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DETROIT, APRIL 19, 1919



CURRENT COMMENT

The Victory Liberty Loan

THE fifth and last popular war loan, which will be known as the Victory Liberty Loan, will be offered to the public on April 21. This issue, the terms of which have just been announced, is considerably smaller than was anticipated by most financial observers. The amount of the issue for which subscriptions will be asked in the three weeks' drive beginning next Monday, has been fixed at four and one-half billion, as compared with six billion for the last Liberty Loan. The issue will be in the form of short-term notes bearing four and three-fourths per cent interest and maturing in four years, with the treasury reserving the privilege of redeeming the notes in three years. While these notes will be practically tax exempt for the small investor. They are wholly exempt from state and local taxation, excepting estate and inheritance taxes, and from normal rates of federal income taxes.

Now that the war is over and our boys are coming home, bearing the banner of victory, the patriotic urge to buy liberty bonds may not appeal as strongly to the average man as was the case when the conflict was on and our boys were in the thick of the battle. But preparations for the continuation of the struggle to a victorious end were necessary to insure that end, and the cost of maintaining our boys at the front, of bringing them back and demobilizing them must be paid, and in addition to all that can be raised by taxation the government needs our savings to help pay it. Nor will the benefit accrue to the nation alone, since our savings will be invested in the best security in the world, bearing an attractive rate of interest, when the tax exemption features are considered. While the victory bonds are offered at a season when the average farmer's income is at low point, in this case future income may be anticipated by arranging payment for the bonds on the installment plan where necessary.

If we feel apathetic in the matter, a talk with any of the boys just back

from Europe, who gave so much of their lives to the achievement of this victory will give us the proper point of view. The purchase of bonds to the limit of our ability will be the result, and the Victory Liberty Loan will be quickly over-subscribed.

Developing Seed Production

of producing an adequate supply of good seed to meet our home demands and insure future harvests to feed the people of famished Europe. Instead of producing sufficient seed for home planting the American farmer hitherto depended upon foreign countries for the bulk of his supply of radish, cabbage, cauliflower, carrot, kale, parsley, pepper, spinach, beet and turnip seed, and a large portion of his clover and alfalfa seed.

Before the war we got most of our radish seed from Germany, France and England. Now the radish seed industry promises to become a profitable one in California and several of the northern counties of Michigan. Turnip, cabbage and kale seed production is beginning to develop in several favored sections. At the present time we can gain control of the turnip seed business before Holland, Denmark and Sweden can recover from the effects of the war; besides seed purchased from these countries is likely to be that which accumulated during the period since 1914.

Long Island, New York, has developed a big business in producing cabbage seed and several sections in the south are finding it profitable to produce kale seed. The spectacular rise in the price of spinach seed has added another profitable specialty to the list of crops produced in California and several districts along the Atlantic Coast. New Mexico and Arizona have demonstrated the fact that they can produce Bermuda onion seed for the farmers of southern Texas. Formerly the onion growers of this district annually imported more than 75,000 pounds of this valuable seed from the Canary Islands.

Today we are in a position to supply our home demands for carrot, beet and parsley seed. California, with her peculiar climate contributing these seeds to our supply. It formerly required two years to produce the seed, as these plants do not flower the first season; but American climate and ingenuity have shortened the time naturally required to produce seed by playing a joke on "mother nature." The roots are harvested and shipped to Cuba and Porto Rico for winter growing. We are also producing such seeds as celery, okra, parsley and collards for ourselves without any difficulty.

Those who pooh-pooh at scientific agriculture should familiarize themselves with the development of seed production in America since 1914. A short time ago we were mighty ignorant of our domestic seed producing resources and possibilities. No effort had been made to develop or to coordinate our assets in this direction, but the stress of war-time necessity forced us into the development of this branch of agriculture which is adding many millions of dollars to the incomes of our farmers.

The United States Department of Agriculture has rendered high-class service in gathering information and data and publishing it in the form of a monthly seed reporter. As a result the farmers who produce seeds are kept posted on the market situation and probable demand for the seeds they are producing. The farmers who need these seeds for planting know where they can secure an ample supply of thoroughly good seeds. At present we are substantially independent of other countries so far as the supply of good seeds is concerned, and some

of our best-posted seedsmen predict that within a year Europe will be looking to America for seeds of many sorts. In the matter of wheat, oats, rye and barley we will help Europe with seed necessary to plant thousands of acres this spring. Clover, alfalfa and sweet clover seed growing is being developed rapidly in many agricultural regions, and we shall, undoubtedly, be able to meet our home requirements and have a surplus for export.

The development of a great seed-producing industry in America means, not only a big saving of capital for our farmers but it is encouraging the growing of crops and varieties better adapted to our soil and climatic conditions, and creating a heavy demand for special machinery. This means the growth and development of a big business all along the line from the growing of the seed to distributing it to the trade.

Another phase of this great seed-producing business is the fact that it is opening up a new field for high-class agricultural students who are seeking a business where they can match their brains and scientific training against the land and capital of men who can see future profits in a big, paying business. The great need at the present time is for men capable of directing and training the class of labor qualified to develop this specialized type of agriculture; plenty of capital is available as soon as it can be shown practical results.

A Golden Anniversary

THE well known advertising agency of N. W. Ayer & Son, of Philadelphia, Pa., celebrated the fiftieth anniversary of their career on the evening of April 4th inst. The plan was to entertain at a formal dinner, with appropriate speeches, reminiscences and music, the managers of the leading publications and advertisers who have for many years been their customers.

It was conceived and executed along the broad gauge lines and carefully thought out systems that have always marked the business management of this largest concern in their line in the world. Over one thousand guests sat at the tables and all were highly pleased and edified with the entire affair. The execution of the program brought out in bold relief the wonderful increase, not only in volume and importance of advertising, but also the equally increased moral standard and character of it, to both elements of which the firm of N. W. Ayer & Son have undoubtedly contributed more during the past fifty years than any other concern in America. They fully deserve our wishes for continued prosperity.

The Verdict of the Voters

THE verdict of the voters at the recent general election is a credit to the entire electorate of the state and particularly to the women of Michigan who exercised the elective franchise for the first time. The adoption of the good roads bonding amendment to the state constitution by a large majority is an evidence of progressive thought among all the people of the state, and the rejection of the proposed saloon amendment by a very decisive vote is equally impressive as indicating progression along a radically different line. These examples indicate that the people of Michigan are solidly for advancement and opposed to retrogression, and that they know how to get what they want by the intelligent use of democracy's most efficient weapon—the ballot.

The intelligent voters of America are the country's great bulwark. They are a safe court of last resort in the settlement of questions of public policy. Their ultimate judgment is generally sound, and carries with it the public sentiment essential to its adequate enforcement. That strong pub-

lic sentiment is sometimes slow to crystallize is also a matter for congratulation, rather than otherwise, as it is a safeguard against the catchy doctrine of extremists. The conservative intelligence of our people insures the perpetuity of our democracy.

News of the Week

Wednesday, April 9.

PRESIDENT WILSON'S call for his ship in which to return to the United States has had many interpretations in this country and abroad, but its immediate effect has been to hurry up the proceedings of the peace delegates. —Magdenburg, Germany, is being plundered and Nuremberg is in a state of siege, while Berlin is said to be facing a general strike of workers. —A call is issued for the organization of the American Legion, to be composed of American veterans of the world war. —The National Grange asks treasury department to fix the interest rate on the Victory Liberty Loan at four and one-half per cent. —Spotted typhus is raging in Ukraine, Poland, Serbia and several portions of western Russia. —A call is issued by the President for an industrial congress to consider plans to join the interests of capital, labor and the government in an effort to provide an amicable program for the readjustment of industry.

Thursday, April 10.

THE League of Nations commission considers the question of an international staff, the Monroe Doctrine clause and the Japanese race equality amendment. —Victoria, Australia, has expended \$5,200,000 in the purchase of land for repatriated soldiers. —Sweden is seeking a loan of \$25,000,000 in this country. —Six battalions of Japanese troops are sent to Korea to suppress disturbances which are spreading. —Evacuation of Allied troops from Odessa is officially confirmed. —Southern farmers have started a movement to have the government remove the cotton embargo. —New York senate passes the minimum wage scale by a vote of 29 to 21. —Total United States casualties in the war were 273,105.

Friday, April 11.

THE peace delegates adopt resolution providing that the Monroe doctrine is not to be affected by the provisions of the covenant. —Washington officials are endeavoring to learn the extent of the mutiny of American soldiers in northern Russia. —The Bavarian Soviet regime at Munich reestablishes diplomatic relations with the Bolshevik government at Moscow. —Neutral nations are seeking to float a billion dollar loan in Germany. —American and Japanese financiers are organizing a new steamship corporation. —Officials at Washington deny the report that a secret treaty exists between the United States and China. —Nearly two thousand troops of the 85th Division arrive in New York. —Quebec votes in favor of licensing the sale of wine and beer.

Saturday, April 12.

IT is predicted that the German delegates will be asked to sign the peace treaty between April 26 and May 1. —Belgium and France protest against the selection of Geneva as the seat of government of the League of Nations. —President Wilson offers a solution to the Adriatic question. —The chancellor of Germany declares that country must oust the Soviets or face doom. —The General Motors corporation approves a profit-sharing plan for its employees. —A credit of \$20,000,000 is granted Great Britain by the United States government. —A so-called labor political party in session at Springfield, Illinois, endorses the government of the Soviets in Russia.

Sunday, April 13.

AN official summary of the revised covenant of the League of Nations is issued. —The council of four decides that the Saar Valley is to be definitely granted to France in perpetuity to work the coal mines and other resources. —According to reports the Soviet government of Russia stands ready to stop the world revolt campaign if she is recognized and the allies will send goods to the nation. —Bolshevik propaganda is held responsible for the trouble with American troops near Archangel. —Michigan troops to the number of 1,972 reach New York harbor. —President Wilson is being urged by the "wets" to invalidate the war-time dry law because it has no provision for its enforcement.

