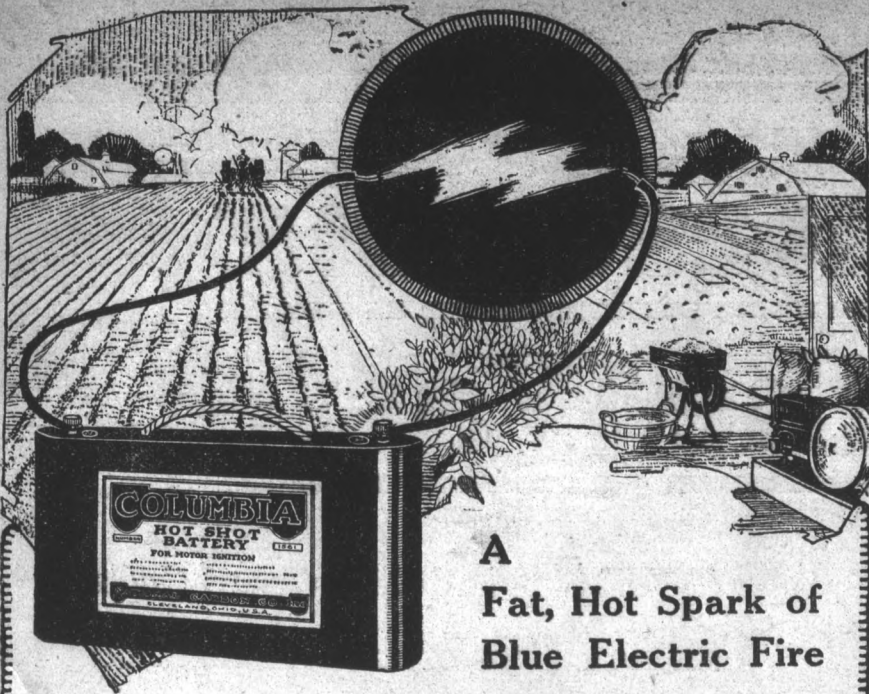
Standard Oil Company
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910 S. Michigan Avenue, Chicago, Ill.

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THE spark from a Columbia Hot Shot is a fat, blue, hot spark—a flash of electric fire that explodes every atom of gas in the cylinder.

Connect a Columbia Hot Shot Dry Battery to your tractor or stationary engine today. (Any Columbia dealer will tell you the cellpower to use.) Watch how easily the engine starts. You get a real explosion. Note how smoothly the engine continues to run. It has more power. Ignition is positive.

A Columbia Hot Shot Battery is a single, solid unit of 4 to 15 cellpower. It has no joints, no connections to keep tightened, and no metal parts that rust or that need to be kept in running order. It is an inexpensive, dependable, powerful, long lived battery.

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DETROIT

a ton for soft winter wheat bran, and \$48 to \$49 in Kansas City. Fluctuations are of a very erratic character, and, without any abnormal short interest in the market, a sharp downturn would not be surprising. Flour demand is improving and mill operations are increasing. With the grass season practically at hand, millfeeds will naturally tend downward, and dairy interests should buy only for their immediate requirements. While there is a possibility that values will soar even higher, this appears very improbable, and the dairyman who stocks up with the offal at current prices may regret his eagerness for the feed within another month.

Shorts, the heavier offal, have followed the upward trend of bran, but the premium commanded by shorts over the lighter feed is not so wide as usual for this season of the year. Hog producers are buying large quantities of shorts to use as a slop in feeding spring pigs, though their requirements are not abnormal for the spring season. Standard middlings or gray shorts are bringing around \$60 a ton in Minneapolis, the leading spring wheat market, with the brown grade about \$53 a ton there. Chicago quotes \$54 for brown, and \$59 to \$60 for gray shorts, with the St. Louis market averaging about \$2.00 a ton under this level. Gray shorts in the southwest are selling at \$54 a ton, and \$52 for brown, basis Kansas City. The sharp rise in both bran and shorts has tended to reduce consumption, and in a small measure this is being felt in price changes.

A lagging demand from feeders still is apparent in the cottonseed cake and meal trade, and unlike other commodities, the market has been practically stationary in recent weeks, tending downward slightly. The absence of buying by dairy interests and other feeders is offset to an extent by the heavy sales to fertilizer manufacturers. Off-colored meal is being taken by the fertilizer trade at a level around \$7.50 per unit, basis the Memphis market, and there is sufficient demand to absorb the offerings of meal manufactured from damaged seed. Cake and meal of forty-three per cent protein are bringing around \$62 to \$63 a ton at Texas and Oklahoma crushing points, or around \$68 a ton in the important feeding sections, or about \$80 in Michigan. In the southeastern crushing sections the market is at a slightly higher level.

While crushing activity in the cotton belt is being sharply reduced as the season progresses, an acute shortage of the high protein concentrate, such as was witnessed a year or two years ago, is improbable. Instead, the supply situation may become easier as the spring and summer period for feeding cake and meal on grass approaches. Beef cattle values are at a disappointing level, and producers are disinclined to purchase high-priced cake for their fattening operations. The tendency has been, and probably will continue, to carry along the stock during the grazing season as cheaply as possible. If pastures are in good condition during the grazing period, which now is the prospect for the entire southwest, west and more northern sections, consumption of cake on ranges is expected to be far below normal. The stocks of cake and meal in crushers' hands are more than double the total of a year ago, though less seed was used by crushers in their operations.

Linseed feeds are tending downward. Flaxseed from the Argentine is moving into the United States in more liberal volume, but the domestic supply situation is not encouraging, the shipments from the interior being extremely light. Crushers are asking about \$75 a ton for linseed cake and meal, basis Minneapolis, representing a decline of \$3.00 a ton during the

past month. Because of the restricted operations of crushing plants, little difficulty has been encountered in disposing of offerings for prompt shipment. Feeders are buying in small lots. Indicative of the weak position of the market is the fact that crushers are willing to contract for delivery of linseed feed in April or May at a discount of \$3.00 to \$5.00 a ton under the spot market. Crushers are without an export outlet for cake and meal, and with no improvement anticipated in the foreign demand for some months, or at least the remainder of the crop year, the trade is dependent entirely on domestic buying. A further easing of prices is probable as the season advances, particularly if weather conditions are favorable.

Marketings of hay from the west continue on an enormous scale, though eastern terminals still complain of a dearth of offerings. Car shortage, poor condition of country roads and scarcity of hay in farmers' hands, are the restricting influences in the eastern movement. There is a strong undertone in the clover market, with Detroit quoting around \$32 a ton, with sales in St. Louis up to \$38 a ton. Because of the scarcity of clover hay in the country, dealers look for no sharp reaction in prices until the new crop becomes available for market. Dairymen of the east and north are heavy buyers. Alfalfa, which is being substituted on a very large scale in the east and north for clover, displays a strong tone, the sharp declines of February having placed the market on a firmer basis. A significant factor in connection with the heavy movement of alfalfa from Colorado, Kansas, Nebraska and other western states is the growing scarcity of the better grades sought by dairymen. The cheaper offerings are in very liberal supply, and for this reason display an easy tone, selling at a sharp discount under the better varieties. Choice alfalfa is bringing a top of \$36 a ton in Kansas City, the leading market, with the cheapest grades down to \$15 a ton. Pressure on the cheaper grades is being felt more or less in the market for the better offerings. Dairymen and feeders in general should purchase sparingly at this time, as seasonal readjustments to a new crop basis usually are witnessed early in the grass period. New alfalfa begins moving in May, while slackening in demand as a result of the use of pastures already is being felt.

Strength of corn and oats have played an important part in the price changes in feed markets. Corn has advanced to around \$1.60 a bushel in the middle west markets, and the distant deliveries have gained sharply, having turned up thirty cents a bushel from the low point recorded in February. The improved position of the hog market is increasing consumption of corn on farms of Iowa, Illinois and surrounding states, with producers more generally inclined to market their grain "on the hoof" than in the raw form. The car situation has not improved, and the movement to markets is light. With spring planting work progressing northward, it is probable that arrivals will continue to fall off. With the sale of white oats at \$1.00 a bushel in Chicago recently, a new record level was reached on the minor cereal. Heavy sales to foreigners, light farm reserves in the United States and a strong domestic demand account for the unusual level of oats. It is very doubtful, however, if further material advances will be scored, owing to the approach of the new crop. Texas and other southern states will soon begin offering new crop oats, and with the pasture season at hand, the consumptive requirements in domestic channels will be reduced. But spring planting work is now stimulating feeding of oats.

Farmers' Elevator Exchange

*Is Launched at Meeting Held Last Week
at Saginaw*

FARMER representatives of Michigan's cooperative and farmer-owned and controlled elevators have taken the first step toward the establishment of a cooperative elevator exchange.

This happened in Saginaw on Tuesday, March 30. There were representatives from about fifty of these elevators present to take an active part in the deliberations. Should the undertaking be fully realized it will by all odds be the largest cooperative enterprise ever attempted in the state, and the directness with which these agricultural leaders went at their job gave everyone present, even the old-line jobbers and dealers, a genuine feeling that the thing was going to succeed.

Farm Bureau Sponsor for the Movement.

The Michigan State Farm Bureau issued the call for this meeting and Mr. Nicol, of South Haven, vice-president of this organization, held the gavel while the big job was being pulled off. In his opening remarks Mr. Nicol cleared the atmosphere of any misunderstanding as to the position of the Farm Bureau in relation to the proposed elevator exchange. "We are here, not as a dictator, to tell what should be done, but as a promoting agent to give the farmers a chance to build the kind of organization that will best serve the farmers' wants and the highest interests of the public. To that end we have not only called the representatives together but we also stand ready with the necessary funds to guarantee that all financial obligations be cared for until the exchange is in a position to take care of itself." Mr. Nicol believes that the interests of all are served when one class is righteously benefited.

Standardized Products Market Best.

Without question farm products must be standardized before any great improvement can be made in our marketing system, was the position taken by Professor Tennant, Marketing Director of the Michigan Agricultural College. When carefully graded products are sold the parties to the transaction know exactly what they are selling or buying. In the Potato Growers' Exchange the better grading now practiced has proved one of the chief factors in building a reputation for the organization. But to do this grading best it has been found necessary for the producers to grow the same type of potato. Growing fewer varieties makes possible a greater uniformity of product. At the present time about seventy per cent of the potatoes grown by the members of the above exchange are of one variety—the Petoskey. Mr. Nicolson, seed specialist who is now at the head of the seed distribution work of the State Farm Bureau, declares that there is need of not more than three varieties of wheat for the state.

The greatest progress cannot be made by tenaciously sticking to the old individualistic ideas. "We must break away from them," says Mr. Tennant, "and instead develop the cooperative idea. Progressive work will follow mutual effort while competitive methods are bound to prove abortive in comparison." He holds that an adequate sales service which brings the farm products nearer to the consumer, before it leaves the control of the producer, can be built only upon the cooperative plan. And this cooperative scheme must be of such size that the highest service may be given those who seek our goods. It is only then that we can hope to dodge the jobber. Not alone should we seek to get a great volume of raw materials, but

likewise our finances should be mobilized and made to work to the best advantage.

The various types of farming followed in Michigan make unusually broad demands upon our marketing organizations. There is a wide range of crops and a great latitude in the varieties used so that market channels carry many products. Aside from the regular grain crops and beans we have a large supply of all kinds of live stock that must move to the cities, and fruit of many kinds to get to the consumer. In handling all these various lines Mr. Tennant believes that the Farm Bureau will be equal to the task of coordinating the work in a way that will secure the maximum of advantage and service.

The farmers were extremely interested in the story of the work done by the Michigan Potato Growers' Exchange as presented by Dorr D. Buell, general manager. There are now over ninety locals affiliated and the combined business of these has been of almost unbelievable magnitude. The Exchange is the clearing house of the locals and does the selling of products and the buying of supplies. During the past two years much experience has been had by both members and officials and the general satisfaction, not to mention the enthusiasm, of the rank and file of the members gives the organization a foothold that it would now be difficult for outside influences to disturb.

Once efficiently organized, farmers find that their marketing troubles give them little concern and being released from these troubles they can and do, turn their attention to new questions of production. It is easy to get interested in producing uniform goods when those not uniform bring a shorter price than well graded stock. To get such potatoes members of the locals in northwestern Michigan are confining their efforts to fewer varieties, in fact, nearly three-quarters of the potatoes grown in the district are now of the Petoskey variety.

Mr. Buell also finds that there is a big advantage in doing business on a large scale. They can always supply customers. Anyone wanting potatoes knows that they can be had of the Exchange. The magnitude of the business makes it possible to give closer attention to grading, to transportation problems, to the handling of the products at the terminals, etc. It is easier for the big concern to build a reputation, open up new markets, more completely cover the fields developed, finance their enterprises. He is thoroughly solid on the idea of forming a similar Exchange for the farmers' elevators of the state.

Mr. Arnold who is in charge of the sales of all farm products other than potatoes handled through the Potato Growers' Exchange and of the buying of supplies, gave ample evidence of the wisdom of making binding contracts between the locals and the Exchange. Where the locals are bound to sell through the organization they have set up to do this work, the Exchange knows that when a sale is made the goods can be delivered. If no obligation exists on the part of the local manager to place a carload through the central office then the manager of the latter is handicapped in getting quotations because he is obliged to offer on condition. The same rule holds in buying supplies.

Coming to the business part of the program a motion was unanimously passed providing for the formation of an elevator exchange by farmer-owned and operated elevators of the state. A

Heat and Hot Water

—the joy of every farm woman



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IDEAL-Arcola Radiator-Boiler Heating Outfits from \$131 up

Any Dealer will furnish in sizes to suit rooms and climatic conditions.

For Soft Coal	No. 1-B Size IDEAL-Arcola with 100 sq. ft. of Radiation				\$131
	No.	Size	ft.	sq.	
	2-B	"	"	150	163
	3-B	"	"	200	188
	4-B	"	"	250	234
	5-B	"	"	300	270
For Hard Coal	No. 1-A Size IDEAL-Arcola with 135 sq. ft. of Radiation				\$150
	No.	Size	ft.	sq.	
	2-A	"	"	200	191
	3-A	"	"	265	234
	4-A	"	"	330	279
	5-A	"	"	400	327

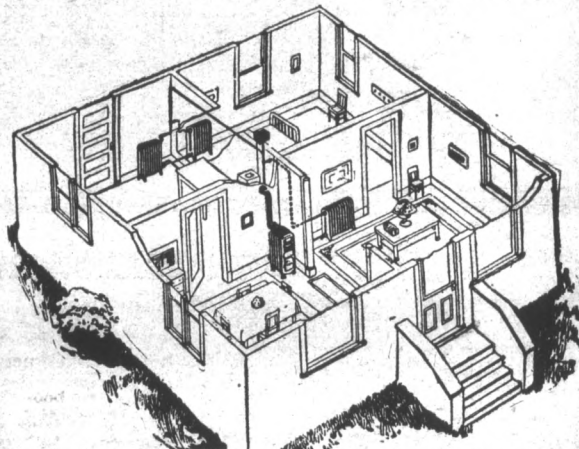
Prices include Expansion Tank and Drain Valve. Prices do not include labor, pipe and fittings. Radiation is of regular 38-in. height 3-column AMERICAN Peerless, in sizes as needed to suit your rooms. EASY PAYMENTS, if desired. Outfits shipped complete f. o. b. our nearest warehouse—at Boston, Providence, Worcester, Springfield (Mass.), Albany, New York, Philadelphia, Harrisburg, Pittsburgh, Baltimore, Washington, Richmond, Buffalo, Cincinnati, Indianapolis, Birmingham, Detroit, Chicago, Milwaukee, Minneapolis, St. Paul, Des Moines, or St. Louis.

Shipped complete for immediate installation

The beauty of the IDEAL-Arcola method is that no cellar is needed. Everything is on one floor. The Arcola is placed in any room that has a chimney connection. No running to cellar. Same water is used over and over again for years. No fire risk.

Buy now at present attractive prices for outfits complete!

IDEAL-Arcola outfits consist of the boiler and radiator to heat various size houses. Write us your requirements! Unlike stoves, there are no coal-gas leaks into the living-rooms. The IDEAL-Arcola delivers the soft, radiant warmth of hot water—not the dry burnt-out atmosphere of stove heating. There is no fire risk to building—no danger to children—fire lasts for hours! The Arcola burns hard or soft coal.



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The VIKING can be cleaned in a few minutes—straight discs save time and they cannot get mixed up because they are all hung together—like keys on a ring.

There are no big clumsy parts to lift and clean.

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waterproofs as well as fireproofs your roofs. Sold under positive guarantee. We want a few more SALESMEN for our well known brands of waterproof roof coating, lubricating oils, greases and paints. Salary or commission.

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Reliable Company wants to develop capable salesmen for Ohio, Indiana and Michigan territory. Prefer up-to-date farmers, experienced selling fertilizer locally. Permanent salary, commission and expense paid position if you can "make good." Address at once, giving full particulars and references. Box 1410 care Michigan Farmer, Detroit, Mich.

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Total value\$3.50
All for \$2.30.



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\$2500 Cash Secures 250 Acres, 18 Cattle and 1
2 horses, 5 pigs, poultry, wagons, harness, machinery, tools, hay, potatoes, grain; broad machine-worked fields, spring-watered pasture for 38 cows, wood enough to pay for farm, big apple orchard, 2,000 sugar maples; 10 room house, 3 barns, other buildings; delightful surroundings, beautiful view of river which farm borders; price for everything \$2500 with \$2500 cash, balance easy terms. Details page 9 Strout's Spring catalog Bargains 33 States, copy free. **STROUT FARM AGENCY, 814 B. C. FORD BLDG., Detroit, Michigan.**

Alabama Alfalfa Lands Demopolis Section

Embraces best portion 5 counties—the real "Argentina of America" for alfalfa, grain, grass and live stock unexcelled. New comers here from 24 states—land yet cheap. Full information. Write **C. C. CLAY ALFALFA LAND COMPANY** Demopolis, Alabama.

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For Sale 30 acres strictly high grade soil. Fine buildings, 17 head of Holstein Cattle, team of horses, hogs, chickens and all necessary tools and equipment. Will sell at sacrifice owing to the owners poor health. Write **JOHN CONANT,** Grand Haven, Mich.

For sale, reasonable, 120 Acres. One of the best farms in Michigan. One mile to station. Dixie Highway, Church and School. Buildings worth \$15,000.00. Write or phone, **R. W. ANDERSON,** Clarkston, Mich.

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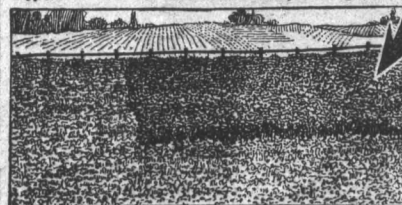
Increases growth of alfalfa and clover up to 300 or 400 per cent, depending on the need of the soil for sulphur. Gypsum supplies a combination of sulphate sulphur and calcium in the most available plant food form—Calcium Sulphate.

High cost of alfalfa and clover seed makes the application of AGRICULTURAL GYPSUM (Land Plaster) at the recommended rate of 400 to 500 pounds an acre a real economy. Gypsum is a preservative of barnyard manure. It prevents escape of ammonia from the manure, and every dollar's worth used saves \$2 worth of NITROGEN.

A Gypsum Test Strip on Your Fields Will Prove Its Worth in Legume Yields

Prove the value of AGRICULTURAL GYPSUM on your farm. Go to your local building supply dealer and purchase enough Agricultural Gypsum to make a test strip on your clover, alfalfa or other legumes in rotation. The test should prove conclusively that Agricultural Gypsum is greatly needed on YOUR soil. Send us your name and address and get our free book telling all about the value and use of Gypsum as a permanent soil builder. Book free on request.

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(From Oregon Agricultural College Bulletin No. 163.) Illustration shows result of Gypsum application on four-year-old field of alfalfa on Earnest Ranch, Oregon. Light spot shows unfertilized plot; dark spot shows luxuriant growth where Gypsum was applied.

WE HAVE FOR SALE Four fine Stock Ranches. Well fenced, watered and grassed over. Several improved and part improved farms. 300 acre Sheep Ranch, with good buildings, orchard, and 200 fine breeding ewes. 12,000 acres of unimproved lands, on easy terms. **McClure Stevens Land Co.,** Gladwin, Minn.

Buy farms in New York State through the Farm Brokers' Association, Inc., an old established organization which will give you thoroughly reliable information and see throughout the State. Write the Central Office at Oneida, N. Y. for brief list and state your requirements.

committee was then selected by the chair for the drafting of bylaws. This committee consisted of the following:

E. P. Hutchinson, Caledonia, chairman; James Nicol, vice-president of the Michigan State Farm Bureau; Prof. H. A. Tenant, Department of Marketing and Farm Management of the Michigan Agricultural College; W. A. Young, Albion; C. W. Benjamin, Bellevue; J. B. Leach, Chesaning; B. H. Ellis; Dorr D. Buell, Cadillac, General Manager of the Michigan Potato Growers' Exchange, and C. A. Raviller, Plymouth, specialist in farm organization work.

The proposed by-laws as adopted by those present are now offered to the various local cooperative and farmer-owned and controlled elevators for ratification. When twenty or more locals ratify the by-laws then a meeting will be called for completing the organization. The matter of supplying copies of the by-laws to the various locals, educating the locals and the public to the advantages of the proposed exchange and calling the meeting when the necessary number have ratified, was put in the hands of the State Farm Bureau. Any farmer or local farmers' elevator officials interested in this matter can secure a copy of the proposed by-laws requesting same of Secretary Bingham, Michigan State Farm Bureau, Birmingham, Michigan.

Some of the more general provisions in the scheme of organization are for the fullest possible control by the farmer members, adequate financing, a definite fixed charge per unit for selling,

regular and special auditing of the books of the Exchange and of the locals. The name of the organization is to be "The Michigan Farm Bureau Elevator Exchange;" the principal office is to be at Lansing; the membership is limited to farmers' cooperative elevators and to farmer-owned and controlled elevators; the fiscal year is to begin July 1 and close June 30; the annual meeting will be held in July and three-fifths of the representatives of qualified members will constitute a quorum to do business; the board of directors is to consist of seven members—six to be chosen from representatives of local elevators and the seventh from the executive board of the Michigan State Farm Bureau; a membership fee of \$200 is required of each local besides a non-interest bearing note of \$500 which is to stand as a guarantee for the fulfillment of contractual obligations; binding contracts for the sale of all or any part of the products of each local are provided for; locals are not to sell to outside parties except as provided for in contract; the products of each local must be marked so as to be identifiable; voting by proxy will not be permitted but one may under certain restrictions vote upon specific questions by mail; the amount of indebtedness is limited to \$20,000; supplies bought will be settled for on a cash basis; arbitration of differences is provided for and the by-laws can be amended at any meeting by a two-thirds vote, providing notice of the proposed amendment is given in the call of the meeting.

News Letter from M. A. C.

BERRIEN county, already the leading section of Michigan in the production of Guernsey cattle, will become a breeding center for the middle west as well, it is predicted by J. A. Waldron, dairy extension specialist at M. A. C., following the project launched by the Watervliet First National Bank and business interests of that city to loan money up to \$50,000 to men desiring to purchase purebred Guernseys at six per cent interest and on notes running from one to three years.

It is proposed to bring at least one hundred head of purebred females to Berrien county and thus give the business a strong initial impetus. At a mass meeting held at Watervliet on March 27 the possibilities and advantages of breeding Guernsey cattle on a community basis were discussed. It was pointed out that in addition to the purchase of cattle in large numbers, as the men of Watervliet propose to do at the present time, tried sires may be interchanged, dairy products may be marketed, and surplus cattle may be advertised and sold.

Mr. Adolph Knott of Niles, secretary of the Berrien County Guernsey Breeders' Association, is unable to meet the requests coming from outside buyers. The demand is not so much for prize blooded animals as for good individuals with good breeding and production records back of them.

Guernsey cattle fit exceptionally well into the agriculture of the greater portion of Berrien county because of the fact that a large majority of the farms are devoted to fruit growing, making it rather difficult to produce large quantities of roughage and making very little pasture land available, two things that are almost necessary for profitable handling of some of the larger breeds of dairy cattle.

Michigan Farmers Buy Tractors. "Indications are that more tractors will be in transit to farms of Michigan during the coming spring than ever before," says E. C. Sauve, of the farm mechanics department at M. A. C. "Tractors rating at 8-16 horsepower have proved practical on some eighty-

acre farms and this fact seems to point to possibilities for future tractor use by live operators even on smaller farms. Many of the new owners this spring will be having their first tractor experience and the increased interest in tractor operation study has shown that they are alive to the need for trained operators."

San Jose Scale Again on Firing Line.

Following advice given to farmers of Michigan by Prof. C. P. Halligan, of the horticultural department at M. A. C., that San Jose scale still is a distinct menace, comes a similar warning from L. R. Taft, state inspector of orchards. It was hoped that the severe winter of two years ago had killed the insect parasites, but during last summer many trees which did not receive treatment became quite badly infested.

Two remedies found to be effective are suggested by Mr. Taft. Owners of orchards should see that their trees are sprayed before the buds open. Either commercial lime-sulphur solution diluted at the rate of one part to eight parts of water, or "scalecide" at the rate of one to fifteen parts of water may be used.

Although the latter, being a soluble oil preparation, has the merit of spreading along the branches and reducing the amount required, the lime-sulphur is an excellent fungicide and is helpful also in controlling the diseases of fruit trees.

"At the present price of fruit farmers can well afford to fight to preserve their product, especially as the scale may get the unsprayed orchards," says Mr. Taft.

Hatch Chicks Early.

The importance of hatching chicks as early as possible in April is emphasized by Prof. C. H. Burgess, of the M. A. C. poultry department. "Many people make the mistake of hatching chicks late in May and the first of June," says Prof. Burgess. "This is a great mistake. By hatching in the early part of April the chicks reach maturity early enough in the fall so that they can come into laying during the month of November." — HENSHAW.

Growing Greater Mileage On Desert Land

On several thousand acres in the Salt River Valley of Arizona, this company today is producing the finest variety of commercial long-staple cotton in the world.

While this accomplishment is of general interest as beginning the reclamation of an immense agricultural empire, it is primarily important to users of our tires.

Cotton is an indispensable element in modern tire construction; superior cotton enhances the strength, flexibility and endurance of the product it enters.

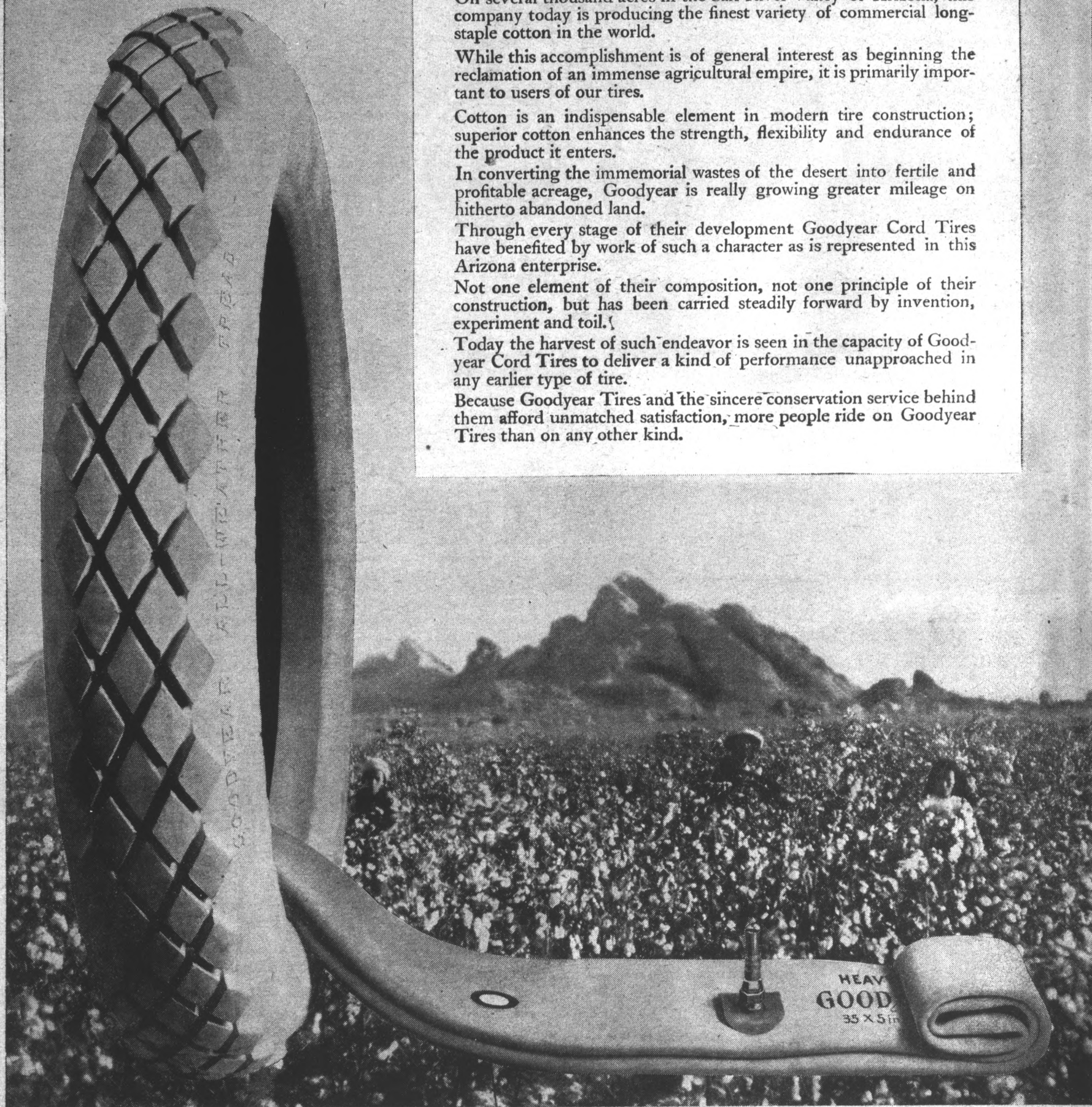
In converting the immemorial wastes of the desert into fertile and profitable acreage, Goodyear is really growing greater mileage on hitherto abandoned land.

Through every stage of their development Goodyear Cord Tires have benefited by work of such a character as is represented in this Arizona enterprise.

Not one element of their composition, not one principle of their construction, but has been carried steadily forward by invention, experiment and toil.

Today the harvest of such endeavor is seen in the capacity of Goodyear Cord Tires to deliver a kind of performance unapproached in any earlier type of tire.

Because Goodyear Tires and the sincere conservation service behind them afford unmatched satisfaction, more people ride on Goodyear Tires than on any other kind.



This actual photograph shows former desert land in the Salt River Valley of Arizona, now producing the finest variety of commercial long-staple cotton obtainable

Copyright 1920, by The Goodyear Tire & Rubber Co.

GOODYEAR CORD TIRES



The Feed that makes the Yield

Cut Down Your Cost

A number of the most successful dairymen testified before the Federal Milk Commission, which has been fixing the price of milk from the producer to the consumer, that they had cut down their costs of production by feeding **Corn Gluten Feed** and wheat bran freely in grain rations they mixed themselves.

The Commission must have been convinced by what these representative good dairymen had to say about different feeds and the economy of a man's mixing up his own rations.

For, in arriving at the price it thought the dairyman ought to get for his milk, the Commission based its calculations on home-mixed rations in which Corn Gluten Feed was a principal basic ingredient.

Made by
Corn Products Refining Co.
New York Chicago

Write to H. CHRYSTAL,
606 Ford Bldg., Detroit, Mich.

If you have not yet fed Buffalo Corn Gluten Feed, if you want to know more about how to feed it, and your dealer does not happen to have it, write us—giving his name.

A \$50,000 SAVING THIS YEAR to Farmers by these

Binder Twine Prices

The Gleaners have contracted with Warden Hulburt of Jackson Prison for FIVE MILLION POUNDS of binder twine for 1920 which will be sold on a co-operative basis. The quantity price secured by this enormous contract allows us to give to each purchaser of twine

A PATRONAGE DIVIDEND

of one cent per pound—or a saving of \$20 on every ton and a big round \$50,000 on the 5 million pounds. This saving we allow you to deduct from the regular quoted price when you pay for the twine. Here are the prices f. o. b. Jackson, Mich.:

CASH PRICES

(Per 100 lbs. gross weight)

If paid on or before

May 1st,	\$14.86 less Patronage Dividend of 1c per lb.	\$13.86
June 1st,	14.96 less Patronage Dividend of 1c per lb.	13.96
July 1st,	15.43 less Patronage Dividend of 1c per lb.	14.43
Aug. 1st,	15.54 less Patronage Dividend of 1c per lb.	14.54
Sept. 1st,	15.64 less Patronage Dividend of 1c per lb.	14.64

TIME PRICE

(Per 100 lbs. gross weight)

Due on or before

Oct. 1st,	\$15.75 less Patronage Dividend of 1c per lb.	\$14.75
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An agents' commission on collective orders of 50c per 100 lbs.—\$10.00 a ton—is allowed from the prices shown at the right.

Twine is No. 1 Standard Grade fully guaranteed by the State.

Prices will not be lower this season so—SEND FOR AN ORDER BLANK NOW—and be sure of getting twine at these low prices.

Gleaner Clearing House Association

807 Michigan Trust Building

Grand Rapids, Michigan

SPECIAL—Send for prices on fertilizers, spraying materials, feeds, etc. We can save you money. A postal will bring a price list.

National Agricultural Affairs

HEARINGS on the Truth in Fabric bill, introduced by Congressman Burton L. French, have been in progress before the House Interstate and Foreign Commerce committee for several days. This bill, which from the standpoint of the farmer and consumer, is one of the most important now pending in congress, is being ably supported by its friends and meeting the most bitter opposition from its enemies. The opponents of the measure are manufacturers of woolen goods with a few New York merchants who insist on retaining the right they have long abused, of selling shoddy as all wool.

Many retail merchants favor the measure, as do farm organizations all over the country, housekeepers' associations, truth-in-advertising groups, and some manufacturers of wool fabrics who believe that all manufacturers should be required to let the people know what is in the garments that they offer for sale. Thirty organizations, including the Grange, American Federation of Farm Bureaus, Society of Equity, National Board of Farm Organizations, National Farmers' Council, Retail Merchants' Association of New Jersey, and the Consumers' League, have endorsed the French Truth in Fabric bill. The republican state convention of Minnesota also adopted a plank recommending the legislation.

Among those who have spoken in favor of the bill before the committee, are Prof. C. S. Plumb, George H. Wilber, J. F. Walker and W. N. Conden, representative wool growers of Ohio; President E. L. Moody and Secretary E. S. Hill, of the New York State Federation of Sheep Raisers, T. C. Atkeson, of the National Grange, Gray Silver, of the American Farm Bureau Federation, C. A. Lyman, of the National Board of Farm Organizations, E. A. Calvin, of the Cotton States Marketing Association, C. A. Goss, of Successful Farming, and E. E. Reynolds, of the Lawrence publications.

The evidence before the committee shows that a large part of the so-called all-wool goods are in fact all wool, but wool that has been reworked after having served its purpose as blankets, clothing, carpets or other material; that retail merchants themselves do not know what the contents are of goods they offer for sale. It has also been shown that the Truth in Fabric bill is entirely practicable in its operation. The labeling can be readily done at a minimum of cost. Machines for doing the stamping are being made by several firms to meet every requirement. The proportion of shoddy to virgin wool used in the manufacture of woven fabrics is rapidly increasing, while the number of sheep throughout the United States is steadily decreasing, the rate of decrease being at the rate of one million head a year for the past seventeen years. It was pointed out that there is a great demand for legislation which will enable the consumer to know the contents of the fabrics he buys, coming from all parts of the country, and that if this congress does not enact effective legislation similar in its provisions to the French Truth in Fabric bill, another congress will, or the legislatures of the different states will enact similar legislation more or less drastic in its provisions. A movement of this kind goes forward, never backward.

Representative French is well pleased with the support his bill is receiving from the farm organizations and the public generally, but whether it can be reported in this congress or not is still doubtful as the same opposition that has heretofore existed against the passage of the oleomargarine law and the pure food law is opposing the

passage of the Truth in Fabric measure, and in spite of the multitude of organizations that have endorsed the passage of the measure, it is uncertain whether public sentiment is sufficient to put it over in the present congress.

The representatives of the farm and wool growers' organizations have done their part. It is now up to the farmers to back them with personal letters to their congressmen. This measure means much, not only to those who are now keeping sheep but to all farmers. I would advise you to write at once to your congressman, in care of House of Representatives, Washington, D. C., calling his attention to the French Truth in Fabric bill, H. R. 11641, and asking him to use his influence with the Interstate and Foreign Commerce committee to the end that the bill may be reported out onto the floor of the house for action. Resolutions of local granges and other organizations are all right, but personal letters direct from a constituent to his congressman are far more effective.

Whether the corn borer is the destructive pest that it is claimed to be or not, it is liable to give the farmers of this country a good deal of trouble and cause much loss in infested areas. On March 29 the Federal Department of Agriculture's quarantine on sections of Pennsylvania, New York, Massachusetts and New Hampshire infested with the corn borer, went into effect.