Monday, April 14.

MANY Bavarian towns are returning to the old alliance as the Soviet organization at Munich dwindles. —In two days' rioting in Egypt. (Continued on page 616).

DEVOTED
TO
MICHIGAN
VOLUME CLII.

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY. ESTABLISHED 1843.

A Practical Journal for the Rural Family

QUALITY
RELIABILITY
SERVICE
NUMBER SIXTEEN

High Farming on a Big Scale

A GREAT engineering project upon which government engineers have been planning for several years, but which was shelved during the world war, is about to be revived and will eventually bring into cultivation thousands of acres of worthless land. The big problem is one of drainage and embraces some fourteen thousand square miles, or the entire natural district of the Saginaw Valley. This district extends from the highlands of Gladwin county, which form the northern rim of the Saginaw drainage basin to the southern rim down in Genesee county and around through Clinton county, as its western limits, to Saginaw Bay. The problem arises because waters that are made to drain from farm lands in all this area must go somewhere. The Creator made the waters of this region in the beginning to flow down and out through the mouth of the Saginaw river, and they have flowed so ever since. The best that engineers of this day can do is to assist nature in doing her work in an orderly manner.

Most of the present drainage troubles have arisen over faulty methods of helping nature. The common method consists of running water off one man's land on to some other man's land, and leaving it to him to pass it along to somebody else. Unfortunately, it reaches the flood area of the lower valley and the bay at a time of high water, and takes toll as it goes. Floating houses, barns and fragments of bridges, mingled with forest debris and fluid mud attest the heedlessness of the method. The property damage amounts to hundreds of thousands of dollars annually; and it is this waste that the government engineers are trying to overcome.

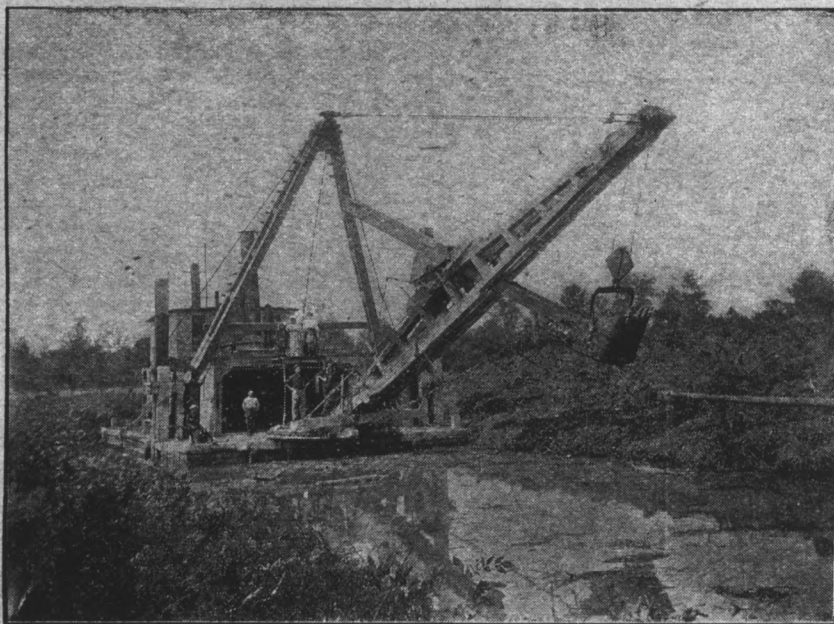
When Michigan's biggest drainage and reclamation problem is worked out to its conclusion, just as much water will flow down to Saginaw Bay as now, but it will flow more orderly and with a minimum of destruction.

The Big Prairie Farm.

The biggest and most successful reclamation project ever attempted in Michigan, or in any of the central states, is the Prairie Farm in Saginaw county. This project points the way to

*A Story of How Dikes, Ditches, Dredges and Drains
Have Transformed a Useless Swamp Into the
Best Farm in the Saginaw Valley.*

By James C. Mills



success in enterprises of this kind, and at the same time it adds to the drainage problem of the district as a whole. The Prairie Farm, in fact, is a gigantic example of the existing drainage method—to unload the water on the other fellow. It is not difficult to realize that not many ten thousand-acre tracts could be pumped dry in the settling basin of the Saginaw Valley without creating flood conditions of the proportions of a deluge. But despite this deterrent fact is the fact that the Prairie Farm owners have diked and drained ten thousand acres of rich muck land, and have made the operations pay. The net annual return on the large investment is said to exceed twelve per cent.

There are one hundred thousand acres more of the same rich alluvial land contiguous to the Saginaw river, which may be reclaimed and made into profitable farms. But the reclamation must be made on a large scale and it

awaits the concerted aid of a comprehensive plan of government engineers. This in the main will provide for at least one double dike across the settling basin of the rivers to encircle in the river bed above Saginaw, a channel to impound the waters which flow down from the uplands and to receive the pumpage from large sections in the flood area, as they are diked and developed. The success of the Prairie Farm enterprise makes the whole broad scheme feasible, and the requirements of the entire drainage area seem to demand it as one link in the chain of outlet channel for increasing agricultural land drainage above.

Conditions in the Early Days.

Although it was well known to Saginaw settlers and farmers that the soil of the prairie marshes was of exceeding fertility, and would undoubtedly produce wonderful crops, nothing was done in those early days to reclaim

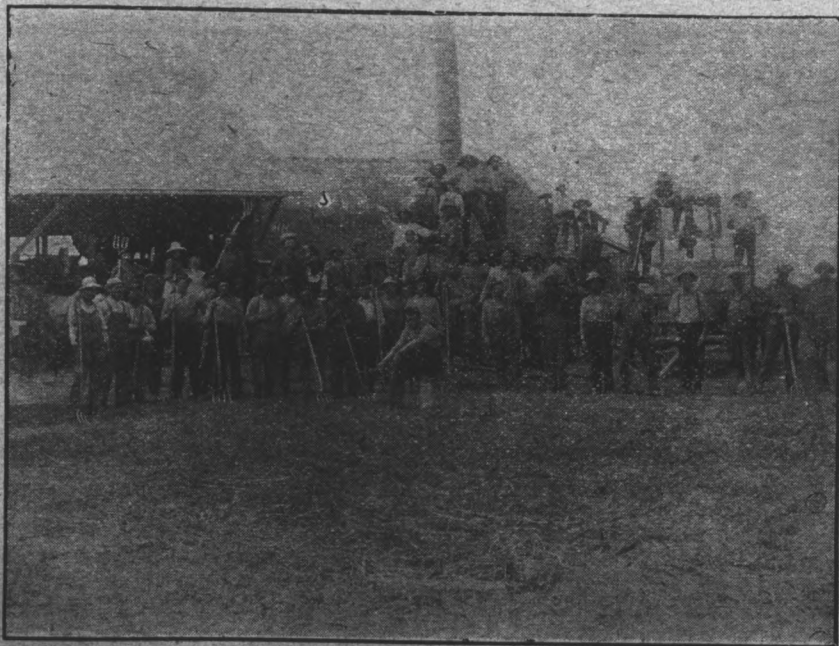
them. The spring freshets which overflowed the marshes to a depth of ten to fifteen feet, leaving quantities of mud and debris on the land, were the great obstacle to improvements. There was still a great acreage of wild government lands on higher ground subject to natural drainage, offered at a low price, and there was no incentive to experiment with the muck lands which lay only three or four feet above the normal level of Lake Huron. Northeasters from Georgian Bay often piled the sluggish waters of the river back upon the marsh, a dingy scum on the trunks of trees revealing where the floods had risen head high. It was evidently not a proposition to be undertaken by the individual farmer, as only by extensive work on a large scale was there hope that reclamation of the marshes could be accomplished. Time and development of the farming lands were required to make a project of this nature seem feasible to capitalists, and until that point was reached little could be expected of any plans for reclamation.

Beginning of Reclamation.

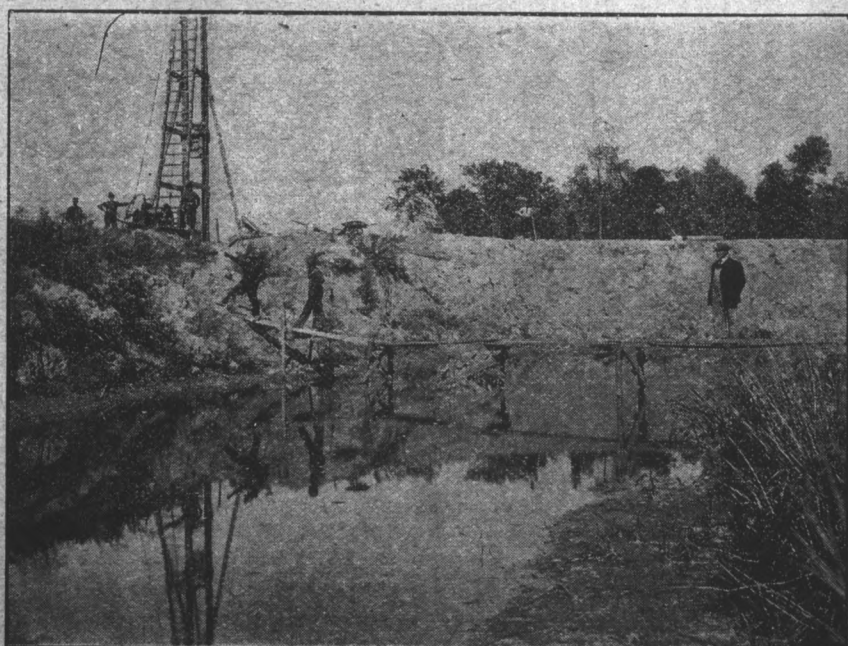
It was late in the eighteen-eighties that the first efforts were made to reclaim muck lands in Saginaw county. Harlan P. Smith, a prominent dealer in choice farming lands, had delved into the subject quite thoroughly and acquired title to considerable acreage about seventeen miles south of the city of Saginaw. Associated with him were Chas. H. Camp and George B. Brooks, who composed a well-known law firm, and together added to the holdings already acquired until they owned about ten thousand acres. This large area in one parcel was situated in Albee and St. Charles townships, south and east of the Flint and Shiawassee rivers.

These progressive men then proceeded to cut a large ditch from the northern part of the prairie land to the Flint river, a distance of about two miles, enclosing three or four hundred acres, and plowed and prepared the ground for seeding. The results of their practical efforts at farming on a large scale were fairly successful, but the difficulties were many and the expense great, and there was more or less trou-

(Continued on page 636).



Farm Hands at Mint Distillery on Prairie Farm.



Main Canal and Dike at Site of Pumping Station.

Welcome him with IDEAL HEATING!



Your boy writes he expects to be home soon to enjoy all future winters in comfort with an IDEAL Boiler and AMERICAN Radiators in the old home

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AMERICAN & IDEAL RADIATORS & BOILERS Puts June in every room throughout severest winter.



IDEAL Boilers will supply ample heat on one charging of coal for 8 to 24 hours, depending on severity of weather. Every ounce of fuel is made to yield utmost results.

Sold by all dealers. No exclusive agents

An IDEAL Boiler and AMERICAN Radiators can be easily and quickly installed in your farm house without disturbing your present heating arrangements. You will then have a heating outfit that will last longer than the house will stand and give daily, economical, and cleanly service.

Have this great comfort in your farm house

You will say that IDEAL heating is the greatest improvement and necessity that you can put on your farm for it gives you the needed comfort and enjoyment during the long season of zero, chilly, and damp weather.

It is not absolutely necessary to have a cellar or running water in order to operate an IDEAL heating outfit. There is no need to burn high priced fuel because IDEAL Boilers burn any local fuel with great economy and development of heat.

Send for our Free Heating Book

We want you to have a copy of "Ideal Heating." It goes into the subject very completely and tells you things you ought to know about heating your home. Puts you under no obligation to buy.



IDEAL Hot Water Supply Boilers will supply plenty of warm water for home and stock at small cost of few dollars for fuel for season. Temperature kept just right by Siphon Regulator. Write for booklet.

AMERICAN RADIATOR COMPANY

Write to Department F-3 Chicago



Agricultural News

INSURANCE AID FOR FARM LOAN BANKS.

THE necessity for the entry of the Federal Farm Loan Banks into the fire insurance business has been removed by the formation of a private company to perform the functions which the board claimed were not being performed by existing insurance companies. The details of the new organization have not been made public but it is understood that the company will have the cooperation of a number of the leading fire insurance companies of the country in its efforts to provide adequate protection for farm property.

The Federal Farm Loan Board in its annual report submitted to congress recently recommended that the Federal Farm Loan Banks be empowered to write fire insurance. The report declared that owing to the remoteness of some of the property and to other handicaps under which farm property labored it was impossible to get insurance to protect the property on which the banks were asked to make loans. On this account it was said large numbers of farmers were being deprived of the benefits of the system, and it was recommended that this be rectified by permitting the banks to insure such risk in a mutual insurance company.

Difficulty in guaranteeing the titles of the properties on which loans were made was also reported, and a plan to remedy this defect was also suggested. The General Agencies, Inc., of Baltimore, which is the name of the company that has arranged with fire insurance companies to cover the risks complained of, has arranged with several surety and title companies to provide a guarantee that will be satisfactory to the Federal Reserve Board.

Plans for carrying the new arrangement into effect have been on foot for several weeks, and it is reported that the proposal has the support of some of the leading officials at Washington.

The details of the plan have not been worked out. It is recognized that the proposal involves underwriting difficulties such as the insurance companies are not as a rule inclined to attack, but in view of the public nature of the demand, and because of the natural opposition in most quarters to government insurance in any form, it is expected that the companies will make an extra effort to make a success of the plan.

In the event it is put into operation it is expected to entirely eliminate the demand for self-insurance by the Farm Loan Banks.

FEDERAL CROP REPORT.

THE Crop Reporting Board of the Bureau of Crop Estimates, United States Department of Agriculture, makes the following estimates from reports of its correspondents and agents:

The average condition of winter wheat on April 1 was 99.8 per cent of a normal, against 78.6 on April 1, 1918, 63.4 on April 1, 1917, and 82.3, the average condition for the past ten years on April 1. There was an increase in condition from December 1, 1918, to April 1, 1919, of 1.2 points, as compared with an average decline in the past ten years of 5.9 points between those dates. Upon the assumption of average abandonment of acreage and average influences on the crop to harvest, condition April 1 forecasts a production of about 837,000,000 bushels, which compares with 553,449,000 bushels, the estimated production in 1918, and 412,901,000 in 1917.

The average condition of rye on April 1 was 90.6 per cent of a normal, against 85.8 on April 1, 1918, 86.0 on April 1, 1917, and 88.6, the average condition for the past ten years on April 1.

The condition of rye forecasts a production of approximately 101,000,000 bushels; last year's estimated production was 89,103,000 bushels; the 1917 crop 62,933,000 and the average of the preceding five years 44,547,000 bushels.

GROWING IMITATION SILK AND WOOL IN MICHIGAN.

IT seems now that the much maligned milkweed plant is at last coming into its own. Doctor Sidney Smith Boyce, who is developing a fiber farm at Saginaw Michigan, makes report that from a variety of the asclepias plants known as asclepias incarnata, or swamp milkweed, he is producing a fiber of fineness and character hard to be distinguished from silk. While from the varieties known as asclepias cornutus he is producing another style of fine fiber not easily distinguished from fine merino wool.

The plant from which the imitation silk fiber is obtained is a variety of the swamp milkweed style of plants, is perennial and grows much the best in soils too low and wet to grow ordinary farm crops.

When once planted this plant requires but little further attention beyond gathering the stalks in October. It grows five to seven feet and yields two to three tons of stalks per acre. The raw fiber is obtained from the bark by breaking and is now worth twenty-five cents a pound.

To grow this silk fiber plant a dyke may be run across any piece of over-wet land and the lower part planted to silkweed plants and the dryer part to ordinary farm crops and these latter kept dry by pumping off the excess moisture upon the milkweed plants.

The large variety of wild milkweeds persistently clothing the roadsides and bone-dry hillsides and pronounced noxious weeds, is so familiar to almost everyone that it needs but little describing. This variety of plants is also perennial and can be gathered in abundance and used to obtain the imitation wool fiber, or for paper stock, but until taken in charge and domesticated the crop will be quite irregular, both in amount and character, but under cultivation and its instincts recognized and cared for the yield is quite as great as that of the swamp variety. This plant is gathered before the seed pods open and decorticated while green.

DON'T FORGET THE GARDEN.

DON'T forget to include the home garden as one of your main lines of work the coming season. If you have not already made your plans for a garden do so at once. Select, fertilize, and prepare your ground as soon as possible. The seed supply should also be looked after and ordered at the earliest possible date, in order to prevent disappointments and delays in planting. See that the garden includes a good variety of vegetables, and also plant it so that it will continue to work for you and supply your table with fresh vegetables throughout the entire summer and fall. Too many gardens are abandoned after the first crop of vegetables is harvested in the summer.

ROLLING BATH TUB WITH WATER HEATER

The wonderful new Ro-San product for homes without plumbing. Nothing like it anywhere. Equal in comfort, style and quality to our famous Indoor Toilet and Washstand. Full size metal tub, white enamel. Simple heater and 12 gallon nickel water tank. Water heats quickly. A boon if you have sickness or need hot water quick day or night. Use gas, gasoline or kerosene. No plumbing or extra. After use tub closes up against frame, less than 8 feet square. Covers heater. Rolls anywhere easily. Keep in small closet. Bath in comfort-as often as you like-anywhere in the house. Write today for particulars and price.

ROWE SANITARY MANUFACTURING CO.
7404 6th St.
Detroit, Mich.



CARPENTER GRAIN CO.
Buy & Sell CARLOADS - CORN - WHEAT - RYE - OATS -
BATTLE CREEK, MICHIGAN

Seed Corn for sale. White dent, large ear and stock heavy cropper and very early. Planted on bottom land the past season June, 15th and matured before frost struck it. \$3.50 bushel.
I. R. NEHER, Ross, Mich.

Northern Grown Choice Michigan Pea Bean Seed for sale. These beans yielded 34 bus. per acre for last season. It pays to plant the best. Only \$5 per bushel. Order early.
J. P. SEILER, East Jordan, Mich.



One Man Alone Pulls Biggest STUMPS!

Quickest! Cheapest! Easiest!

A Kirstin One-Man Stump Puller instantly gives you a GIANT'S POWER - makes you master of any stump! Many Kirstin owners pull stubbornest stumps in 4 to 10 minutes! AS CHEAP AS 5 CENTS per stump!

Kirstin One Man Stump Puller

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Plan for Selling Wool

How Illinois Farmers Will Do It

WOOL growers in Illinois will be given a chance to market their spring clip of wool on the cooperative plan. County agents from leading sheep raising sections agreed to follow a uniform plan in selling the spring wool crop at a meeting held at the Stock Yard Inn at Chicago. Definite plans for carrying out the work will be drafted by D. O. Thompson, secretary of Illinois Agricultural Association, and Prof. W. C. Coffey, Sheep Husbandry Department, University of Illinois. After the plans have been finished they will be submitted to a committee of five for approval.

Copies of the final plan will be sent to all of the farm bureaus in Illinois, and through these organizations the sheepmen will be allowed to concentrate the marketing of their wool. The practice has always been for buyers to go into the country and buy from the sheep owner, but many sheepmen claim this practice has been abused. Few men have a thorough understanding of the various commercial grades of wool and they sell their season's clip without grading it and for less than it is worth in many instances.