The infested sections are limited to small areas in these states, and the articles covered by the quarantine are cornstalks, celery, green beans, beets with tops, spinach, rhubarb, oat and rye straw, and cut flowers. Shelled corn is not included. These articles may be moved in interstate commerce to points outside the infested area, only after they have been inspected by agents of the department and certified as free of the corn borer. Violations of the quarantine will be punished with fines up to \$500 and imprisonment for one year.

The American Federation of Labor has become a vast industrial and political machine. In 1916 the Labor Federation had a membership of 1,450,000, while the membership now is 4,079,770. Some idea of its widespread organization is shown in the fact that the other day a communication was sent out from headquarters to 40,000 local unions asking for the appointment of 120,000 members of a special committee to act in its nonpartisan political campaign. These committees are in addition to those appointed by city central bodies, all working unitedly under the direction of a single official head in Washington.

This paragraph from the letter shows the spirit of the trade unions: "The American Federation of Labor has reared its structure upon the fundamental principle that organized labor owes allegiance to no political party; but is partisan to the principles of justice, freedom and democracy."

I have referred to this labor movement because I am convinced that farmers should know what trade unions are doing, and as a demonstration of the power that organized farmers might exert if their various organizations were all united in one central overhead representative organization such as the Federation of Labor.

The government has been conducting a campaign to induce the consumers to buy the cheaper cuts of meats as a means of reducing the high cost of living. According to the testimony of Prof. L. D. Weld, economist of Swift & Company, before the House Committee on Agriculture, the "cheaper cuts of meat" movement is aiding the packers to keep these cuts of meat on the

(Continued on page 615).



A NAME and a BRAND to Trust

THE NAME of Goodrich, branded on automobile tires, is itself a certification of the very utmost in tire satisfaction.

Stamped upon millions of tires, it has stood and today stands responsible for their superior quality and service.

Goodrich keeps faith with every buyer of its tires. Frankly, openly, it states the least that a Goodrich Tire, with proper usage, will deliver.

8000 Miles for Silvertown Cords, 6000 Miles for Fabric Tires!
It is an adjustment basis maintained only by virtue of persistent high quality reflected in the big mileage which the tires deliver.

Goodrich Tires



The Goodrich Adjustment Basis:
Silvertown Cords, 8000 Miles
Fabric Tires, 6000 Miles

Order Early Your 1920 DE LAVAL CREAM SEPARATOR

Farmers in need of a new De Laval Cream Separator this year may wisely place their orders immediately if they have not already done so.



For three years past, notwithstanding the constantly increased production, it has not been possible to make nearly enough De Laval machines to meet the demand. We shall make 25,000 more machines in 1920 than in any prior year, but are already behind deliveries in some sizes. Hence the importance of getting in your order early.

Superior as De Laval Cream Separators have always been to other separators, they are better still in 1920.

If you have milk to separate you can't afford to waste quantity or quality of product, time and convenience through the use of any other means of separating than a De Laval machine.

An improved De Laval Separator will surely save its cost in a few months, and will go on doing so every few months for many years.

De Laval Separators speak for themselves. Their appearance and performance best demonstrate their superiority. Be sure you see and try one before buying any other or deciding to go on using an inferior or half-worn-out separator another year.

Your De Laval local agent will be glad to afford you the opportunity to do this. If you don't know him simply address the nearest De Laval main office, as below.

The De Laval Separator Co.

165 Broadway
NEW YORK

29 East Madison Street
CHICAGO

61 Beale Street
SAN FRANCISCO

More than 50,000 Branches and Local Agencies the World Over

Pastures and Production

By J. L. Justice

WITH the present labor shortage on farms, I expect more farmers than ever before are seeking a solution of some of their problems in the utilization of more pastures. I know this is true in this and other communities. The increase in pasture crops on many farms will be as high as ten to twenty per cent. Many are wanting to get back to the pastures they had before the war—pastures that were broken up to swell the grain area during the war.

Good pastures are not so easy to make as some would lead us to believe. It is a fine art to make and maintain a suitable pasture, one that many do not succeed in accomplishing. Pastures are profitable when properly cared for. I have no doubt but that many fields could be greatly improved by putting them into pastures for a few years, pasture them so that they would not be eaten too close at times, and fertilize them lightly with manure.

What farmer does not like to break up a good pasture and put it in corn, potatoes or some other spring crop? He knows what kind of crops usually follow old pastures. Land kept in well maintained pasture will be kept in a good state of fertility, and if we could plow up such each year to plant to corn we should have little trouble in securing substantial yields.

Someone has said that agriculture will begin to decline when farmers are forced by necessity to resort to pastures in order to avoid a labor handicap. This cannot be true. Production of some farm products may be reduced, but it would seem that a sufficient meat and milk supply would be maintained at substantial prices. Good pastures do not reduce the efficiency and productivity of a farm, but for the farmer who studies the proper making and maintenance of pastures it is a means of increasing the efficiency of farms. Two small pasture fields, so that the live stock may be shifted from one to another, relieves the situation wonderfully on a live stock farm. Last year I had it so arranged that we were able to shift the stock about in four fields, only two of which were in permanent pasture, until the drouth so burnt up all the pastures or made it dangerous to the pastures to have the live stock on them that it became necessary to supplement them for several weeks with silage.

Close grazing often endangers a pasture. That is one reason why the use of two or more small pastures are often better than one big pasture field, as it allows one to shift the live stock from one field to another when a rest of a week or two will be of great benefit and give the grass a chance to recover. If it has been necessary to thicken a pasture by sowing a little seed one will be better able to improve the stand by constant shifting of the stock. Permanent pastures may also be protected and made to yield better returns in most years by letting the stock pasture other crops when possible, such as rye, clover meadows, stalks and so forth.

Farm pastures need not be permanent. The second year clover yields a wonderful lot of forage if it is pastured heavily enough and if the live stock is turned on before it has made too rank growth in the spring. In all our experience we have never found any pasture in the early summer that was superior to a field of clover. It provides pasture from the latter part of April or middle of May to late fall, but because the more liberal the ration in case it is desired to have a crop of seed from the clover it should not be pastured later than the first of July yet not to produce waste. C. C. L.

or thereabouts. The objection to cattle bloating on clover has usually been raised against the practice, but our experience has shown that we can turn onto the clover and leave them on day and night without losing a single animal from bloating, while if taken from the field at night and fed dry feed they will bloat. Pastures have an important place on our farms to fill, both in the coming years of readjustment and in systems of efficient and profitable farming.

BALANCED RATION FOR DAIRY COWS.

Please give a balanced ration for milch cows and fattening steers. I have for roughage, mixed clover and timothy hay, silage, corn fodder, bean pods and oat straw. Grain, oats and rye, molasses, and can get wheat bran at \$50 per ton, or dairy feed at \$40 per ton, which contains the following: Protein twenty per cent; fats four and a half per cent; crude fibre fifteen per cent; carbohydrates thirty-eight per cent. Will it be necessary to feed cottonseed meal with this? It is \$80 per ton. Price of oats sixty-six cents per bushel and rye \$1.16 per bushel.

Sanilac Co.

W. G.

You have a nice variety of roughage feeds and by feeding them alternately, that is feeding hay once a day, and corn fodder once a day, or bean pods once a day, and oat straw once a day, it will furnish a sufficient variety so that the cows will eat it with relish. Of course, corn silage should be fed twice a day if you have a sufficient amount. Cattle never tire of good corn silage for roughage. Part of this ration, however, is deficient in protein. Bean pods are the richest of the foods in protein.

Oats, rye and molasses are none of them very rich in protein, consequently the added grain must contain a good per cent of proteins to give a sufficient amount to balance the other food nutrients properly. If your dairy feed contains twenty per cent protein, it is cheaper than other feeds to go with your roughage, cheaper than wheat bran at \$50 a ton, and it is just as cheap as cottonseed meal at \$80 a ton, so it would make little difference whether you bought the dairy feed or cottonseed meal. To balance the ration you would only have to feed one-half as much cottonseed meal to get the same results as with dairy feed. I would suggest that you grind oats and rye, equal parts, and then mix with equal parts of dry feed and it would be a splendid thing to put in wheat bran, especially for dairy cows because it is a splendid food. If you conclude to use cottonseed meal I would only feed to dairy cows two pounds per day. Then in order to get a sufficient amount of proteins you could mix the oats, rye and dairy feed equal parts and feed a sufficient amount of this with the two pounds of cottonseed meal to give your cows a pound of grain for every three pounds of milk, if they produce milk above four per cent in butter-fat or one pound for every four pounds of milk, if she produces less than four per cent butter-fat.

A good ration for dairy cows giving milk is also a good ration for fattening steers. It would make but little difference, but you need not be so cautious about feeding cottonseed meal to the steers. You can feed quite heavily, if you desire. In fact, the steer wants all the grain that they will eat up clean April or middle of May to late fall, but because the more liberal the ration the greater gains you will make. Your roughage should be fed liberally and pastured later than the first of July yet not to produce waste. C. C. L.

FIRST TURN OVER STARTS YOUR FORD IN ZERO WEATHER

75c PREPAID



The latest improved timer brush for Fords. Sliding brush contact principle same as used on highest priced cars. A time and trouble saver. Avoids 50 per cent trouble in using your Ford all winter.

The "MASTER" Timer Brush Guaranteed for 5,000 miles

Assures long hot spark. Increased power. Affords easy starting and a smooth running motor. Send for one today. Price 75c—your money back if you want it.

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I Can Ship Your Engine

When You Want It—Save You \$15 to \$500. Any Style—Stationary, Portable or Saw Rig. Any Size—2, 3, 4, 5, 6, 8, 12, 15, 22 or 30 H.P. Cash or Easy Terms. BOSCH Ignition on order. Catalog FREE.

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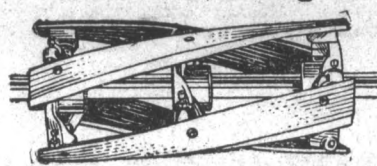
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Plant Dewberries They are the best of all berries for home or market. We offer plants of the Lucretia Dewberry (The one best kind) at \$2.50 per thousand. Some of our members received better than \$1000 per acre last season. The berry is frost proof and a certain heavy cropper.

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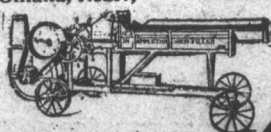
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The exceptional merit of the Appleton knives is just one of the reasons that more and more farmers insist upon the Appleton Silo Filler. You should know the score of other reasons. Write today for catalog K.

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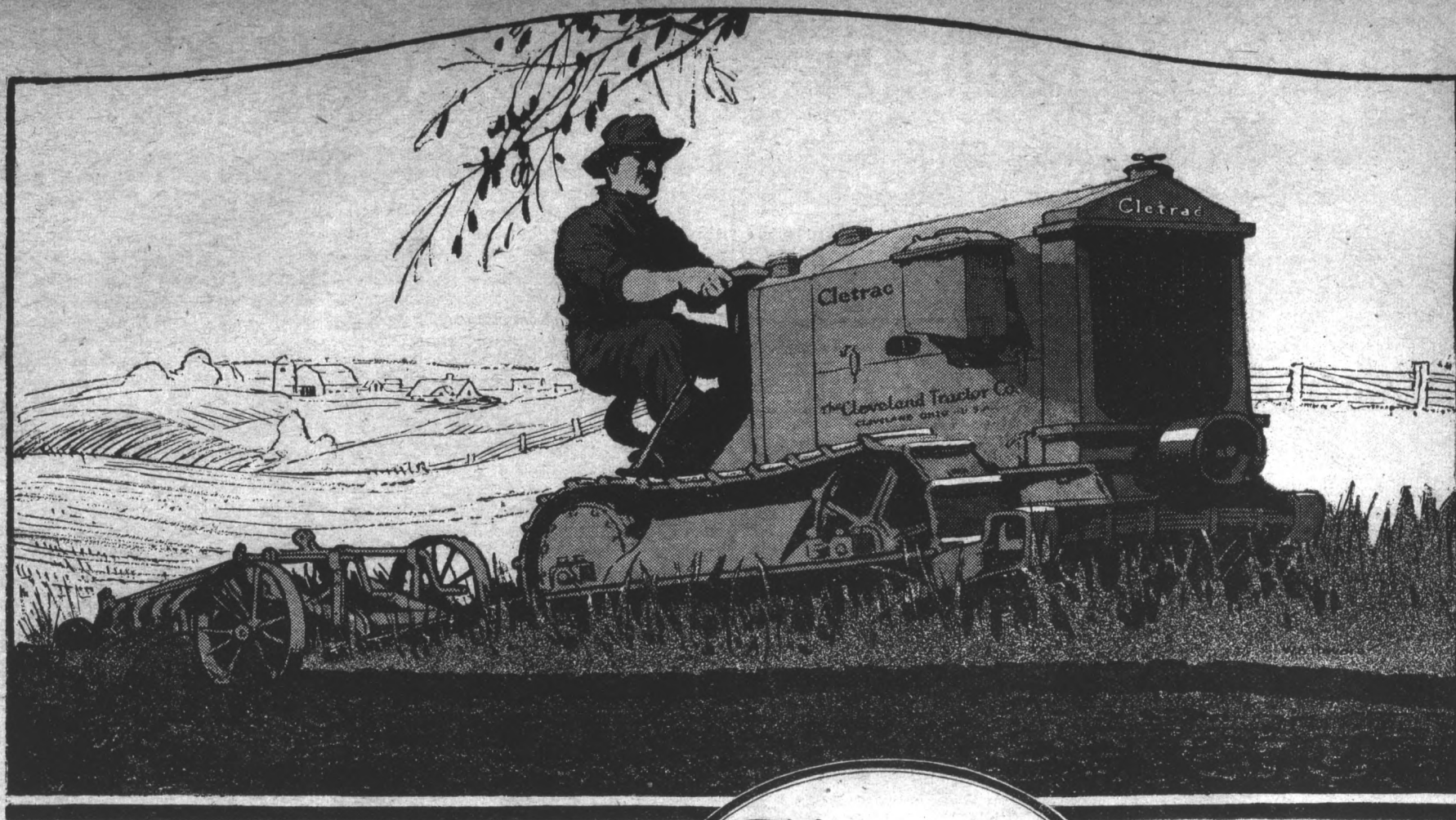
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Cletrac
TANK-TYPE
TRACTOR

Cletrac Shoulders the Load

After months of winter idleness horses tire quickly under the terrific strain of the spring plowing rush.

Not so with the Cletrac. This husky tank-type tractor *never* tires. It works every minute, travels easily over *any* ground in any weather. Plows deep and fast—lightens seed-bed work later and helps produce bigger crops.

One Cletrac replaces four to eight horses, saves their care and feed bills—

does *every* power job around the farm from spring plowing to clearing roads in winter. Burns kerosene or distillate perfectly—and a boy can run it.

Let the Cletrac shoulder *your* spring plowing load. See the Cletrac dealer near you or write for a copy of the interesting booklet "Selecting Your Tractor."

The Cleveland Tractor Co.

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*Largest Producers of Tank-Type Tractors
in the World*

Cleveland, Ohio

Contract Ditching

A Big-Profit, Spare-Time Business for Farmers



Ed. Uvaas Made \$1900 in 84 Days' Work

I purchased one of your No. 1 ditching machines in April, 1915, and the gross earnings from 84 days' operation were \$2200. I paid out for help and supplies \$287.00, and my repair bills amounted to \$20. This netted me \$1902.00. My crew consisted of one man beside myself. I had never done contract ditching before getting your machine and my farm work took up considerable of my time.

ED. UVAAS, Larsen, Wisconsin

IF YOU have ever looked into the contract ditching field, you know that steady demand and big profits are certain—with the right ditcher.

If you are interested in getting the cream of the contracts in your vicinity, get in touch with us immediately. Whether you are an experienced contractor or just thinking of getting into the work, on either a full-time or part-time basis, get the facts regarding the

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BUCKEYE

Traction Ditcher

This machine is the undisputed leader under all conditions of soil and climate. It furnishes its own power. It cuts through hardpan and frost. It operates well in swampy land. It gives you **100 to 150 rods of ditch each day**—every foot clean, smooth, true to grade and ready for tile or pipe.

Drop us a line today. Let us show you how others have become independent through this work—how you can do the same, right in your locality.

Free Book Tells How

Our interesting book, "Dollars in Ditches," will be sent to you on request. It shows what hundreds of others are doing with Buckeye traction ditchers. It tells how this big institution stands behind you. It describes the machine in detail. It shows the average prices charged and the average profits made.

A letter or post card will bring it free.

\$6,350 from one Season's Ditching for J. E. Griffith

I own and operate a No. 1 Contractor's Buckeye Ditcher and as an investment it cannot be beat. I recommend it to any one going into the business.

I have dug 268 rods in 10 hours, and I dug 18,370 rods during the 1918 season. During that time I was often held up by lack of tile, and harvest. I average 175 rods per day.

J. E. GRIFFITH, London, Ontario.

R. W. Sherrard made \$71.00 in one day

On one job I cut 117 rods of ditch, averaging 42 inches deep, made four connections and two curves in one actual day's work, for which I received \$71. I passed the 41 mile mark of ditching with my machine on this job, and the machine is in A-1 condition. This, in a little over three years, and I have not run the machine one half the time, having other work to attend to.

R. W. SHERRARD, Rochester, Indiana.

The Buckeye Traction Ditcher Co.
366 Crystal Ave. Findlay, Ohio.

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All Sizes at Proportionately Low Prices
Direct from Galloway's Factories

That's the reason for this low price. This saves you the difference between my price and the price of the high-priced separators. I cut out all waste and sell you at this rock bottom wholesale figure. You get your new Galloway Separator right fresh from my factory floor. You buy in the most economical way—the modern way of doing business.

TRIAL TEST FOR 180 MILKINGS
Sold on 90 days' trial. Has strong, sanitary base; Tank of pressed steel; Heavy tinware; Sanitary bowl; Discs separate from each other for washing. Takes only a few of them to skim a lot of milk. Cream pail shelf and bowl vice combined with hinge for lowering. High carbon crank shaft (just 50 revolutions per minute). Oil bath and sanitary drip pan.

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Will last forever. You will never have to rebuild it! Neither will your grandchildren. Built from the famous BRAZIL VITRIFIED PIPE CLAY. The "B-V-T" has been on the market nine years without a failure.

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One Man Saws 25 Cords a Day

The Ottawa Log Saw falls trees or cuts off stumps level with ground. Saws up logs, cuts up branches, log cutter, runs pump jack and other belt machinery. Mounted on wheels. Easy to move anywhere. 10 Year Guarantee. 30 Days Trial. Write for Free Book and Cash or Easy Terms. OTTAWA MFG. CO., 1501 Wood St., Ottawa, Kans.

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Dairy, Horse, Hog and Poultry feeds. Bran Middlings, Cotton seed Meal, Cull Beans. We want to send you our price list. YOUNG - RANDOLPH SEED COMPANY, Owosso, Michigan

The Dairy Outlook

AT nearly all milk producers, or dairy cattle breeders' association meetings, the future of the dairy industry is one of the leading subjects of discussion. Food production of every kind is confronted with a set of conditions for which there is no parallel in history, and men accustomed to predict production and marketing problems in an off-hand manner are slow to commit themselves, or give others advice on how to proceed. Obviously, it is a dangerous moment for prophecy, most of those venturing into that realm relying on their ambiguity to protect their reputations.

All we know to a certainty is that the world is short of dairy products and that millions of the human family are confronted with disease and semi-starvation. That thousands of dairy herds in Europe have been destroyed or seriously depleted and that those that have not been depleted are woefully short of the feedstuffs necessary to produce milk. But what the food requirements of these countries may be during the next two or three years, measured by their ability to pay prices which will pay a margin above the cost of feed and labor charges is a knotty problem.

The maintenance of present prices for an indefinite period seems very improbable, yet feed and labor prices must come down before there can be any marked decrease in the price of dairy products. Dairy farmers of today are playing the game on a close margin and if prices drop the majority of them would reduce production or pocket heavy losses. The problem of the immediate future could be accurately foretold if we really knew the dairy situation in Europe, and what moves might be made on the part of the government or private financiers to remedy the present chaotic situation as regards foreign exchange and credits. We know that the people of war ravaged Europe are anxiously awaiting relief, and look to this country for the bulk of dairy products to meet their requirements.

In speculating on the future demands of the world for dairy products the difficulties of establishing a permanent European outlet must be given thoughtful consideration. England will undoubtedly be a buyer of American canned milk and cheese. The dairy industry in Germany has suffered severe losses since the beginning of the war, but for many years the national policy of that government has been to protect the live stock interests at the expense of the consumer, excluding foreign products even by resorting to regulations that matched its doubtful diplomacy. France has aimed at self-sustenance, a policy made possible by the number of small farms and the natural frugality of its people, and it is quite probable that when normal conditions return there will be but a small demand for dairy products from America.

All of the European countries are facing the necessity for enforced economy for many years, and will endeavor to go on as nearly as possible a self-sustaining basis, an example of what may be accomplished along these lines being afforded by England's increase in food production during the past four years. France, Belgium and Germany will look to America as an outlet for their manufactured products, but they are sure to avoid any unfavorable trade balances; consequently the products from these countries will call for cash, rather than dairy products. The Latin countries will have to do the best they can with what means they have on hand. Every dollar sent to America for food will be carefully accounted. The popular belief here in America that famine threatens the people in these countries is not credited by those who understand the situation there.

Optimistic economists tell us that our own population will consume dairy products in sufficient volume to keep the industry on a high-pressure basis for years to come as soon as prices reach a level which will warrant heavier consumption, but the experience of the past few years has taught dairy farmers, especially producers of market milk, that the consumer is a factor not to be ignored. If the dairy industry is to continue prosperous a similar condition is imperative in our industries, as dairy products are sure to fall off in consumption whenever payrolls diminish. In a sense milk and its products are a luxury, and must be placed on that list at present, only high wages making their use general at present prices. The excessive cost of distribution of whole milk in our cities is a problem demanding solution, consumers' strikes and periodical agitations for public investigations indicate public discontent and unstabilized conditions. In some cities milk distributors have profiteered brazenly, and consumption has decreased. These city distributors glibly tell the consumers that the farmers are to blame for the prices, ignoring the fact that they are getting more for distributing the milk than the farmer is for producing it.

And while on the subject of the consumption of dairy products, another menace to the producer may be pertinent. The manufacturers of all kinds of substitutes have been active since prices for dairy products have advanced, embracing the present opportunity to clinch the substitute argument. While the dairy farmers have been busy producing canned milk, butter and cheese to ship abroad and feed our army and navy the manufacturers of "nut butter" and oleomargarine have been spending hundreds of thousands of dollars in newspaper advertising to exploit the merits and cheapness of their products. The fact remains that these butter substitute manufacturers have made substantial inroads, and that butter consumption per capita is steadily diminishing, and that a realization of this will come when our export business ceases, and the domestic market is called upon to absorb the bulk of the entire output.

Until the prohibition period that peculiarly American institution, the saloon free lunch, was responsible for the daily consumption of an incredible quantity of dairy foods—mostly cheese, but it has disappeared forever. The free lunch in our big cities had a great influence on the prices of cheese. The use of cheese in the average American household has been curtailed, and will be slow to regain its normal consumption when the era of plentitude comes around. These are facts that all dairy farmers must consider. Likewise, the hotel and restaurant men who have largely increased their net earnings at the expense of their patrons by cutting down on cheese and other dairy products have dealt a severe blow to the dairy industry. The portions of butter served in hotels and eating houses have been reduced, and cheese is rarely served in the cheaper restaurants, so that when condensers and manufacturers of other dairy products have filled all of the export orders they may find domestic needs reduced by this system of parsimony which taxes the consumer not only excessively for what he gets, but charges for what he does not receive. A national campaign to increase consumption of dairy products has been suggested, and from the results obtained through advertising conducted in several large

(Continued on page 610).

True Value STOCK FEED

Prize Winners

Must be bred right and fed right. There must be no guess work in either breeding or feeding.

The feeder of a winning animal at the State Fair or Live Stock Exposition is the highest type of scientist.

He knows that the *quantity* of each feeding element in the ration is correct for building bone, making muscle, fat, and healthy tissue *with no waste*. These feed elements also must be of highest quality to keep live stock in condition to make quick and economical gain.

True Value STOCK FEED

is made from products that are tested in the laboratory for true content. It is exactly balanced for special feeding. It is correctly blended from clean pure grain products and feed elements. It consequently produces results that can be had only from the highest quality truly balanced ration. It is used also as a base with higher concentrates in feeding dairy cows and other live stock.

TRUE VALUE STOCK FEED has been proved of highest economy by other feeders. Prove it out for yourself. It is made up from ground oats, corn feed meal, hominy feed, cotton seed meal and oat feed. The proportion of the most important feed elements are: Protein, 10%; fat, 3.5%; fibre, 12%; carbohydrates, 65%.

Thousands of stock feeders are studying the important matter of feed values. The way they are calling for TRUE VALUE STOCK FEED shows that they are on the right road to feeding economy. They have found it economical to sell grain and buy TRUE VALUE FEEDS.

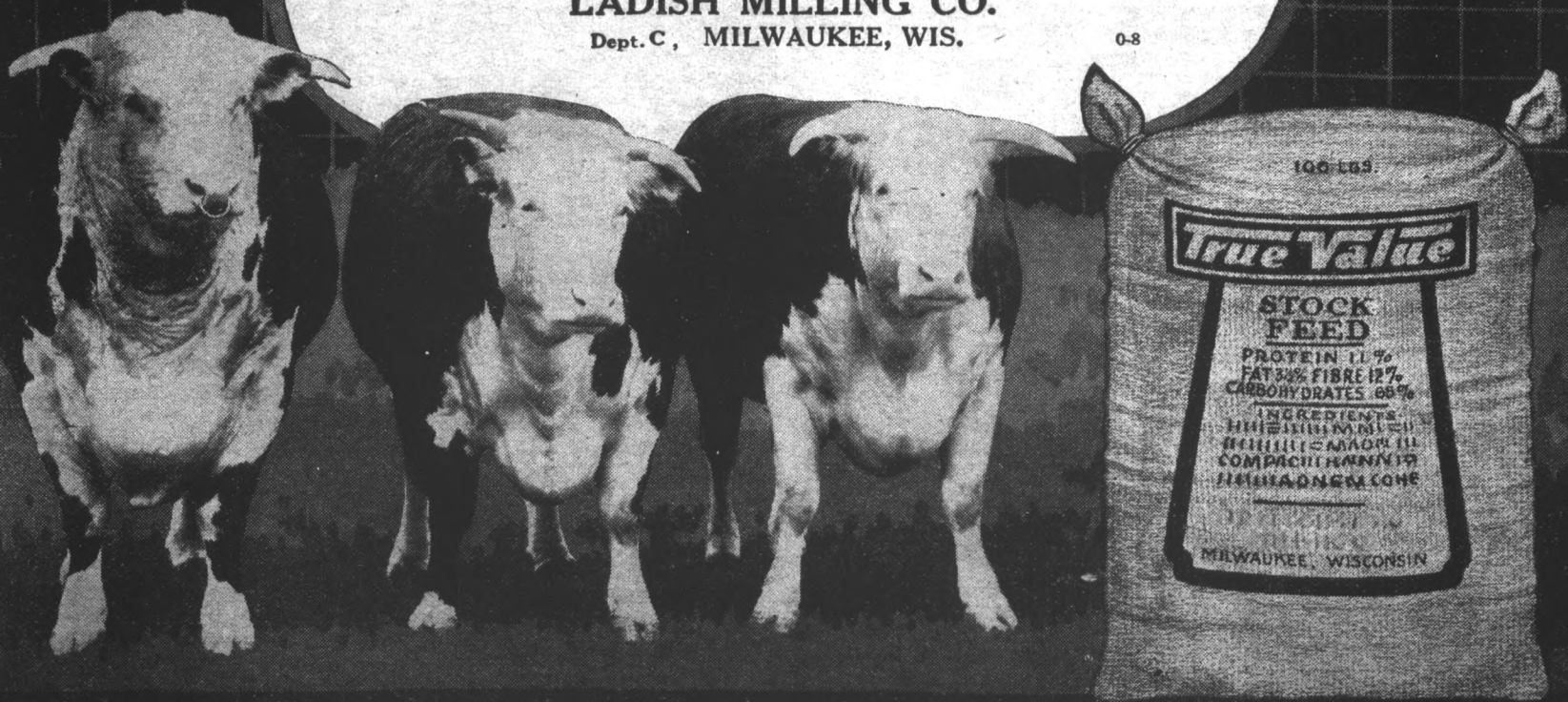
Careless scoop shovel methods of feeding home grown grains are no longer followed by feeders who want best profits. They want TRUE VALUE FEED—the ration of known value.

Order TRUE VALUE STOCK FEED of your dealer. If he hasn't it yet, write us for advice and information about how to get it at once.

LADISH MILLING CO.

Dept. C, MILWAUKEE, WIS.

0-8



SPRAY ALL Fruits and Vegetables

There is scarcely any fruit or vegetable that insects and diseases do not attack. Worms and bugs, blight and rot are serious enemies of most garden crops and fruits. Tomatoes, eggplants, cucumbers, squashes, cabbages, beans and potatoes; apples, pears, quinces, grapes and berries all have their insect enemies and are attacked by fungous diseases. Disappointing results are almost certain unless they are properly sprayed. The "one best spray" for fruits and vegetables is

Pyrox

REG. U. S. PAT. OFF.
TRADE MARK REGISTERED

It kills all leaf-eating worms and bugs, prevents blight, rot and other fungous diseases, and keeps the plants green and growing until frost. It gives the leaves a rich, healthy green color and makes strong, sturdy, vigorous plants that will yield to the utmost.

PYROX costs little for the good that it does. It is easy to use—simply mix with cold water and spray. It sticks through wet weather and dry. It gives lasting protection. Make your garden produce more. Keep it in a healthy, thriving condition right through the season. Protect your trees and vines and produce fruit that is clean and sound, free from insect and fungous damage.

Remember, Pyrox is a powerful fungicide. Twenty years of actual farm use have proved it the most effective remedy against serious fungous diseases. It contains the essential copper,—in proper quantity and in most active form for greatest fungicidal value. It often succeeds where other fungicides fail. The poison insecticide in Pyrox is chemically blended with its copper fungicide, and increases the effectiveness of both.

Get your supply of PYROX early. See your dealer and be sure that he has it in stock. Write today for the new PYROX book.

BOWKER INSECTICIDE COMPANY

43-E. Chatham St., Boston, Mass.
1006 Fidelity Bldg., Baltimore, Md.
716 Conway Bldg., Chicago, Ill.

Flash Light and Battery



Yours Without Cost

The best flash light money can buy. 6 1/2 inches in length, comes equipped with 2-cell battery ready for use. Throws a clean, white light that wind cannot blow out. Lessens fire risks. Just the thing to light you on your short trips to barn and cellar.

If you will send us two yearly subscriptions your own may count as one, accompanying order with \$2.00 remittance, we will send you this Handy Flash Light ready for use all charges prepaid.

THE MICHIGAN FARMER,
Detroit, Michigan

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Profitable Employment

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.

Salary and expenses paid weekly. For detailed information address

The Michigan Farmer

60 Years Experience Behind This Windmill

Perkins have built good windmills since 1860. Some of the first mills are still running. This experience guarantees you satisfaction and all worth while improvements when you buy

PERKINS
WIND MILLS
Standard for 60 Years

Get our experts' advice on right kind of mill for your well. We make all types. Direct Stroke. Wood or Steel Wheel; Back Geared Mills for deep wells.

Oilless replaceable bearings. Improved automatic regulator. Power stroke exactly centered between bearings. Simple, quiet, powerful. Require minimum attention. Work in lightest breeze.

Get all the facts NOW. Write today for Windmill Booklet Free.

PERKINS CORPORATION

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24-Hour Service on Replacement Parts



Write Today for
Windmill
Booklet

FREE

HIGH SPRAYERS

Pressure 35 Years Experience

Ospraymo Catalog Free
With special features all their own. They claim your kind attention. In every size . . . for every zone. They furnish sure protection.

FIELD FORCE PUMP CO., Dept. L, Elmira, New York

Fruit and Nut Trees Along the Highways

THE planting of fruit and nut trees on both sides of the state highways is included in the plans of Frederick S. Greene, New York State Commissioner of Highways, as a means of beautifying and preserving the roads. Speaking of this feature of highway improvement Commissioner Greene says:

"The yield from trees planted along our highways represents but a small part of their value to the state. There are few things we can do toward lengthening the life of a road than the planting of trees so that the pavement is shaded. In some of our midsummer days it is not unusual to find a temperature of from 115 to 125 degrees on the pavement itself where it is subjected to the direct rays of the sun, whereas the same pavement under the shade of a tree will show at the same time not over ninety degrees of heat. It is during these hot days that we most frequently get our sudden showers. The temperature of the water from one of these showers runs from about sixty-five to seventy degrees. On an unshaded pavement we have therefore a sudden drop in temperature from, say 120 degrees to sixty-five degrees, or full fifty-five degrees. On a pavement protected by the shade of trees we have a drop of from ninety to sixty degrees, or a total of thirty degrees, just one-half the change in temperature of an exposed pavement. The stress and amount of shrinkage set up in a pavement which is subjected to the sudden change of fifty-five degrees are a detriment to any type of road. Further than this, with an unexposed pavement this sudden

change in temperature is more gradual due to the fact that the leaves of the trees retard the water to some extent, and the pavement does not get the full rainfall at one blow.

"I think this is a subject that is well worth looking into. If the state can not go into the business of raising and selling hay or products from trees we might at least consider leasing certain parts of our roads to farmers living along them, or we might consider encouraging the farmer to plant trees along our roads, allowing him to have the crops of these trees for his trouble.

"This idea is not so new as many people might suppose. Both in Germany and France the roadsides are utilized to produce productive crops. In France a great deal of the firewood used by the inhabitants is secured from highway trees. These are trimmed up very high and each fall the new shoots which have appeared during the summer are cut and collected into fagot bundles. This is done under the supervision of the National Forest Service of the country."

The trees to be planted under Commissioner Greene's direction are to be set at intervals of twenty to forty feet, and he also proposes to plant alfalfa on each side of at least four thousand miles of the eight thousand miles of improved state roads. He figures that the receipts from the hay would pay a part of the cost of maintaining the highways. Some practical New York state farmers, however, are not quite sure that this scheme of state hay farming will prove to be a profitable venture.—E. E. R.

Pruning the Pear Tree

PEARS grow upright and the trunk is apt to be injured by sun-scald. For this reason, growers wish to start the branching of pear trees lower than apple trees and they wish to keep the head of the tree open to try and induce a tendency to spread out and develop a larger fruiting area.

When pruning the pear remove the sprouts and spurs which are apt to grow thickly on the main limbs near the trunk. If these growths are infected with blight it means that the disease can soon reach the main trunk and ruin the tree, while if upper twigs are blighted the disease can often be stopped by pruning out and burning the infected wood.

During the first five years pears are usually pruned heavily to stimulate the growth of wood but after that the annual pruning is reduced so that the wood developed will have a chance to harden and be in less danger from the blight. If mature trees are pruned heavily it will start the growth of an abundance of new wood and this increases the danger of fire-blight.

Like all other fruits, it costs money to harvest pears and the trees that are allowed to grow straight upright with no effort at training are apt to bear much of their fruit high in the air where it is difficult to pick. Most growers do their pear pruning in the spring by thinning out the top. Some do summer pruning in August and this late summer pruning stops the growth of new wood until the tree recovers from the shock and by that time the climbing conditions are detrimental to tree growth. Summer pruning of pears must be done late enough so that the trees will have no chance to make a second growth of wood that year. If this is done it may result in winter injury to the soft wood produced late in the season.

The fire-blight can usually be controlled by examining the trees during the winter and cutting out infected branches about one foot below the signs of the disease. Corrosive sub-



Pruning the Pear Tree.

limite can be used to sterilize the tools after each cut so the disease will not be carried from one tree to another. During the summer the disease is, of course, the most active and if pruning is done then, the greatest of precautions are necessary to keep from spreading it to other trees, either on the hands or the tools. The double-trees which take off the pruning shears which take off the limb cleanly on all sides with no tearing of the bark are very useful in pruning pear trees.

R. G. KIRBY.

SPRING GARDEN WORK.

OBVIOUSLY, one may not do work in the garden proper at this season in Michigan latitude, still, there are preparations to be made no less important if vegetables are to be gathered in their proper season of earliness. First, there are plans to make, and seeds to secure that there may be no delay when the season of planting does come. Personally, I prefer to secure seeds direct from reliable seed houses, rather than to get them from some store.

Then, too, if extra early vegetables are to be had from the garden, the plants must be grown in a forcing bed of some sort, or in a sunny kitchen window. With tomatoes, for instance, a semi-tropical plant, it is absolutely necessary to start the plants some eight or ten weeks prior to the time when they may safely set in the open field, if a substantial crop of ripened fruit is to be harvested.

Now it is great fun to care for plants and watch them boost along under the influence of rich soil and summer temperature while winter still holds all outdoor nature locked fast. To the writer there is nothing quite so conducive to contentment and enjoyment as to be at work in a summer temperature surrounded with thriftily growing plants, while outside the gales howl and rain or sleet beats a tattoo on the glass.

M. N. EDGERTON.

PLANTING TREES IN LINE.

WHEN starting the orchard it is necessary to use a planting board in order to get the trees in a true alignment. Take a board four or five feet long and bore a hole in each end large enough for small stakes to slip through. Then make a notch in the center of the board.