Through the cooperative plan there will be two principal advantages offered. The primary object will be that of concentrating the marketing of the wool to get more for it, and, second, there will be an educational campaign carried along with it.

Two and a Half Cents for Handling.

Plans are now being worked out to pool the wool at some central point in the county designated by the farm bureau officials or a similar organization. Here it will be labeled and shipped to a central storehouse in charge of men acting as agencies for the wool growers, John D. Holliway, president of the National Wool Warehouse and Storage Company, offered to handle the wool for two and a half cents a pound. In this case the wool would be concentrated at a central point in each county and consigned to the warehouse in Chicago. The two and a half cents a pound covers all of the expenses, including freight, storage, grading of the fleeces, loading and unloading and marketing. There will be no other charges if the wool is sold within a period of four months.

On the other hand, if the agencies deem it wise to hold the wool over four months there will be an additional charge of fifteen cents a month on every bag. Each bag weighs three hundred and fifty pounds. Seventy-five per cent will be advanced to each producer at the time he delivers the wool, and the balance paid when the wool is sold. Seven per cent interest will be paid on the advanced sum to

the agency which handles the wool. The advantages offered in this method of marketing are that each wool producer's clip will be graded and he will receive the same for his wool as his neighbor with a similar grade. In this way each man is paid a uniform price for the grade his wool scores. When the wool is sold a complete statement will be returned to each producer, showing the weights, grades and selling price of his wool, and all other details. If he does not receive as much for his wool as his neighbor he will know the reason, and this will stimulate the growth of a better grade of wool.

J. Howard Miner, county agent of Henderson county, Ill., says: "Ninety-five per cent of the wool growers in my county will market their wool crop through the farm bureaus again this year. Forty-six consigned over 20,000 pounds of wool through our bureau last year. I sent out letters offering to handle their wool for members of the bureau and offered the same chance to others who were not members. I went there in April practically a stranger, and those men brought their wool in and didn't even ask for a receipt when it was loaded on the car. When the wool was sold a draft for \$12,001 came back to me for the whole consignment, and then each man was paid his share. We are going to do the same thing this year with practically all of the men who have any wool to market in that county."

Visit Wool Storehouse.

About two o'clock all of the delegates at the meeting were taken to the National Wool Warehouse and Storage Company's plant in automobiles. This plant has a capacity of from 10,000,000 to 15,000,000 pounds of wool. While making a tour through the plant Ezra Booth, who is in charge of the warehouse, gave a practical demonstration in wool grading. As he sorted out the various grades, dropping each grade into separate baskets, he explained to the men what constituted quarter, one-half, three-eighths, half-clothing and fine staple. These are the rough commercial grades.

"Do the woolen mills take these rough commercial grades as they are sorted here?" was one of the questions asked. Mr. Holliway replied: "We send a small sample taken from one of these big sacks, and when the wool is sold we rarely have one of our grades questioned."

Mr. Holliway offers to furnish paper twine to the farm bureaus at wholesale price, which is now twenty-six cents a pound. He suggested that they all use the same kind of twine

(Continued on page 625).



Who Manages The Standard Oil Company?

(Indiana)

SEVEN men, who have demonstrated unusual ability in their particular branch of the business, have been entrusted with the task and responsibilities of management.

Mr. Robert W. Stewart
Chairman of the Board

Mr. William M. Burton
President

Mr. Henry S. Morton
Vice-President

Mr. George W. Stahl
Secretary-Treasurer

Mr. Seth C. Drake
General Manager—Sales

Mr. William E. Warwick
General Manager—Manufacturing

Mr. Beaumont Parks
General Superintendent

are now at the head of the Company's affairs. These men, all residents of Chicago, and all actively engaged in this business, and no other, are the Board of Directors.

They are responsible to the 4623 stockholders, and to the public, for the policies governing the Company's activities.

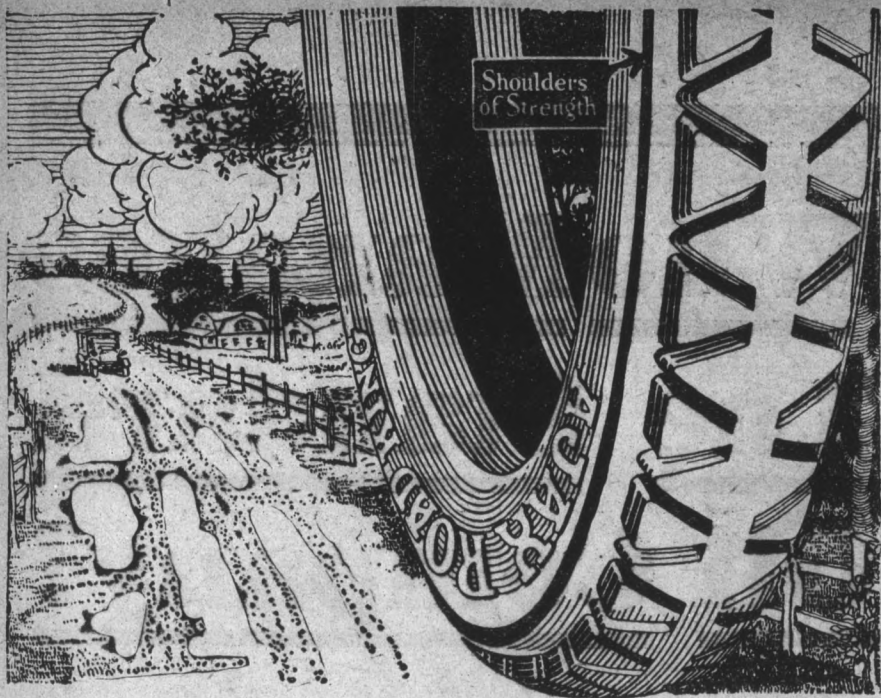
Each Director is a highly trained specialist, who, in addition to being master of his own particular specialty, has a profound knowledge of the oil business generally.

This complete understanding of every phase of the business, from the production of crude oil to the intricate problem of distribution, is the reason for the superlative service given by the Standard Oil Company.

Standard Oil Company

(Indiana)

910 S. Michigan Avenue, Chicago, Ill.



Mileage!

SURELY you've noticed the ever-increasing number of Ajax Tires in use on your own roads. More and more the farmer who checks up his mileage turns to Ajax. He knows that the greater mileage we have built into the Ajax Tires, enables him to get greater mileage out of them.

AJAX ROAD KING

More mileage is actually built into the Ajax Road King by Ajax Shoulders of Strength—those buttresses of rubber that brace and re-inforce the tread. They are an exclusive Ajax feature—a scientific means of putting more rubber where it should be—more tread on the road.

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Remember this—dirt tracks are merely country roads fenced in. Ajax Tires will win for you. Use them.

Ajax Tires Are Guaranteed In Writing 5000 Miles

AJAX TIRES

AJAX RUBBER COMPANY, Inc., NEW YORK

Factories: Trenton, N. J.

Branches in Leading Cities

ROSS Ensilage Cutters and Silo Fillers

Fill your silo with Ross cut silage. It is cut clean, not macerated. Every particle contains its own juices. Ross cut silage is uniform from top to bottom of silo, not soggy at the bottom and dried out on top.

There's a type and size of Ross for any engine—4 H. P. and up, cylinder or fly-wheel construction. Each one cuts corn clean. Ross Silo Fillers run with 300 R. P. M. less speed—require one-fourth less power—and are absolutely safe and sure.

Extra heavy knives, low speed six-fan blower, self conforming bearings, ball bearing end thrust adjustment and reversible cutting bar. The Ross

Keep a crew on the jump to feed them. Won't break down. Never choke, no matter how fast the corn is fed. Thousands of happy owners testify to their year 'round, honest dependability.

runs with a smooth, steady hum, fills your silo in a steady stream, every machine backed by sixty-nine years' experience and an ironclad guarantee.

A Size to Match Your Power

Write For These Free Books

No wide awake farmer or dairyman will pass up this chance. Simply tell us your needs. We mail these valuable books free. Many facts you should know, all explained. Get them—send a postcard—TODAY.

THE E. W. ROSS CO.

114 Warder St., Springfield, Ohio



Please mention the Michigan Farmer when writing to advertisers.

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The annual earnings of all employees have risen from \$673 per man in 1910 to \$1,460 this year. Train crews' pay advanced from \$993 a man in 1910 to \$2,020 this year. Wages of other than train service men advanced from \$599 in 1910 to \$1,325 this year.

Every thinking employer coincides with the view that the better the pay the better the service. The safety of millions of human beings depends upon railroad employees. They should receive the maximum rate of wage. They should receive the best treatment, that their work may be of maximum quality.

BUT—where and when is to be the end of this wage increase? What is to be the limit? How heavily can the government assess the ultimate consumer with safety? **BUT**—how are the railroads to stand the financial strain after government control ends? And who will pay the deficit? **BUT**—what is to prevent organized labor in other industries from following the example of the railroad men? And what is to be the end of it all? Sooner or later a halt must be called somewhere, and the sooner the halt comes the better for the country at large, for owners of railroad securities, for labor itself, which must realize that it cannot eat the pudding and still retain possession.

Many complaints are heard regarding the inferior quality of many of the lambs arriving on the Chicago market from near-by feeding stations. Strange to say, at a time when prime lambs are selling at enormously high prices, flocks of lambs are received showing scarcely any flesh on their bones, being merely poor feeders. Of course, they have to be sacrificed at very low prices, being really unfit for human food.

The demand for feeder cattle in the Chicago market is increasing constantly, and prices have undergone material advances, with the spread between ordinary light weight stockers and weighty feeders greatly narrowed. Average prices are highest ever known and there are not anywhere near enough choice lots for the growing demand. Sales on the Chicago market are largely at a range of \$11 to \$14 per 100 pounds.



Own a "Selected" Farm in Western Canada

Make Bigger Profits!