Of course, the location of each tree to be placed in the orchard will be indicated by a stake. Place the planting board on the ground so that the notch coincides with the stake which has been set for the tree. Then pin the planting board to the ground with the small stakes at each end. The middle stake can now be removed and also the planting board. Dig the hole for the tree and then place the planting board back on the two end stakes. The notch will come right where the tree stake stood before the hole was dug and, of course, that is the place to put the tree. It enables the grower to place his trees upright in straight lines. If the planting board is not used it will be difficult to line up the trees even if the holes are in line as one tree will be too near to one side of the hole and the next tree too near to the other side. The result is an orchard which advertises for many years the careless methods by which it was planted.

DIFFERENT WIDTH DRILL ROWS AND YIELD.

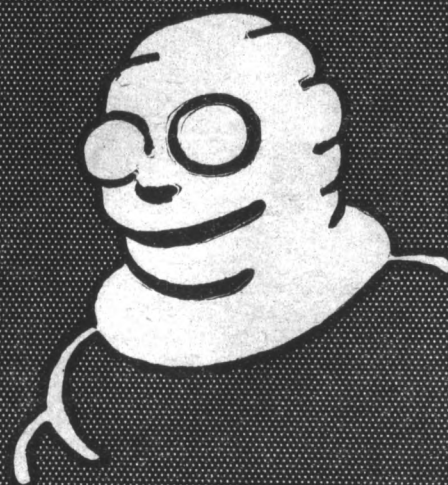
I wish to find out all I can about a grain drill (with disc) that sows four-inch rows instead of seven or eight. Will they work equally as well as the seven or eight-inch on all kinds of soils? Are they as light draft as the seven-inch in sowing the same width of land? Do you consider the sowing of grain in the four-inch rows any better than the seven-inch the way we farm here in this state? B. N. V.

Experiments at the Michigan Agricultural College and other experiment stations, regarding the effect on yield of distance apart of drill rows of small grains, indicate that there is no advantage in drilling closer than seven or eight inches, the usual width of standard drills. The four-inch spacing gives somewhat less yield than the usual seven and a half inch width with wheat and oats.

The four-inch drill has about the same draft as the seven or eight-inch drill, except on heavy soil the draft is somewhat greater.—J. F. C.

MICHELIN

UNIVERSAL CORD



A Sturdy, Oversize Cord Tire that Establishes a New Standard for Durability and Freedom from Skidding

The Michelin Universal Cord embodies three substantial improvements in cord tire construction: *first*, a new and perhaps unequalled wear-resisting tread-compound; *second*, an improved non-skid tread that offers effective protection

against skidding in every possible direction; *third*, a super-sturdy oversize body. These combined advantages result in increased resiliency and a freedom from blow-outs hitherto unknown. For your next tire get a Michelin Universal Cord.

Michelin Tire Company, Milltown, New Jersey
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Get the gall cure that's guaranteed! Your money back if Bickmore's fails. Guaranteed to quickly cure while the horse works. Cures wounds and sores on horses, cattle, pigs and poultry. Your dealer has it. Also ask for Bickmore's Horse Liniment. For yourself, always keep handy Bickmore's XYZ Skin Ointment and Bickmore's XYZ Family Liniment. Ask your dealer for them.

Binder Twine Get our low price. Farmer agents wanted. Free samples. Melrose, Ohio.
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OFFER No. 109.

The Michigan Farmer, one year..\$1.00
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Home Life, one year25
Gentlewoman, one year..... .25
Household Journal, one year..... .35

Total value\$2.20
All for \$1.70.

OFFER No. 113.

The Michigan Farmer, one year..\$1.00
Breeder's Gazette, one year..... 1.50

Total value\$2.50
Both for \$2.15.

OFFER No. 115.

The Michigan Farmer, one year..\$1.00
American Fruit Grower, one year 1.00
Everybody's Poultry Journal, 1 yr .50
Gleanings in Bee Culture, 1 yr... 1.00

Total value\$3.50
All for \$2.60.

OFFER No. 118.

The Michigan Farmer, one year..\$1.00
Power Farming, one year 1.00
Chester White Journal, one year .50

Total value\$2.50
All for \$1.75.

Illustration shows tile and mill house covered with Everlastic "Rubber" Roofing. Other buildings with Everlastic Shingles.

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Everlastic
Roofings**

For Economy and Satisfaction—

EVERLASTIC ROOFS are the most economical and satisfactory it is possible to buy. They are low in first cost, inexpensive to lay, and very durable.

They are satisfactory because they are handsome in appearance, staunch, weatherproof, and highly fire-resistant.

For your home or any other structure where appearance is essential, no roofing will produce a more artistic effect than Everlastic shingles.

The heavy surfacing of real crushed slate gives them the rich color (red or green) of the natural slate which long exposure to the weather makes even more beautiful. They contain no artificial coloring; painting is unnecessary.

If you prefer *roll* roofings, you have the choice of two styles: Everlastic Slate-Surfaced Roofing (red or green) and the popular Everlastic "Rubber" Roofing. Both are products of the highest quality, suitable for all steep-roofed buildings.

Everlastic Roofings offer the biggest value in the roofing field. Behind them stands the reputation of The Barrett Company, with its 60 years of successful manufacturing experience.

Our illustrated booklets sent free on request, will show you how to get better roofs for less money.

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Everlastic "Rubber" Roofing

A recognized standard among "rubber" roofings. Famous for its durability. Made of high-grade waterproofing materials, it defies wind and weather and insures dry, comfortable buildings under all weather conditions.

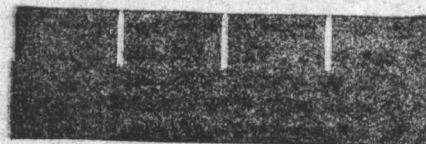


Everlastic Slate-Surfaced Roofing

A high-grade roll roofing, surfaced with genuine crushed slate, in two natural shades, red or green. Needs no painting. Handsome enough for a home, economical enough for a barn or garage. Combines real protection against fire with beauty. Nails and cement with each roll.



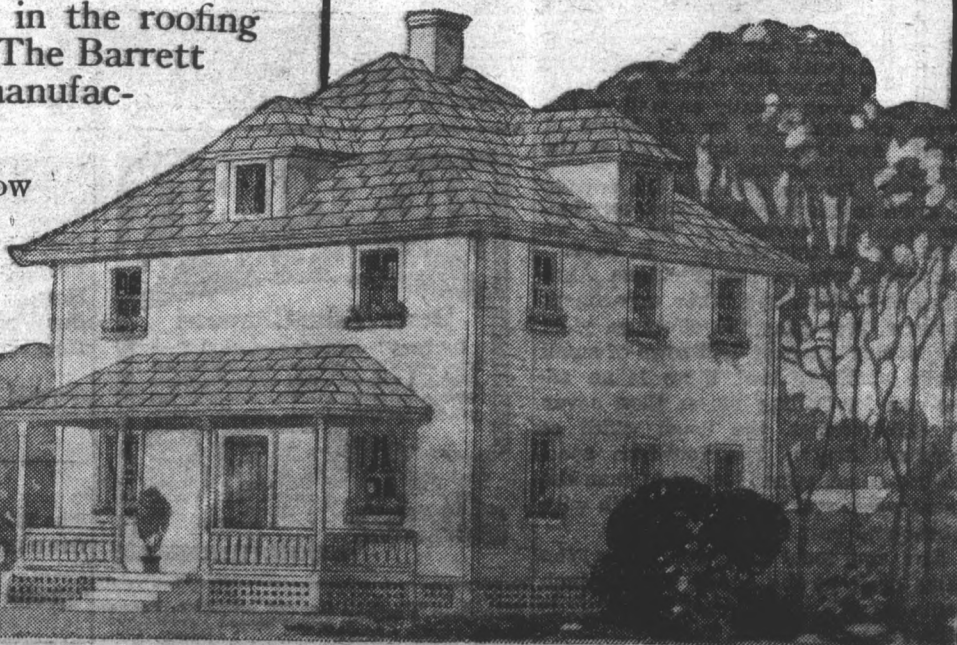
Everlastic Multi-Shingles (4 Shingles in One)



Made of high-grade felt, thoroughly waterproofed and surfaced with crushed slate in beautiful natural slate colors, either red or green. Laid in strips of *four shingles in one* at far less cost in labor and time than for wooden shingles. Give you a roof of artistic beauty worthy of the finest buildings, and one that resists fire and weather. Need no painting.

Everlastic Tylike Shingles

Made of the same durable slate-surfaced (red or green) material as the Multi-Shingles, but cut into individual shingles, 8 x 12 1/2 inches. Laid like wooden shingles but cost less per year of service. Need no painting.



WORLD EVENTS IN PICTURES



Mrs. Edward Bell, wife of the Secretary of the American Embassy at Tokio, is appointed to the diplomatic post of counselor to the Embassy.



The famous "House of David" band playing in New York for the benefit of the statue to be presented to France by America.



Present "dry" era induces Georgian farmer to use pair of circus camels for farming.



Woman's heroism saves ship's crew.



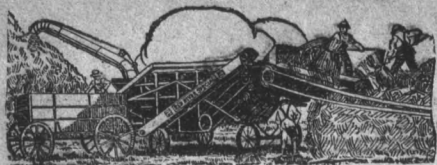
Mr. Sanderson, secretary of the senate, returns peace treaty to the executive offices.



Little Miss Miyu Fujii, a junior member of the Japanese embassy at Washington.



Husband and wife delegates to rival party conventions.



Make an Extra Income Threshing

There's good money made in running a threshing outfit. Last year there were not enough threshers in some states to save the crop. Threshing machine owners were begged to "come and thresh at any price." Why not make an income in this business for yourself? Write and get our proposition on the

Red River Special

There is a demand for threshing with this machine. It's the thresher that "saves the farmer's thresh bill" in grain saved from the stack.

Even if you get a thresher for just your own grain, it would pay you. But why not thresh for a few neighbors, too?

Hitch the thresher to your tractor, or let us supply you with the reliable Nichols-Shepard Steam Engine and have the ideal threshing outfit—good for many years of money-making service.

Write for Circulars

NICHOLS & SHEPARD CO.
(In Continuous Business Since 1843)
Builders Exclusively of Red River Special Threshers,
Wind Stackers, Feeders, Steam and
Oil-Gas Traction Engines
Battle Creek Michigan

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THE VALLEY OF THE GIANTS

A ROMANCE OF THE REDWOODS

By Peter B. Kyne

Bryce's boyhood was much the same as that of other lads in Sequoia, save that in the matter of toys and, later guns, fishing-rods, dogs, and ponies he was a source of envy to his fellows. After his tenth year his father placed him on the mill pay-roll, and on pay-day he was wont to line up with the mill-crew to receive his modest stipend of ten dollars for carrying in kindling to the cook in the mill kitchen each day after school.

This otherwise needless arrangement was old Cardigan's way of teaching his boy financial responsibility. All that he possessed he had worked for, and he wanted his son to grow up with the business to realize that he was a part of it with definite duties connected with it developing upon him—duties which he must never shirk if he was was to retain the rich redwood heritage his father had been so eagerly storing up for him.

When Bryce Cardigan was about fourteen years old there occurred an important event in his life. In a commendable effort to increase his income he had laid out a small vegetable garden in the rear of his father's house, and here on a Saturday morning, while down on his knees weeding carrots, he chanced to look up and discovered a young lady gazing at him through the picket fence. She was a few years his junior, and a stranger in Sequoia. Ensnared the following conversation: "Hello, little boy."

"Hello yourself! I ain't a little boy."

She ignored the correction. "What are you doing?"

"Weedin' carrots. Can't you see?"

"What for?"

Bryce, highly incensed at having

been designated a little boy by this superior damsel, saw his opportunity to silence her. "Cat's fur for kitten breeches," he retorted—without any evidence of originality, we must confess. Whereat she stung him to the heart with a sweet smile and promptly sang for him this ancient ballad of childhood:

"What are little boys made of?"

"What are little boys made of?"

Snakes and snails,

And puppy dog's tails,

And that's what little boys are made of."

Bryce knew the second verse and shrivelled inwardly in anticipation of being informed that little girls are made of sugar and spice and everything nice. Realizing that he had begun something which might not terminate with credit to himself, he hung his head and for the space of several minutes gave all his attention to his crop. And presently the visitor spoke again.

"I like your hair, little boy. It's a pretty red."

That settled the issue between them. To be hailed as little boy was bad enough, but to be reminded of his crowning misfortune was adding insult to injury. He rose and cautiously approached the fence with the intention of pinching the impudent stranger, suddenly and surreptitiously, and sending her away weeping. As his hand crept between the palings on its wicked mission, the little miss looked at him in friendly fashion and queried:

"What's your name?"

Bryce's hand hesitated. "Bryce Cardigan," he answered gruffly.

"I'm Shirley Sumner," she ventured.

"Let's be friends."

"When did you come to live in Sequoia?" he demanded.

"I don't live here. I'm just visiting here with my aunt and uncle. We're staying at the hotel, and there's nobody to play with. My uncle's name is Pennington. So's my aunt's. He's out here buying timber, and we live in Michigan. Do you know the capital of Michigan?"

"Of course I do," he answered. "The capital of Michigan is Chicago."

"Oh, you big stupid! It isn't! It's Detroit."

"Tain't neither. It's Chicago."

"I live there—so I guess I ought to know. So there!"

Bryce was vanquished, and an acute sense of his imperfection in matters geographical inclined him to end the argument. "Well, maybe you're right," he admitted grudgingly. "Anyhow, what difference does it make?"

She did not answer. Evidently she was desirous of avoiding an argument if possible. Her gaze wandered past Bryce to where his Indian pony stood with her head out the window of her box-stall contemplating her master.

"Oh, what a dear little horse!" Shirley Sumner exclaimed. "Whose is he?"

"Tain't a he. It's a she. And she belongs to me."

"Do you ride her?"

"Not very often now. I'm getting too heavy for her, so Dad's bought me a horse that weighs nine hundred pounds. Midget only weighs five hundred." He considered her a moment while she gazed in awe upon this man with two horses. "Can you ride a pony?" he asked, for no reason that he was aware of.

She sighed, shaking her head resignedly. "We haven't any room to keep a pony at our house in Detroit," she

explained, and added hopefully: "But I'd love to ride on Midget. I suppose I could learn to ride if somebody taught me how."

He looked at her again. At that period of his existence he was inclined to regard girls as a necessary evil. For some immutable reason they existed, and perforce must be borne with, and it was his hope that he would get through life and see as little as possible of the exasperating sex. Nevertheless, as Bryce surveyed this winsome miss through the palings, he was sensible of a sneaking desire to find favor in her eyes—also equally sensible of the fact that the path to that desirable end lay between himself and Midget. He swelled with the importance of one who knows he controls a delicate situation.

"Well, I suppose if you want a ride I'll have to give it to you," he grumbled, "although I'm mighty busy this morning."

"Oh, I think you're so nice," she declared.

A thrill shot through him that was akin to pain; with difficulty did he restrain an impulse to dash wildly into the stable and saddle Midget in furious haste. Instead he walked to the barn slowly and with extreme dignity. When he reappeared, he was leading Midget, a little silverpoint runt of a Klamath Indian pony, and Moses, a sturdy pinto cayuse from the cattle ranges over in Trinity county. "I'll have to ride with you," he announced. "Can't let a tenderfoot like you go out alone on Midget."

All aflutter with delightful anticipation, the young lady climbed up on the gate and scrambled into the saddle when Bryce swung the pony broadside to the gate. Then he adjusted the stirrups to fit her, passed a hair rope from Midget's little hackamore to the pomel of Moses' saddle, mounted the pinto, and proceeded with his first adventure as a riding-master. Two hours of of his valuable time did he give that morning before the call of duty brought him back to the house and his neglected crop of carrots. When he suggested tactfully, however, that it was now necessary that his guest and Midget separate, a difficulty arose. Shirley Sumner refused point blank to leave the premises. She liked Bryce for his hair and because he had been so kind to her; she was a stranger in Sequoia, and now that she had found an agreeable companion, it was far from her intention to desert him.

So Miss Sumner stayed and helped Bryce weed his carrots, and since as a voluntary laborer she was at least worth her board at noon Bryce brought her in to Mrs. Tully with a request for luncheon. When he went to the mill to carry in the kindling for the cook, the young lady returned rather sorrowfully to the Hotel Sequoia, with a fervent promise to see him the next day. She did, and Bryce took her for a long ride up into the Valley of the Giants and showed her his mother's grave. The gray squirrels were there, and Bryce gave Shirley a bag of pine-nuts to feed them. Then they put some flowers on the grave, and when they returned to town and Bryce was unsaddling the ponies, Shirley drew Midget's nose down to her and kissed it. Then she commenced to weep rather violently.

"What are you crying about?" Bryce (Continued on page 598).

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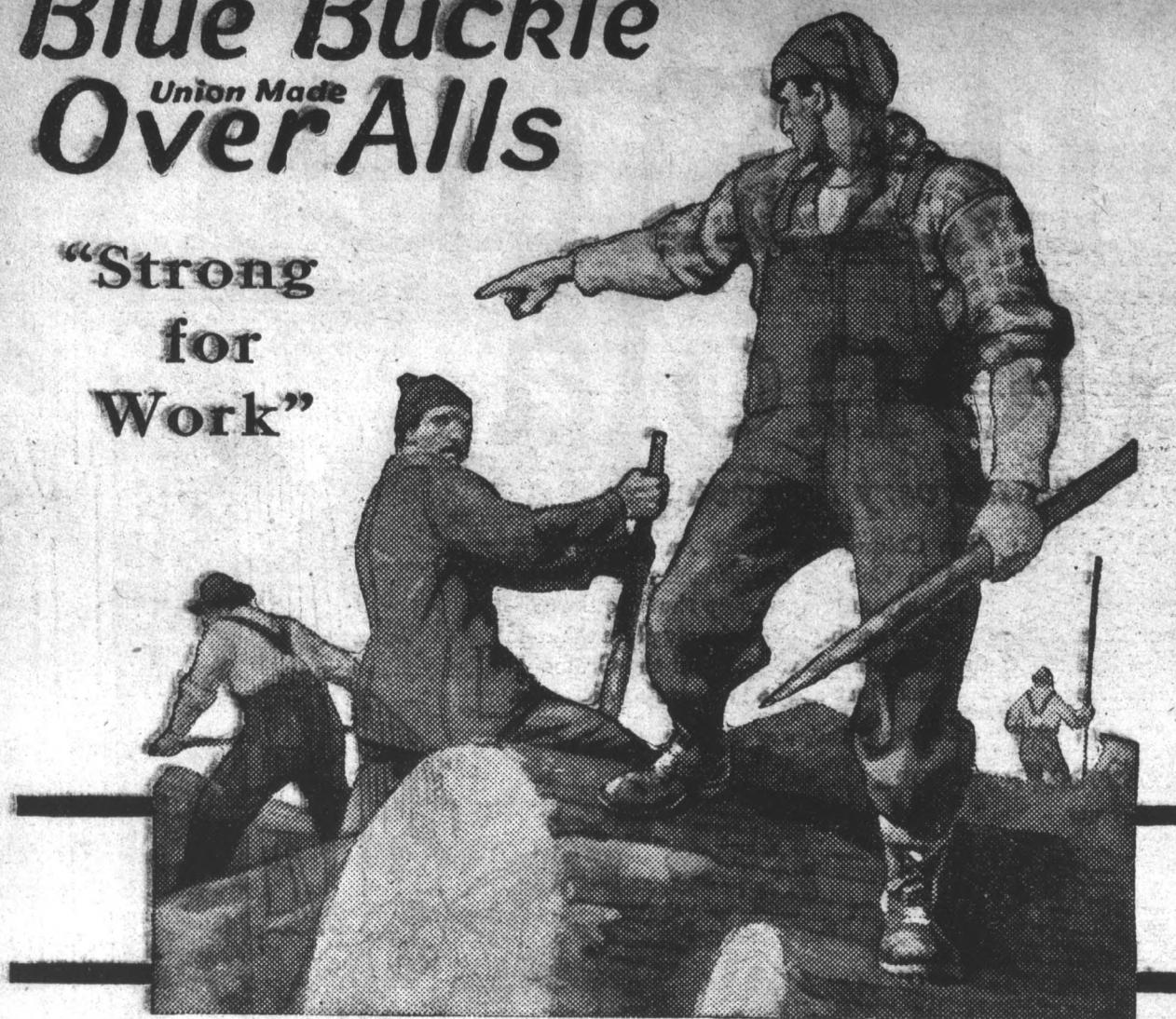


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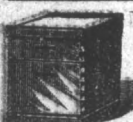
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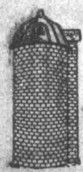
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demanded. Girls were so hard to understand.

"I'm go-going h-h-h-home to-morrow," she howled.

He was stricken with dismay and bade her desist from her vain repinings. But her heart was broken, and somehow—Bryce appeared to act automatically—he had his arms around her. "Don't cry, Shirley," he pleaded. "It breaks my heart to see you cry. Do you want Midget? I'll give her to you."

Between sobs Shirley confessed that the prospect of parting with him and not Midget was provocative of her woe. This staggered Bryce and pleased him immensely. And at parting she kissed him good-bye, reiterating her opinion that he was the nicest, kindest boy she had ever met or hoped to meet.

When Shirley and her uncle and aunt boarded the steamer for San Francisco, Bryce stood disconsolate on the dock and waved to Shirley until he could no longer discern her on the deck. Then he went home, crawled up into the haymow and wept, for he had something in his heart and it hurt. He thought of his elfin companion very frequently for a week, and he lost his appetite, very much to Mrs. Tully's concern. Then the steelhead trout began to run in Eel River and the sweetest event that can occur in any boy's existence—the sudden awakening to the wonder and beauty of life so poignantly realized in his first love affair



"What a perfectly glorious country!" she exclaimed. "Yes," Bryce Cardigan replied. "It's a he country; I love it, and am glad to get back to it."

—was lost sight of by Bryce. In a month he had forgotten the incident; in six months he had forgotten Shirley Sumner.

CHAPTER IV.

THE succeeding years of Bryce Cardigan's life, until he completed his high-school studies and went east to Princeton, were those of the ordinary youth in a small and somewhat primitive country town. He made frequent trips to San Francisco with his father, taking passage on the steamer that made bi-weekly trips between Sequoia and the metropolis—as The Sequoia Sentinel always referred to San Francisco. He was an expert fisherman, and the best shot with rifle or shot-gun in the country; he delighted in sports and, greatly to the secret delight of his father, showed a profound interest in the latter's business.

Throughout the happy years of Bryce Cardigan's boyhood his father continued to enlarge and improve his saw-mill, to build more schooners, and to acquire more redwood timber. Lands, the purchase of which by Cardigan a decade ago had caused his neighbors to impugn his judgment, now developed strategical importance. As a result those lands necessary to consolidate his own holdings came to him at his own price, while his adverse holdings

that blocked the logging operations of his competitors went from him—also at his own price. In fact, all well-laid plans matured satisfactorily with the exception of one, and since it has a very definite bearing on the story, the necessity for explaining it is paramount.

Contiguous to Cardigan's logging operations to the east and north of Sequoia, and comparatively close in, lay a block of two thousand acres of splendid timber, the natural, feasible, and inexpensive outlet for which, when it should be logged, was the Valley of the Giants. For thirty years John Cardigan had played a waiting game with the owner of that timber, for the latter was as fully obsessed with the belief that he was going to sell it to John Cardigan at a dollar and a half per thousand feet stumpage as Cardigan was certain he was going to buy it for a dollar a thousand—when he should be ready to do so and not one second sooner. He calculated, as did the owner of the timber, that the time to do business would be a year or two before the last of Cardigan's timber in that section should be gone.

Eventually the time for acquiring more timber arrived. John Cardigan, meeting his neighbor on the street, accosted him thus:

"Look here, Bill: isn't it time we got together on that timber of yours? You know you've been holding it to block me and force me to buy at your figure."

"That's why I bought it," the other admitted smilingly. "Then, before I realized my position, you checkmated me with that quarter-section in the valley, and we've been deadlocked ever since."

"I'll give you a dollar a thousand stumpage for your timber, Bill."

"I want a dollar and a half."

"A dollar is my absolute limit."

"Then I'll keep my timber."

"And I'll keep my money. When I finish logging in my present holdings, I'm going to pull out of that country and log twenty miles south of Sequoia. I have ten thousand acres in the San Hedrin watershed. Remember, Bill, the man who buys your timber will have to log it through my land—and I'm not going to log that quarter-section in the valley. Hence there will be no outlet for your timber in back."

"Not going to log it? Why, what are you going to do with it?"

"I'm just going to let it stay there until I die. When my will is filed for probate, your curiosity will be satisfied—but not until then."

The other laughed. "John," he declared, "you just haven't got the courage to pull out when your timber adjoining mine is gone, and move twenty miles south to the San Hedrin watershed. That will be too expensive a move, and you'll only be biting off your nose to spite your face. Come through with a dollar and a half, John."

"I never bluff, Bill. Remember, if I pull out for the San Hedrin, I'll not abandon my logging-camps there to come back and log your timber. One expensive move is enough for me. Better take a dollar, Bill. It's a good, fair price, as the market on redwood timber is now, and you'll be making an even hundred per cent on your investment. Remember, Bill, if I don't buy your timber, you'll never log it yourself and neither will anybody else. You'll be stuck with it for the next forty years—and taxes aren't getting any lower. Besides, there's a good deal of pine and fir in there, and you know what a forest fire will do to that."

"I'll hang on a little longer, I think."

"I think so, too," John Cardigan replied. And that night, as was his wont, even though he realized that it was not possible for Bryce to gain a profound understanding of the business problems to which he was heir, John Cardigan discussed the Squaw Creek



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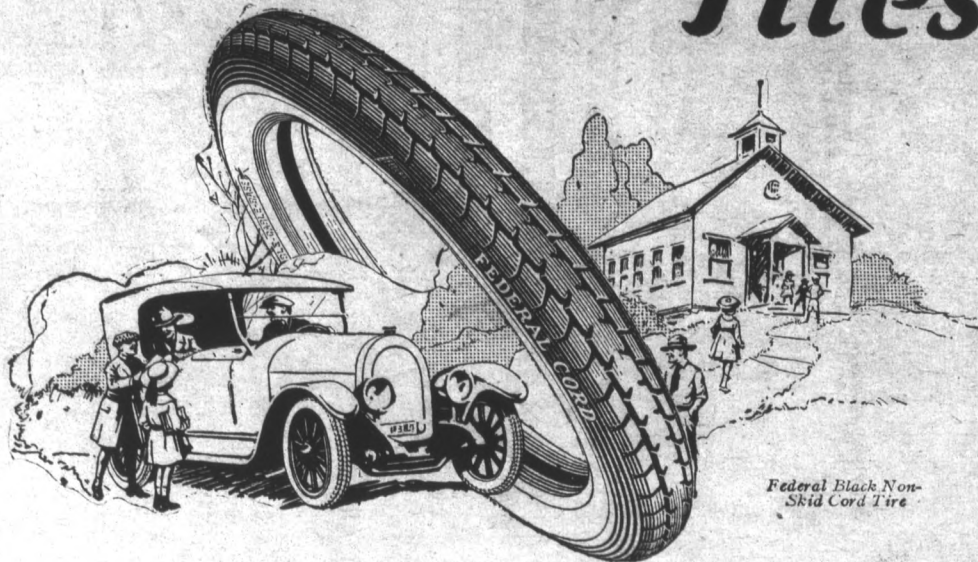
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timber with his son, relating to him the details of his conversation with the owner.

"I suppose he thinks you're bluffing," Bryce commented.

"I'm not, Bryce. I never bluff—that is, I never permit a bluff of mine to be called, and don't you ever do it, either. Remember that, boy. Any time you deliver a verdict, be sure you're in a position you won't have to reverse yourself. I'm going to finish logging in that district this fall, so if I'm to keep the mill running, I'll have to establish my camps on the San Hedrin watershed right away."

Bryce pondered. "But isn't it cheaper to give him his price on Squaw Creek timber than go logging in the San Hedrin and have to build twenty miles of logging railroad to get your logs to the mill?"

"It would be, son, if I had to build the railroad. Fortunately, I do not. I'll just shoot the logs down the hillside to the San Hedrin River and drive them down the stream to a log-boom on tidewater."

But there isn't enough water in the San Hedrin to float a redwood log, Dad. I've fished there, and I know."

"Quite true—in the summer and fall. But when the winter freshets come on and the snow begins to melt in the spring up in the Yola Bolas, where the San Hedrin has its source, we'll have plenty of water for driving the river. Once we get the logs down to tidewater, we'll raft them and tow them up to the mill. So you see, Bryce, we won't be bothered with the expense of maintaining a logging railroad, as at present."

Bryce looked at his father admiringly. "I guess Dan Keyes is right, Dad," he said. "Dan says you're crazy—like a fox. Now I know why you've been picking up claims in the San Hedrin watershed."

"No, you don't, Bryce. I've never told you, but I'll tell you now the real reason. Humboldt county has no rail connection with the outside world, so we are forced to ship our lumber by water. But some day a railroad will be built in from the south—from San Francisco; and when it comes, the only route for it to travel is through our timber in the San Hedrin Valley. I've accumulated that ten thousand acres for you, my son, for the railroad will never be built in my day. It may come in yours, but I have grown weary waiting for it, and now that my hand is forced, I'm going to start logging there. It doesn't matter, son. You will still be logging there fifty years from now. And when the railroad people come to you for a right of way, my boy, give it to them. Don't charge them a cent. It has always been my policy to encourage the development of this county, and I want you to be a forward-looking, public-spirited citizen. That's why I'm sending you east to college. You've been born and raised in this town, and you must see more of the world. You mustn't be narrow or provincial, because I'm saving up for you, my son, a great many responsibilities, and I want to educate you to meet them bravely and sensibly."

He paused, regarding the boy gravely and tenderly. "Bryce, lad," he said presently, "do you ever wonder why I work so hard and barely manage to spare the time to go camping with you in vacation time?"

"Why don't you take it easy, Dad? You do work awfully hard, and I have wondered about it."

"I have to work hard, son, because I started something a long time ago, when work was fun. And now I can't let go. I employ too many people who are dependent on me for their bread and butter. When they plan a marriage or the building of a home or the purchase of a cottage organ, they have to figure me in on the proposition. I didn't have a name for the part I play-



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ed in these people's lives until the other night when I was helping you with your algebra. I'm the unknown quantity."

"Oh, no," Bryce protested. "You're the known quantity."

Cardigan smiled. "Well, maybe I am," he admitted. "I've always tried to be. And if I have succeeded, then you're the unknown quantity, Bryce, because some day you'll have to take my place; they will have to depend upon you when I am gone. Listen to me, son. You're only a boy, and you can't understand everything I tell you now, but I want you to remember what I tell you, and some day understanding will come to you. You mustn't fail the people who work for you—who are dependent upon your strength and brains and enterprises to furnish them with an opportunity for life, liberty, and the pursuit of happiness. When you are the boss of Cardigan's mill, you must keep the wheels turning; you must never shut down the mill or the logging-camps in dull times just to avoid a loss you can stand better than your employees."

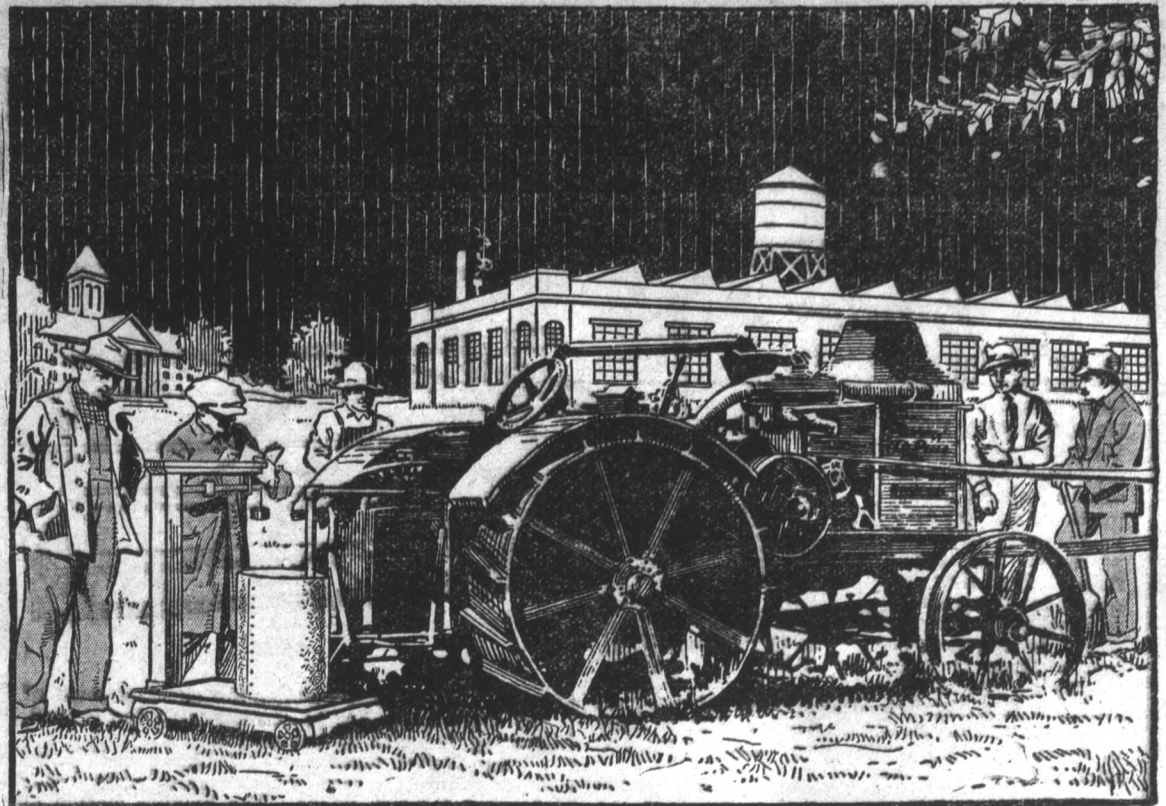
His hand, trembling old hand closed over the boy's. "I want you to be a brave and honorable man," he concluded.

True to his word, when John Cardigan finished his logging in his old, original holdings adjacent to Sequoia and Bill Henderson's Squaw Creek timber, he quietly moved south with his Squaw Creek woods-gang and joined the crew already getting out logs in the San Hedrin watershed. Not until then did Bill Henderson realize that John Cardigan had called his bluff—whereat he cursed himself for a fool and a poor judge of human nature. He had tried a hold-up game and had failed; a dollar a thousand feet stumpage was a fair price; for years he had needed the money; and now, when it was too late, he realized his error. Luck was with Henderson, however; for shortly thereafter there came again to Sequoia one Colonel Seth Pennington, a millionaire white-pine operator from Michigan. The Colonel's Michigan lands had been logged off, and since he had had one taste of cheap timber, having seen fifty-cent stumpage go to five dollars, the Colonel, like Oliver Twist, desired some more of the same. On his previous visit to Sequoia he had seen his chance awaiting him in the gradually decreasing market for redwood lumber and the corresponding increase of melancholia in the redwood operators; hence he had returned to Michigan, closed out his business interests there, and returned to Sequoia on the alert for an investment in redwood timber. From a chair-warmer on the porch of the Hotel Sequoia, the Colonel had heard the tale of how stiff-necked old John Cardigan had called the bluff of equally stiff-necked old Bill Henderson; so for the next few weeks the Colonel, under pretense of going hunting or fishing on Squaw Creek, managed to make a fairly accurate cursory cruise of the Henderson timber—following which he purchased it from the delighted Bill for a dollar and a quarter per thousand feet stumpage and paid for it with a certified check. With his check in his hand, Henderson queried:

"Colonel, how do you propose logging that timber?"

The Colonel smiled. "Oh, I don't intend to log it. When I log timber, it has to be more accessible. I'm just going to hold on and outgame your former prospect, John Cardigan. He needs that timber; he has to have it—and one of these days he'll pay me two dollars for it."

(Continued next week).



OilPull again breaks World Record

At the Winnipeg tractor contest in 1912 the OilPull established a world's record for fuel economy in tractor motors by using only .7 pound of fuel per horse-power hour.

For eight years this record stood unequalled. But in January, 1920, it was again broken by another OilPull. At the tractor fuel economy tests held by the Ohio State University at Columbus, a 12-20 OilPull established a new world's record—for either kerosene or gasoline burning tractor motors—of .606 pounds of kerosene fuel per horse-power hour. This lowered the old OilPull record by over 13%.

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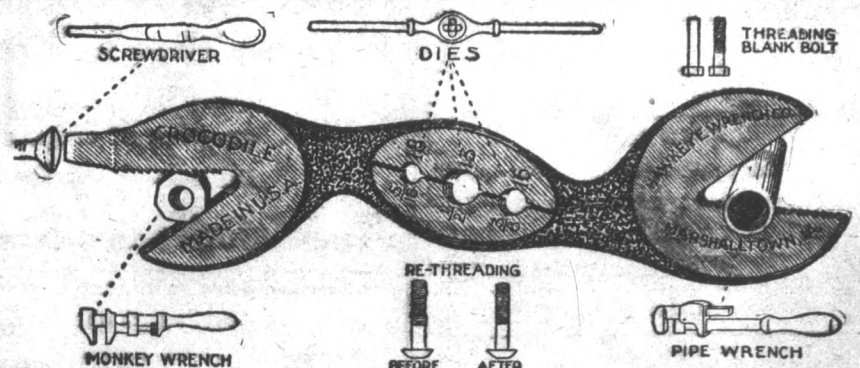
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Hoard's Dairyman, one year.....	1.00	Swine World, one year	1.00
Swine Breeders' Journal, one year .50		American Sheep Breeder, one year	1.25

Total value 2.50
All for \$1.90.

Total value \$3.25
All for \$2.25.

How Much Grain Do You Lose Between Field and Thresher?

To avoid loss of grain from shattering, many farmers have adopted grain-tight racks for hauling to stack or thresher—a step in the right direction. But what about grain lost from shattering while passing through the binder or damaged while in the shock?

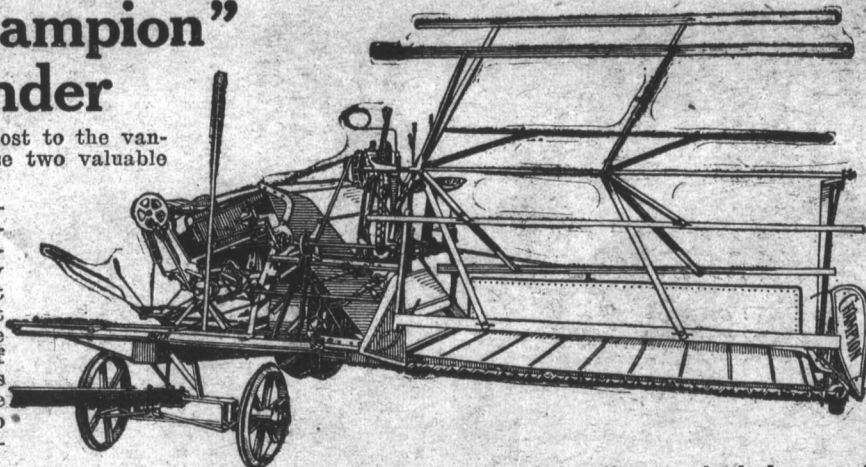
"The Champion" Binder

reduces this loss almost to the vanishing point by these two valuable improvements:

FORCE FEED ELEVATOR that automatically adjusts itself to light or heavy grain in different fields, or in different parts of the same field. The flow of grain to the packers is continuous and the grain is handled so gently there is practically no shattering.

RELIEF RAKE prevents trash from gathering on the inside end of the cutter bar. You don't have to leave your seat to remove trash or carry a stick for that purpose.

In operating most binders, weeds catch on the inner corner of the cutter bar and retard the butts of the grain, allowing the heads to be elevated first; so, instead of having a smooth bundle with heads all at one end, you have a bunch of



grain. When such bundles are shocked some of the grain heads are in contact with the ground, causing them to sprout or rot.

The Relief Rake on the "Champion" keeps trash cleaned away and prevents grain being dragged through uncut. The kicking motion of the rake straightens the grain so it travels up the elevator in proper position.

FOUNDED 1825

B. FAVERY AND SONS
LOUISVILLE, KY.

INCORPORATED 1877

Insure Your Automobile and Trucks

I WAS reading not long ago in the local paper of one of Michigan's smaller cities of a case that had attracted considerable attention three-abouts. It appears that a farmer driving a well-known and popular small car had run into and injured a workman of the town and was being sued for damages. The accident had happened about eight or nine o'clock in the evening as the farmer and his family were leaving for home.

The defendant declared that his son a lad of eighteen—was running the car, that he was driving well within the speed limit of the city, that the plaintiff had come out suddenly from a cross street riding a bicycle and evidently confused by the lights of the car which, however, were dimmed, he first went one way and then the other, that the accident was clearly unavoidable on their part and that the plaintiff was guilty of contributory negligence. But the workman's leg was badly hurt, it would never be quite right again, it might be months or a year or more before he would be able to walk, he had a family, he was dependent on what he earned from day to day to support them. What would they do? His lawyer brought them into the court room and in his final plea to the jury called attention to the tired-looking wife sobbing quietly in her handkerchief, and the three small children all under six. The plaintiff's lawyer took particular care to emphasize on the jury that the defendant was a well-to-do farmer, he had his farm well tooled and stocked—what a contrast to the poor workman. The verdict was rendered for \$4,000 damages and the farmer's savings of a great many years was almost entirely wiped out.

It is not at all unlikely that the poor workman's attorney had the first slice of this juicy melon, but the farmer had to place a mortgage on his farm to pay it and one of the boys had to give up the college education he planned. And this coming in the farmer's declining years when it seemed that he was going to be fairly comfortable for the rest of his life.

There are a large number of such cases, not all where the verdict rendered is as large as this, but the sympathy of a jury is usually with the party injured or whose property has been damaged and judgments for several hundred dollars are not uncommon at all.

A large proportion of the farmers in Michigan now have automobiles and the use of trucks is increasing very rapidly. For saving time on the road when time is most needed on the farm, in getting perishable goods to market, for saving the wear and tear of road trips on the farm teams, they readily justify their original cost and maintenance.

It is true, however, that a large number of farmers do not realize the importance of having these machines insured in some good company. They will insure their houses and barns against fire, against lightning, against tornado or windstorm. They will insure their live stock against death or disease or accident. It not infrequently happens that losses through automobile or truck ownership is as great as the loss of the farm buildings or live stock. The policies of these companies usually cover fire, theft, and liability. Practically all of the companies have also added collision. Some cover windstorm losses but this consists principally of a good talking point as statistics show that a very few cars are damaged to any great extent by wind.

Probably the most valuable coverage to the policy holder is that of liability. This means that if the policy holder or anyone driving his car with his con-

Good Clubbing Offers

OFFER No. 101.

The Michigan Farmer, one year..\$1.00
McCall's Magazine, one year..... 1.00

Total value\$2.00
Both for \$1.50.

OFFER No. 102.

The Michigan Farmer, one year..\$1.00
Woman's World, one year..... .50
Needlecraft, one year50

Total value\$2.00
All for \$1.60.

OFFER No. 103.

The Michigan Farmer, one year..\$1.00
American Boy, one year 2.00

Total value\$3.00
Both for \$2.50.

OFFER No. 104.

The Michigan Farmer, one year..\$1.00
Christian Herald, one year..... 2.50

Total value\$3.50
Both for \$2.35.

OFFER No. 105.

The Michigan Farmer, one year..\$1.00
McCall's Magazine, one year..... 1.00
Youth's Companion, one year.... 2.50

Total value\$4.50
All for \$3.50.

OFFER No. 106.

The Michigan Farmer, one year..\$1.00
Woman's World, one year50
Little Folks' Magazine, one year.. 1.50

Total value\$3.00
All for \$2.10.

OFFER No. 107.

The Michigan Farmer, one year..\$1.00
Today's Housewife, one year..... 1.00
Young People's Weekly, one year 1.00

Total value\$3.00
All for \$2.25.

Boys and Girls



Members of the Bartholomew County, Ind., purebred calf club signing their notes for the foundation of some purebred dairy herds.

Are writing to The Breeder's Gazette

every week, relating their experiences as growers of crops and feeders of calves, pigs, lambs, colts and poultry.

Their stories are interesting and instructive

They are being printed exclusively in THE GAZETTE. We welcome such contributions at our regular rates and also pay cash commissions to those who solicit subscriptions. We send terms and circular matter on application to those who furnish references as to responsibility. Address

The Breeder's Gazette, Room 1125 542 South Dearborn St., Chicago, Ill.



Winter Problems solved by the Hive with an Inner Overcoat. Wintered 100% perfect, no loss of bee winters of 1916-17-18. The Inner Overcoat did it. Send for free 48 page catalog of bee keepers supplies. BEES WAX WANTED. A. G. WOODMAN CO., Dept. M. F., Grand Rapids, Michigan.

sent and knowledge should injure some person or damage their property the insurance company would take care of the damage, would furnish the attorney in case of suit and stand all of the costs, in short, take charge of the entire matter. If the farmer mentioned who injured the workman had been carrying liability insurance the company would have had their own attorney defend him, stood all the costs of the suit, and paid the judgment.

Automobile thieves, too, have been very active during the past year and made away with a large number of cars, the greater proportion of which were never recovered. Especially is this true nearer the large cities. Here they work in gangs, taking usually the cheaper popular cars because they find them easier to dispose of. Some of these gangs had their own garages that they would run the stolen cars in and by taking off or altering numbers, repainting, changing the cushions or other equipment so transform them that the owner himself could not identify his car. Even when a machine, that has been stolen, is recovered it is not infrequently worthless, as an auto thief is not the most careful driver in the world. The insurance company will pay for the damage done if a car is recovered and the owner wishes it again, or the company will pay the owner for the car and if it is recovered the car belongs to the company. They not only pay for the cars stolen, but for equipment, such as extra tires, tools, etc., which are oftentimes taken.

Collision insurance is valuable because it protects against damage done by someone else to the policy holder's car. No matter how careful a driver a man may be himself, he always stands a certain chance of being run into and his car damaged by some irresponsible fellow driving recklessly.

Cars, trucks, and their equipment are increasing in price. Buy a good lock for your car and use it whenever you leave your car standing, even in your own garage. Get a fire extinguisher and keep it in the car where you can get at it quickly in case of necessity. And insure your trucks and automobiles in some good reliable company.

Sunshine Hollow Items

By Rube Rubicon.

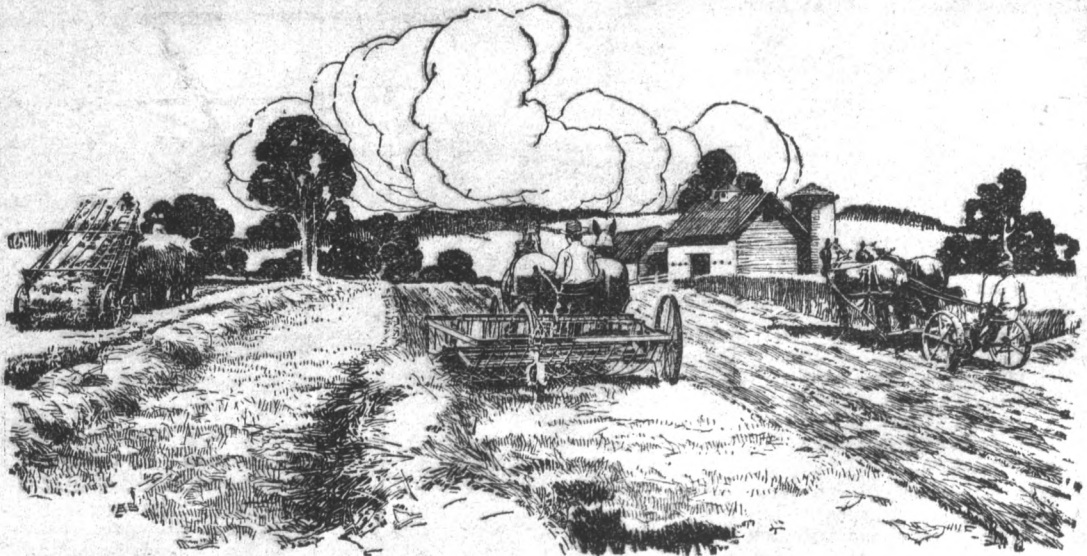
Flossie Grandy is saving up her money to buy more oil stock. Friends say she will lose a lot of money if she keeps on. She already has two hundred shares of Oily Midas stock which cost eight cents per share. She says it will go up to ten cents per share almost any time and if they should bore a well on the tract there is no telling what they might find.

Max Spence is still feeling sore about his Spy apple tree. The hardware man wouldn't trust him for a stepladder to pick the fruit. So he got mad and cut down the tree, then picked and sold the apples and went down and paid cash for the ladder. Folks say that's the way the Bolsheviks do. Easy picking last year but no tree left to blossom next spring.

Harrison Snyder went to an auction last week. He nodded "how de do" at the auctioneer who was a friend of his from over in the next township. The auctioneer said "sold" and Harrison, who is a bachelor, found that he had bought a baby buggy for \$3.75.

Mrs. Muggins, whose husband has left her, placed an ad in the city paper that she would not be responsible for any debts contracted by others than herself. It must have been quite a blow to Chauncy Muggins. His wife says she is glad he left her because he didn't leave anything else. Folks say that Chauncy started at the top of the ladder and worked down, while most folks start at the bottom and stay there.

Air-cure Your Hay the International Way



IT ISN'T sun-drying that puts quality into hay, but *air-curing*. And hay is air-cured best when side-tedded into light, breeze-sifting windrows such as those that trail off in the wake of

International Combined Side-delivery Rakes and Tedders

You can follow closely behind the mower with this machine and rake the hay before the leaves begin to wilt. The teeth strike the heads of the hay first and rake clean, picking up every last wisp—and there is no shattering of leaves. The hay is turned completely over and deposited in snug, airy windrows through

which the air circulates freely, curing evenly both stems and leaves with its magic touch.

There are points of mechanical excellence that distinguish this fast-working, gentle hay-handling machine from all other types of side-rakes and tedders. There are also many points of mechanical excellence that distinguish all hay machines made in the International Harvester factories — McCormick, Deering, and Milwaukee mowers and self-dump rakes, International tedders, sweep rakes, stackers and loaders. Ask your nearby International full-line dealer to show you.

INTERNATIONAL HARVESTER COMPANY

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(INCORPORATED)

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The Sign of a Profitable Dairy

THE Empire sign on a fence, post or building, is invariably the sign of a profitable dairy. Without exception it is proof that the owner has realized that the world is clamoring for and demanding better and cleaner milk and has determined to supply it in the most economical and efficient way.

Perhaps most dairymen adopt the Empire because it's the most economical way to milk, but their customers appreciate the cleanliness of Empire milking and are learning to look for milk produced in this way.

Ask our nearest dealer for our catalog 23-M or write us for it.

"The Standard of the Better Dairies"

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Chicago, Denver, Atlanta, Toledo, Syracuse, Minneapolis, San Francisco, Montreal and Toronto

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A Newly Invented SAW RIG

Low introductory offer puts this new saw rig within reach of all, at small part of cost of other rigs. Saws your winter's wood in few hours. Powerful 4-cycle motor. Easy to operate, light to move. 30 days' trial to prove our claims. 10-year guarantee. FREE BOOK.

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194 Main St., OTTAWA, CAN.

Strawberry Plants \$3.75 per 1000

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Filena Woolf, Swan Lake Fruit Farm, Allegan, Mich.

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with the Thermo-Seal INNER LINING



Comforting Heat in Every Room—
Not Just in One Spot—But the Home
Filled with Pervading Warmth

WITH the Homer Pipeless Furnace you'll notice a sense of genial, comforting warmth all over the house.

This is due to the fact that the Homer keeps the air in constant circulation. The cold air is drawn down through the outer compartment of the combination register, is heated by the furnace and then rises and circulates all through the house.

The warmth is pervading—encompassing—because the air is warmed—and so you will not have cold corners.

The Homer burns any kind of fuel. Its extra large fire pot is made of heat-resisting Stokel Iron. The fire pot is so heavily made that it will last as long as the furnace itself.

The drawing in the circle shows the warm air rising in the inner passage. The Thermo-Seal Inner Lining is made of two thicknesses of thick galvanized iron and in between a heavy layer of asbestos.

The Homer Thermo-Seal Inner Lining is a wonderful heat and fuel saver. It keeps the heat from being wasted by surface radiation. The outside of the furnace is kept cool—and it is safe to store fruit and vegetables in the cellar or basement.

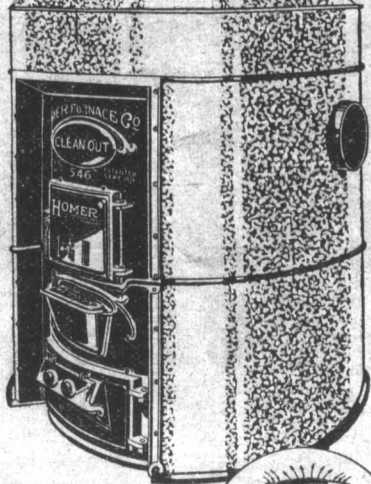
The Thermo-Seal Inner Lining is an exclusive Homer feature—and well worth while as a saver of fuel and heat.

Talk to the Homer dealer. There is one near you—and you'll find he's a good dealer too—one who knows furnaces. We will be glad to give you the name of the dealer nearest you. Write us for new 1920 Furnace Book which gives the complete Homer facts.

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MANUFACTURERS OF
COLDWATER MICHIGAN

HOMER
ORIGINAL PATENTED
PIPELESS FURNACE



Less Price
Less Fuel
More Heat
It Heats
It Ventilates
It Satisfies



Woman's Interests

When You Make Cake

THERE is a popular idea that anyone can make a cake. But every young housekeeper who has gone into her kitchen from school room or office without preliminary training in her mother's kitchen or in cooking school, and attempted to "stir up" a light, delicate cake for company, will tell you that the making of real cake is an art, acquired only after long practice. If the Standard dictionary definition for cake could be taken literally, "A composition of flour, butter, sugar, eggs or other ingredients, baked in various forms," then we might admit that anyone could meet those specifications. But we have been trained to believe that a cake must be something more than a "composition." It must be light, delicate, tender, pleasing to the eye and the palate. And to get these specifications skill is required.

In choosing sugar for cakes look well to the grain, as a coarse-grained sugar will give a coarse cake. On the other hand, powdered sugar is undesirable as it gives a dry cake, with a close, firm texture. A fine granulated sugar is required for a fine-grained cake. Cake flour is preferable as it has been made especially to insure a delicate, light tender cake. Bread flour gives a thick, tight mixture. If you can not get cake flour, choose pastry flour. And if you absolutely must use a bread flour, use a little less than the usual recipe calls for.

As in making bread, absolute cleanliness is a requisite. An earthenware bowl with a rounding bottom is desirable for mixing and to make cake with the greatest ease, numerous other aids

To get best results we must use the best materials, fine granulated sugar, the greatest ease, numerous other aids

Eleven Things to Remember in Cake Making

Coarse granulated sugar gives a coarse-grained cake.

Powdered sugar gives a close-grained, dry cake.

Fine granulated sugar gives best results.

Cake flour gives a light, tender, delicate cake.

Bread flour gives a thick, heavy cake.

Too hot an oven forms crust before cake is light, with later cracking of top.

Layer cake and cup cakes need a hotter oven than loaf cakes.

Cake made from egg yolks needs a slower oven than with white cakes.

Cakes made with eggs to lighten need a slower oven than cakes with baking-powder or soda.

To prevent bulging in middle, have batter thicker at edges of tin than in the center when cake enters oven.

Never beat cake after egg whites are folded in.

FOOD FORTIFIES
against exhaustion and
illness—if it's the right
kind of food.

Grape-Nuts

is easily digested and with
cream or good milk is a well
balanced ration that builds
tissue and increases strength
of body and mind.

"There's a Reason"

Good Reading at a Bargain

OFFER No. 108.

The Michigan Farmer, one year..\$1.00
Metropolitan Magazine, one year 3.00
Boy's Life, one year 1.50

Total value\$5.50
All for \$4.25.

OFFER No. 110.

The Michigan Farmer, one year..\$1.00
Pictorial Review, one year..... 2.00
Woman's World, one year50

Total value\$3.50
All for \$2.60.

OFFER No. 111.

The Michigan Farmer, one year..\$1.00
Woman's Home Companion, 1 yr. 2.00
McCall's Magazine, one year..... 1.00

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All for \$2.75.

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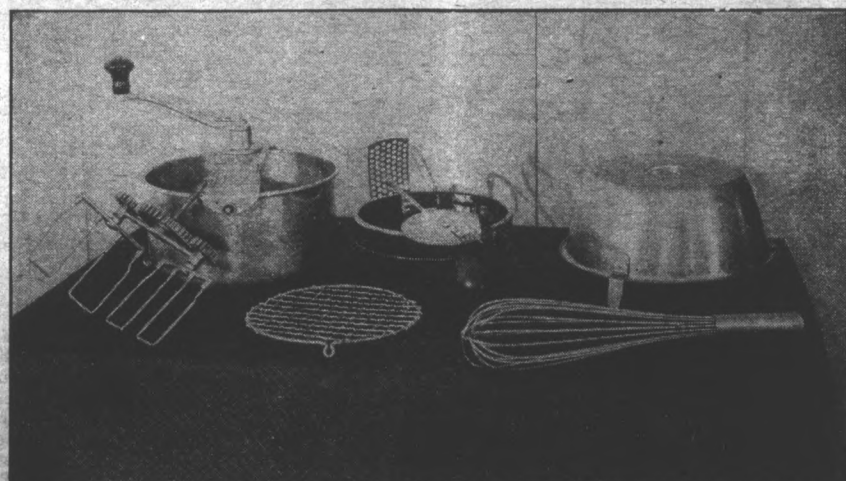
The Michigan Farmer, one year..\$1.00
National Sportsman, one year... 1.00
Guide to Nature, one year..... 1.00

Total value\$3.00
All for \$2.35.

perfectly fresh eggs, good sweet butter or butter substitute, the best baking-powder on the market, or pure soda and cream of tartar, and, if possible, cake flour. Then the ingredients should be carefully measured or weighed before starting to mix the cake. In the case of the butter it is better to weigh it as it is almost impossible to measure shortening accurately. Flour and soda should be sifted before measuring, and after measuring, all dry ingredients should be sifted together.

If you are using wood or coal, be sure that your fire is in good condition and the oven ready. Do not try to bake a cake with a freshly built fire, or one that is nearly out and must be

to cookery are necessary, though good cake has been made in a tin basin with a broken-handled iron spoon. For creaming butter a wooden spoon with a slit bowl is handy, and while you can beat eggs with a four-tined fork, you get along faster if you can have a good egg beater. But you must have accurate measuring cups and spoons if you are to get accurate results. You would hardly expect to cut out a garment without an exact pattern and be sure of a perfect fit. So you can not expect to have a perfect cake if you measure in a haphazard fashion. The temperature of your oven depends upon the sort of cake. A layer cake and cup cakes demand a hotter



Cake Makers Welcome Devices that will Help Get the Best Results.

oven than a loaf cake. Sponge cakes, made with egg yolks, want a slower oven than cakes made with egg whites. Fruit cakes, of course, want a slow oven, and cakes made from bread dough do not need as quick an oven as those made with baking powder or soda. Too hot an oven at first will make the cake rise too quickly. It will crust over, or brown, and later crack and let the batter run over the crust. If the oven seems too hot a pan of water set on the bottom of the oven under the cake will lower the temperature and in the case of cakes with molasses, help to keep them from forming too dark a crust. After a crust has formed a sheet of light wrapping paper may be laid over the top to prevent scorching, if the oven heat can not be reduced. In opening and closing the oven door, be careful not to jar the cake.

Unless you have cake tins with removable bottoms it is better to line the pan with greased paper than to trust to greasing the tins. In this way only can you be sure of removing the cake from the tin without tearing it. Sometimes greasing the tin and dusting with flour gives good results. To be sure that the tin will be full after baking, fill it two-thirds full of the mixture. Have the batter thicker around the edges than in the center if you want the cake to have an even top after baking.

If you are making a sponge cake remember that the lightness of the cake depends upon the amount of air incorporated with the eggs as no baking-powder is used with a true sponge cake. The yolks must be beaten until very light and thick, and the whites until dry and stiff. The failure of most sponge cakes comes from not beating long enough. It is a good plan to beat the whites first, being sure they are dry, time yourself while beating them, and beat the yolks equally as long. Add the sugar to the yolks gradually, beating all the time, and then add the flavoring. When this is done, cut and fold in the whites, then cut and fold in the flour. To "cut and fold," bring the spoon straight down from the top of the mixture to the bottom of the bowl, then turn completely over.

In mixing butter cakes first cream the butter, having it at about the temperature of a comfortable room. Add the sugar a little at a time, mixing in thoroughly, and then the egg yolks, which have been thoroughly beaten. Instead of using another dish for this beating, draw the butter and egg mixture to one side of the bowl and beat the eggs in the mixing bowl. After adding the yolks, add the milk and sifted flour alternately, a little at a time, beating well between additions, or add the milk all at once and then the flour. To have a fine-grained cake, beat thoroughly after all the milk and flour are added, and lastly cut and fold in the egg whites, beaten dry.

Remember that a layer cake batter should be thinner than a batter for a loaf cake, and cup cakes should be still thicker than loaf cakes. It is a good plan to try a small cake in a baking-powder can cover to be sure that everything is right before baking the whole of the mixture. The old idea that baking-powder loses its virtue if the cake stands seems to be exploded. One well-known manufacturer of baking-powder claims that cakes are improved by letting them stand, when their powder is used. Experiments in the home kitchen have proven that at least they are not harmed by standing.

Every housekeeper of experience has one cake recipe which she changes for most purposes. Perhaps one of the most widely used is the following:

Break an egg in a cup, add two tablespoons of melted butter and fill cup with milk. Sift one and one-half cups of flour, one cup sugar and two teaspoons of baking-powder. Combine the two mixtures. This will make two lay-

GULBRANSEN

(Pronounced Gul-BRAN-sen)

Player-Piano



Your Stag Party An Uproarious Success

Men always have a good time at stag parties—after they get started and their minds get together. There is one thing they all understand—music. Try some of these songs on your Gulbransen the next time you have a crowd of men in:

Sweet Adeline Come on Papa
Stein Song I Want a Doll
There's a Meeting Here Tonight
Does She? I'll Say She Does



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Every occasion you can think of—is mentioned in our new book "Good Times With Your Gulbransen" with appropriate selections recommended.

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You Can Play the Gulbransen Better Than You Ever Could Have Played by Hand

That is true of nearly everybody. Because playing the piano is a two-sided art. The mechanical art of "reading" and "fingering"—and the mental art of playing the music interestingly.

One has no connection with the other—except that notes must be struck by some means before we consider how they shall sound. In fact, until correct striking of notes is accomplished—whether by hand or by mechanism—only then does interesting music become a possibility.

The Gulbransen starts you off at the point in musical education where perfect command of the piano is accomplished. It strikes the right notes unfailingly. And it enables you to play them in any desired style of shading, phrasing or rhythm. It offers every degree of tone value. It gives you full control of all of these.

Now then, if you enjoy music, you have the chance to make music—with equal enjoyment to those who listen. If you habitually hum or whistle, or keep time to a good march or dance, you are naturally musical. You will play the Gulbransen interestingly and with improving taste.

This is true of the Gulbransen because its exquisite "pedal-touch" gives you real freedom in producing musical effects—as much as though you played it by hand. You will have increasing interest in playing with expression. You will be in fact what you are now at heart—a musician.

Try a Gulbransen at our dealer's store. You can locate him by the "Baby at the Pedals"—actually playing the Gulbransen—in his window. And send coupon below for our free book "Good Times With Your Gulbransen." Tells all about the music available and the fun you can have.



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The loud pedal ought to be called the "noisy pedal" the way some pianists use it. Rightly used, it makes the music sound better. Our new book tells how to use the Gulbransen loud pedal.

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☐ Check here if you own a piano which is not a self-player.

For convenience use margin for your name and address.

MICHIGAN FARMER PATTERNS.

Any of the patterns illustrated may be secured by sending order to Pattern Department, Michigan Farmer, Detroit, enclosing the amount set opposite the patterns wanted.



No. 3152—Girl's Dress. Cut in four sizes, 6, 8, 10 and 12 years. A 10-year size will require 3½ yards of 36-inch material. Price 12c.

No. 2932—Girl's Dress. Cut in four sizes, 6, 8, 10 and 12 years. Size 10 requires 3¼ yards of 38-inch material. Price 12c.

No. 3134—Ladies' Dress. Cut in six sizes, 34, 36, 38, 40, 42 and 44 inches bust measure. It will require 7½ yards

of 38-inch material for a medium size. The width of skirt at lower edge is about 1½ yards. Price 12c.



No. 3140-3143—An Attractive Home Gown. Blouse 3140 cut in six sizes, 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 3143 cut in seven sizes, 24, 26, 28, 30, 32, 34 and 36 inches waist measure. A medium size will require 6½ yards of 27-inch material with 2½ yards for the under blouse. The width of the skirt at lower edge is 1½ yards. Two separate patterns, 12c for each pattern.

No. 2917—A Pretty Gown. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5½ yards of 44-inch material. Width of skirt at lower edge is about 1½ yards. Price 12c.



No. 3131-2818—A Stylish Combination. Blouse 3131 cut in six sizes, 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 2818 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 about six yards of 30-inch material with 1½ yards for the overblouse. The skirt measures about 1½ yards at lower edge. Two separate patterns 12c for each pattern.

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Lowe Brothers' Paints are sold by the one best dealer in each town.

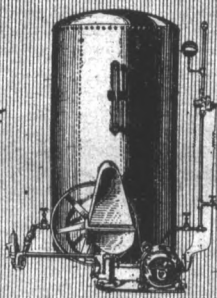
The Lowe Brothers Company

499 EAST THIRD STREET, DAYTON, OHIO

Boston New York Jersey City Chicago Atlanta Kansas City Minneapolis Toronto

Paints

Water for every farm need



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The Michigan Farmer

ers which may be combined with any folding it under with a perforated filling or frosting you like.

To convert this into loaf cake, use one and three-fourths cups of flour. Cup cakes take a scant two cups. If cream is plentiful fill the cup with cream after breaking the egg instead of using butter and milk.

The following recipe from Mrs. Hill's "Practical Cooking and Serving," gives the best sponge cake I ever tasted—if it is correctly made. Many cooks fail with it, I believe because they do not beat the eggs long enough, and perhaps do not have the right oven temperature.

"Beat the whites of four eggs with one-fourth teaspoon of salt until dry. Then beat in gradually one-half cup of fine granulated sugar. Beat the yolks the same length of time (by the clock), then beat in gradually another half-cup of sugar; add grated rind and one tablespoonful of the juice of a half orange or lemon; then beat whites and yolks together. Now sprinkle three-fourths cup of flour in little by little,

adding it under with a perforated spoon. Do not beat any after flour is added. Bake from twenty to forty minutes." If these directions are religiously followed you obtain an "Ideal" sponge cake, the name given by the author.

The illustration shows several utensils which help in cake making. That they are not absolutely essential to get fine results, many a housekeeper well knows. The cake mixer gives good results, and some busy mothers have been known to put all the ingredients in the mixer at once and have a child do the stirring. The wire tray is fine for cooling the cakes, and those who have used the cream whip next the cake mixer say it is the best they have ever used. The egg whip in the foreground is useful for many things besides whipping cream and eggs. It is handy in beating batters, and an inventive cook can find many other uses for it. The angel food pan is always inverted while the cake is cooling, giving a lighter cake.

DEBORAH.

The Women's Opportunity On The Farm

By Addie Farrar

MOST women fail in farming because they have taken up the work too hastily or with too little capital, or because they have worn themselves out at some other occupation before trying farming. The small farm requires neither the fund of strength or the capital of the big farm, but cultivated, it will eventually prove to women that to leave the little town or village, with its peaceful quiet, for the perils and struggles that beset one in a big city, thus giving up the assured income of a patch of productive ground is a great mistake.

There's money on the farm or village, half-acre for every girl, and the market for music, art, literature, etc., in the city is overcrowded. We can't all be geniuses and successes and the poor little country girl, filled with eager hopes coming to the city, nine times out of ten, unless she marries or goes home, acquires not success, but ill-health. Back in her country home where the air is sweet and the food plenty, lies the bit of ground that means health, an income, and independence.

Progressive women all over the country are finding out that, while they may not farm on a large scale unless they be exceptionally fitted for this work, when it comes to a small plot they can make it pay, and pay well. There is no limit to the demand for foodstuffs and all one needs to make the acre pay is an education in growing things, a good knowledge of the nearest market and a large working capital of energy and grim determination to succeed.

Only a few years ago an eastern woman who had shaken the dust of the city from her shoes to take a small farm, told me of her success with melons.

"You can talk about chicken farm and goose farms and other like places but I believe the melon has all of them beaten as a money-maker," she said. "I've managed to take in a thousand dollars an acre. Of course, I had to work, and work hard, but then you have to work for anything you get. I raise cantaloupes and never fuss with any other kind because I've taken the time to learn all about them. I have five acres and I cultivate all the land I possibly can; and I can make over four thousand dollars a year and still have time to play when the melon season is over."

"My soil is rich and sandy, not good for vegetable crops but just the thing for melons. My seeds cost me a couple of dollars an acre. Then I buy fer-

tilizer. I hire a man to plow and harrow, and occasionally one to help cultivate. I buy the barrels that I use for shipping my melons to the nearest market making my expenses some two or three hundred dollars. The rest of the work I try to do myself. I sell to the dealers direct at so much a barrel and also have a list of hotels and restaurants that I ship to.

"I plant my seeds the first week in May in small hills set a foot deep and in well fertilized, well worked loam. I have my soil worked over in the autumn and in the spring, and pulverized and made light as sawdust. The crop is a swift one and by August we are selling melons by the barrel as fast as we can. I consider it good work for women, and wonder why, when so much money can be made off a few acres, country girls will go to the city and leave a proposition of this sort."

Another woman I know who lives in Wisconsin claims as hers the hundred or so walnut bearing trees of the farm and from them gets a good income. She gathers the nuts and has them hauled to the corner, where with the help of her brother, she runs them through a corn sheller and then spreads them out to dry. City commission merchants pay her from \$1.50 to \$1.75 cents a bushel. She also sells walnut meats to city grocers, getting fifty cents a pound for the broken meats and sixty cents for the whole meats. Of these she sells many dollars worth a year. She also goes into the woods and gathers butternuts and chestnuts, which she ships along with the walnuts. A few pecan trees that were set

out a few years ago are just beginning to bear a few nuts and these she hopes will increase, but owing to the local market she is not quite certain of them.

One girl has just been graduated from college on the proceeds of her squabs, her lavender bed and her herb garden. She was sending squabs to the city markets, when one day, visiting a city friend, she discovered lavender sachets selling in the shops for fifty cents each. When she got home she went out and took a look at the lavender bed just then beginning to bloom. Later on she found her martime and sent boxes to the various cities near to the farm and slowly and surely built up her bank account. She added sachets of dried rose leaves and violets and later began to ship herbs which she planted in a corner of the farm yard. She has now over twenty-five different kinds of herbs for sale. These she is selling beside her lavender.

ender. What she has done other girls living on farms might do rather than come to the city to find only failure.

Not far from Buffalo live two sisters who determined to stay at home and make a small piece pay. After some deliberation and a good look at the markets they decided on ducks and today they are shipping more ducks to market than anyone else in their section.

One enterprising woman has made a success of trapping animals and selling the pelts. She farmed with her husband until his death and in the winter was his companion trapping. Since his death she has found it easy to keep up the work. She cures the pelts herself and gets full market price for them. Her captures are mink, muskrats, weasels, skunks, otters and moles. She loves the work, the keen frosty air, the tramping over the snow filled woods and hills, and believes it is a good work for women. However, she says to one who would take up the work and succeed, that above all things they must be without fear and must take time to study the habits of the animals they intend to trap.

On a much-traveled road, a farmer's wife erected a little summer house near the gate and placed all sorts of jelly, preserves and pickles in it on exhibition. A neat sign called the attention of automobilists to her venture. She has made a decided success and sells large quantities every year, beside securing a very good order trade from city tourists.

Breeding Belgian hares and ordinary rabbits for the markets is the venture of a girl and her brother who are making good at it. The Belgian and Flemish hares are best for meat and the stock from breeders may be bought at \$1.00 and \$3.00 apiece. The animals eat hay, grass and green vegetables. Well-fed, the young ones reach market age from three to four months and average five to six pounds live weight.

Then there is a southern girl who makes a nice income each year by shipping violets to the city markets, and spends hours over her violet beds in order that she may have the finest blooms. An Indiana girl, knowing how folks in the city love home-town flowers, gathers wild flowers each year for shipment to a Chicago florist. Vegetable gardens and chicken runs are always paying for women, and bee-keeping, now that honey is being used more and more, is another good pin money work for farm girls. However, according to a big commission man who deals with farmers all over the country, if you want to make money out of your patch it is well to specialize on some one thing, learn all you can about it and bring it to the highest point of perfection, for that means the best prices.

There are many more ideas one might mention, but to the girl who has a home where the air is clear and there are the woods and the hills, I would say, stay where you are and look about you. Surely there's a corner of the place that is yours where you can grow some of the things that are needed in the city markets. There is always a way for the girl who really wants to find it.

When spring comes and furs and woollens are to be put away, take several thicknesses of wrapping paper or old newspaper and glue firmly together to form the proper-sized bag. After articles are put in, seal the ends and sides with glue and the bag is dust and moth-proof.—M. E.

We use the little wooden trays that come from the grocers for stowing away the left-overs in the pantry or refrigerator. One can crowd them closely together and thus utilize all the space, and often it saves breaking a dish.—Mrs. H. R. W.

Mud stains on your black cloth skirt will disappear when rubbed with a raw potato.—M. A. P.

"I never wrote an ad—but I've used one of your outfits a year—so here goes"

"Unfair, you may say, for a farmer like me to write an advertisement on Western Electric Power and Light Outfits when I already have one. But is it unfair if I tell the truth? You may disagree with my ideas, but I am not asking you to buy a Western Electric if you do not believe in it. I'll go further and say don't buy any plant until you have seen them all. That's what I did."