THE most wonderful opportunity in the world today for Business Farmers who are seeking greater rewards for their industry is in Western Canada along the lines of the Canadian National Railways. In this marvelously fertile section, farming yields a big profit on the investment, because the land can be bought at low prices and wheat and cattle raisers operate under ideal conditions with a big, sure demand for their products at a high level of prices.

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When you buy a "selected" farm in Western Canada along the lines of the Canadian National Railways, you get the benefit of special knowledge of farming conditions acquired through years of close study by experts representing over 14,000 miles of railway, whose impartial advice and practical assistance are of great value to settlers and farm buyers and entirely free of cost to them.

You do not purchase merely "a farm" but in fact and reality a carefully **Selected Farm**, chosen to meet your needs from the cream of the richest wheat farming and cattle raising country on the North American Continent.

You Will Find a Friendly Welcome in Western Canada

The boundary line between the United States and Western Canada is purely imaginary. When you settle on a "Selected" Farm along the lines of the Canadian National Railways, you will find yourself surrounded by the same living conditions that you are used to—the same friendly neighbors, speaking your language and thinking your thoughts—helpful friends, eager to welcome and aid you to achieve the greater prosperity and happiness that await you in Western Canada.

Your harvests will be greatly increased—your animals will thrive better—the cost of cattle raising will be less—your profits greater—on your **Selected Farm** in Western Canada. You will enjoy every benefit that you formerly enjoyed and many advantages that you could not get from higher priced land elsewhere.

Big Profits in Wheat

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All the facts will be furnished free on request and without obligation to you.

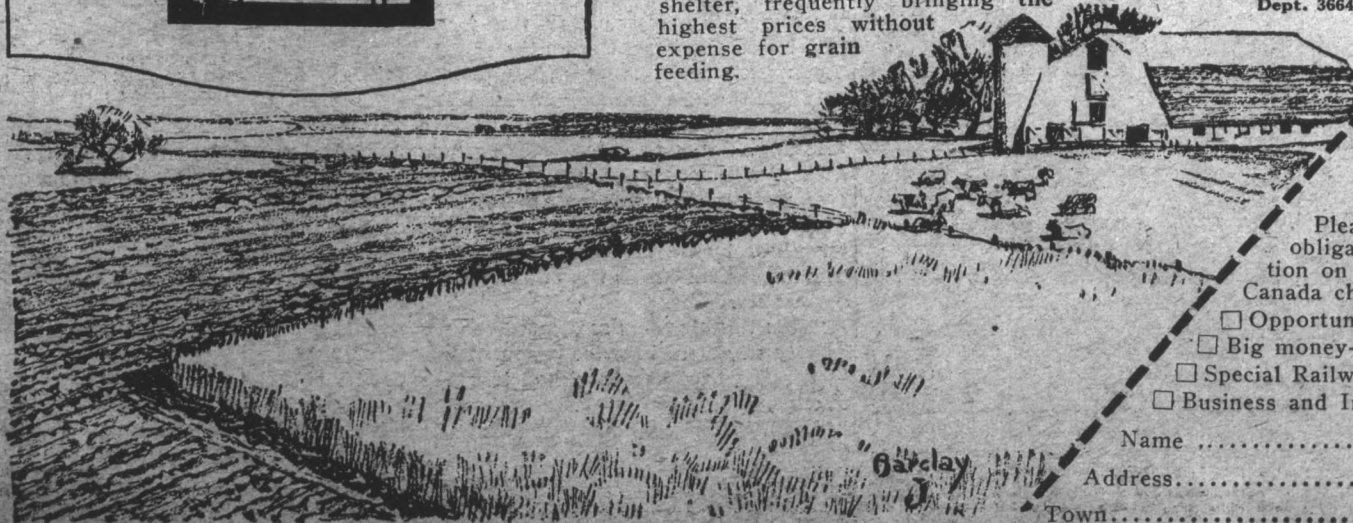
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DEWITT FOSTER, Superintendent of Resources
CANADIAN NATIONAL RAILWAYS
Dept. 3664, Marquette Building, Chicago

Read—Think—Act!

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**Canadian
National
Railways**



Cut Out and Mail This Free Coupon

DEWITT FOSTER
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Name

Address..... R. F. D.....

Town..... State.....



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Write For These Free Books

No wide awake farmer or dairyman will pass up this chance. Simply tell us your needs. We mail these valuable books free. Many facts you should know, all explained. Get them—send a postcard—TODAY.



THE E. W. ROSS CO.
114 Warder St., Springfield, Ohio

A Size to Match Your Power

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Mail Coupon or Write Today to

DEWITT FOSTER, Superintendent of Resources
CANADIAN NATIONAL RAILWAYS
Dept. 3664, Marquette Building, Chicago

**Cut Out and Mail
This Free Coupon**
DEWITT FOSTER
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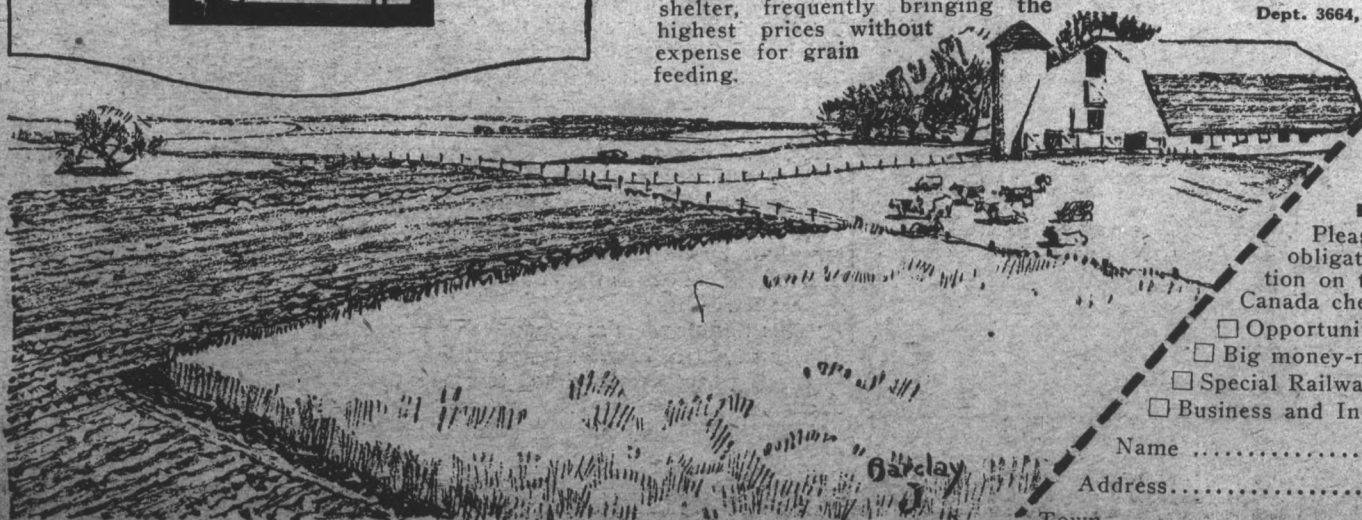
Address..... R. F. D.....

Town..... State.....

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**Canadian
National
Railways**



Some Tires "Climb"

DID you ever wonder why it is often so hard to "stay in the ruts" when driving over poor roads?

Usually you will find the reason in your tires. Many so-called non-skid treads tend to "climb" up the sides of ruts—the fancy bumps and ridges of rubber on the sides of the tread act like the climbers which telephone linemen strap to their legs.

HORSE-SHOE TIRES have no such tendency. They are anti-climb as well as anti-skid. They run true and straight on rough roads—and noiselessly on paved streets.

This is just one of the reasons why experienced motorists, when buying tires,

"Remember the Horse-Shoe Tread"

Guaranteed for 5,000 miles but gives more. See your local dealer or write to

Brown & Sehler,
Grand Rapids, Mich.



RACINE
HORSE-SHOE TIRES

Pedigreed Seed Beans

(Inspection Numbers 3110-A 3121-A.)

Grew 24 bu. of Robust Beans to the acre, on 29 acres, last year. These won 1st and 2nd places at Farmers Week Exposition at M. A. C. They were developed from 30 beans secured from Prof. Spragg four years ago. Will ripen early. Price \$7.50 per bu. including bags. Only about 250 bu. left, first orders get them. Send post office order or check to—

Cheboygan Co-operative Market Ass'n.,
Cheboygan, Mich. Olof Nelson, Grower, Aloha, Mich.

Potato Bags sold direct to the grower at wholesale prices
LINCOLN BAG CO., Springfield, Ill.

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Widow Owner Must Sell 515 Acres, 16 Cows and

2 pairs young horses, lot heifers, hogs, poultry, complete tools, wagons, etc., on improved road, near RR. town. 25 acres dark loam tillage, 50-cow pasture, estimated 100 cords wood, 100,000 timber, 100 apple trees, 9-room house, 2 large barns, silo, horse stables, carriage, ice, poultry houses, etc. \$8000 gets everything, easy terms. Details this big money-maker page. Catalog Bargains 19 states, copy free. **STROUT FARM AGENCY, 814 B. C. Ford Bldg., Detroit.**

F-R-E-E

map, price and typewritten description of exceptionally well located tracts of clover land in Marinette County. In writing be sure to state what acreage you might want and whether you have any property that would have to be sold before you could purchase land. These special bargain tracts are going fast. Write today. **SKIDMORE LAND CO., 381 Marinette, Wisconsin.**

I Sell Farms Where biggest crops grow: fruit, grain, alfalfa, dairying. For list write **J. D. S. HANSON, Hart, Mich.**

Rich Michigan Farms. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, Michigan.