John Horning

Mr. Horning is a farmer near Maiden Rock, Wis.

Too much talk about "light," how about power?

"In my case it was several weeks before I realized that in the pulley on my outfit I had a work-horse that was as valuable by day as the light was at night. Now I am convinced that without enough engine capacity to take care of power and battery charging at the same time, a farmer is cheated out of a money saving that means heaps.

"Of course, I know there are other plants with pulleys, but I do not know whether their engines can take care of an extra load or not. Maybe they can—they should. I do know that I got more engine with my plant than some of my neighbors.

But will the engine do the work?

"A big husky engine, like a mule, is no good if it balks. Now I want to say that my engine is dependable. Of course, all valve in head, 4-cycle engines

are powerful—that's been proved.

"Nor must I fail to give my engine credit for starting when I want it to start, even in the coldest weather—and it keeps on running too. In fact, I can hear it right now. But if it depended on me to watch the oil level like a cat watches a sparrow, I'm afraid I'd be in trouble most of the time. I'm too busy. With my engine all I need do is fill the oil reservoir about once in two or three months. Then as long as there is even an inch or two of oil in the crank case, there's enough for the revolving crank to splash over every moving part.

"Then there's another thing that means sure death to a set of bearings—starting too soon on kerosene. I made that mistake once with another engine I had. Result was the kerosene seeped down into the oil reservoir, thinned my lubrication, and pretty soon bang! went the bearings. Now this present engine, though it burns kerosene, starts on

gas—about a cupful is needed—and keeps running on gas that gradually changes to a mixture of gas and kerosene, which finally becomes all kerosene when the engine is hot enough to burn it up. I haven't had any bearing or lubricating troubles all this time and I don't look for any.

I don't know enough about a generator to talk about it.

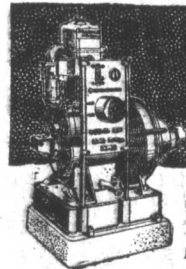
"I am going to stay off the generator question. I don't believe the average farmer knows enough about a generator anyhow to talk about it. I took my generator on faith. I understand that these people have been making generators for about 30 years, which is longer than I have been farming. I think I know something about farming and I should imagine that they know something about generators.

What about the Batteries?

"I have become interested enough in batteries to read up on them a little, and I know now that my battery is geared up a little differently from most other lighting plants. I think the explanation of the Western Electric Company, written by them, is a better one than I can write. If you're interested, read it."

Note: What Mr. Horning means by "difference" in his battery statement is this:

The charging of the battery is automatically controlled. At the start the current flows in at a fairly high rate, but as the batteries fill the rate of flow becomes gradually less and less—till at last the current is just trickling in. Then it stops by itself. This "tapering charge" takes the strain off the batteries and so makes them last longer.



Western Electric Power and Light Outfit—the dependable farm hand.

Maybe some of the formation that helped Mr. Horning decide will help you, too, in choosing a Power and Light outfit. Write for booklet MF3 to Western Electric Company, at Chicago.

Some good territory still available for live-wire representatives.



Makes the Battery last longer

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No. 3150—Child's Dress. Cut in four sizes, 4, 6, 8 and 10 years. An eight-year size will require 3½ yards of 27-inch material. Price 12c.



No. 3128—Boy's Suit. Cut in four sizes, 3, 4, 5 and 6 years. For a three-year-size three yards of 27-inch material will be required. Price 12c.



No. 3148—Girl's Dress. Cut in four sizes, 8, 10, 12 and 14 years. Size 10 will require three yards of 44-inch material. Price 12c.

No. 3142—A Pretty Frock. Cut in three sizes, 12, 14 and 16 years. Size 16 will require 4½ yards of material 27 inches wide. Price 12c.



No. 2984—A Neat and Comfortable House Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5½ yards of 36-inch material. Price 12c.

No. 3132—Misses' Dress. Cut in three sizes, 16, 18 and 20 years. Size 18 will require six yards of 30-inch material. Skirt measures about 1½ yards at its lower edge. Price 12c.



No. 3139—A Dainty Negligee. Cut in four sizes: Small 32-34; medium 36-38; large 40-42; extra large 44-46 inches bust measure. A medium size will require 3½ yards of 36-inch material. Price 12c.



No. 3149—A New Skirt. Cut in seven sizes, 22, 24, 26, 28, 30, 32 and 34 inches waist measure. A medium size will require 3¾ yards of 27-inch material. The width of skirt at lower edge, with plaits extended, is about 1½ yards. Price 12c.



No. 3145—A Simple Apron. Cut in four sizes: Small 32-34; medium 36-38; large 40-42; extra large 44-46 inches bust measure. A medium size will require four yards of 36-inch material. Price 12c.

No. 2474—Ladies' House Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 6¼ yards of 36-inch material. Price 12c.

Good Reading

OFFER No. 121.

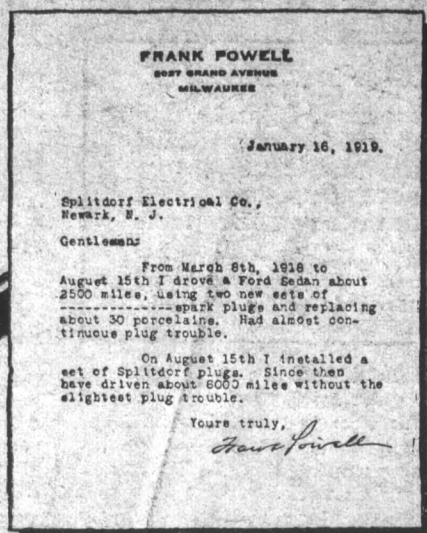
The Michigan Farmer, one year...\$1.00
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—Bring \$2.00 per pound alive.

Genuine Wild Mallard Ducks
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Prize Flock, headed by 55 pound tom.

S. C. R. I. Red Chickens
Fine laying strain of prize
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America's Largest Game Farm
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Give your hens a chance to do their best.
Keep the houses, runs and brooders
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150 EGG CHICK Both
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both are made of
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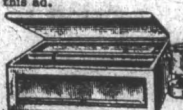
BABY CHICKS of the leading varieties of Pure-Bred Poultry. Eggs for hatching. Incubators, Brooders, Poultry Supplies. Illustrated circular free. Prices low. Satisfaction guaranteed. Write today. NICHOLS' POULTRY FARM, Box 128, Monmouth, Illinois.

WAIT! LOOK at MY PRICE

My 1920 offer is the sensation of the incubator industry. Others can't understand how I can sell such a superbly built, scientifically correct hatching machine at such an amazing price. My answer is that I have smashed all records for big production—built in such huge quantities that I can afford to sell at this almost unbelievable price—and still make an honest profit. Furthermore, there is no "Profitless" about the

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Your Money Back. You're
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140-chick capacity—
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BOTH Incubator
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This is my record-
smashing offer. A complete
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worth every cent of
\$25.00, for a mere
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Send for Special Descriptive Circular
Gives full and interesting facts regarding
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Free Copy today.

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Stop Losing Chicks

Put Avicol in the drinking water.

Most people lose half of every hatch, and seem to expect it. Chick cholera or white diarrhoea is the trouble. The U. S. Government states that over half the chicks hatched die from this cause.

An Avicol tablet in the drinking water, will positively save your little chicks from all such diseases. Inside of 48 hours the sick ones will be as lively as crickets. Avicol keeps them healthy and makes them grow and develop.

Mrs. Vannie Thackery, R. F. D. 3, St. Paris, O., writes: "I had 90 chicks and they all died but 32. Then I commenced on Avicol and haven't lost any since. They have grown wonderfully."

It costs nothing to try Avicol. If you don't find that it prevents and promptly cures white diarrhoea and all other bowel diseases of poultry, tell us and your money will be refunded by return mail. Avicol is sold by most druggists and poultry remedy dealers, or you can send 25c or 50c today for a package by mail postpaid. Burrell-Dugger Co., 495 Columbia Bldg., Indianapolis, Ind.

AVICOL
stops chicks dying

Our Boys' and Girls' Page

Scratches---But A Basket of Berries

By Uncle Ed

GOT my legs and arms scratched the red trickle down your leg. You up some, but I filled my basket stand back and cry, "I can't go another step! I'm all scratched up now!"

The boy who said that pulled up his trousers leg and showed the big rakes of berries. Yes, and it means, too, where the blackberry bushes had tried that you have backed out; you are to hold him back. They looked red whipped; and God pity the boy that and splashes of blood showed through has been whipped in any untoward circumstance! He never will be as strong there was the full basket of berries as he was in the first place.

When I heard the boy say what he did and then looked at his legs all dug up by the thorns of the blackberry canes, I felt like saying, "Good for you, my boy! Something good in store for you." It is so, too; and not only for that boy of the stout heart that would not be beaten out of the berry patch by a few scratches, but for every lad and every girl who stays by his job in spite of every hindrance until he has his basket full.

Of course, a fellow doesn't really enjoy being dug all up in the time of it. Our boy of the full basket more than once as he pushed his way through the bushes no doubt said, "Ouch! That is a sharp one!" But he didn't back out. He just got his shoe against the stout cane which was in the way, pushed it aside and pressed on a little farther. And it does hurt to win a full basket of anything worth having. Nobody ever reached a very marked success that he did not have to fight every inch of the way.

I know a young farmer that is having a bitter tussle with all sort of drawbacks. Something new comes up every year to make him grit his teeth and hold on the harder; but he never has quailed yet, and I don't believe he ever will. And some day he will reach the point at which he is aiming. For there is this good thing about it, challenge fortune to a foot to foot fight times enough and look it long enough in the eye fearlessly, and by and by it will stop battling with you and come right round on your side.

Think of this good side of it, too. If you trample a path through the berry patch once, next time it won't be half as hard. The canes now lie down where the thorns won't prick you. Now you can get your basket full easily and whistle and sing while you are doing it. The first time through is hardest. It was so with the men who went across this country the first time. They had to cut trees and break roads and fight wildcats and bears, lying out under the stars at night and being wet with the dews and the storms many a time before they reached the clearing the other side. But those who came afterward enjoyed the fruits of what they had done; and if they themselves ever traveled that way again, they found a good highway where once was the trackless forest. Breaking the way costs, but it makes all life easier afterward. So in blackberrying; so in clearing a road; so in making a farm home. The first time is hardest.

Better than all is the mysterious something that comes into the heart of the boy who bravely meets the hard things that come to him. Getting a feed consumed since May 18: Hay full basket of berries is fine. But think of the strength of character that is gained by fighting through! Do you know, one single backdown hurts a boy more than a thousand rakes from blackberry bushes. What if you stop at the edge of the berry patch when the first thorn pricks you. You feel

HOW I RAISED MY CALF.

IDREW the unlucky number thirteen, but I got a nice Hereford calf weighing 501 pounds. I had arranged with one of the neighbors, whose son also bought a calf, to draw mine home with his, but when the men tried to rope her, she was so frightened that we drove her home.

I liked the name of Bessie, so I decided to call her by that name.

I will now tell you how I fed and cared for her. For twelve days I kept Bessie in a box stall for the purpose of taming her and getting her used to being handled.

As she was too strong and unruly for me to handle, one of the men led her for a few times till I could manage her myself. When I was leading her, I would let her nibble at the grass to get her used to it.

During these twelve days, Bessie was fed on alfalfa hay and ensilage, ground corn and barley and whole oats, also half a teaspoon of salt. The ensilage and grain ration was continued while she was on pasture. Although while the grass was at its best Bessie cared little for the ensilage.

August 1 I took Bessie from pasture and again put her into a box stall and from this time on she was dry-fed. The ration was the same as before: Alfalfa hay, ensilage, whole oats, ground corn and barley mixed, and salt. The amount given gradually increased as Bessie grew bigger.

The following is the total amount of feed consumed since May 18: Hay 962 pounds; ensilage 1,228 pounds; grain 1,158 pounds; salt four pounds. I must not forget to say that she was on exhibition at the Lenawee County Fair and won third premium, blackberry bushes. What if you stop for which the prize offered was \$5.00. She weighed 810 pounds when taken to the show at Buffalo, where she was

auctioned off at fifteen and three-quarter cents a pound, and brought \$127.57. The freight charges, yardage and commission amounted to \$5.30, leaving net proceeds of \$122.27. The lot of calves in the shipment won a prize of \$50, making a premium for each club member of \$2.00. This premium added to the \$122.27 brings the entire proceeds up to \$124.27.—John H. Ruesink, aged eleven years.

HOW TO START WITH POULTRY.

Will you please advise me what you consider the best way for a boy to begin with poultry? I have ten dollars that I want to invest in a little business for myself.—J. N. D.

I know of no better way for a boy to start in the poultry business than to buy three or four sitting hens and a few hatching eggs from some good flock and raise your own chickens. In the fall you can save a few of your best pullets and buy a good male bird and you will have a good start. As a general rule this will prove far more satisfactory than investing all of your money in two or three birds and not having anything left to buy sitting hens with, and to buy feed for your little chicks. Another good way is to buy two sitting hens and forty or fifty baby chicks and avoid the risks of hatching the chicks. In either case you will be getting about all you can get for your money, and assuming less risk than would be the case if you tried to begin on a larger scale.

L. J. M.

SOUR MILK AND BUCKWHEAT.

Will you please tell me the best method of feeding sour milk to young chicks? If fed in an open dish it becomes dirty, and we have not been able to get the milk to flow through the water fountains. What is the feeding value of buckwheat for the laying hens? Is it equal to wheat?

Sanilac Co.

B. M.

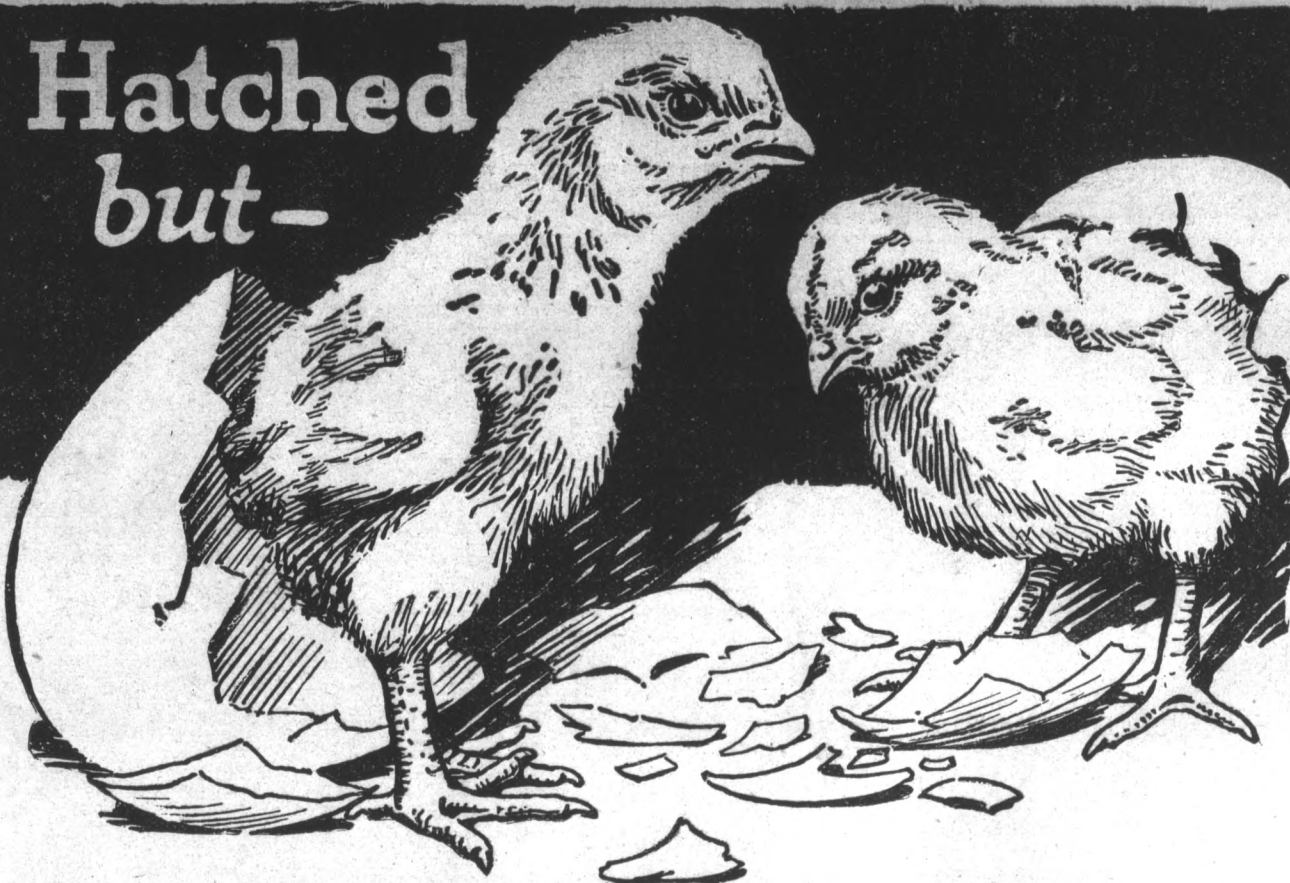
We feed sour milk to young chicks in the commercial sanitary fountains made for that purpose. As the curd separates from the whey the fountains are apt to clog, only the whey flowing out where the chicks can drink it. Then we pour off the whey into a pail where it can be used for the old hens and the chicks eat the curd ravenously, usually cleaning it up from the dish before it becomes dirty.

Often sour milk can be fed to the best advantage by using it in a mash. The growing birds eat it quickly and it seldom becomes dirty. The sour milk fountains for little chicks should be scalded once or twice a week to keep them from becoming scummy and unsanitary. As the chicks grow larger the milk can be fed in earthen crocks, possibly with a slatted frame over the top to keep the birds from walking in the milk.

Buckwheat is not considered as good as wheat for poultry feed but it furnishes heat and energy and is often fed mixed with other grains. Buckwheat hulls have little food value. The middlings from buckwheat contain a high per cent of fat and protein, but the bran must be ground very fine before being used as poultry feed and we would not consider it as desirable as wheat bran. Buckwheat in poultry rations has been found to help produce white fat and white meat. When this is desired the buckwheat is undoubtedly helpful in the ration. R. G. K.

A hen may be a good layer, but if she is at all constitutionally weak she will not be able to transmit vital powers to her offspring. It is all right to select breeders for egg production and fancy points, but vigor must come first or after several years of careful selection the breeder may find a lot of weak sickly birds in his yards which are incapable of being profitable. In breeding poultry, as in other kinds of live stock, vigor is essential and it cannot be neglected.

Hatched but—



How Many Will You Raise?

The loss in little chicks that die the first few weeks after hatching amounts to millions of dollars each year. Everybody must cut down the losses and increase production to the limit this season. How many chicks do you lose from *Gapes*? *Diarrhoea*? *Indigestion*? *Leg Weakness*? *Weakness from Rapid Growth of Feathers*? Prepare them to withstand little chick ailments by feeding

Dr. Hess Poultry Pan-a-ce-a

Remember that disease takes the weaklings—not the strong and healthy. And remember that indigestion is at the bottom of many little chick ailments.

Pan-a-ce-a prevents and cures gapes. Pan-a-ce-a regulates the bowels.
Pan-a-ce-a prevents and cures leg weakness. Pan-a-ce-a produces appetite; it promotes digestion.

And remember good digestion is most essential during the rapid growth of feathers. A Pan-a-ce-a chick will outfeather a non-Pan-a-ce-a chick every time.

Your dealer is authorized to supply you with enough Pan-a-ce-a for your whole flock, with the understanding that it's to prevent and cure *Gapes*, *Indigestion*, *Diarrhoea*, *Leg Weakness*; that you are to see marked results during the growth of feathers; otherwise, he will refund every cent you have paid. 30c, 75c and \$1.50 packages. 25-lb pail, \$3.00; 100-lb. drum, \$10.00. Except in the far West and Canada.

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Barred Rocks	23.00	12.00	6.25	Wh. Wyandottes	35.00	18.00	9.50
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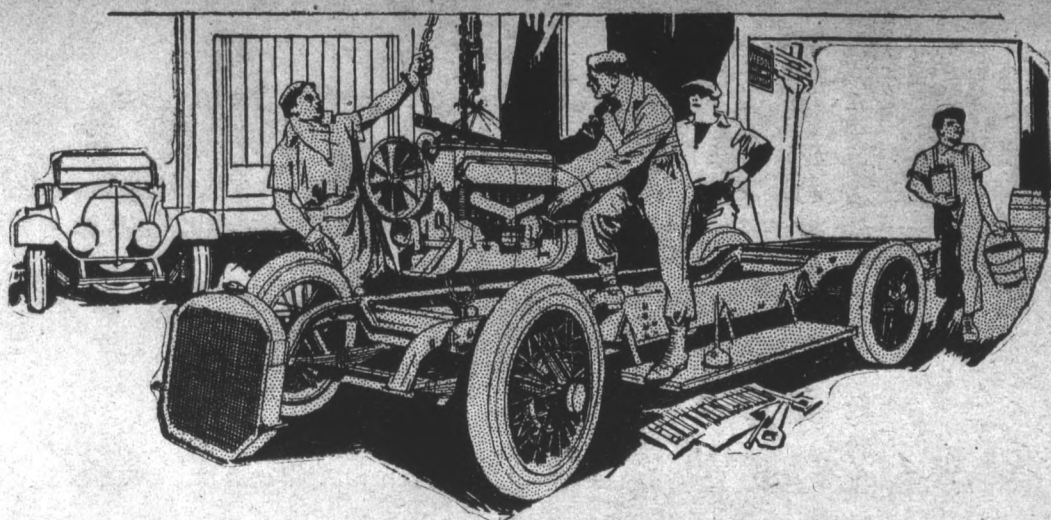
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Springfield Hatcheries & Poultry Farms, Box K, Springfield O.



Which of these troubles has injured your engine?

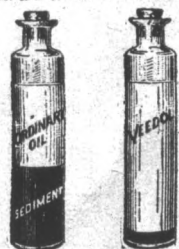
Scored cylinders, burned-out bearings, fouled spark plugs, played-out piston rings, worn cam shaft, loose wrist pins, sticking or pitted valves

REPAIR shops all over the United States report that these seven common troubles are responsible for 90% of all delay, "layups" on the road, and repair expense.

Yet each of these troubles can usually be prevented. Each of them is *due chiefly to improper lubrication.*

Layups and repair bills due to sediment in your oil

Under the intense heat of the engine—200° to 1000° F.—ordinary oil breaks down. Large quantities of sediment are formed which have no lubricating value and which thin out the remaining oil.



Ordinary oil after use
Sediment formed after 500 miles of running

Excess carbon is formed, valves are pitted. The oil film fails to hold. Cylinders and pistons are scored by metal-to-metal contact. The engine over-heats. Bearings burn out. This is the toll taken by sediment in your oil.

How the sediment problem was solved

To produce an oil that would reduce sediment to a minimum, engineers experimented on the road and in

the laboratory for years. Finally they evolved the famous Faulkner Process, used exclusively for the production of Veedol, the lubricant that resists heat.

Veedol reduces the amount of sediment formed in the engine by 86%. This is graphically shown by the two bottles in the sediment test at the left. It reduces evaporation between 30% and 70%—giving long mileage per gallon of oil.

Make this simple test—buy Veedol to-day

Drain oil from crankcase and fill with kerosene. Run engine very slowly on its own power for thirty seconds. Drain all kerosene. To remove kerosene remaining in the engine, refill with one quart Veedol. Turn engine over about ten times, then drain mixture of oil and kerosene and refill to the proper level with the correct grade of Veedol.

A run on familiar roads will show you that your car has new pickup and power. It takes hills better and has a lower consumption of both oil and gasoline.

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THE DAIRY OUTLOOK.

(Continued from page 590).

cities the proposition has considerable merit.

In common with other industries dairy farming must accept whatever penalties the coming reconstruction period imposes. Present prices are naturally ephemeral, and lower prices seem only to be a matter of time. Labor may cherish the futile hope of retaining all it has gained, but the dairy farmers should entertain no such fallacious ideas; in fact, there has been a disposition to take a pessimistic view of the future, as indicated by so many farmers disposing of their cows and going into other lines of production. That prices may hold up to a fair level for some time seems probable, but for how long no one seems willing to prophesy.

Economy in the use of feeds is imperative, home-grown feeds will become more popular and profits will come from feeding for heavier milk yields whenever the opportunity presents. Most dairy farmers are in a cautious state of mind, and it is indicated by their actions in hesitating to stock up on high-priced grain feeds. The history of the dairy industry shows that while it does not present a short cut to prosperity, those who consistently practice a safe system get reasonably satisfactory returns, while those who conduct the business along hit-and-miss lines rarely achieve financial success. Those who have kept their good cows, raised the bulk of the food supply and kept abreast of the times will in the end achieve the same measure of success as the efficient element in other industries.

The outlook for the breeder of purebred dairy cattle was never more favorable. All things point to a prosperous future. For years federal and state extension men, cooperating with purebred cattlemen, have been preaching and teaching the value of higher-producing dairy cows, and the importance of wiser selection and better feed and care. It is more important than ever that the "low-producing-cow" be eliminated from the herd. Losses from feeding poor animals and profits from feeding good are larger than under pre-war conditions.

Prices paid for purebred cattle have advanced comfortably but are in keeping with milk cattle price advances. The breeders view the future hopefully, as exemplified by the increased business done by the dairy breed registry associations, and the activity shown by transfers of breeding stock. This does not necessarily mean an increase in the number of purebred cattle, but does mean an increased interest in the purebred business throughout the country. This activity comes from a scarcity of good dairy cattle and to a certain extent from hope in the future of the dairy industry. Prices have not advanced in any greater ratio than they have for many essential commodities. We must expect high prices because costs of maintenance and production have advanced.

Even though prices for breeding stock should recede temporarily if prices of dairy products take a slump, the farmer who has a good breeding herd will hold a much more strategic position than the crop farmer. Prices for other food products will recede as much or more than prices for dairy products and breeding cattle. The man who gave up his pastures to grow grain and cultivated crops will wish to return to the dairy business, and now that he has the money, he will turn to the man who has good cattle to purchase his foundation stock.

W. M. K.

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The PREMIO JR. MODEL B is a well-made, substantial, reliable camera in every respect. This camera has to stand the usual rigid tests which are applied to all cameras made by The Eastman Kodak Co. It loads and unloads in daylight with the Premo Film Pack of 12 exposures. It makes pictures 2 1/4 x 3 1/4 inches in size and the negatives are of such quality that excellent enlargements can be made from them.

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CULTURE OF SOY BEANS.

I would like to hear from Mr. Ullsperger in regard to the soy bean. I would also like to know where seed could be purchased, and also about the commercial inoculating system. I have my farm in pretty good shape to grow crops, but think clover would not be a success. I am anxious to grow clover, and any information I could obtain through your paper would be much appreciated.

Wayne Co.

C. D. J.

Soy beans may be purchased from any reliable seed dealer. The Wisconsin Experiment Station at Madison, Wisconsin, also issues yearly a list of farmers who have soy beans for sale. This may be obtained free upon application. There has been such an exceptional demand for soy beans that nearly all farmers have sold their seed, and the only available supply is in the hands of seed dealers.

Inoculating soy beans with commercial culture has materially increased the yield of soy beans. The culture may be secured from the United States Department of Agriculture, Washington, D. C., from the Michigan Agricultural College, East Lansing.

After securing the bottle read and follow the directions given on the bottle carefully. These directions call for:

1. Fill the bottle two-thirds full of water, then shake well.
2. Place a gauze over the top of bottle, and
3. Pour the water over the seed with one hand while the seed is stirred with the other. Stir until all seed is moist.

After thoroughly mixing the seed it is ready to plant. Keep seed away from direct sunlight at all times.

Inoculation can be secured for soybeans, clover, alfalfa or sweet clover (same for both), peas, common beans or cowpeas.

I believe you can grow clover successfully on your soil by following the directions given. If your soil is sour use limestone, top-dress with manure, use good seed, inoculate the seed, plant with a drill, compact with a cultipacker and use a light nurse crop of either oats or rye which should be cut for hay if the soil becomes very dry. You may plant soy beans, plow them under and then plant clover during the following season. The soy beans will place the field in better condition to grow clover.

H. W. ULLSPERGER.

PREVENTING EGG EATING.

Our hens have been laying right along, but are beginning to eat their eggs. We have had to sell some on account of this. They have plenty of grit and ground bone, green feed and scratch feed. What can be the reason?—J. D.

Hens are apt to learn egg eating when they lay in open nests. It pays to have nests which the hens enter from the back. Then the eggs are removed by lowering a hinged door in the front. The nests are rather dark and the hen does not readily see the egg she has laid. At least, the other hens do not bother her or have a chance to scratch the eggs around the nest after they are laid.

Plenty of litter in the nests helps to reduce the number of broken eggs. Oyster shell is necessary in the ration so the eggs will have firm shells. There should be a nest to every four hens in the flock as a lack of nests often causes crowding and broken eggs. Hens that are confirmed egg eaters can be killed to keep the habit from spreading. Possibly when the hens have dark nests and plenty of exercise on the open range many of them will stop eating eggs. The fact that hens eagerly eat eggs that are accidentally broken on the floor does not prove they are egg eaters. But when they deliberately break eggs they are profit wasters that must be eliminated.

R. G. K.



Champion

Dependable Spark Plugs

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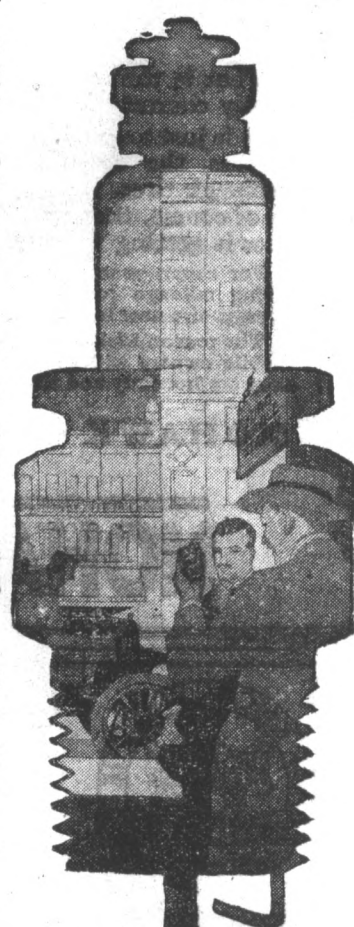
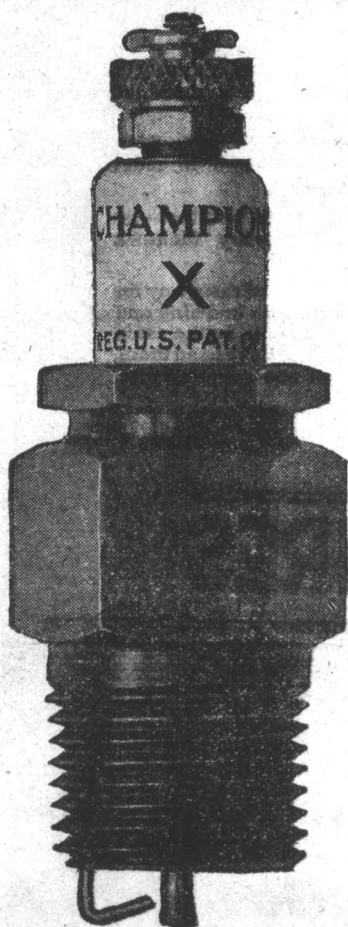
A LONG time ago, in 1911, the Ford Motor Company chose Champion Spark Plugs as best adapted to the requirements of the Ford Car.

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There is a Champion Spark Plug for every type of motor car, truck, tractor, motorcycle and stationary engine. Order a set from your dealer today.

Be sure the name Champion is on the Insulator and the World Trade Mark on the box



Champion Spark Plug Company, Toledo, Ohio

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Good Reading

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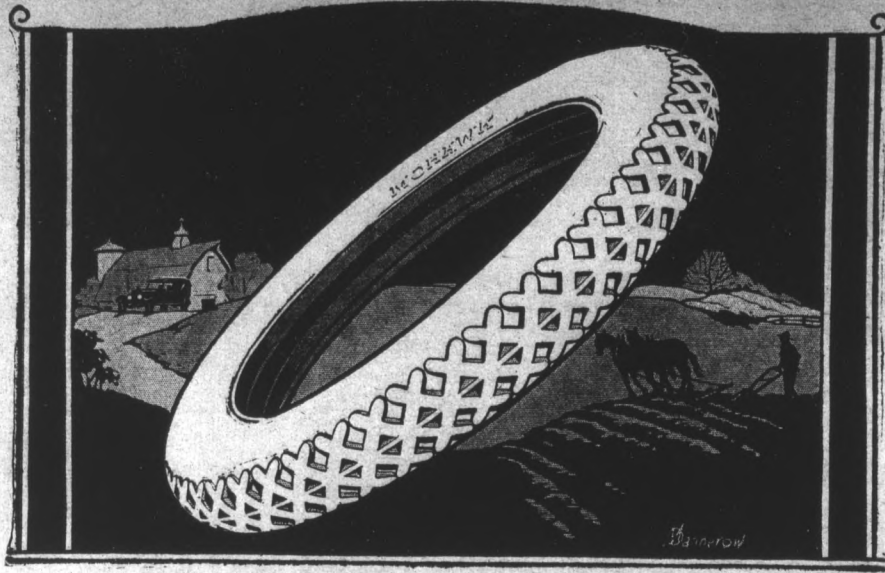
The Michigan Farmer, one year..\$1.00
Needlecraft, one year50
McCall's Magazine, one year..... 1.00

Total value\$2.50
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OFFER No. 119.

The Michigan Farmer, one year..\$1.00
Market Growers' Journal, one yr. 1.50
Poultry Keeper, one year50

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MARRIED COUPLE WANTED AT ONCE for care of small country home near Birmingham, 50 minutes from Detroit. Modern home, electric light and all conveniences, bedroom and bath on first floor for couple. Man's duties: care of one horse, two cows, small garden and general outside work. Wife's duties: plain cooking and general light housework for small family. H. A. O'Dell, 1024 Hammond Bldg. Tel. Main 3376.

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It makes me smile when I see poor gals pulling away by hand. Buy a Mehring Milker and you can smile too. It was the first practical milker and still has the lead in speed, efficiency and cheapness of operation and repair. Send for a catalogue and be convinced. It will milk one or two cows at once. Price \$30 cash or \$85 on trial. Also engine power milkers. W. M. MEHRING, Keymar, Maryland.

SPRING MANAGEMENT OF BEES.

BY HY W. SANDERS.

DURING the weeks that pass from the time the bees are taken from their winter quarters until they begin to gather the season's crop of honey, they will increase in numbers at an extraordinary rate, until from having barely enough bees to keep warm at the conclusion of winter, they will, if prosperous, be overflowing and ready to swarm by the middle of June. That is the condition that the beekeeper desires for it is these powerful colonies of bees that gather the honey crop, and all that is done in the way of management must aim at so increasing the numbers as to bring about the desired result.

Taking from the Cellar.

It is rather puzzling to know just when is the best time to take the bees from the cellar. If taken too soon they will be exposed to a lot of unnecessary cold, and many bees will attempt to fly on bright days only to become chilled and never return to the hive. On the other hand, if they are kept in the cellar too long they may become affected with dysentery, or even die of starvation if at the end of their supplies. The nearest thing to a rule is to take them out when they can be sure of a cleansing flight, which requires a temperature of at least sixty degrees. Some go by the blooming of soft maples, willows, etc., and set out the bees when this occurs. Others, again, prefer to set out the bees when the weather is dull, so that when they do fly it may be naturally, without dis-



Examining the Hives.

turbance, or the danger of "mixing." Our own plan is to wait till the snow is all gone and the weather moderates and then set the colonies out at night. They are closed up only while being carried out, and immediately released, then by morning all is quiet and the bees will not rush out when the light comes, as they will if carried out suddenly in the daytime. One of the worst mix-ups we knew happened when a beekeeper set out a great many hives on a warm day without any precautions. A strong wind sprung up as the bees, whilst those at the other side without marking their hives, and they were blown to the leeward side of the yard. When night came the hives at the windward side had but a very few bees, whilst those at the other side had so many that they could not get inside but clung in great masses outside till they chilled and died. We find that carrying them out at night overcomes this danger.

Examining the Colonies.

On the first fine day when the bees are flying freely we go through the hives. A little smoke is blown in and the cover raised. Then the frames are examined one by one. Condition of the hive is noted, also if there is a laying queen, and the amount of stores. The bottom-board with its accumulation of rubbish is changed for a clean

The bottom-board with its accumulation of rubbish is changed for a clean one. If all is well with the colony, plenty of bees, a queen, and plenty of stores, there is nothing more to do but "let it alone and be thankful," as Dr. Miller says. If the hive should be queenless it is joined up to another one, if short of stores it is given sealed combs of honey saved from the preceding year. If there are none available it is marked for feeding later and enough spared from another colony to fill immediate wants. This is to avoid too early feeding. If the hive is very weak the combs on which the bees are clustered are moved to one side of the hive and then a full comb of honey put next to them and then a tight division inserted to conserve the warmth. The entrance is closed down to barely enough to let a single bee pass for the same reason.

Wrapping the Hives.

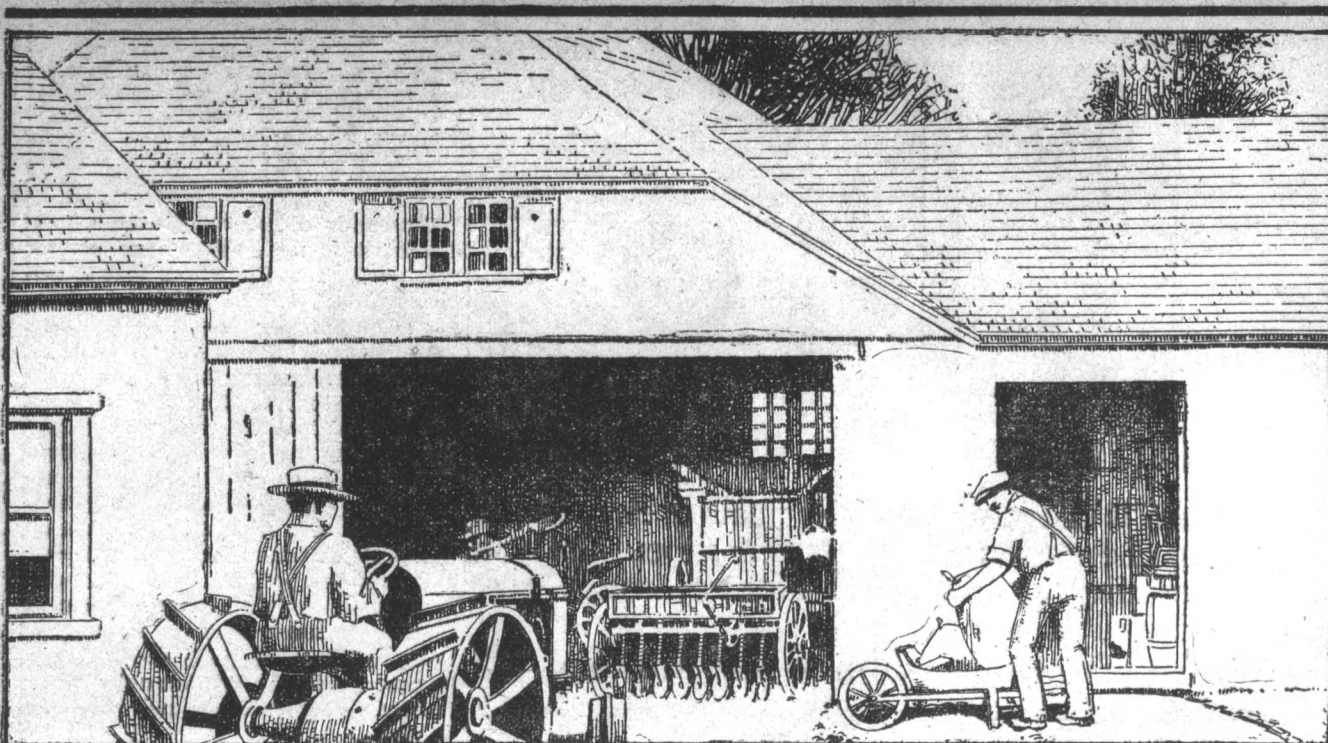
All hives, strong or weak, are now wrapped in tar paper. The method is to take off the cover but not the "quilt" of burlap or oilcloth that covers the frames beneath. The hive body is now wrapped from above with a sheet of the paper, being folded down at the ends as if it were a parcel, and there secured by a piece of lath and a nail. The cover is then replaced and a stone added to prevent it blowing off. We value highly this wrapping process as it keeps out the cold winds of spring and as it will not be necessary to open the hives again for several weeks the bees will breed faster with the protection. The entrances are, of course, made small at this time of year, either by tacking a lath over the greater part of the length or by means of blocks of wood.

Weak Colonies.

These are the problems that perplex many a beekeeper. They may be weak from a variety of causes. Wintering may have been passed under conditions where the bees have been subjected to undue cold or heat, and in either case the numbers will be weakened by the activity caused by these conditions or the bees may have had a failing queen in the fall and have entered the winter with too few young bees. The older ones die off in course of nature and the colony is weakened when spring comes. Or again, poor food or an insufficiency of it may be the cause, and the good apiarist will see to it that prevention rather than cure should be the rule in the future. But being in the difficulty, what is to be done with the poor little colonies that cover only one or two or three frames?

Uniting.

Joining them together is the plan generally advised, but in our experience it is not a good plan, and some very eminent beemen have found the same thing. The united colony soon seems to be as weak as the ones that formed it. Dr. Miller once tried joining up eight and soon the resulting one was as weak as ever. It seems that these are old bees, and before they can "brood" enough young ones for replace themselves, they are gone. So of late, we have adopted the plan of keeping all colonies, however weak, so long as they have a laying queen, separate. Queenless ones are joined up. Now, if there are enough strong colonies in the yard, the Alexander method is practiced and the weak colony is placed above a queen excluder on the top of a strong colony. The only entrance is down through the excluder and the other hive, but the bees seem to agree all right, as on placing them together a sheet of newspaper is placed over the excluder and they have to gnaw their way through.



Rusty Implements Hamper Farm Work



NEARLY every farmer has had experience with breakage of rusted parts of farm machinery almost as soon as it is taken into the field for the season's work.

It is the *good* farmer who knows the necessity of proper housing for his expensive implements and tools. And an implement shed will soon pay for itself in the lengthened life of machinery—especially if it's protected with a MULE-HIDE Roof.

For durability, weather-resistance and general utility MULE-HIDE Roofing stands the test. Just a few of the reasons why its service record is:

"Not a Kick in a Million Feet"

Just ask your lumber dealer. He'll tell you. If he hasn't a stock of MULE-HIDE a post card to us will bring him samples and prices.

THE LEHON COMPANY *Manufacturers*

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OVIE'S BABY CHICKS



They Lay and Pay!

There is more than a tingle of satisfaction when you receive Ovie's Baby Chicks, which are beyond comparison in quality, from free range flocks. That is why, once a customer, always a customer.

25,000 SELECTED CHIX WEEKLY
Hatched by an expert with our new system used exclusively by us, in the world's most up-to-date Hatchery.

14 LEADING VARIETIES
Safe delivery guaranteed by P. P. prepaid. Write us for illustrated booklet on Ovie's Chix.
OVIE'S HATCHERY CO.
24 State Street MARION, IND.

Anconas Eggs from State Champion prize oldest breeders in the state. \$2 per 15, \$5 per 50. W. E. WEST & SON R. 1, East Lansing, Mich.

Baby Chicks S. C. W. Leghorns, White, Buff Barred Rocks, S. O. R. I. Red, Anconas, White Wyandottes, Buff and Brown Leghorns, 25 for \$6.25, 50 for \$11.50 for \$20. Fenton Chicken Hatchery, Fenton, Mich. Box 244.

Baby Chicks S. C. W. and Brown Leghorns, and S. O. Anconas. Healthy, vigorous, and from a good laying strain. We guarantee safe delivery. Order now. Seventh season. Send for price list. City Limits Hatchery and Poultry Yard, R. 5, Holland, Mich.

Barred Plymouth Rock eggs for hatching from fullblood prizewinning strain \$2.00 per 15, \$3.00 per 50. J. A. BARNUM, Union City, Mich.

Baby Chicks S. O. White Leghorns, bred to lay. After Apr. 1 will sell chix and eggs from my exhibition pens, write for prices.
HILLSIDE POULTRY FARM, Hillsdale, Mich.

Buff Leghorn and White Leghorn Cockerels from 200 egg strains. Eggs and baby chicks. A few pens.
Dr. WILLIAM SMITH, Petersburg, Mich.

Barred Rock Eggs from Chicago and Indianapolis winners. Great layers. \$2 per 15, \$10 per 100 and up. Buff Duck Eggs. 28th year. Circular free.
G. EARL HOOVER, R. 3, MATTHEWS, IND.

For Sale 4 laying pullets and cock from 260 egg strain and blooded stock. S. O. White Leghorns. Mrs. Henderson, Leesville, Mich.

CHICKS AND EGGS

Rose and Single Comb R. I. Reds, Barred Plymouth Rocks. Superior Color. Prolific Layers. Prepaid by parcel post and safe delivery guaranteed. Illustrated catalog free.
INTERLAKES FARM, Box 39, Lawrence, Mich.

CHICKS CHICKS

12,000 chicks a week after Mar. 20. Grand laying strains utility S. C. White Leghorns and Mottled Anconas. Strong, sturdy chicks shipped everywhere parcel post guaranteed safe arrival in lots 25; 50; 100 or more. 12th season, order now. Fine free catalogue.
W. VAN APPELDORN, R. 7, Holland, Mich.

Barred Rock Baby Chicks, order now for May and June. Apply for terms.
H. H. PIERCE,

Chicks Bred-to-Lay and Exhibition S. C. W. Leghorns, stock that produced the winners in the state demonstration farm work. Winners at Detroit, Toledo and Oil City, Pa. Shows. \$10.50 per 50, \$20 per 100, \$35 per 500. Safe delivery postage paid. Sunnybrook Poultry Farm, Hillsdale, Mich.

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

Chicks Leghorns, Minorcas, Spanish, Houdans, Cam, pines, Reds, Rocks, Orpingtons, Brahmas, Wyandottes. Tyrone Poultry Farm, Fenton, Mich.

Barred Rocks egg contest winners, eggs from strain with records to 230 a year. \$2.00 per setting prepaid by P. P. Circular free.
FRED ASTLING, Constantine, Mich.

Barred Rocks 15 eggs, \$1.75; \$8 a hundred; by prepaid mail. 100 hens laid 10,421 eggs from Nov. 1, 1919. Lewis B. Avery, Saline, Mich.

Barred Rock eggs winners at Detroit, and other B shows. Pens \$4.50 per 15. Range \$1.75 per 15, \$3.25 per 30, postpaid. **EARL MURPHY,** Britton, Mich.

Baby Chicks The fluffy lively kind, the kind that live and grow. Hatched in the most modern incubators built, all eggs are from pure blood farm stock. Catalogue and price list mailed upon request.
NORWALK CHICK HATCHERY, Norwalk, O.

Black Langshans 15 eggs for \$2.00 order direct from this ad or write **MRS. ETHEL BURGET, Maybee, Mich.**

Cockerels Buff, Columbian and Silver Penciled Plymouth Rocks; Anconas and Rouen drakes \$3.00 each. Hatching eggs. Catalog 2c. **Sheridan Poultry Yards, R. 4, Sheridan, Mich.**

Day Old chicks and eggs for hatching. Breeder and importer of Barron Strain White Leghorns, White and Barred Rocks, S. O. Rhode Island Reds. Heaviest laying strains obtainable. Order early.
Brunner's Poultry Farm, Holland, Mich., R. R. No. 8

Eggs from special mated and selected R. O. Brown Leghorns; 25 \$1.50, 50 \$4, and 100 \$7. Safe delivery guaranteed. **D. E. SPOTTS, HILLSDALE, MICHIGAN.**

Fowler's Buff Rocks. We are now booking cockerels left. **R. B. FOWLER, Hartford, Mich.**

CHICKS We have shipped thousands each season since 1904. Are booking orders now for Spring delivery, booklet and testimonials. **FREEPORT HATCHERY, Box 12, Freeport, Mich.**

DANGER If chix and eggs are **Chix 15c Up** not shipped right. Best Blooded stock ever produced at low prices quoted. Selected Utility, Exhibition trapnested stock. 16 varieties. Hatching eggs. Hens, Ducks. Book your orders early. Avoid disappointment. Stamps appreciated. **Beckman Hatchery, 23 E. Lyon St., Grand Rapids, Mich.**

FOR SALE A White Orpington, cockerel and two hens. Price \$2.50. **W. E. WEST & SON, R. D. 1, East Lansing, Mich.**

For Sale B. P. Rocks eggs for hatching. \$2.00 per 15 prepaid. **MRS. E. BELLEN, Whittemore, Mich.**

Additional Poultry Ads. on Page 619



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In every city there is a Hirth-Krause dealer who has been selling quality shoes for years and therefore is an expert in the art of shoe fitting. Get acquainted with him and he will save you money and discomfort by fitting you with shoes that will give you more satisfaction.

A wonderful shoe with a great promise

This shoe is the result of many years of experience in making the nation's best service shoe. Only a plant operating as the Hirth-Krause, could give this wonderful value.

The man who works will find that this shoe will outwear any ordinary pair of shoes. Supremely comfortable.

Ask your dealer to give you Hirth-Krause shoes with the mileage guarantee.



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Shoemakers for three Generations
Shoes
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ROUGE REX
(RED KING)
For the man who works

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Change of Copy or Cancellations must reach us Ten Days before date of publication

Wildwood Farms Angus

Home of Edgar of Dalmeny one of the world's greatest sires.
He produced Erodemas, the grand champion bull at show in Perth, Scotland in Jan. 1919, and (1) He produced Blue Bell a cross-bred heifer which was awarded the championship at the Smithfield, (Eng.) fat stock show in Dec. 1919. (The latter is England's equivalent of our Chicago International.)

Edgar is now an American Citizen, and is here for the purpose of bettering the breed in this country.

Edgar's calves are as yet too young to offer for sale but they are a promising lot and are being spoken for fast.

We have a few choice young bulls by Black Monarch III who won the Mich. State Fair Grand Championship in 1914-1915-1916, still for sale.

Our herd is under State and Federal supervision A visit will interest you, write for particulars.

WILDWOOD FARMS
ORION, MICHIGAN

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

WOODCOTE ANGUS

BREEDERS OF MANY
INTERNATIONAL WINNERS
INCLUDING THE
UNDEFEATED CALF HERD OF 1919
Write for 1920 Bull sale list.
WOODCOTE STOCK FARM IONIA, MICH.

Registered Aberdeen-Angus. Seven bulls from four to twelve months old. Plenty of size, best of breeding. Prices reasonable. Come and see them. Inquire F. J. WILBER, Olio, Mich.

GUERNSEY BULL CALVES FOR SALE

\$50.00 and up. Sired by Noro's Mayking Mayrose Breeding. This is accredited herd against tuberculosis from State and Federal government. Avondale Farms, Wayne, Mich.

GUERNSEY bull calves whose sire's dam made 19,460.20 milk. 900.05 fat. Their mother's sire's dam made 15,109.10 milk. 778.80 fat. T. V. HICKS, Battle Creek, Mich.

FOR SALE

Guernsey Bull. Serviceable age. A. R. records dam 530 lbs. granddams 766 lbs. and 553 lbs. A son of Antone's May King.
GILMORE BROTHERS, Camden, Mich.

Guernseys Federal inspected herd. Bull 2 yrs. old g. son of Imp. Spotswood Sequel, dam's A. R. record 419.34 b. f. class G. Bull calf 8 mo's. old. 6 bull calves 2 to 5 mos. old. Satisfaction guaranteed G. W. & H. G. Ray Albion, Mich.

GUERNSEYS—REGISTERED BULL CALVES
Containing blood of world champions.
HICKS' GUERNSEY FARM, Saginaw, W.S. Mich.

Guernsey Bull Calf. Lined of Walter Phipps Farm. Born May 2-1919. \$100.00 f.o.b. Novi or Birmingham. Walter Phipps Farm, 80 Alfred St. Detroit, Mich.

Registered Guernseys We are breeding better Guernseys Extended Pedigree of our Herd Bull to any one except the Postal Card Man. If you want better Guernseys—we have them.
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Reg. Guernsey Bulls for sale cheap from 1 to 12 months old and from good producing and tuberculin tested cows. C. E. Lambert & Sons, Linwood, Mich.

For Sale Registered Guernsey bulls. May Rose breeding cheap if taken soon. Come or write. John Ebele R. 2 Holland, Michigan.

For Sale cows and heifers fresh and springers one or car load lots. Apply THE JENNINGS FARMS, Bailey, Mich.

GENRIDA FARM

OFFERS
BULL CALF, BORN DEC. 26, 1919
Sire: King Flint, who combines the blood lines of 2 families of 3 generations of 30 lbs. cows and 2 generations of 1200 lb. yearly record cows. Dam: Has a 21.39 lb. 3 yr. record. Her dam is a 23.99 lb. daughter of Johan Hengerveld Lad.
Walter Hill, Davison, Mich.

The Traverse Herd

We have what you want in BULL CALVES, the large fine growthy type, guaranteed right in every way. They are from high producing A.R. O. ancestors. Dam's records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

FOR SALE three Registered Holstein-Friesian 2-year old heifers. Will make fine cows, best of breeding, sired by a Pontiac Bull. Will sell one or the three.
HENRY S. ROHLFS, Akron, Mich.

REGISTERED Holstein bulls sired by King Zerna R. A. Carra Pontiac, son of the \$50,000 bull, some from good A. R. O. cows. C. H. Giddings, Gobleville, Mich.

\$125 Buys Reg Holstein Bull 1 yr. old. Delivered and guaranteed O. R. High class breeding and a good individual. B. B. REAVEY, Akron, Mich.

SCHOOL ELECTIONS.

Will you please inform us whether a person moving from a school district can vote at a special meeting after he moves out, he still owning land there; also whether the foreign-born widow of a naturalized citizen can vote, she holding property since his death.

H. D.

Ownership of property in the school district does not entitle a person to vote at the school election, that is determined by residence. Residence does not mean actually sleeping and eating in the district, but it is a state of mind. If the voter has left for a temporary purpose with intention of returning, he does not lose his residence; but if he takes up his home elsewhere that would be pretty clear proof of his intention to change domicile. The naturalization of a person as a citizen of the United States carries with it the naturalization of his wife, and she can vote at the place of her residence though she never took out naturalization papers. Very likely the law may be changed since women are given the franchise, but that has not yet been done.

J. R. R.

FLOUR AND BREAD FOR FEEDING.

What is the value of flour for feeding hogs, and which is the best way to feed it? Would bread be a good feed for cows and horses, and how much may be fed with safety? J. E. M.

Flour would make an excellent feed for hogs, even better than wheat middlings, but usually its value as a human food would prevent feeding it to hogs. Red Dog flour, which is a by-product from some of the choicest grades of flour, and very much like wheat middlings, is quite extensively used in some localities. The best way to feed it is to make it into a very thick mash with milk if possible, otherwise water will do. This should be pretty well salted to flavor it.

Bread would make a very good food for horses and cows, the great trouble is to get them educated so they will eat it. At first you could soak it and mix with bran or middlings to get them to eating it. Quite a large feed could be used without any detriment.

C. C. L.

MAKING BREEDING PENS.

Will you please tell me how long it takes for eggs to become infertile after the roosters are removed from the flock, and how long for them to become fertile after the roosters are put back with the flock? M. M.

Poultry breeders usually mate up their breeding pens in January or February and do not save eggs for hatching for about four weeks. This insures no effect from previous matings and results in a large per cent of fertile eggs. When roosters are placed with a flock the eggs will often show a large per cent of fertility in a week or ten days. Of course, there is some variation in different flocks, depending on the vitality of the stock and size of the flock or breeding pens.—R. G. K.

LEACHED ASHES.

I can get leached ashes at a local potash factory for twenty-five cents a team load. They are more or less wet, some of the consistency of well-mixed cement, while some are dry enough to crumble. About what would they analyze? Can I use them in place of limestone and how much should I spread per acre? R. A.

Leached ashes are probably worth the hauling, but not much more. You understand the potash has all been leached out of them. Also much of the carbonate of lime, but some of it is left. If you do not have to haul them too far, it would probably be a good investment.

The fact of them containing considerable moisture would have no effect upon their value, other than their weight and the inconvenience in handling. Of course, the moisture would be of no value. You can apply any amount you wish. C. C. L.

Get This Special Calf Meal Offer

To prove to you that International Calf Meal is all we claim for it—and more—we will for a short time only, ship prepaid a 100 lb. sack for \$5.50 to any point east of the Rockies. Send no money—pay when feed arrives. Once you try

INTERNATIONAL CALF MEAL

you will quit trying to raise calves on new milk. International Calf Meal will raise five calves at the cost of raising one on new milk—and they will thrive better. It is a perfect substitute for new milk—a scientifically mixed feed that all calves like. One pound is equal to one gallon fresh dairy milk in feeding value.

Act Today

This special offer will be withdrawn shortly. Act now. You can't go wrong.

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International Sugar Feed Co.
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As per your special \$5.50 offer you may ship me 100 lbs. International Calf Meal Prepaid to my station.

My name is.....

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Watch the Udder

Keep the "business end" of the cow on the job of milk-giving. Injuries to teats or abnormal udder conditions reduce production, make the cow restless, and render milking difficult.

Bag Balm is a wonderful penetrating, healing ointment designed especially to restore the normal healthy texture to congested, caked or inflamed udders and to heal any external cut, chaf, bruise, chafing or extreme soreness. A sure remedy for Caked Bag, Cow Pox and Bunches.

Keep the udder soft, silky and healthy and teats smooth and clear. The production will be increased and milking will be a pleasure.

Buy your package of Bag Balm from your feed dealer, druggist or general store—sold in liberal 60c packages. Send for free booklet, "Dairy Wrinkles."

DAIRY ASSOCIATION CO.,
LYNDONVILLE, VT.

BAG BALM
MADE BY THE
KRO-KURE
PEOPLE

Build SILO SAVE
YOU OWN SILO HALF
FREIGHT PREPAID. Stronger, safer, better than Silos costing three times our price. 25, 50, 75 and 95 ton sizes at the lowest prices ever made on reliable silos. Our patented construction makes expensive foundations unnecessary. Makes perfect ensilage. Storm proof. Easily, quickly erected. Strongly endorsed by thousands of users. TERMS IF DESIRED. Write for free illustrated catalog. JONES SILO CO., Kansas City, Mo.

HENS WITH DIARRHEA.

Would like to know what to do in case of white diarrhea, as I have had several hens die with it. Have tried different home remedies without success. Would also like a remedy for hens eating one another's feathers. Do they lack something in their food, or is it just a habit? I feed corn morning and night, ensilage and scraps at noon. They also have plenty of meat scraps, crushed bone and egg shells and plenty of clean water. R. H.

Hens are usually resistant to the germs of white diarrhea although they can transmit the disease to the chicks by means of the eggs. White diarrhea in grown birds can be detected by what is called the agglutination test, but this can only be done by skilled workers in a laboratory. Possibly the hens only have common diarrhea which is caused by various digestive disorders. Chalk powder is a common remedy for diarrhea. Olive oil is also good. A half teaspoonful of paregoric given daily may soon cure the trouble.

Feather pulling is a habit usually caused by a lack of exercise and faulty feeding methods. Often it spreads rapidly through a flock when one hen acquires the habit. Some breeders have stopped feather pulling by dissolving powdered aloes in alcohol and painting the mixture on the plumage. Usually plenty of meat scraps and green food in the ration will keep hens from the habit if they have plenty of range and opportunity for exercise.—R. G. K.

SILO FOR TEN COWS.

Do you think that ten dairy cows are enough for a silo ten feet in diameter, that is, if enough silage can be fed off this way? A. M.

In cold weather you can get along very well where you only have ten cows to feed from a silo, but when the weather gets warmer they cannot eat a sufficient amount to keep ensilage in the best of condition. You could, however, if too much spoils cut it down in the center and feed one-half at a time. A little will spoil on the exposed side which can be thrown out when fed.

You can feed ensilage, a certain amount to horses, hogs and chickens, and you will probably also have some young cattle and it might pay you to increase your herd of cows if your silage gets too stale from undue exposure. C. C. L.

NATIONAL AGRICULTURAL AFFAIRS.

(Continued from page 586).

move and secure higher prices for them, but will be of no benefit to the poor.

A bill has been introduced in the house providing for an investigation of the gasoline situation and the reasons for the prevailing high prices. As farmers are among the most extensive consumers of gasoline this measure promises to be of considerable interest to them. Senator James W. Wadsworth, of New York, has given assurance that when this bill reaches the senate he will be among those who will do what they can to help out the consumers of gasoline. If there is profiteering in this product it is probable that an endeavor will be made to punish the profiteers, or at least bring about a reduction in price. The high price of gasoline is having a marked influence upon the high cost of producing farm crops.

It is not often that we find the meat packers commending any proposal aiming at government regulation of their business. The exceptional instance was noted at a hearing before the Senate Agriculture Committee last week, when two representatives of the packing industry spoke favorably of the bill which has passed the house and is now before the senate, requiring the marking of all cold-stored products with dates of entrance and to forbid sale of products stored for more than twelve months.—E. E. R.

HEADLIGHT OVERALLS

UNION MADE

OUTWEAR TWO ORDINARY PAIR



He is Guaranteed Double Wear on His Headlight Overalls

Twice the wear of ordinary overalls, or money back—that's our guarantee to him, and to you.

We put more denim and better denim into Headlights than goes into the making of ordinary overalls, so that they last longer and give more comfort. You can shorten your workday by putting more comfort into it—the roomy comfort of Headlight Overalls. Buy your first pair today.

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World's Greatest Overall Makers

Factories: Detroit St. Louis San Francisco Port Huron, Mich. and Perth, Amboy, N. J.
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Facts in BLACK & WHITE

Holstein Clubs are Flourishing Everywhere

Holstein Clubs, County, state and district, have been organized throughout the country and are making wonderful progress in establishing testing associations, and in co-operative effort in eradicating disease among their animals. They are receiving definite and systematic aid from the Extension Service activities of The Holstein-Friesian Association. Members are inspired with ideals in dairying and dealing, and in many ways the greatest good for all Holstein breeders is being propagated.

Read the whole big story of Holstein progress in our free booklets. Send today.

THE HOLSTEIN-FRIESIAN ASSOCIATION
164 Hudson Street
Brattleboro Vermont.

CLUNYSTOCK FARM

A Semi-Official Bred Bull to Head Your Herd
Maplecrest Application Pontiac No. 132652, heads Your Herd
His dam's record is 1344.3 lbs. butter, 23,421.2 lbs. milk in 365 days, and 35,103 lbs. butter and 515.6 lbs. milk in 7 days.
One of his sons from our good record dams will carry these great blood lines into Your Herd.
For Pedigrees and Prices write to
R. BRUCE McPHERSON, Howell, Mich.

4 Nearest Dams 32.46 lbs.

Bull Born November 14, 1919

Color—nearly half and half.

Sire's Dam:—Butter 7 Days 32.32; Milk 7 Days 552.40; Average per cent Fat 4.68.

Sire's Sire's Dam:—Butter 7 Days 40.32; Milk 7 Days 610.20; Butter 30 Days 165.22; Milk 30 Days 2695.8.

Dam:—Butter 7 Days 26.61; Milk 7 Days 532.9.

Dam's Dam:—Butter 7 Days 30.59; Milk 7 Days 565.00; Butter 30 Days 124.19; Milk 30 Days 2436.6

She heads a combination of three direct generations of thirty pound cows.

Price \$750.00 f. o. b. Howell.

McPherson Farms Co., Howell, Mich.
Herds under U. S. Supervision.

HOLSTEIN BULL CALVES FOR SALE

From dams with good records.
BULL CALVES Sired by 45 lb. BULL.
BULL CALVES Sired by 34 lb. BULL.
BULL CALVES Sired by 33 lb. BULL.
PRICES VERY REASONABLE.

Privilege of return if not satisfied.

A. W. COPLAND,
Birmingham, Michigan.
Herd under State and Federal Supervision.

OUR HERD SIRE

Model King Segis Glista

By a 30 lb. son of Lakeside King Segis Alban De Kol. His dam Glista Fenelle 32.37 lbs. Her dam Glista Ernostine 35.96 lbs. His three nearest dams average over 33 lbs and his forty-six nearest tested relatives average over 30 lbs. of butter in seven days. Write for prices on his sons.

Grand River Stock Farms
C. G. Twiss, Mgr. Eaton Rapids, Mich.

Winnwood Herd

—SENIOR HERD SIRE—

Flint Maplecrest Boy (166974)

4 years old and weighs 3000 lbs. We have a few of his sons ready for service and some little fellows straight as a line and priced right the daughters of Flint Maplecrest Boy are making good.

—JUNIOR HERD SIRE—

Sir Ormsby Skylark Burke (249 66)

A brother to the world champion cow over all breeds (Duchess Syklark Ormsby) 1506 lbs. of butter in one year. He is the best bred Ormsby bull in Michigan his dam a daughter of King Segis Pontiac she is a sister to King Segis Pontiac Count and the \$50,000 bull King Segis Pontiac Alcatraz, we said get a better bull (we got ours) one of his sons out of a daughter of Flint Maplecrest Boy will make some herd sire.

JOHN H. WINN, (Inc.)
ROSCOMMON, MICH.

Bazley Stock Farm YPSILANTI, MICH.

A nicely bred calf. The dam of this calf has just made 12.77 lbs. of butter from 304.6 lbs. of milk as a senior yearling. She is from a 16 05 2 year old that will freshen in April and will be tested. Dam of Calf is both a granddaughter of King of the Pontiacs and Woodcrest De Kol Lad 26 A. R. O. Daughters. Sire of Calf is a 21 lb. grand son of the \$50,000 bull. Price only \$100.00

JOHN BAZLEY
319 ATKINSON AVE.
DETROIT, MICHIGAN.

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A wonderful shoe with a great promise

This shoe is the result of many years of experience in making the nation's best service shoe. Only a plant operating as the Hirth-Krause, could give this wonderful value.

The man who works will find that this shoe will outwear any ordinary pair of shoes. Supremely comfortable.

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Shoemakers for three Generations
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ROUGE REX
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ORION, MICHIGAN

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

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GUERNSEY bull calves whose sire's dam made 19,460.20 milk 900 to fat. Their mother's sire's dam made 18,169.10 milk 775.80 fat. T. V. BLOKE, Battle Creek, Mich.

FOR SALE

Guernsey Bull. Serviceable age. A. R. records dam 30 lbs. granddams 66 lbs. and 55 lbs. A son of Antone's May King. GILMORE BROTHERS, Camden, Mich.

Guernseys Federal inspected herd. Bull 2 yrs. old 22.50 lbs. Imp. Sportswood Sequel, dam's A. R. record 19,111.11 class G. Bull calf 8 mos. old, 100 lbs. 22.50 lbs. most old. Satisfaction guaranteed G. W. A. H. G. R. Albion, Mich.

GUERNSEYS REGISTERED BULL CALVES
Containing blood of world champions.
HICKS' GUERNSEY FARM, Saginaw, W. S. Mich.

Guernsey Bull Calf. Lined of Walter Phipps Farm. Born May 2-1919. \$100.00 Feb. Nov. or Birmingham. Walter Phipps Farm, 80 Alfred St. Detroit, Mich.

Registered Guernseys We are breeding better Guernseys. Extended pedigree of our Herd Bull to any one except the Postal Card Man. If you want better Guernseys we have them. J. M. WILLIAMS, North Adams, Mich.

Reg. Guernsey Bulls for sale cheap from 1 to 12 months. Bred from good producing and tuberculin tested cows. C. E. Lambert & Sons, Linwood, Mich.

For Sale Registered Guernsey bulls. May Rose breeding cheap if taken soon. Come or write. John Ebel's R. 2, Holland, Michigan.

For Sale cows and heifers fresh and springers one or car load lots. Apply THE JENNINGS FARMS, Bailey, Mich.

GENRIDA FARM

OFFERS
BULL CALF, BORN DEC. 26, 1919
Sire King Flint, who combines the blood lines of 2 families of 3 generations of 30 lbs. cows and 2 generations of 1200 lb. yearly record cows. Dam has a 21,39 lb. 3 yr. record. Her dam is a 23,99 lb. daughter of Johan Hengerveld Ltd.
Walter Hill, Davison, Mich.

The Traverse Herd

We have what you want in BULL CALVES, the large fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dam's records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

FOR SALE three Registered Holstein-Friesian yearling old heifers. Will make fine cows, best of breeding, sired by a Pontiac Bull. Will sell one or the three.
HENRY S. ROHLFS, Akron, Mich.

REGISTERED Holstein bulls sired by King Zerna Alcazar Pontiac son of the \$6,000 bull; some from good A. R. O. cows. C. H. Giddings, Goblesville, Mich.

\$125 Bays Reg Holstein Bull 1 yr. old. Delivered and guaranteed O. K. High class breeding and a good individual. B. B. REAVEY, Akron, Mich.

SCHOOL ELECTIONS.

Will you please inform us whether a person moving from a school district can vote at a special meeting after he moves out, he still owning land there; also whether the foreign born widow of a naturalized citizen can vote, she holding property since his death.

H. D.

Ownership of property in the school district does not entitle a person to vote at the school election, that is determined by residence. Residence does not mean actually sleeping and eating in the district, but it is a state of mind. If the voter has left for a temporary purpose with intention of returning, he does not lose his residence; but if he takes up his home elsewhere that would be pretty clear proof of his intention to change domicile. The naturalization of a person as a citizen of the United States carries with it the naturalization of his wife, and she can vote at the place of her residence though she never took out naturalization papers. Very likely the law may be changed since women are given the franchise, but that has not yet been done.

J. R. R.

FLOUR AND BREAD FOR FEEDING.

What is the value of flour for feeding hogs, and which is the best way to feed it? Would bread be a good feed for cows and horses, and how much may be fed with safety? J. E. M.

Flour would make an excellent feed for hogs, even better than wheat middlings, but usually its value as a human food would prevent feeding it to hogs. Red Dog flour, which is a by-product from some of the choicest grades of flour, and very much like wheat middlings, is quite extensively used in some localities. The best way to feed it is to make it into a very thick mash with milk if possible, otherwise water will do. This should be pretty well salted to flavor it.

Bread would make a very good food for horses and cows, the great trouble is to get them educated so they will eat it. At first you could soak it and mix with bran or middlings to get them to eating it. Quite a large feed could be used without any detriment.

C. C. L.

MAKING BREEDING PENS.

Will you please tell me how long it takes for eggs to become infertile after the roosters are removed from the flock, and how long for them to become fertile after the roosters are put back with the flock? M. M.

Poultry breeders usually mate up their breeding pens in January or February and do not save eggs for hatching for about four weeks. This insures no effect from previous matings and results in a large per cent of fertile eggs. When roosters are placed with a flock the eggs will often show a large per cent of fertility in a week or ten days. Of course, there is some variation in different flocks, depending on the vitality of the stock and size of the flock or breeding pens.—R. G. K.

LEACHED ASHES.

I can get leached ashes at a local potash factory for twenty-five cents a team load. They are more or less wet, some of the consistency of well-mixed cement, while some are dry enough to crumble. About what would they analyze? Can I use them in place of limestone and how much should I spread per acre? R. A.

Leached ashes are probably worth the hauling, but not much more. You understand the potash has all been leached out of them. Also much of the carbonate of lime, but some of it is left. If you do not have to haul them too far, it would probably be a good investment.

The fact of them containing considerable moisture would have no effect upon their value, other than their weight and the inconvenience in handling. Of course, the moisture would be of no value. You can apply any amount you wish.

C. C. L.

Get This Special Calf Meal Offer

To prove to you that International Calf Meal is all we claim for it—and more—we will for a short time only, ship prepaid a 100 lb. sack for \$5.50 to any point east of the Rockies. Send no money—pay when feed arrives. Once you try

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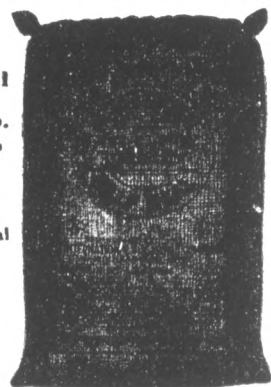
you will quit trying to raise calves on new milk. International Calf Meal will raise five calves at the cost of raising one on new milk—and they will thrive better. It is a perfect substitute for new milk—a scientifically mixed feed that all calves like. One pound is equal to one gallon fresh dairy milk in feeding value.

Act Today

This special offer will be withdrawn shortly. Act now. You can't go wrong.

International Sugar Feed Co.
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Makers of the Famous International Special Dairy Feed
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As per your special \$5.50 offer you may ship me 100 lbs. International Calf Meal Prepaid to my station.

My name is _____

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Watch the Udder

Keep the "business end" of the cow on the job of milk-giving. Injuries to teats or abnormal udder conditions reduce production, make the cow restless, and render milking difficult.

Bag Balm is a wonderful penetrating, healing ointment designed especially to restore the normal healthy texture to congested, caked or inflamed udders and to heal any external cut, chap, bruise, chafing or extreme soreness. A sure remedy for Caked Bag, Cow Pox and Bunches.

Keep the udder soft, silky and healthy and teats smooth and clear. The production will be increased and milking will be a pleasure.

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DAIRY ASSOCIATION CO.,
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BAG BALM

MADE BY THE KOW-KURE PEOPLE

Build YOUR OWN SILO SAVE FREIGHT PREPAID. Stronger, safer, better than Silos costing three times our price. 25, 50, 75 and 95 ton sizes at the lowest prices ever made on reliable silos. Our patented construction makes expensive foundations unnecessary. Makes perfect ensilage. Storm Proof. Easily, quickly erected. Strongly endorsed by thousands of users. TERMS IF DESIRED. Write for free illustrated catalog. 434 Koch Bldg. JONES SILO CO. Kansas City, Mo.

HENS WITH DIARRHEA.

Would like to know what to do in case of white diarrhea, as I have had several hens die with it. Have tried different home remedies without success. Would also like a remedy for hens eating one another's feathers. Do they lack something in their food, or is it just a habit? I feed corn morning and night, ensilage and scraps at noon. They also have plenty of meat scraps, crushed bone and egg shells and plenty of clean water. R. H.