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

WANTED to hear from owner of good farm for sale. State cash price, full particulars. **D. F. Bush, Minneapolis, Minn.**

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For FREE Big Book

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Your choice of five selling plans including long terms. The money you save you can use in a dozen different ways. So don't delay write for big 1919 "Divide the Money" money saving implement book. 300,000 satisfied customers—many your next neighbors—prove the merit of the Galloway method. Facts are what count. Special patented features on Galloway implements on no other, yet prices away below. Close by shipping points. Mention implement interested in for special literature. Write today **WM. GALLOWAY CO., Box 287 Waterloo, Iowa**

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On trial. New, well made, easy running, easily cleaned, perfect skimming separator. Skims warm or cold milk. Different from picture which shows larger capacity machines. Our guarantee protects you. Get our plan of easy

MONTHLY PAYMENTS and handsome free catalog. Whether dairy is large or small, write today. Western orders from Western points. **AMERICAN SEPARATOR CO. Box 6061 Cambridge, N. Y.**



The Unity of Industries

CHARLES M. SCHWAB, has been proposed as the head of an organization having for its aim the establishment of unity in industries, to cooperate with finance, manufacturing, merchandising, labor and agriculture in placing American business on a stable and thorough-going basis. Mr. Schwab was suggested for such leadership by Roy G. Owens, of the Lakewood Engineering Company, of Cleveland, who said: "The time has come when all phases of American life must be welded together so that we will all march forward to accomplishment."

"To make this possible," continued Mr. Owens, "finance, manufacturing, merchandising, labor and agriculture must join hands. Not one of them can act individually and accomplish real results. We must all learn to know that all of us are laborers, manual or mental, also that each of us is a capitalist governing the exchange of the product of individual efforts."

Cooperation and Progress.

"The only man who might ever have been able to call himself absolutely independent of his fellow beings was perhaps the Cave man, who depended on no one, but in modern life independence means something much more constructive. A better definition of our individual positions is that we are a nation of inter-dependents. Not one of us can accomplish any result without the cooperation of others."

"If the term so thoroughly imbedded in our minds, capital and labor, could be eliminated by this unity of action suggested and it could be definitely understood by each of us that capital without labor is a corpse, and that labor without capital is a cripple, but that both of them working together spelled progress for all, then we would begin to have the unity of thought and action so much to be desired."

"The only way for business to have people know what is good for business is for business to take the public into its confidence and get them thinking and acting on those things which are good for business on the theory and good sense that whatever is good for business is good for the people as a whole, and that what is good for the people as a whole is good for business."

"Many articles have been written on this subject, but the story must be repeated over and over again if the thought of unity for individual and public progress is to be thoroughly imbedded in each of our minds."

A Prosperity Campaign.

"The national prosperity campaign, which is the conception of some far-sighted business who have the support of thinkers in other phases of American life, have undertaken to further the thoughts expressed in the many articles on the subject over the slogan, 'Let's Go.'"

"If all take up this slogan, 'Let's Go'—let's put it across—get everybody to thinking, doing and going, everybody acting without waiting for someone else, and nothing can stop America. No person, no business, no nation ever got anywhere by waiting on someone else. The successful one is the one who does something."

"This thinking has suggested the necessity of a still broader organization, in which would be associated together finance, manufacturing, merchandising and labor, who would be brought together in common counsel under a man who is endowed with commercial vision and executive ability, and who

would at the same time be imbued with the idea that labor must be permitted to take its place in business affairs."

"One name stands out above all others—that of Charles M. Schwab. If Mr. Schwab can be persuaded to accept leadership in a movement of this kind and could be surrounded with one leader selected for finance, one for labor, one for manufacturing, one for merchandising and one for agriculture, and these men could sit together for a conference on the subject, out of which could come an invitation over their names to American industry to attend a conference of industry for the purpose of a permanent organization, such a movement would have almost unanimous support."

"The plans proposed should in no way be dependent upon government activities nor should it affect the paternalistic attitude toward any class or phase of people, but it might well seek the cooperation of government departments who are devoting their efforts to the good of American industry."

"The European situation which brought about the great war; the situations there as they have developed since the armistice was signed; the lack of coordination in our own country, point clearly to the necessity for a movement suggested which would do constructive work."

"It is true after all that all political situations, all governmental activities, factional differences and all social requirements are predicated on commerce," continued Mr. Owens.

"If unity of opinion through publicity emanating from an organization such as is proposed could be brought about in the course of time, such a result would be without precedent in the history of the world."

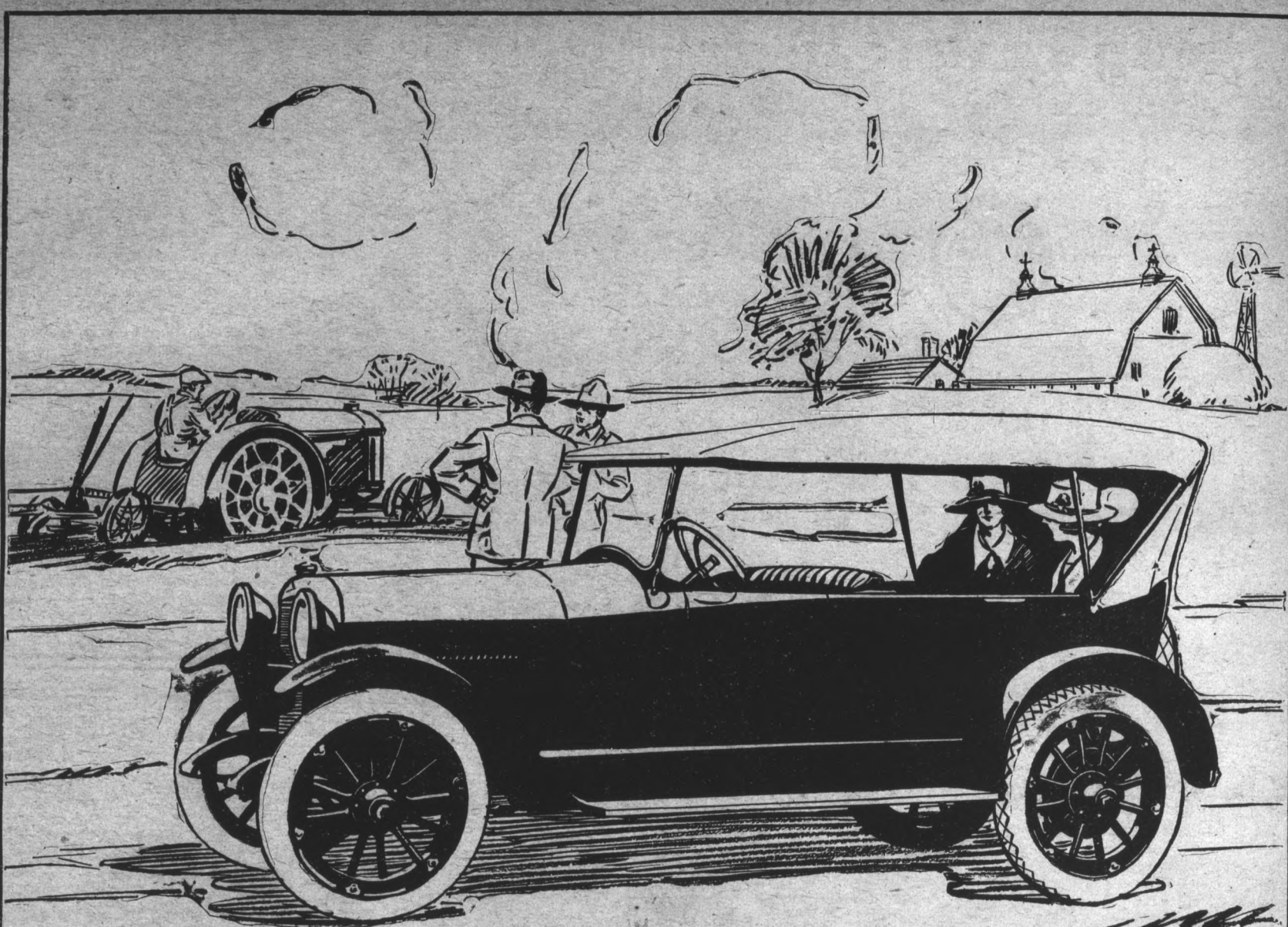
"The magnitude of such an undertaking is recognized, nevertheless, the object to be attained is one which need not be thought of as impossible."

NEW YORK DAIRY SHOW ON THIS MONTH.

THE Second National Milk and Dairy Exposition is to be held the last week in April, in the Seventy-first Regiment Armory, in New York City. A big effort is being made to demonstrate the food value of milk and to educate the mothers of young children in the necessity for its use even at the present price. Data on milk production will be featured also, in order to let the consumer know that the dairyman is not luxuriating in ill-gotten gains at present prices.

Several eastern states are sending dairy exhibits. The main stress in the exposition will, of course, be laid on the milk supply of the city. New York is now consuming about fifteen per cent less than normal, and it is hoped to restore consumption to the usual amount by this type of publicity. As the city is paying sixteen cents a quart for milk now, this appears to be a task of considerable difficulty.

Prizes for milk and various milk products will be given. Dishes prepared with milk, such as custard pie, rice pudding and other similar preparations, will be given prizes. New milk drinks will be encouraged. A "Milk and Baby Week" will be carried on by the city department of health at the same time as the exposition, and is expected to add to the popular interest in the subject.



The Linwood "Six-39"
5-Passengers—\$1555

PAIGE

The Most Beautiful Car in America

Pay Enough to Secure Satisfaction

There are just two spendthrifts—the man who spends too much and the man who spends too little. Both are grossly extravagant and both are deluded by the same error—a false sense of values.

But there is this distinction.

The man who *over-spends* can probably afford it, whereas the man who *under-spends* cannot. For, after all, the seventy-five dollar suit of clothes is a perfectly tailored all-wool garment and worth at least half of its price.

The fifteen dollar suit is a "sweat shop" cotton and a sudden shower proves that it is worth exactly nothing.

And so it is with a motor car or any other manufactured product.

You must pay *enough* to secure *satisfaction*—no less. You must convince yourself that the basic materials and workmanship are all right.