Hens are usually resistant to the germs of white diarrhea although they can transmit the disease to the chicks by means of the eggs. White diarrhea in grown birds can be detected by what is called the agglutination test, but this can only be done by skilled workers in a laboratory. Possibly the hens only have common diarrhea which is caused by various digestive disorders. Chalk powder is a common remedy for diarrhea. Olive oil is also good. A half teaspoonful of paregoric given daily may soon cure the trouble.

Feather pulling is a habit usually caused by a lack of exercise and faulty feeding methods. Often it spreads rapidly through a flock when one hen acquires the habit. Some breeders have stopped feather pulling by dissolving powdered aloes in alcohol and painting the mixture on the plumage. Usually plenty of meat scraps and green food in the ration will keep hens from the habit if they have plenty of range and opportunity for exercise. R. G. K.

SILO FOR TEN COWS.

Do you think that ten dairy cows are enough for a silo ten feet in diameter, that is, if enough silage can be fed off this way? A. M.

In cold weather you can get along very well where you only have ten cows to feed from a silo, but when the weather gets warmer they cannot eat a sufficient amount to keep ensilage in the best of condition. You could, however, if too much spoils cut it down in the center and feed one-half at a time. A little will spoil on the exposed side which can be thrown out when fed.

You can feed ensilage, a certain amount to horses, hogs and chickens, and you will probably also have some young cattle and it might pay you to increase your herd of cows if your silage gets too stale from undue exposure. C. C. L.

NATIONAL AGRICULTURAL AFFAIRS.

(Continued from page 586).

move and secure higher prices for them, but will be of no benefit to the poor.

A bill has been introduced in the house providing for an investigation of the gasoline situation and the reasons for the prevailing high prices. As farmers are among the most extensive consumers of gasoline this measure promises to be of considerable interest to them. Senator James W. Wadsworth, of New York, has given assurance that when this bill reaches the senate he will be among those who will do what they can to help out the consumers of gasoline. If there is profiteering in this product it is probable that an endeavor will be made to punish the profiteers, or at least bring about a reduction in price. The high price of gasoline is having a marked influence upon the high cost of producing farm crops.

It is not often that we find the meat packers commending any proposal aiming at government regulation of their business. The exceptional instance was noted at a hearing before the Senate Agriculture Committee last week, when two representatives of the packing industry spoke favorably of the bill which has passed the house and is now before the senate, requiring the marking of all cold-stored products with dates of entrance and to forbid sale of products stored for more than twelve months.—E. E. R.

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He is Guaranteed Double Wear on His Headlight Overalls

Twice the wear of ordinary overalls, or money back—that's our guarantee to him, and to you.

We put more denim and better denim into Headlights than goes into the making of ordinary overalls, so that they last longer and give more comfort. You can shorten your workday by putting more comfort into it—the roomy comfort of Headlight Overalls. Buy your first pair today.

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World's Greatest Overall Makers

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Facts in BLACK & WHITE

Holstein Clubs are Flourishing Everywhere

Holstein Clubs, County, state and district, have been organized throughout the country and are making wonderful progress in establishing testing associations, and in co-operative effort in eradicating disease among their animals. They are receiving definite and systematic aid from the Extension Service activities of The Holstein-Friesian Association. Members are inspired with ideals in dairying and dealing, and in many ways the greatest good for all Holstein breeders is being propagated.

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CLUNY STOCK FARM

A Semi-Official Bred Bull to Head Your Herd
Maplecrest Application Pontiac No. 132652, heads Your Herd
His dam's record is 1344.3 lbs. butter, 23,421.2 lbs. milk in 365 days, and 35,103 lbs. butter and 515.6 lbs. milk in 7 days.
One of his sons from our good record dams will carry these great blood lines into Your Herd.
For Pedigrees and Prices write to
R. BRUCE McPHERSON, Howell, Mich.

4 Nearest Dams 32.46 lbs.

Bull Born November 14, 1919

Color—nearly half and half.

Sire's Dam:—Butter 7 Days 32.32; Milk 7 Days 552.40; Average per cent Fat 4.68.

Sire's Sire's Dam:—Butter 7 Days 40.32; Milk 7 Days 610.20; Butter 30 Days 165.22; Milk 30 Days 2695.8.

Dam:—Butter 7 Days 26.61; Milk 7 Days 532.9.

Dam's Dam:—Butter 7 Days 36.59; Milk 7 Days 565.00; Butter 30 Days 124.19; Milk 30 Days 2436.6

She heads a combination of three direct generations of thirty pound cows.

Price \$750.00 f. o. b. Howell.

McPherson Farms Co., Howell, Mich.
Herds under U. S. Supervision.

HOLSTEIN BULL CALVES FOR SALE

From dams with good records.

BULL CALVES Sired by 45 lb. BULL.

BULL CALVES Sired by 34 lb. BULL.

BULL CALVES Sired by 33 lb. BULL.

PRICES VERY REASONABLE.

Privilege of return if not satisfied.

A. W. COPLAND, Michigan.

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Herd under State and Federal Supervision.

OUR HERD SIRE

Model King Segis Glista

By a 30 lb. son of Lakeside King Segis Alban De Kol. His dam Glista Fenelle 32.37 lbs. Her dam Glista Ernesline 35.96 lbs. His three nearest dams average over 33 lbs and his forty-six nearest tested relatives average over 31 lbs. of butter in seven days. Write for prices on his sons.

Grand River Stock Farms
C. G. Twiss, Mgr. Eaton Rapids, Mich.

Winnwood Herd

—SENIOR HERD SIRE—

Flint Maplecrest Boy (166974)

4 years old and weighs 3000 lbs. We have a few of his sons ready for service and some little fellows straight as a line and price of right the daughters of Flint Maplecrest Boy are making good.

—JUNIOR HERD SIRE—

Sir Ormsby Skylark Burke (249 66)

Albrother to the world champion cow over all breeds (Duchess Skylark Ormsby) 1296 lbs. of butter in one year. He is the best bred bull in Michigan his dam a daughter of King Segis Pontiac she is a sister to King Segis Pontiac Count and the \$50,000 bull King Segis Pontiac Alcartra, we said get a better bull (we got one) one of his sons out of a daughter of Flint Maplecrest Boy will make some hard sire.

JOHN H. WINN, (Inc.)
ROSCOMMON, MICH.

Bazley Stock Farm YPSILANTI, MICH.

A nicely bred calf. The dam of this calf has just made 12.77 lbs. of butter from 304.6 lbs. of milk as a senior yearling. She is from a 16.65 2 year old that will freshen in April and will be tested. Dam of Calf is both a grand daughter of King of the Pontiacs and Woodcrest De Kol and 25 A. R. O. Daughters. Sire of Calf is a 21 lb. grand son of the \$50,000 bull. Price only \$100.00.

JOHN BAZLEY

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A BULLY GOOD BULL CALF.

Born July 1919. His six nearest dams have good yearly records. Amongst them are three world's records Good individual, nicely marked, and worth in any good herd all he will cost. You can't pay too much for this kind. I have a fine four months bull, not quite so well bred but a nice one.

L. E. CONNELL

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Holsteins of Quality

Five large heifers and some extra good cows bred to a grand son of Mayfield Sylvia, also calves and yearling heifers. All Federal tested for Tuberculosis.

E. A. HARDY,

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To reduce my herd I am offering for sale a number of Pure Bred Holstein heifers and full age cows.

JOSEPH H. BREWER,

Grand Rapids, Mich.

Reg. Holstein Bull Calf born Feb. 1, 1920. Sires 13 dams ave. 31 lbs. Price \$100 Reg. and Del. would take Liberty bond. J. R. Hicks, R. 3 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.

Bull calf born Apr. 27, '19. Sire's six nearest dams average 33.34 lbs. butter for 7 days. Dam is a 16.82 lb. 3 year old. Oscar Wallin, Unionville, Mich.

LONG DISTANCE

Holstein calves of either sex. Can spare a nicely marked heifer backed by seven dams that average above 1200 lbs. butter and 24000 lbs. milk in one year. Choice Duroc Sows.

A. FLEMING,

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10 mo. old bull 4-5 white, 9 nearest dams average 23.85 lbs. butter, 533 lb. milk in 7 days. \$125. Terms. Also few grand daughters of Maple Crest Kern. Heng. M. L. McLAULIN, Redford, Mich.

FOR SALE

Four Reg. Holstein Cows and a 31 lb. bull. J. Taylor Gage, Manchester, Mich.

HARWOOD HEREFORDS

A few young bulls from 10 to 18 months, well bred, in fine condition. Special price for the next thirty days. No females for sale at present. Visitors welcome.

Jay Harwood & Son, Ionia, Mich.
Farm Six Miles South of Ionia

HEREFORDS

3 Prince Donald, 3 Farmer and one Polled bulls from 7 to 13 months old, for sale.

ALLEN BROS.

PAW PAW, MICHIGAN

Herefords Special low price on the following for a short time. One four year old cow, due in spring. Two 2 year olds with calves by side. One yearling heifer. Three bull calves, about 9 months old, one polled, two horned, all well marked and good dark color.

COLE & GARDNER,

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Herefords. Just purchased 3 new herds, now have 150 head; we offer you anything desired either sex, horned or polled, any age. Priced reasonable.

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MICHIGAN JERSEYS

Michigan is an ideal place for the raising of Jersey Cattle and there are no better cattle for dairying than Jerseys. Jerseys mature early, live long, produce persistently, give the greatest amount of butter-fat obtainable from every pound of feed. They are hardy and vigorous, always on the job and the greatest mortgage-lifters that ever entered a barn.

Michigan should have more Jerseys and the Jersey breeders of the state are anxious to cooperate with anyone who is interested in successful dairy farming.

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ALFRED HENRICKSON,
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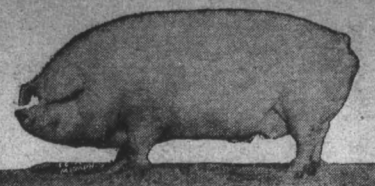
Maple Lane Register of Merit Jersey Herd. Bulls ready for service out of R. of M. dams and sired by one of the best grandsons of Pogue 98th of Hood Farm.

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The Wildwood Farm

Jersey Cattle, Majesty strain. Herd on State accredited list. R. of M. testing constantly done. Bulls for sale. ALVIN BALDEN, Phone 148-5, Capac, Mich.

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One of the Best Herds in Michigan

Spring gilts and fall yearlings bred for March, April and May litters. I ship C. O. D., pay express and register in buyer's name. If you want a BIG TYPE sow, guaranteed right in every way, write me.

J. CARL JEWETT,

R. 5, Mason, Michigan.

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

FOR SALE Jersey Bulls ready for service R. of M. ancestors. Raleigh-St. Lambert breeding. Jerseys stand for economy. Waterman & Waterman, Packard Rd. Ann Arbor, Mich.

LILLIE Farmstead Jerseys--A few heifers bred to freshen soon, heifers bred to freshen next fall, 3 cows, R. of M. bull calves. C. C. Lillie, Coopersville, Mich.

Bulls ready for service from our herd bull Marguerites Premier gdson of Pogue 98th of Hood Farm, and cows now on test for R. of M. Smith & Parker, Howell, Mich.

FOR SALE Purebred Jersey Bull Calf six months old. Containing blood from the Hood Farms, Sophie's Agnes, B. W. PARDEE, Big Rapids, Mich.

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For Sale Registered Jersey Bulls from tested dams. Grass Lake, Mich.

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For Sale Shorthorns of Quality Scotch and Scotch Topped descendants of Archers Hope, Avondale, Mass. Sulton and White Hall Sulton. Model Type, by the Oscola Co. Shorthorn Breeders Ass. John Schmidt, Sec. Reed City, Mich.

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You Can Buy

a bull that will put weights on your dairy calves--the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. A roan, senior yearling, a Missie of Villager breeding, a herd bull prospect, Federal Test.

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MEADOW HILLS Shorthorns. Herd headed by Silvester King, full brother of Lavender Sultan. Purdue University's great sire. For sale females of all ages, a few young bulls. Geo. D. Doster, Doster, Mich.

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Home of the Michigan Champions.
Shorthorn Sires in Service:

IMP. Lorne, IMP. Newton Champion, Sterling Supreme. Why not buy a young bull to head your herd that carries the blood that is making Shorthorn History. Only a few real headers left. Write your wants.

C. H. PRESCOTT & SONS, Tawas City, Mich.

Royal Bruce 79521 heads our herd. Three half brothers sold for \$55,000.00 one Cluny Proud Augusta, going to head Wm. Duthies of Albany's herd at \$21,000.00. One bull and a number of females for sale.

Central Mich. Shorthorn Breeders Assn. offer 40 bulls, 38 females, write for new list. OSCAR SKINNER, Sec. Gowen, Mich.

The Kent Co. Shorthorn Assn. have males and females of quality for sale. L. H. LEONARD, Sec., Caledonia, Mich.

FOR SALE Registered Shorthorns of good milking strain. Bull Roan three years old, bull calves 2 to 6 months. Chas. Warner Jr., R. 4, Imlay City, Mich.

Milking SHORTHORNS. Clay bred bull calves Herds under Federal Supervision. Davidson & Hall, Beland & Beland, Tecumseh, Mich.

Registered Shorthorn bull of best Bates breeding five months old. Freeland, Mich.

Milking Shorthorn 1 bull calf of service age for sale, color red ROSEMARY FARMS, Williamston, Mich.

Shorthorns Good Scotch bred bulls, cows and heifers priced right. W. B. McQUILLAN, R. 7, Howell, Mich.

Shorthorns Scotch and Scotch Topped, only a few left at old prices. W. J. BELL, Rose City, Mich.

Small herd of registered Shorthorns for sale. Priced for quick sale. SHEAR BROS. R. F. D. 5, Flint, Mich.

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Berkshires size with quality is our specialty. Write your wants to M. G. MOSHER & SONS, Osseo, Mich.

Duroc sows and gilts bred to Walts King 92940, who has sired more 1st and 2nd prize pigs at the State Fair in last 2 years than any other Duroc boar. Everyone will be a money maker for the buyer. Cat. and price list.

Walnut Hill Durocs June farrowed boars ready for service from Ira Jackson and Brookwater stock, also bred gilts and sows of all ages for Mar. and Apr. farrow, priced right and registered in buyer's name. Write.

JOHN C. DEAN, R. 1, Mason, Mich.

DUROC-JERSEYS
A few extra good bred sows and gilts for sale. CAREY U. EDMONDS, Hastings, Mich.

DUROC JERSEYS
Bred Gilts for March and April farrow. Write at once for description or come and see them. Satisfaction guaranteed with every order. RUSH BROS. OAKWOOD FARM, Romeo, Mich.

Michigana Farm offers some exceptional in tried sows. These are guaranteed to give satisfaction and they will ship on approval to responsible parties. They breed and sell good Durocs. O. F. Porter Mgr. Pavilion, Mich.

ROYAL BRED GILTS
Dams sired by Michigan Cherry Col. Bred to Jacks Cherry King, No. 18929. Son of the \$10,000 champion, Jacks Orion King 2nd. all high class stock, write for prices. The Jennings Farms, R. 1, Bailey, Mich.

DUROC JERSEYS
Gilts bred for March and April farrow. A Guarantee back of every Sow Sold. F. J. Drott, Monroe, Mich. R. 1.

DUROC JERSEYS
E. D. HEYDENBERG, Wayland, Mich.

Duroc Jersey, Bred sows and gilts April and May farrow. Sired by or bred to my 1000 lb. herd boar. JOS. SCHUELLER, Weidman, Mich.

Duroc bred sows and gilts sired by Orion Cherry King Col. 2nd. bred to all Col. of Sangamo 2nd. First class lot, reasonable. W. C. Taylor, Milan, Mich.

DUROC GILTS. Bred and open. Real ones at fair prices. BOARDMAN FARMS, Jackson, Michigan.

DUROCS for Sale Bred sows and fall pigs of both sex and a car of grade draft colts. CHAS BRAY, Okemos, Michigan.

Chester Whites, spring and fall stock for sale won highest honors against strong competition. F. W. ALEXANDER, Vassar, Mich.

Raise Chester Whites?
Like This
the original big producers

I HAVE started thousands of breeders on the road to success. I can help you. I want 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. S. S. BENJAMIN, R. F. D. 10, Portland, Michigan

O. I. C. and Chester White Swine
Strictly Big Type with quality. Spring pigs of March and April farrow. A choice lot of boars. Will only spare a few more gilts at present. Will ship C. O. D. and record them free. Newman's Stock Farm, Marlette, Mich. R. No. 1.

O. I. C. and Chester White Swine booking orders for spring pigs from big type blood lines. Fall pigs with size and quality. I ship C. O. D. and register in buyer's name. John C. Wilk, Alma, Mich.

O. I. C.'s 2 extra choice last spring gilts. 11 last fall boars wt. 175 to 250 also fall gilts the best I ever had. Farm 1/4 mile west of Depot. Citizens Phone 124. OTTO B. SCHULZE, Nashville, Mich.

O. I. C.'s Am offering a few September pigs that combine size and quality. C. J. THOMPSON, Rockford, Mich.

O. I. C.'s Big type gilts, fall yrs, tried sows, Mar. Apr. farrow. Summer and fall pigs. I pay exp. reg. free, satisfaction guaranteed. G. P. Andrews, Dansville, Mich.

O. I. C. Gilts bred for March and April farrow, I pay express and register in buyers name. H. W. MANN, Dansville, Mich.

O. I. C.'s Have some Choice Spring Gilts, bred for spring farrow. THAYER BROS., R. 1, Mason, Mich.

O. I. C. Gilts bred for March and April farrow, guaranteed safe with pigs. Fall pigs and a few service boars. Herd insured by D. T. F. C. Burgess, R. 3, Mason, Mich.

O. I. C.'s Choice bred gilts, 2 extra fine service boars, choice Sept. pigs either sex or pairs. CLOVERLEAF STOCK FARM, R. 1, Monroe, Mich.

O. I. C. Choice gilts bred for April and May farrow. W. B. McQUILLAN, R. 7, Howell, Mich.

O. I. C.'s choice gilts bred for May and June farrow. good fall boars. Booking orders for spring pigs. A. J. Barker & Son, Belmont, Mich.

L. S. P. C.
2 choice spring boars and 2 nice fall boars left, a few extra nice gilts left bred for April farrow.

H. O. SWARTZ, Schoolcraft, Mich.

LOOK B. T. P. C. We are selling at a great sacrifice for the next 10 days extra good gilts to farrow in Apr. choice fall pigs to make room for our herd sows. W. BREWBAKER & SONS, Elsie, Mich.

FOR SALE--Large Type Poland China Gilts, bred for April farrow. Inspection invited. Free delivery from Manchester. A. A. Feldkamp, R. 2, Manchester, Mich.

MILLER Meadow's L. T. P. C. boars all sold. Gilts sired by General Jones and bred to our young boar Alaska, address: CLYDE WEAVER, Ceresco, Mich.

For Sale
Two Bred Poland China Gilts
Litter mates, farrowed Apr. 3, 1919. Choice individuals and choice Big Type breeding. Weighed March 10, better than 300 lbs., not fat. Bred for Apr. 7 and Apr. 23 respectively.

WESLEY HILE, R. 6, Ionia, Mich.

Boars also sows and pigs. Real Big Type Poland China. Bred big for 35 years. Sired by Mich. Buster by Giant Buster. Litter 14 out of Mow's Miss Queen 2nd, some breeding, also by Butler's Big Joe by Rust's Big Joe, out of a Wonder Queen, nuf said. Write us your wants, we will treat you right, our prices are low. J. C. BUTLER, Portland, Mich.

Big Bob Mastodon pigs takes the cake, book your order now. Fall boars and gilts sired by a grandson of Disher Giant, open or bred to Big Bob for Sept. 23 yearling sons. O. E. GARNANT, Eaton Rapids, Mich.

Big Type Poland Chinas with quality, at reasonable prices. Pigs of both sex, and bred sows and gilts. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

Big Type P. C. Bred gilts, Fall yearlings, prize winners, out 1100 lb. sire and mammoth sows from Iowa's greatest herds. E. J. Mathewson, Burr Oak, Mich.

L. T. P. C. Spring gilts ready to ship also fall pigs both sexes. P. R. ALEXANDER, R. F. D. 6, Albion, Mich., Bell phone 643F11.

T. P. C. Gilts sired by Big Giant and O's Orange. Bred to O's Orange and Col. Jack Jr. No better breeding to be had. L. L. Chamberlain, Marcellus, Mich.

LEONARD'S B. T. P. C. bred sows all sold. Order booked for boar pigs at weaning time from Mich. Champion Herd. E. R. Leonard, R. 3, St. Louis, Mich.

U. S. FIGURES SHOW
a shortage of 2,578,000 hogs, over Jan. 1, 1919. Just figure a moment what this will mean to the farmer. Constructive breeder of Poland China Hogs.

C. A. BOONE, Blanchard, Mich.

I am offering Large Type Poland China Sows, bred to F's Orange, at reasonable prices; also fall pigs. Write or call Clyde Fisher, St. Louis, Mich. R. R. 3.

6th ANNUAL P. C. Bred Sow Sale March 13, 1920. For particulars write W. J. HAGELSHAW, Augusta, Mich.

Large Type Poland China Stock Hogs and Bred gilts. E. H. EISELE, R. 2, Manchester, Mich.

B. T. P. C. All sold out except some Fall Gilts, Thanking my customers. JOHN D. WILEY, Schoolcraft, Mich.

A FEW NO. 1
Fall boar pigs left. Pairs not skin. A few tried sows bred. Booking orders for spring pigs. Large type, winning blood lines. Satisfaction guaranteed.

STEUBENS HAMPSHIRE FARM
R. R. 3, Angola, Ind.

Pine Grove Hampshires, "Quality First" Michigan Boy, Grand Champion boar of Michigan, Bred and owned by us. Many other prize winners at Michigan State Fair 1919. Hog's for sale all ages, both sex. "Lookout Joe", a \$1000 boar heads our herd. GEO. COUPAR & SONS, R. 1, Marlette, Mich.

Edgewood Hampshires, spring boars sired by our prize winning and Grand Champion boars. Make the right buy today and get a good one, either for Hampshire breeding or for a cross on your other sows. Depew Head, Edgewood Farm, Marion, O.

Bred Gilts all sold at present and more later. Spring pigs in season. JOHN W. SNYDER, St. Johns, Michigan.

Blue Hogs Shipments desired the coming summer should be booked at once. Now shipping spring orders. These hogs are actually blue in color. They are the largest, growthiest and most prolific breeders on earth. Write for information. Mention this paper. The Blue Hog Breeding Co., Wilmington, Mass.

Tamworths The great bacon breed. Spring pigs for sale, in pairs or trios not a kin. W. H. WARNER, Concord, Mich.

SHEEP.
KIDS

I cannot sell you any more ewes until next fall. To some grown up, I can offer 10 very good young Shropshire ewes that will lamb in April for \$400.00. Their lambs contracted to me should not more than purchase price next fall. Also 10 mighty nice ewe lambs for \$350.00. Come and see them.

S. L. WING, KOPE-KON FARMS, Coldwater, Mich.

Idle Wild Stock Farms Shropshire yearling rams from prize winning stock. Make your selection early. Cliff Middleton, proprietor, Clayton, Mich. R. 3.

250 Reg. Shropshires offered past season all sold before Aug. 1st can supply any thing needed. Registered Shropshire ewes and rams of same high quality. C. LEMEN, Dexter, Mich.

Want a Sheep? Let American Hampshire Sheep Association send you dandy booklet with list of breeders. Write COMFORT A. TYLER, 22 Woodland Ave., Detroit, Mich.

Reg. Cotswolds Ewes all sold; yearling rams for sale taking orders for fall delivery. A. M. BORTEL, Britton, Mich.

HORSES
For Sale or Trade

Registered Percheron Stallions: Brown three year old. Gray yearling. Butler Stock Farms, Portland, Mich.

For Sale or trade Percheron Stallion Danforth No. 105320, 6 years old sound and right in every way a sure foal getter second prize at West Mich. State Fair would trade for Dairy Cattle. Apply THE JENNINGS FARMS, Bailey, Mich.

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

Percheron Stud eight years old, coat black a ton horse a good worker. Price \$300. E. J. ALDRICH, Tekonsha, Mich.

For Sale Very pretty spotted Shetland pony, registered Mammoth Jack, 1 grade Guernsey Bull two years old, price on application.

J. M. McFARREN, Rapid City, Mich.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Stiffness.—I have a young horse that has been some stiff in fore quarters for the past two weeks and would like to know what can be done to prevent permanent soreness. Subscriber, Decatur, Mich.—Your horse should be exercised, or worked every day. His food supply should be regulated according to the work he is doing. Perhaps you have fed him too much grain when he was idle. Let fresh air into stable and keep his bowels open. Without knowing what ails him, don't give him drugs.

Suppurative Pneumonia.—About the first of October one of my pigs took sick. Some nine days later another took sick. Both were very weak, could hardly walk. The last one that took sick died on November 14. Our local Vet. opened it, found large abscess in lung, and both lungs were badly diseased. The lungs give off a bad odor. The Vet. called the ailment necrosis of the lungs. Is it safe to turn other pigs in this pen next spring? H. E. N., Smiths Creek, Mich.—Spread fresh powdered lime on pen floor, and wash walls with fresh lime wash and you can safely use the pen any time after it has been cleaned.

Stomach Worms.—I have some pigs that are troubled with stomach worms and would like to have you give a remedy. Z. C., Marcellus, Mich.—Give three grains of calomel and six grains of santonin for each hundred pounds the hogs weigh is a good remedy for intestinal parasites, but for stomach worms, give a teaspoonful of turpentine in three ounces of raw linseed oil daily for three days. This is the proper dose for a shoat weighing eighty to one hundred pounds. Fast the hogs for twenty-four hours if you care to obtain the best results from vermifuges and vermifuges.

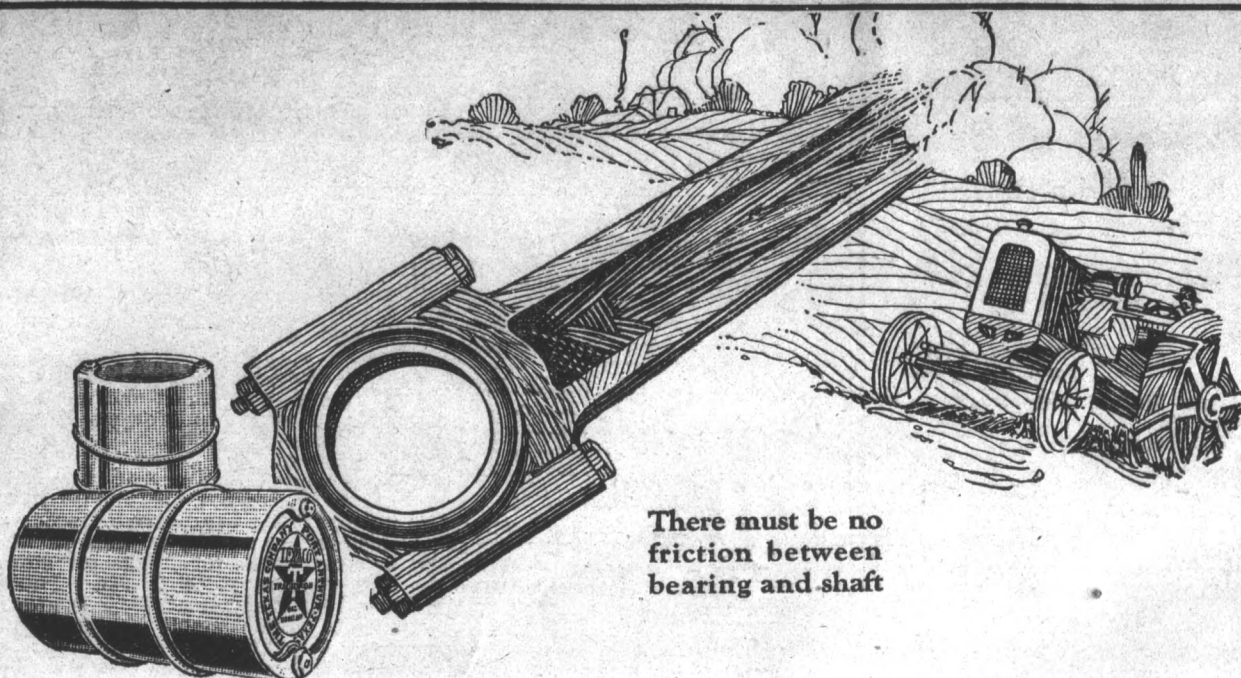
Weakness—Chronic Indigestion.—I have a mare that perspires during the night, coat usually wet in the morning, and her bowels are too loose. My cattle are inclined to chew wood. A. K., Lenox, Mich.—Clip your mare, change her feed, let fresh air into stable, feed more oats and well cured mixed hay. Give her a tablespoonful bicarbonate of soda and two tablespoonfuls of powdered wood charcoal in each feed. Feed your cows some roots and plenty of well-cured fodder, give each one a teaspoonful of salt, a tablespoonful powdered gentian and plenty of powdered wood charcoal in feed once a day.

Worms.—I have an eight-year-old driving horse with ravenous appetite for feed, but he is weak and fails to lay on flesh. Have fed him plenty of condition powders. Subscriber, Carsonville, Mich.—Give him one dram of santonin, half dram of calomel and one ounce of ground gentian in bran mash twice a week for three weeks. His teeth may require floating. Change his feed.

Nervous Cow—Ovarian Cysts.—Our four-year-old cow freshened in October, 1919. Was bred back the tenth of February, and again the third of March. Since then she has shrunk in her milk, urinates frequently, kicks and rolls and is very uneasy. Her urine is red, walks stiff, but has no fever. Our local veterinarian says she has neither inflammation of bladder or kidneys, but is inclined to believe her ovaries might be diseased. T. B. P., Custer, Mich.—If she gets with calf, she will perhaps recover, but she may have a cystic condition of the ovaries, if so your veterinarian can doubtless crush them through rectum, then she will get with calf. Give her one dram of urotropin (Uritone, Parke, Davis & Co.), at a dose three times a day.

Abortion.—I bred a two-year-old heifer; she failed to come in heat again and I, of course, thought her safely in calf, for not only myself, but several neighbors believed her to be in calf. Six months after she was served I sold her to a friend who expected her to soon come fresh, as she surely had every appearance of being in calf. Her udder had seemingly filled, but she soon lost all indications of being with calf, but fails to come in heat. Will it pay to keep her? T. M., Wayne Co.—Her ceasing to come in heat after being bred indicated that she was in calf. Perhaps she aborted without any person knowing it. I hesitate to advise you to keep her for breeding or dairy purposes.

TEXACO MOTOR OIL ★ THUBAN COMPOUND ★ HARVESTER OIL ★ AXLE GREASE



There must be no friction between bearing and shaft

TEXACO

TRACTOR OIL



Every badly-worn bearing is a mute but powerful protest against improper lubrication. It is evidence that the tractor has overheated, that the motor has knocked, that fuel has been wasted, that power has been lost; in short, that the tractor has not "kept going" in the field. And if the tractor is to pay the farmer, it must not lose time when he needs it most. For continuous and dependable operation there must be no friction between bearing and shaft. TEXACO TRACTOR OIL will take this wear. Its tough oil film is exceedingly durable—quality makes it so. Its wonderful body makes it economically lasting. TEXACO TRACTOR OIL comes in 33 and 55 gallon well-built steel drums, wooden barrels and half-barrels, and five gallon cans.

THE TEXAS COMPANY, Petroleum and Its Products

General Offices: Houston, Texas. Offices in Principal Cities. District Office: Chicago, Ill., McCormick Bldg.

THE

Ray Warner Dispersal

SHORTHORNS

ALMONT, MICHIGAN

APRIL 15, 1920

At 1 o'clock P. M.

29 Head — 18 Females — 11 Males

Entire Herd of Ray Warner.

9 Head from the Herd of Chas. Warner Jr.

Location 4 1-2 miles south of Imlay City or 1-2 mile west and 1-2 mile south of "Webross" stop on D.W. R.

SEND FOR CATALOG

RAY WARNER,

Route No. 3

ALMONT, MICHIGAN

Wanted management of a stock farm where a skilled veterinary is required. A graduate of Ontario Veterinary College twenty years' experience in Canada. Open for engagement May 1st. References: Sir Adam Beck, London, Ont., Captain Tom Robinson, London, Ont., Dr. Angus McLean, Detroit, Dr. W. G. Jennings, Detroit. Address Dr. Donald J. McColl, 108 Scovel Place, Detroit, Tel. Wal. 2122.

Stallion For Sale. One Imported Percheron. One Standard, bred by Athel. Sell or trade for anything, anywhere. JOHN STREVEL, Blaine, Mich.

FOR Sale One Belgian Stallion grandson of Brinde. Our reason colts in way. Price \$5.00. H. E. HOBART, Colling P.O., Tuscola, Mich.,

BELGIAN DRAFT HORSES

We have the best and largest herd in the world to select from, with Grand Champions heading our herd.

We won more premiums at the International Belgian Horse Show, Waterloo, Iowa, 1919 than any other breeder or exhibitor, competing against 25 exhibitors from Iowa, 3 from Indiana, 1 from Illinois and 1 from Canada.

We have sold 4 winners at the International Belgian Horse Show to an Iowa breeder. Those horses winning again at the International Live Stock Show at Chicago the same year.

We are listing mares of Iowa breeders and breeders from other states, to be bred to our Rubis 8004, whose offspring won at both Internationals this year, taking some of the highest honors in stallion and mare classes.

We can sell you a carload of stallions and mares or just one of either sex.

We invite your inspection and will meet you at any of the railroad stations if you will write us in time.

Come to Burt, Michigan, via Grand Trunk Railway or to St. Charles, Michigan, via the Michigan Central Railroad.

We are in the market for Registered Belgian Draft Colts

Owosso Sugar Company
Prairie Farm

ALICIA, Saginaw County, MICHIGAN

When writing to advertisers please mention the Michigan Farmer.

\$1,200 Settlement!!

Hartford Business Man Recommends Howell Company

The Big Mutual Pays Reasonable Claims, Promptly

Hartford, Mich.,
April 1st, 1920.

Citizens' Mutual Automobile Insurance Co.,
Howell, Michigan.

Gentlemen:

I wish to thank you for the prompt and satisfactory manner in which you settled my claim. I took automobile insurance as I realized that automobile owners were the prey of the automobile thief and, in many cases, unreasonable damage claims.

On March 4th I had the misfortune to have a traffic accident in which a person was knocked down, suffering serious personal injury. The doctor and hospital bill, together with the serious nature of the case made this quite expensive. One of your officers co-operated immediately in arranging a fair basis of settlement. The people injured assumed a reasonable attitude when they found they could get their pay by making a fair proposition, and the matter was taken care of without litigation or delay.

Some of my friends who are insured in Stock Companies were greatly surprised that you can pay your claims so promptly when the cost to the policy-holder for the policy is so small, but I have informed them that a large company gives quantity production at low cost, and I have no hesitation in recommending my friends to insure in your Mutual Company which has stood the test of five seasons and has always had sufficient money on hand to pay its claims, promptly, and where the injured parties present a reasonable claim I am sure that it will be promptly paid, and on the other hand, where unreasonable claims are demanded your Company is large enough to contest the claim and appeal, if necessary, to the Supreme Court, so that automobile owners will be treated fairly.

Yours sincerely,
(S. M. CARPP).

Dye That Skirt, Coat or Blouse

"Diamond Dyes" make old, shabby, faded apparel just like new.

Don't worry about perfect results. Use "Diamond Dyes," guaranteed to give a new, rich, fadeless color to any fabric, whether wool, silk, linen, cotton or mixed goods,—dresses, blouses, stockings, skirts, children's coats, draperies,—everything!

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To match any material, have dealer show you "Diamond Dye" Color Card.

\$30 Profit per Hive



made by beekeepers. You, too, can make big money by keeping bees as a side line. Little work required. Bees supply own food. Men, women and older children can learn quickly. We buy spare honey at highest market price. Our productive Italian Bees now ready for May delivery. Write today for catalogue. Beekeepers send for bee lists. No obligations attached.

The Griggs Bros. Co.
Dept. 27, Toledo, Ohio

Please Mention The Michigan Farmer
When Writing to Advertisers.

Latest Market Reports

SECOND EDITION.

The markets in this edition were revised and corrected on Wednesday afternoon, April 7.

WHEAT

Owing to strikes on some of the railroads the movement of grain has been slow. These conditions affect all grains and strength is felt in all. Receipts of wheat are light and exporters are anxious to buy. Present prices at Detroit are as follows:

No. 1 red	\$2.68
No. 1 mixed	2.66
No. 1 white	2.66
No. 2 red	2.65
No. 3 red	2.62

CORN

Corn values declined Monday but made a rapid recovery and the market closed with a firm tone. At Chicago the bulls had an advantage at the opening Monday, but during most of the day were in distress. At the outset prices jumped to new high marks for the season. This resulted in active selling which was accompanied by many disturbing rumors. Higher quotations on hogs have also given some strength to the corn deal. Prices on the local market are quoted as follows:

No. 3	\$1.67
No. 3 yellow	1.72
No. 4 yellow	1.67
No. 5 yellow	1.63
No. 6 yellow	1.59

OATS

Oats are in demand and prices are well sustained. Receipts are light and there is an active demand from local buyers as well as shippers. Present quotations on the local market are as follows:

No. 2 white	\$1.05
No. 3 white	1.04
No. 4 white	1.03

RYE

The receipts of this cereal have been light and the demand is active. At Detroit Cash No. 2 rye is quoted at \$1.88 per bushel.

BEANS

There is little activity in the bean market but prices are steady. Choice pea beans for immediate shipment are quoted at \$6.60 per cwt on the local market. At New York the situation shows little change from previous weeks. Choice pea beans being quoted at \$7.25@7.50 per cwt; red kidneys \$14.50@14.75.

SEEDS

There is little change to report in the seed situation. Prices are firm and the market steady. At Detroit prime red clover is quoted at \$34; alsike at \$36.50; timothy \$6.40.

FEEDS

The demand for all kind of feeds is active and prices are well sustained. On the local market prices are as follows: Bran \$55@56; standard middlings \$58@59; fine middlings \$58@59; coarse corn meal \$69.50; cracked corn \$72@72.50; chop feed \$61@62 per ton in 100-pound sacks.

POTATOES

On the Detroit market supplies of potatoes are moderate, prices slightly higher and the demand active. Sales to jobbers of Michigan U. S. Grade No. 1 round white stock are reported at \$8.75@9 per 150-pound sack.

BUTTER

Butter prices are firm and the supply is moderate. On the local market prices are 62c per pound for fresh creamery and 62@65c for fresh creamery in one-pound prints.

EGGS

Buying is active and supplies are

coming in freely. Present prices at Detroit are 42@43c for fresh eggs.

POULTRY

The market is firm and the demand greater than the supply. Present values on the local market are as follows: Live Poultry, spring chickens best 38@40c; Leghorns 36@37c; hens 40@42c; Leghorns 36@37c; hens 40@42c; small hens 38@39c; roosters 24@25c; geese 30@35c; ducks 40@45c; turkeys 44@45c per pound.

GRAND RAPIDS

Milling companies advanced the price of wheat to growers this week five cents per bushel. The price now is \$2.40 for No. 1 red and \$2.38 for No. 1 white. Egg market is lower, owing to increase in receipts. Dealers now pay 39c per dozen to producers. Eastern buyers are in western Michigan this week for April for storage. The opening price is 38c. Potatoes are a little higher at \$3.25 to growers. Buyers from outside the state have been through western Michigan this week and bought from farmers a large quantity on \$3.15 per bushel basis. A few spring lambs were marketed this week at \$8 each for Easter. They were dropped in January. Hay is lower at the city market, selling at \$25@27 for loose timothy. Farmers have been holding for an advance but cheapness of baled hay caused little demand for loose hay. A few farmers began preparing their ground for sowing oats this week. Scarcity of help may curtail the acreage of all crops this season.

WOOL

There seemed to be a better feeling in the wool trade at Boston Saturday, April 3. Ruling prices for the various grades and classes were as follows: Ohio and Pennsylvania fleeces, delaine

unwashed 97c@1; fine unwashed 74@76c; half-blood combing 83@85c; three-eighths-blood combing 69@70c. Michigan and New York fleeces, fine unwashed 70@73c; delaine unwashed at 95c@1; half-blood unwashed 80@82c; three-eighths-blood unwashed 67@68c.

NEWS OF THE WEEK.

(Continued from page 578).

the grip of a blizzard, accompanied by strong winds and a heavy fall of snow. The strike of switchmen in Chicago is affecting all roads entering that city except two.—It is reported that union officials predict a strike of six million men, should the anticipated move by employers in leading industries to abolish the eight-hour day be undertaken.—French labor leaders are urging the nationalization of French industries.

Monday, April 5.

CANADA will start immediately on the formation of an efficient air force.—A tornado sweeps through Parkersburg, W. Va., doing serious damage to property.—Railway service in central western states is demoralized by heavy snow storms.—A heavy slide of earth in the Culebra Cut of the Panama Canal narrows the channel down to one hundred feet but has not stopped shipping.—County agents from every part of Michigan report an unusually critical labor situation on Michigan farms this spring.

COMING SALES.

Shorthorns, April 10, Elmer Westfall, Edwardsburg, Mich.
Holsteins, April 12, John P. Olcott, Perry, Mich.
Shorthorns, April 15, Ray Warner, Almont, Mich.

Live Stock Market Service

BUFFALO

Pigs \$16.75; medium and heavy at \$16.50@17.50; yorkers and mixed at \$17.50@17.75; wool lambs \$22; clipped lambs \$19; calves \$19.

DETROIT

Cattle.
Market strong to 25c higher.
Best steers \$12.00@12.50
Best handy wt bu steers... 10.00@11.25
Mixed steers and heifers 9.50@10.75
Handy light butchers 8.50@ 9.50
Light butchers 7.50@ 8.50
Best cows 9.00@ 9.25
Butcher cows 7.00@ 8.25
Cutters 6.00@ 6.25
Canners 5.00@ 5.50
Best heavy bulls 8.50@ 8.75
Bologna bulls 7.50@ 8.00
Light butcher bulls 8.50@ 9.50
Feeders 9.00@10.25
Stockers 7.50@ 8.50
Milkers and springers... \$ 65@ 125
Veal Calves.
Market dull.
Best \$17.00@17.50
Others 10.00@13.00

BUFFALO

Cattle.
Receipts 1,401 cars; strong; prime shipping steers \$14@14.50; best shipping steers \$12.50@13; medium shipping steers at \$12@12.50; Canadian heavy steers \$12@12.50; Canadian steers and heifers \$11@12; best native yearlings 950 to 1000 lbs at \$13.50@14.50; light native yearlings, of good quality \$12@12.50; best handy steers \$11.50@12.50; fair to good kind \$10.50@11.50; handy steers and heifers mixed \$11@11.50; western heifers \$11@11.50; state heifers \$10@11; best fat cows \$10@11; butchering cows at \$8.50@9.50; cutters \$6.50@7.50; canners at \$4.50@5.25; fancy bulls \$9@10; butchering bulls \$7.50@8.50; common bulls \$6.50@7.50; best feeders 900 to 1000 lbs \$9.50@10.50; medium feeders \$8@9; stockers \$7.50@8; light to common \$6.50@7.50; best milkers and springers \$10@15; mediums \$8@9.
Hogs.
Receipts 70 cars; steady, heavy at \$15.75@16; mixed and yorkers \$17.25@17.50; pigs \$16.50.
Sheep and Lambs.
Receipts 40 cars; 25c lower; top lambs \$21.50; wethers at \$16@16.50; yearlings \$17@19; ewes \$14@14.50.
Calves.
Receipts 1,500; lower; tops \$19.50; fair to good \$16.50@18.50; grassers at \$6@8.

CHICAGO

Hogs.
Estimated receipts today are 2,000; holdover 1,954. Market steady. Bulk of sales \$15.25@16.25; tops at \$16.50; heavy 250 lbs up, medium, good and choice \$14.75@15.80; medium 200 to 250 lbs medium, good and choice at \$15.50@16.50; light 150 to 200 lbs, common, medium, good and choice \$15.80@16.50; light lights 130 to 150 lbs, common, medium, good and choice at \$15@16; heavy packing sows 250 lbs up, smooth \$13@14; packing sows 200 lbs up, rough \$12.75@13.25; pigs 130 lbs down, medium, good and choice at \$13.25@15.25.
Cattle.
Estimated receipts today are 1,000. Market steady to 25c lower. Beef steers, medium and heavyweight 1100 lbs up, choice and prime \$14@15; do medium and good \$11.65@14; do com-

Ro-San Rolling Bath Tub With Heater

Full size white enamel tub, nickel plated 12-gal. tank. Closes up in space 3 ft. square. On castors—rollitanywhere. Heater attachment for kerosene, gasoline or gas. Water heats quickly, waste drains through hose attached to temporary or permanent outlet. Simple. Guaranteed. Write for catalog and price.

Rowe Sanitary Mfg. Co.
4141 6th St.
Detroit, Mich.

Ask about Ro-San Indoor Closets and Washstands. No Plumbing Required.

30 DAYS TRIAL

FEEDER CATTLE IN DEMAND.

AS the grass season approaches the demand for stockers and feeders shows an increase, but many intending buyers have been hindered from making purchases by a scarcity of the right kind of cattle and higher prices than they cared to pay. Plenty of the commoner order of stockers have been offered for sale, and even these have advanced in prices along with those of a more desirable kind, but most country buyers prefer to purchase wellbred feeders, although objecting to going much over \$11. Better lots sell as high as \$11.50, and now and then there is a venturesome stock feeder who is prepared to pay from \$12 to \$12.50 for a fleshy lot of feeders requiring only a short feed. Word comes from southeastern Kansas that owners of the best pastures are expected to make leases at \$10 per head for cattle, with five acres per head, this comparing with \$15 to \$20 paid last year. In the corn belt states the extent of cattle feeding will depend upon the value of the land and the prices for feed very largely.

THE HOG MARKET.

THE Chicago hog market went to sleep last week during the strike of the forces employed by the Union Stock Yard & Transit Company, and buyers had to look to other western markets for supplies of hog products, even Chicago being dependent upon Omaha and other points in the west. Wholesale beef prices were boosted sharply, as were all pork products. The strike came at the time when Illinois stockmen were especially desirous of shipping in order to avoid the assessment of live stock on the first day of April. Aside from the strike, the general surroundings of the hog market have not changed very much. Hogs have been marketed liberally, and the supply left is materially cut down. Light bacon and light butchering hogs are as much as ever market toppers, with heavy hogs going at a large discount. The average weight of the hogs reaching the Chicago market is now 239 pounds, being a pound more than a week earlier, and eight pounds more than last year.—F.

BERKSHIRE MEN MEET.

THE meeting of Berkshire breeders at the Board of Commerce, Detroit, March 24, was not as largely attended as expected, the nice weather making the farmers think of their work and help shortage. Mr. C. E. Bingham, secretary of the State Farm Bureau, was with us and gave some very good suggestions, which we appreciated; we are for the bureau and will work with them in any way we can as this organization is the hope of the farmer. Mr. E. J. Barker, of Indiana, also gave an interesting and helpful talk along promotion and breed lines.

Pig club work for the boys and girls was strongly endorsed and we will gladly help in this work any way we can. Showing at state and West Michigan fairs recommended, also the showing at local fairs as far as possible. Public sales also considered as one of the best ways to sell stock and promote breed interest.

Mention was made of the fact that the American Berkshire Association had offered fifty dollars for pig club premium at the State Fair, and M. F. Millard, Detroit, offered the same amount; the matter has been left with state pig club officials to arrange.

Officers elected were: J. L. Miller, Caledonia, president; W. H. Every, Manchester, vice-president; J. W. Clapp, Northville, secretary-treasurer; directors, B. Parker, Niles; Wm. Voisin, Hastings; C. B. Scully, Almont; M. F. Millard, Detroit; C. V. Mosher, of Oshtemo. J. W. CLAPP.

SAVAGE



ATHAW BRINGS OUT THE COONS

THEY come out of their den-trees—travel a little during the night—and then lie out on limbs in the grateful afternoon sun.

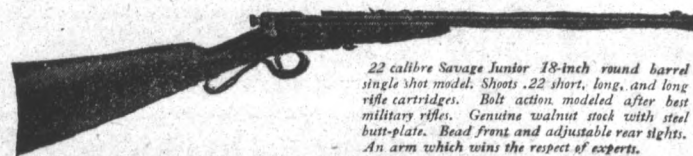
Take a walk in the woods with your little Savage Junior rifle. Watch the snow around the trees for the hand-shaped tracks. Run your eye along the highest limbs. Search for the black-marked mask—the gray body—the ringed tail.

A hollow-pointed .22 long rifle bullet from your carefully rifled, carefully targeted, deadly accurate little Savage Junior will bring a coon from the tallest tree and coon skins are bringing high prices this year.

Your little .22 Savage Junior Bolt-action single-shot rifle is simple and dependable. If you haven't yours yet, your dealer has it for you. Only \$9.75. Ask him to show it to you. For description, write us.

SAVAGE ARMS CORPORATION

Sharon, Pa. UTICA, N. Y. Detroit, Mich.
Executive and Export Offices: 50 Church Street, New York City



.22 calibre Savage Junior 18-inch round barrel single shot model. Shoots .22 short, long, and long rifle cartridges. Bolt action, modeled after best military rifles. Genuine walnut stock with steel butt-plate. Head front and adjustable rear sight. An arm which wins the respect of experts.

Foundation Herd For Sale
Holstein-Friesian

Tuberculin tested, and absolutely free from blemishes and in show condition.

Herd consists of seven milking cows, three two year old heifers, due to freshen soon.

Among them is a 21 pound two year old daughter of a 30 pound cow, also a 16 pound two year old daughter of a 19 pound two year old.

Also my junior herd sire who is a son of King of the Pontiacs.

Only reason for selling is a protracted absence from home.

Priced at a bargain considering individuality and breeding.

Write for pedigrees and prices or better still come and see them at the farm.

ADDRESS:

Denbrook Farm, Farmington, Mich.

DENBROOK FARM

Offers the following Duroc-Jersey Pigs for sale. Brookwater Lucy Wonder 28th No. 332502 aged two years. Denbrook Lurette 11 months No. 364154 bred to Brookwater Principal 27th due to farrow first week in May. Denbrook Topsy age 11 months No. 364152 bred to Brookwater Principal 27th due to farrow first week in May. We will also sell The Herd boar Brookwater Principal 27th and five young pigs farrowed March 9th by Brookwater Cherry King Jr. He by proud Cherry King. Prices reasonable considering breeding in individuality. Write for pedigree and prices to

E. J. S. Denby, Denbrook Farm,
Farmington, Mich.

or better yet come and see them.

Mr. POULTRY FARMER:

We make a specialty of White Henner Eggs and have created a profitable market for your eggs the year around. We pay the highest premium for your Henner Whites—We remit same day shipments arrive. Ship Often—Ship by Express

GEO. R. ELDRIDGE CO.

494-18th Street, Detroit, Mich.

Remember! We guarantee you satisfaction with every shipment.

For Best Net Results

Ship to

CULOTTA & JULL

Detroit, Mich.

"Enough Said!"

HAY Ship to The Old Reliable House
Daniel McCaffey's Sons,
623-625 Wabash Bldg., Pittsburg, Pa.

SHIP Carloads Hay and Potatoes to the
old reliable firm E. L. Richmond Co.
Detroit, Michigan.

POULTRY

Hatching eggs from a vigorous heavy laying stock—
S. C. W. Leghorns, Barred Rocks, W. Wyandottes,
Buff Orpingtons. 15, \$1.50; 50, \$4.50; 100, \$8.00. Shipped
prepaid. Miller Poultry Farm, Nappanee, Ind.

JOHN'S Big Beautiful Barred Rocks are hen hatch-
ed grow quick good layers 30 eggs \$3.50; 50, \$5.00. Cock-
erels \$4 to \$6. Photos. John Northon, Clare, Mich.

LOOK: BABY CHICKS AND DUCKS
30 breeds of chicks. 4 breeds of
ducks. Utility and Exhibition
grades. Postage paid and live delivery guaranteed. Ca-
pacity 100,000 weekly Catalog free. Stamps appreciated.
NABOB HATCHERIES, Gambier, Ohio.

R.C. Rhode Island Reds

Choice Rose Comb Cockerels—hen-hatched,
farm raised, big thrifty, prize winning strains.
\$5 to \$7.50. Two from special pen \$10 each.
We raise only R. C. Reds.

BIDWELL STOCK FARM,

Box D, Tecumseh, Michigan.

LAYBILT S. C. W. LEGHORNS

large, great layers, pure white. Strong, Day-Old
Chicks. Hatch every week. Guaranteed delivery, full
count, alive and lively \$18.00 per 100. Parcel postpaid.

V. A. MORSE, IONIA, MICHIGAN

BIG 5 to 6 POUND White Leg-
horn hens, 7
pound males. On account of their larger size they
stand cold weather better and lay all winter. Free
catalog gives winter egg records, describe feeding
methods, etc. A. WAUCHEK, Gobleville, Mich.

Rhode Island Whites

Are the best all purpose birds being year round lay-
ers. Egg and chicks and a few good males.
H. H. JUMP, Jackson, Michigan.

R. C. Brown Leghorns eggs \$1.50 for 15, \$3 per 100.
White Pekin duck eggs \$1.50 for
8. White Chinese geese eggs 40 cents each.
MRS. CLAUDIA BETTS, Hillsdale, Mich.

Ringlet Barred Rocks. Eggs for hatching from
three Grand Pens. Price 15 eggs, \$3.50; 30
eggs, \$6.50. Order early. C. D. Thomas, Ashley, Mich.

Rhode Island Reds for sale. Eggs for hatch-
ing at \$5 per fifty.
BURT Sisson, Imlay City, Mich.

Single Comb Rhode Island Red Eggs for
Hatching. Finest
matings, well bred winter layers. \$3.00 per setting; \$3
per 100. Investigate.
Babeck and Son, R. D. 6, Battle Creek, Mich.

S. C. Brown Leghorns Excellent layers. Farm
range. Eggs postpaid. 15, \$1.50; 30, \$3; 45, \$4;
100 \$8. Floyd Robertson R. 1, Lexington, Indiana.

S. C. B. Minorca Cockerels, 8 to 9 lbs. Price \$5 to
\$10. Eggs in season. Satisfaction
guaranteed. CHAS. SCHROOK, Alenton, Mich.

Silver, Golden and White Wyandottes. Choice
quality cockerels and pullets \$3.00 to \$5.00
each. C. W. Browning, R. 2, Portland, Mich.

S. C. Black Minorcas. We are using a \$50 cock bird.
A sire of winners, weighs 11½ lbs. Eggs \$4.00 per
setting of 15. R. W. MILLS, Saline, Mich.

S. C. Anconas Eggs from selected stock. Heavy win-
ter layers. \$2.00 per 15; \$5.00 per 50;
\$8.00 per 100. Clarence L. Campbell, Parma, Mich.

S. C. Ancona eggs from pen Hogan tested,
heavy winter layers \$2.50 per 15.
GEO. WALLS, Kingston, Mich.

B-A-B-Y C-H-I-C-K-S

Crescent White Leghorns; also, Anconas, Brown Leg-
horns, Black Minorcas, Reds, Rocks, and Wyandottes
(Silver-laced and White). We Hatch the eggs of ten
varieties from eggs on range on separate farms.
CRESCENT EGG COMPANY, Allegan, Mich.

5 to 6 lb. S. C. W. Leghorn hens, 7 lb. males. Barron-
5 Wyckoff-Ferris 254 egg strain. 1171 eggs from 40 pullets
Nov. & Dec. eggs \$3 per 15. A. Wauchek, Gobleville, Mich.

Snowy White Rocks, dandy layers. Fisher strain.
Eggs prepaid. \$1.50-15; \$4.50; \$7-100.
MRS. EARL DERHOFF, Vanburen, Ohio.

White Wyandotte; out of choice stock for sale;
cocks, cockerels \$3, \$5 each, send for my
circular. DAVID RAY, Ypsilanti, Mich.

White Leghorns, Brown Leghorns, Ancona chicks
\$17 per 100. Live arrival guaranteed. Eggs of
all varieties. Catalog free. Triangle, Clinton, Mo.

WHITE WYANDOTTES, free range farm flock
improved by 16 years careful selection. 15 eggs 2.50,
30 4.50; 50 or more .10 each by mail prepaid. Cockerels
3.50, 2 for \$6. Vern Moore R. 1, Hartford, Mich.

White Wyandottes: Eggs for hatching from selected
layers. \$2.00 per 15, prepaid. 1 male 10 females,
\$40.00. Frank De Long R. 3 Three Rivers, Mich.

White Plymouth Rocks 100, \$10.00, prepaid. Day old
chicks, 100, \$20. Richard M. Grettton, Mason, Mich.

For Sale: Imported Grey African Geese. Standard
bred Rhode Island Red Cockerels.
Mrs. W. Truman French, R. 3, Ludington, Mich.

Ten Eggs for \$3.75 from pure Toulouse geese.
Parcel post paid.
MRS. AMY SOUTHWORTH, Allen, Mich.

\$1,200 Settlement!!

Hartford Business Man Recommends Howell Company

The Big Mutual Pays Reasonable Claims, Promptly

Hartford, Mich.,
April 1st, 1920.

Citizens' Mutual Automobile Insurance Co.,
Howell, Michigan.

Gentlemen:

I wish to thank you for the prompt and satisfactory manner in which you settled my claim. I took automobile insurance as I realized that automobile owners were the prey of the automobile thief and, in many cases, unreasonable damage claims.

On March 4th I had the misfortune to have a traffic accident in which a person was knocked down, suffering serious personal injury. The doctor and hospital bill, together with the serious nature of the case made this quite expensive. One of your officers co-operated immediately in arranging a fair basis of settlement. The people injured assumed a reasonable attitude when they found they could get their pay by making a fair proposition, and the matter was taken care of without litigation or delay.

Some of my friends who are insured in Stock Companies were greatly surprised that you can pay your claims so promptly when the cost to the policy-holder for the policy is so small, but I have informed them that a large company gives quantity production at low cost, and I have no hesitation in recommending my friends to insure in your Mutual Company which has stood the test of five seasons and has always had sufficient money on hand to pay its claims, promptly, and where the injured parties present a reasonable claim I am sure that it will be promptly paid, and on the other hand, where unreasonable claims are demanded your Company is large enough to contest the claim and appeal, if necessary, to the Supreme Court, so that automobile owners will be treated fairly.

Yours sincerely,
(S. M. CARPP).

Dye That Skirt, Coat or Blouse

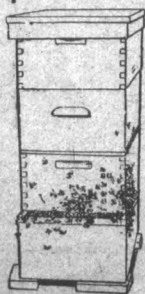
"Diamond Dyes" make old, shabby, faded apparel just like new.

Don't worry about perfect results. Use "Diamond Dyes," guaranteed to give a new, rich, fadeless color to any fabric, whether wool, silk, linen, cotton or mixed goods,—dresses, blouses, stockings, skirts, children's coats, draperies,—everything!

A Direction Book in package.

To match any material, have dealer show you "Diamond Dye" Color Card.

\$30 Profit per Hive



made by beekeepers. You, too, can make big money by keeping bees as a side line. Little work required. Bees supply own food. Men, women and older children can learn quickly. We buy spare honey at highest market price. Our productive Italian Bees now ready for May delivery. Write today for catalogue. Beekeepers send for bee lists. No obligations attached.

The Griggs Bros. Co.
Dept. 27, Toledo, Ohio

Please Mention The Michigan Farmer
When Writing to Advertisers.

Latest Market Reports

SECOND EDITION.

The markets in this edition were revised and corrected on Wednesday afternoon, April 7.

WHEAT

Owing to strikes on some of the railroads the movement of grain has been slow. These conditions affect all grains and strength is felt in all. Receipts of wheat are light and exporters are anxious to buy. Present prices at Detroit are as follows:

No. 1 red	\$2.68
No. 1 mixed	2.66
No. 1 white	2.66
No. 2 red	2.65
No. 3 red	2.62

CORN

Corn values declined Monday but made a rapid recovery and the market closed with a firm tone. At Chicago the bulls had an advantage at the opening Monday, but during most of the day were in distress. At the outset prices jumped to new high marks for the season. This resulted in active selling which was accompanied by many disturbing rumors. Higher quotations on hogs have also given some strength to the corn deal. Prices on the local market are quoted as follows:

No. 3	\$1.67
No. 3 yellow	1.72
No. 4 yellow	1.67
No. 5 yellow	1.63
No. 6 yellow	1.59

OATS

Oats are in demand and prices are well sustained. Receipts are light and there is an active demand from local buyers as well as shippers. Present quotations on the local market are as follows:

No. 2 white	\$1.05
No. 3 white	1.04
No. 4 white	1.03

RYE

The receipts of this cereal have been light and the demand is active. At Detroit Cash No. 2 rye is quoted at \$1.88 per bushel.

BEANS

There is little activity in the bean market but prices are steady. Choice pea beans for immediate shipment are quoted at \$6.60 per cwt on the local market. At New York the situation shows little change from previous weeks. Choice pea beans being quoted at \$7.25@7.50 per cwt; red kidneys \$14.50@14.75.

SEEDS

There is little change to report in the seed situation. Prices are firm and the market steady. At Detroit prime red clover is quoted at \$34; alsike at \$36.50; timothy \$6.40.

FEEDS

The demand for all kind of feeds is active and prices are well sustained. On the local market prices are as follows: Bran \$55@56; standard middlings \$58@59; fine middlings \$58@59; coarse corn meal \$69.50; cracked corn \$72@72.50; chop feed \$61@62 per ton in 100-pound sacks.

POTATOES

On the Detroit market supplies of potatoes are moderate, prices slightly higher and the demand active. Sales to jobbers of Michigan U. S. Grade No. 1 round white stock are reported at \$8.75@9 per 150-pound sack.

BUTTER

Butter prices are firm and the supply is moderate. On the local market prices are 62c per pound for fresh creamery and 62@65c for fresh creamery in one-pound prints.

EGGS

Buying is active and supplies are

Ro-San Rolling Bath Tub With Heater

Full size white enamel tub, nickel-plated gal. tank. Closes up in space 3 ft. square. On casters—roll it anywhere. Heater attachment for kerosene, gasoline or gas. Water heats quickly, waste drains through hose attached to temporary or permanent outlet. Simple. Guaranteed. Write for catalog and price.

Rowe Sanitary Mfg. Co.
4141 6th St.
Detroit, Mich.

Ask about Ro-San Indoor Closets and Washstands. No Plumbing Required. 30 DAYS TRIAL

coming in freely. Present prices at Detroit are 42@43c for fresh eggs.

POULTRY

The market is firm and the demand greater than the supply. Present values on the local market are as follows: Live Poultry, spring chickens best 38@40c; Leghorns 36@37c; hens 40@42c; Leghorns 36@37c; hens 40@42c; small hens 38@39c; roosters 24@25c; geese 30@35c; ducks 40@45c; turkeys 44@45c per pound.

GRAND RAPIDS

Milling companies advanced the price of wheat to growers this week five cents per bushel. The price now is \$2.40 for No. 1 red and \$2.38 for No. 1 white. Egg market is lower, owing to increase in receipts. Dealers now pay 39c per dozen to producers. Eastern buyers are in western Michigan this week for April for storage. The opening price is 38c. Potatoes are a little higher at \$3.25 to growers. Buyers from outside the state have been through western Michigan this week and bought from farmers a large quantity on \$3.15 per bushel basis. A few spring lambs were marketed this week at \$8 each for Easter. They were dropped in January. Hay is lower at the city market, selling at \$25@27 for loose timothy. Farmers have been holding for an advance but cheapness of baled hay caused little demand for loose hay. A few farmers began preparing their ground for sowing oats this week. Scarcity of help may curtail the acreage of all crops this season.

WOOL

There seemed to be a better feeling in the wool trade at Boston Saturday, April 3. Ruling prices for the various grades and classes were as follows: Ohio and Pennsylvania fleeces, delaine

unwashed 97c@\$1; fine unwashed 74@76c; half-blood combing 83@85c; three-eighths-blood combing 69@70c. Michigan and New York fleeces, fine unwashed 70@73c; delaine unwashed at 95c@\$1; half-blood unwashed 80@82c; three-eighths-blood unwashed 67@68c.

NEWS OF THE WEEK.

(Continued from page 578).

the grip of a blizzard, accompanied by strong winds and a heavy fall of snow. The strike of switchmen in Chicago is affecting all roads entering that city except two.—It is reported that union officials predict a strike of six million men, should the anticipated move by employers in leading industries to abolish the eight-hour day be undertaken.—French labor leaders are urging the nationalization of French industries.

Monday, April 5.

CANADA will start immediately on the formation of an efficient air force.—A tornado sweeps through Parkersburg, W. Va., doing serious damage to property.—Railway service in central western states is demoralized by heavy snow storms.—A heavy slide of earth in the Culebra Cut of the Panama Canal narrows the channel down to one hundred feet but has not stopped shipping.—County agents from every part of Michigan report an unusually critical labor situation on Michigan farms this spring.

COMING SALES.

Shorthorns, April 10, Elmer Westfall, Edwardsburg, Mich.
Holsteins, April 12, John P. Olcott, Perry, Mich.
Shorthorns, April 15, Ray Warner, Almont, Mich.

Live Stock Market Service

BUFFALO

Pigs \$16.75; medium and heavy at \$16.50@17.50; yorkers and mixed at \$17.50@17.75; wool lambs \$22; clipped lambs \$19; calves \$19.

DETROIT

Cattle.

Market strong to 25c higher.
Best steers \$12.00@12.50
Best handy wt bu steers .. 10.00@11.25
Mixed steers and heifers .. 9.50@10.75
Handy light butchers 8.50@ 9.50
Light butchers 7.50@ 8.50
Best cows 9.00@ 9.25
Butcher cows 7.00@ 8.25
Cutters 6.00@ 6.25
Canners 5.00@ 5.50
Best heavy bulls 8.50@ 8.75
Bologna bulls 7.50@ 8.00
Light butcher bulls 8.50@ 9.50
Feeders 9.00@10.25
Stockers 7.50@ 8.50
Milkers and springers...\$ 65@ 125

Veal Calves.

Market dull.
Best \$17.00@17.50
Others 10.00@13.00

Sheep and Lambs.

Market steady.
Best lambs \$20.50@21.00
Fair lambs 17.50@18.50
Light to common 14.00@15.00
Fair to good sheep 13.50@14.00
Culls 5.00@ 8.00

Hogs.

Market steady.
Mixed hogs \$16.75@17.00
Pigs 16.00
Heavies 15.50@16.00

CHICAGO

Hogs.

Estimated receipts today are 2,000; holdover 1,954. Market steady. Bulk of sales \$15.25@16.25; tops at \$16.50; heavy 250 lbs up, medium, good and choice \$14.75@15.80; medium 200 to 250 lbs medium, good and choice at \$15.50@16.50; light 150 to 200 lbs, common, medium, good and choice \$15.80@16.50; light lights 130 to 150 lbs, common, medium, good and choice at \$15@16; heavy packing sows 250 lbs up, smooth \$13@14; packing sows 200 lbs up, rough \$12.75@13.25; pigs 130 lbs down, medium, good and choice at \$13.25@15.25.

Cattle.

Estimated receipts today are 1,000. Market steady to 25c lower. Beef steers, medium and heavyweight 1100 lbs up, choice and prime \$14@15; do medium and good \$11.65@14; do com-

mon \$10.25@11.65; light weight 1100 lbs down, good and choice at \$12.60@14.50; do common and medium \$10@12.60; butcher cattle, heifers, common, medium, good and choice at \$8@13.25; cows, common, medium, good and choice \$8@12.35; bulls, bologna and beef \$7.75@11; canners and cutters cows and heifers \$5@8; do canner steers at \$6@8; veal calves, light and handyweight, medium, good and choice \$16@17.50; feeder steers, common, medium good and choice \$9@11.85; stocker steers, common, medium, good and choice \$7.65@11.25; do cows and heifers, common, medium, good and choice \$7.50@9.25; do calves, common, medium, good and choice \$8@11.25.

Sheep and Lambs.

Estimated receipts today are 1,000. Market steady. Lambs 84 lbs down, medium, good, choice and prime \$18@20.75; do culls and common \$14.75@17.75; spring lambs, medium, good, choice and prime \$15.50@18.50; ewes, medium, good and choice \$11@15; do cull and common \$6@10.75; yearling wethers, medium, good and choice at \$15.50@17.50.

BUFFALO

Cattle.

Receipts 1,401 cars; strong; prime shipping steers \$14@14.50; best shipping steers \$12.50@13; medium shipping steers at \$12@12.50; Canadian heavy steers \$12@12.50; Canadian steers and heifers \$11@12; best native yearlings 950 to 1000 lbs at \$13.50@14.50; light native yearlings, of good quality \$12@12.50; best handy steers \$11.50@12.50; fair to good kind \$10.50@11.50; handy steers and heifers mixed \$11@11.50; western heifers \$11@11.50; state heifers \$10@11; best fat cows \$10@11; butchering cows at \$8.50@9.50; cutters \$6.50@7.50; canners at \$4.50@5.25; fancy bulls \$9@10; butchering bulls \$7.50@8.50; common bulls \$6.50@7.50; best feeders 900 to 1000 lbs \$9.50@10.50; medium feeders \$8@9; stockers \$7.50@8; light to common \$6.50@7.50; best milkers and springers \$10@15; mediums \$65@90.

Hogs.

Receipts 70 cars; steady, heavy at \$15.75@16; mixed and yorkers \$17.25@17.50; pigs \$16.50.

Sheep and Lambs.

Receipts 40 cars; 25c lower; top lambs \$21.50; wethers at \$16@16.50; yearlings \$17@19; ewes \$14@14.50.

Calves.

Receipts 1,500; lower; tops \$19.50; fair to good \$16.50@18.50; grassers at \$6@8.

FEEDER CATTLE IN DEMAND.

AS the grass season approaches the demand for stockers and feeders shows an increase, but many intending buyers have been hindered from making purchases by a scarcity of the right kind of cattle and higher prices than they cared to pay. Plenty of the commoner order of stockers have been offered for sale, and even these have advanced in prices along with those of a more desirable kind, but most country buyers prefer to purchase wellbred feeders, although objecting to going much over \$11. Better lots sell as high as \$11.50, and now and then there is a venturesome stock feeder who is prepared to pay from \$12 to \$12.50 for a fleshy lot of feeders requiring only a short feed. Word comes from southeastern Kansas that owners of the best pastures are expected to make leases at \$10 per head for cattle, with five acres per head, this comparing with \$15 to \$20 paid last year. In the corn belt states the extent of cattle feeding will depend upon the value of the land and the prices for feed very largely.

THE HOG MARKET.

THE Chicago hog market went to sleep last week during the strike of the forces employed by the Union Stock Yard & Transit Company, and buyers had to look to other western markets for supplies of hog products, even Chicago being dependent upon Omaha and other points in the west. Wholesale beef prices were boosted sharply, as were all pork products. The strike came at the time when Illinois stockmen were especially desirous of shipping in order to avoid the assessment of live stock on the first day of April. Aside from the strike, the general surroundings of the hog market have not changed very much. Hogs have been marketed liberally, and the supply left is materially cut down. Light bacon and light butchering hogs are as much as ever market toppers, with heavy hogs going at a large discount. The average weight of the hogs reaching the Chicago market is now 239 pounds, being a pound more than a week earlier, and eight pounds more than last year.—F.

BERKSHIRE MEN MEET.

THE meeting of Berkshire breeders at the Board of Commerce, Detroit, March 24, was not as largely attended as expected, the nice weather making the farmers think of their work and help shortage. Mr. C. E. Bingham, secretary of the State Farm Bureau, was with us and gave some very good suggestions, which we appreciated; we are for the bureau and will work with them in any way we can as this organization is the hope of the farmer. Mr. E. J. Barker, of Indiana, also gave an interesting and helpful talk along promotion and breed lines.

Pig club work for the boys and girls was strongly endorsed and we will gladly help in this work any way we can. Showing at state and West Michigan fairs recommended, also the showing at local fairs as far as possible. Public sales also considered as one of the best ways to sell stock and promote breed interest.

Mention was made of the fact that the American Berkshire Association had offered fifty dollars for pig club premium at the State Fair, and M. F. Millard, Detroit, offered the same amount; the matter has been left with state pig club officials to arrange.

Officers elected were: J. L. Miller, Caledonia, president; W. H. Every, Manchester, vice-president; J. W. Clapp, Northville, secretary-treasurer; directors, B. Parker, Niles; Wm. Volsin, Hastings, C. B. Scully, Almont; M. F. Millard, Detroit; C. V. Mosher, of Osseo.

J. W. CLAPP.

SAVAGE



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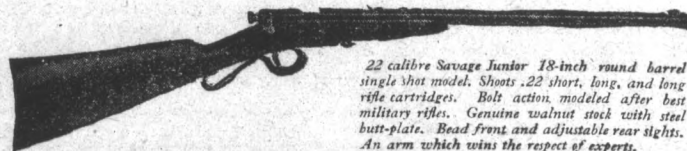
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SHIP Carloads Hay and Potatoes to the old reliable firm E. L. Richmond Co. Detroit, Michigan.

POULTRY

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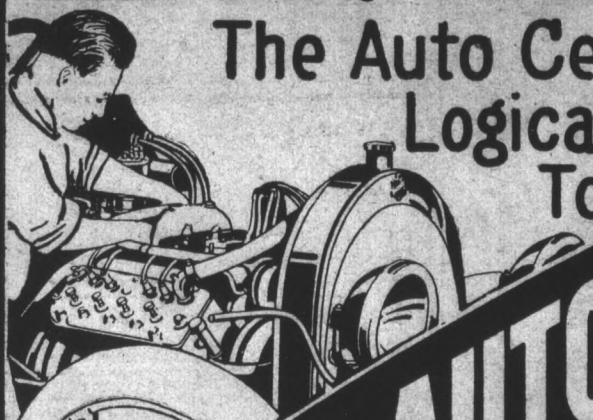
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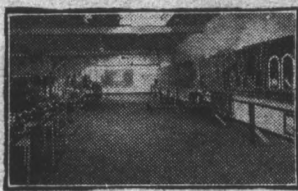
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