You must be sure that the car *answers your requirements* from the standpoint of size, power, design, comfort and general efficiency. No other car will satisfy you. No other investment will be economical.

This is our sincere advice as builders of a quality product. This is the advice that you would receive from every Paige owner in the land. Think it over.

The Linwood "Six-39" 5-Passenger—\$1555 f. o. b. Detroit

The Essex "Six-55" 7-Passenger—\$2060 f. o. b. Detroit

PAIGE-DETROIT MOTOR CAR CO., DETROIT, U. S. A.



An Even Stand of Corn

GIVE your corn crop a good early start when you want an even stand. It takes a good planter to give it that start, a **C. B. & Q. or International Corn Planter** that is easily adjusted and that stays adjusted until the job is done. Consider these planters feature by feature.

They plant corn accurately whether used with edge drop, flat drop, or full hill drop plates; whether the corn is checked or drilled. The drop clutch can be changed, while the planter is working, to drop 2, 3, or 4 kernels to a hill. The tongue is easily adjustable to the height of the horses. A handy foot drop lever makes head-row planting easy.

When you look over the **C. B. & Q. or International** planter, don't miss the automatic marker, a handy feature that saves a lot of work and time. There are fertilizer attachments if you want them, combination pea and corn planting hoppers, open wheels or closed—your planter will be equipped just as you want it. You can plant rows 28 to 48 inches wide by 2-inch adjustments, with four distances between hills.

These planters are so good you will want to know all about them. Drop us a line and let us send you full information.

The Full Line of International Harvester Quality Machines

Grain Harvesting Machines	Haying Machines	Corn Machines
Binders Push Binders Headers Rice Binders Harvester-Threshers Reapers Shockers Thrashers	Mowers Side Delivery Rakes Loaders (All Types) Rakes Bunchers Combination Side Rakes and Tedders Sweep Rakes Stackers Combination Sweep Rakes and Stackers Baling Presses	Planters Drills Cultivators Motor Cultivators Binders Pickers Ensilage Cutters Shellers Huskiers & Shredders
Tillage Implements Disk Harrows Tractor Harrows Spring-Tooth Harrows Peg-Tooth Harrows Orchard Harrows Soil Pulverizers Cultivators	Planting & Seeding Machines Corn Planters Corn Drills Grain Drills Broadcast Seeders Alfalfa & Grass Seed Drills Fertilizer & Lime Sowers	Other Farm Equipment Cream Separators Feed Grinders Manure Spreaders Straw Spreader Attachments Farm Wagons Farm Trucks Stalk Cutters Knife Grinders Tractor Hitches Binder Twine
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are now back on the job, ready for the boys as they come back, ready for everyone who knows the value of this real Service Coat when there's wet-weather work to be done.

A. J. TOWER CO.
BOSTON, MASS.

Over there they've learned the value of Fish Brand Slickers, while we at home have had to do without.



Bigger Crops this Spring

U. S. Department of Agriculture bulletins prove that tiling increases crops from 25 to 50%. When tiling use

American Vitritified Salt-Glazed Tile

It is made from very strong rock shale clay and is burnt in kilns at 2,400 degrees of heat—about twice the heat given to soft tile.

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Glazed or Unglazed Plastered Tile Silos reinforced every course of Tile

Wood Silos in fir and pine with hinge doors. Cement Stave Silos puddled process sealed and poured joints. Write for prices and agent proposition.

Hoosier Silo Co.
Department M-72
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Muncie, Indiana

Our Service Department

What can I do to prevent my tomatoes from rotting on the vines? The rot begins on the blossom end and gradually enlarges until the fruit is rendered unfit for use or market. Will spraying control this disease?

Van Buren Co.

H. R. G.

TOMATO DISEASE.

THE disease affecting your tomatoes last year, was the trouble known as "Blossom End Rot." This is one of the so-called "physiological" diseases of the tomato and results from a break-down of the tissues of the plant. Excessive dryness of soil and the opposite, excess of water, causes this disease. It has been produced experimentally by subjecting plants to extremes of conditions. When found in the greenhouse it usually is the result of keeping the plants too dry. Care in watering promptly does away with the bad condition.

It was noted last year that the tomatoes developing during the drought period showed the disease in excessive amount, but with the onset of rains a clean crop was set. Where gardeners can control the water supply by irrigation, they are able to prevent this trouble.

Certain varieties are more subject to the disease than others. Certain strains of Bonny Best have been notably resistant.

It is evident, therefore, that this disease can be controlled only by general measures which aim to prevent extremes in growing conditions, either of moisture, fertilizer, or of temperature. A well-drained soil given frequent cultivation with plants of a good variety will not be disappointing in a season of ordinary rainfall. Drought periods will require special effort to prevent loss.—G. H. Coons, Plant Pathologist, M. A. C.

PASTURING RYE.

I have about twelve acres of rye that I have had to pasture and it is rather badly cut up. I thought about drilling it then go over it with the spike-tooth drags and seed, and then go over it again with the weeder. Do you think that would be all right? I would also be glad of advice on the following: I have several patches of swamp land. I am going to dig an open ditch to run off the water and I want to seed them for pasture. What would you seed them with to make cow pasture?

Barry Co.

G. T. H.

If this land contains a good per cent of clay I think it will be almost impossible to fill up the cattle tracks by rolling or with a harrow. My idea is that a roller would be as effective as a harrow, because the harrow makes little impression on clay land that has been packed during the winter. Then you can roll the land earlier than you can harrow it and still you must be careful and not roll when it is so soft that the horses will make further depressions in it. These tracks will gradually fill up of themselves and I think I would simply sow on the grass seed early before the freezing is over so that the action of frosts will cover the seed, and then as soon as I could I would run over the ground with a roller and let it go at that.

Draining Swamps for Pasture.

It would have been much better had you drained the water all out of the swamps last fall, then if you had sown on a mixture of grass seed the action of the frosts in heaving the soil would have covered the grass seed. If you wait now until this spring and then drain them it will be difficult to cover the grass seed unless you can harrow the ground and probably it is not in condition to be harrowed. About the only way you can do is to drain them out as soon as possible and sow on the

grass seed early. The spring rains will cover some of it so it will start and then next winter you can sow on grass seed so that it will be quite thoroughly covered by the action of the frost, providing there is no water on the surface.

A mixture of timothy, red-top, orchard grass and alsike clover, would make good pasture on this land.

C. C. L.

VARIETIES OF SOY BEANS.

We have been planting and using soy beans in the ensilage corn for two years. The first year the variety was of a small vine growth kind and well podded and filled. But so low that the corn binder only got about half the vines and pods. Last year we planted a Mammoth variety, the Yellow Mammoth, and while they grew fine and tall and stood up fairly well there was no pods. They only got to the blossoming stage at filling time. What I want to know is the relative value, for ensilage purposes, of these Mammoth vines at blossoming time or what they would have been if they had been podded and filled. We waited a little too long as it was, in filling, the corn was too ripe. Would the soy beans have podded better if they had been inoculated. I think you understand the situation. We like the Mammoth soys best because they were so viney and tall, and the corn binder got them, but if they are not as valuable that way, that settles it. Will look for another variety that may fill the requirements. We think soy beans are at least a 25 per cent addition to the ensilage for feeding value. Has there been tests to determine the feeding value, with or without this addition of the beans or sunflowers.

A. F. C.

As a rule farmers in this latitude would find it more profitable to sow the early maturing varieties of soy beans. Experiments indicate that the well-filled pods possess greater feeding value than the rank-growing vines; besides they make a much better silage. The fact that the smaller varieties filled well on your farm indicates that inoculation is not needed, although on most types of soil it pays to inoculate the seed.

Some varieties of soy beans are adapted better than others to certain uses and conditions. In northern latitudes earlier varieties will mature more certainly than will later ones. Such varieties as the Ito San, Early Brown and Parson's Auburn do well in Michigan. Ito San matures a few days earlier, but the Early Brown and Parson's Auburn are heavier yielders of both beans and forage. Early Brown is probably the best all-round variety for the north.

For best results soy beans should be inoculated. The most practical method is to secure inoculated soil from men who have grown soy beans, using two quarts of inoculated soil to each bushel of seed. A good method is to spread the seed on a floor and moisten them with water to which has been added two tablespoonfuls of liquid glue. To the seed so treated add the soil, which absorbs the moisture while the glue water holds the dirt to the seed and insures even inoculation.

Seed so treated should be stored in a dark place, as sunlight is death to the bacteria. Soy beans should be planted about one inch deep. Nothing is gained by planting deeper. A quick start and vigorous early growth is necessary to mature well-filled pods in this latitude.

If your local dealer is not sure of his varieties or the source of his seed supply, it is best to look elsewhere for your seed. Your county agent should be able to advise you where you can get good seed.

W. M. K.

Many people make themselves miserable trying to run their homes according to the income of some more fortunate neighbor.

Ditches Terraces



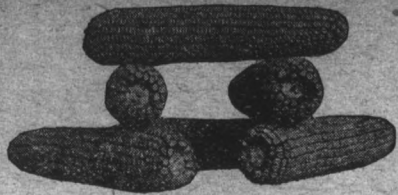
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TAKING HOMESTEAD ON JUDGMENT.

We bought our place by a contract, paying part down, and agreeing to pay \$500 and the interest on the first day of every January following, until the whole amount was paid, when we were to have a deed; and later my husband bought some machinery on written contract agreeing to waive all exemptions. Can the seller of the machinery take our place for what is due on the machinery, if he gets a judgment on it?

One may have a homestead in land which is not owned in fee, but merely on contract; and any agreement by the husband to waive the exemption of the homestead not signed by the wife is void, not to say that it would be good in this case even if she had signed it. By the statutes of this state any sale or mortgage or other incumbrance of the homestead by the husband not in writing and signed by the wife is void.

JOHN R. ROOD.

DISCING VS. PLOWING.

I have twelve acres of a sandy and clay loam which I put into beans last year and was a failure. Which would be the best to disc this ground thoroughly or plow it for part corn and part barley this spring.

Livingston Co.

J. J. G.

If this field was well cultivated last season so that there are hardly any weeds to bother, I would say that for the barley it would be better to prepare the land by thoroughly discing it, leaving a firm, solid sub-soil; but for corn I would plow because corn has a different root system and the ground ought to be loosened deeper.

CRIMSON CLOVER.

I would like to hear from Mr. Lillie in regard to growing crimson clover. I have ten acres of fall wheat to seed in the spring. The crimson is by far the cheapest seed. But I do not know how it would stand the winter. Is it as prolific as the June, and would it make as good a stand under favorable conditions? My neighbor sowed some last spring on wheat and it looked fine when the snow came on. But it may look different in the spring.

Sanilac Co.

R. L.

Crimson clover cannot be depended upon in this climate. It is not nearly as hardy as our common red clover. Several years ago I tried quite thoroughly to get a stand of crimson clover and the little I did get winter-killed. During a favorable season you might get a stand of this plant and get a good crop but it is quite risky and belongs to a latitude much farther south than Michigan. Down in Maryland crimson clover thrives, but it is extremely liable to be winter-killed in this climate.

C. C. L.

SEEDING TO ALFALFA.

I have a ten-acre field to sow to Grimm alfalfa and would like to know if it would be safe to sow when I sow my oats or would it be better to wait a week after sowing the oats. I would sow the oats about April 15.

Genesee Co.

O. D. G.

Alfalfa is very often seeded with oats. It is best not to sow over a bushel and a half of oats to the acre so as to give the alfalfa a chance.

The seed should be sown at the same time the oats are sown, allowing the seed to scatter in front of the teeth of the drill. This will probably cover the seed sufficiently although it is better to roll after seeding with a corrugated roller as some of the seed may be left on top from the drill.

C. C. L.

Solving Your Market Problem

QUICKER marketing often makes the difference between profit and loss on the farm.

With a Republic Truck you can take your produce to the best markets and increase your profits.

But a truck must be built right to withstand the grind of heavy farm work.

Republic Trucks are built by truck specialists. Every Republic has back of it the knowledge and experience gained in building the more than 50,000 Republic Trucks now in use.

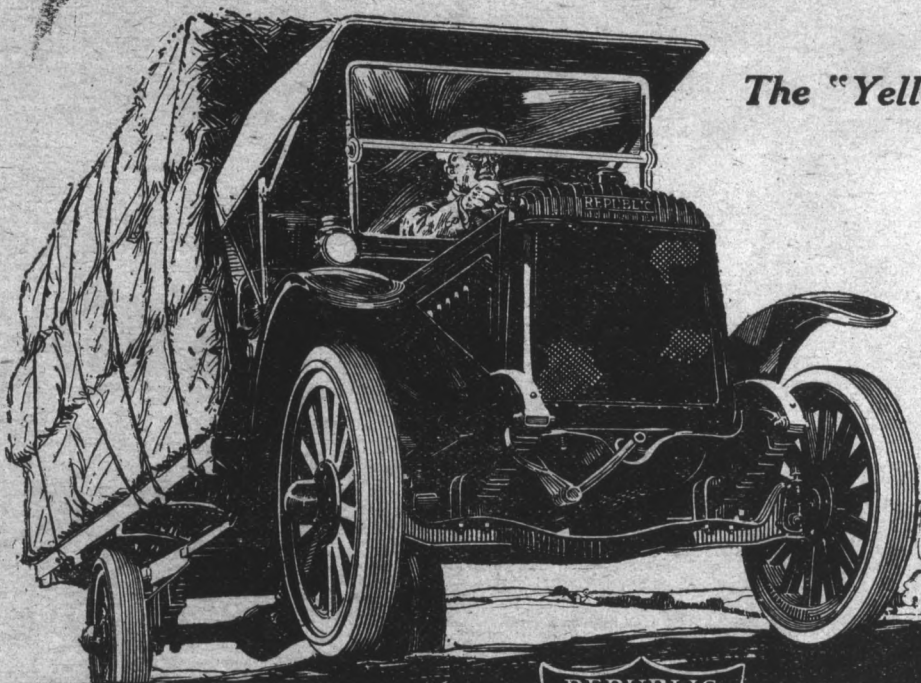
Torbensen Internal Gear Drive applies the power nearer rim of wheel, gaining greater leverage. A separate I-beam axle carries the load and takes all load strain off

driving mechanism. The **POWRLOK** delivers the power to the wheel that has traction and prevents stalling on soft ground, in mud or in snow.

You can get a Republic of any size or capacity your particular work may require. Each model has generous excess proportions and strength. All furnished if you desire with Republic 8-way farm body at a slight extra cost. In five minutes one man can change this body into a hay rack, stock body, tight grain box or any one of five other useful combinations. No tools required but a wrench.

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BETTER THAN RED CLOVER
FOR SOILING AND A VALUABLE HAY CROP

Does not winter-kill. Succeeds on all kinds of soil. Better than red clover as a soil builder. Prepares the land for alfalfa and other clovers. Equal to alfalfa in feed value. We do not handle Southern seed, but offer choicest selections of Michigan grown; 99.75% pure; high germination, scarified, best in the world. Selling at about half the price of red clover seed, every farmer should investigate it. A Special Bulletin explaining cultivation and uses of this most valuable legume, sample of seed and our 1919 Seed Book free, on request. We are headquarters for Michigan Clover, Alsike, Vetch, Peas, Northwestern Alfalfa, etc.

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Early Jersey Wakefield, Charleston Wakefield Succession & Flat Dutch at \$1.50 per M. by express collect; 35c per 100 by par. post prepaid. Satisfaction guar. C. J. & C. Whaley, Martin's Point P. O., S. C.

SEED CORN FOR SALE

Golden Dent long grown and acclimated in Michigan. Deep kernels, large ear and stalk. A heavy cropper. In ear 70 lbs. \$5.00 Shelled per bu. \$4.00.
C. B. COOK, R. 1, Owosso, Mich.

Seed Corn

for sale. Mich. Yellow Dent; this corn been grown on my farm for the last 25 years and with mature at \$4.00 a bu. including bags and also Plymouth Rock eggs at \$1.00 per setting of 13.
JOHN LOHMAN, R. 3, Hamilton, Mich.

SEED CORN.

Old reliable Mich. Yellow Dent. Home grown, fire-dried and tested. Also regenerated Swedish Select and Scottish Chief Oats. Circular and samples on request.
F. A. BYWATER, Memphis, Mich.

MICHIGAN GROWN SEEDS

for Michigan growers. Ask for catalog. Harry E. Saler, Seedsman, 115-119 E. Ottawa St., Lansing, Michigan.

Michigan Wonder Beans

also known as Early Michigan, and 1200 to 1. Choice hand picked seed, free from disease.
A. JENSEN, Greenville, Mich.

Binder Twine

Get our low 1919 prices. Farmer agents wanted. Sample free.
THEO. BURT & SONS, Melrose, Ohio

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JACKSON, MICHIGAN

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**Let One Buy
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BUY an Indiana Silo this year. It will more than pay for itself, and buy another for you next year. The two will earn every year the price of several acres of prime farm land—even at present high prices.

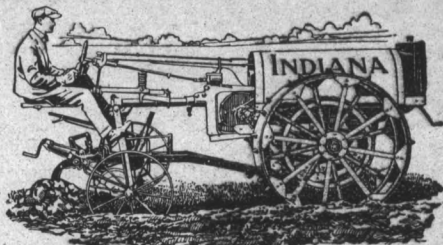
The Indiana Silo is the corner-stone on which many ambitious farmers have founded their fortunes.

It pays better than most silos because it makes better silage, allows less waste, stays in better condition, lasts longer. That is why 60,000 are in use—many more than any other make. Ask Indiana Silo owners.

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The World's Tractor



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*Write for the folder that tells
what it can do on your farm.*

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826 Silo Building . . . Kansas City, Mo. 826 Live Stock Ex. Bldg., Ft. Worth, Tex.

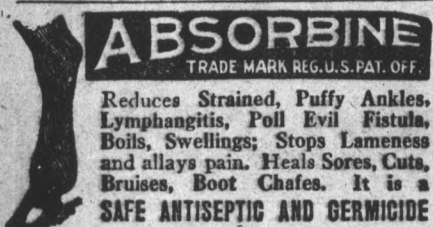
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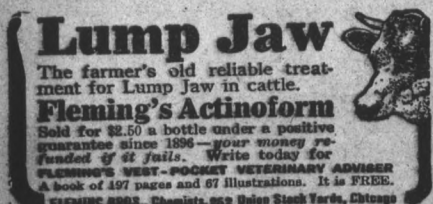


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The Dairy Periscope

By I. J. Matthews

DAIRYING is now just one sea of oil patches interspersed with clear areas here and there. In true submarine style, where many a goodly dairyman did hold forth now, there is nothing but a grease spot to show where he held the land down. But just as a ship in trouble can soothe the angry waves by pouring out a quantity of oil, so the failures that the present conditions have brought on will serve to calm the troubled perplexities of dairying.

Some Discouraging Features.

At the present time there are some discouraging features in dairying. One of them is the very noticeable fact that except in very rare instances, the price received for milk, cream or other dairy products has not been commensurate to the constantly increasing costs of running a dairy. The price of feed has rocketed to unheard of heights and it has been practically impossible to get enough labor to keep the business running at a one hundred per cent efficiency standard. Not only this, but there has been a continual lambasting of the dairy farmer by our big city dailies. The damage that has been done cannot be repaired in a moment for so many things were said that would tend to influence people against the extended use of milk and milk products. Then, too, the discrimination of butchers and packers against the surplus stock that the dairyman sells has worked a hardship, since it has cost relatively more to get this young stock in shape where it could be sold or disposed of. All these taken together with the routine of the dairy has driven a great many big enterprises into the discard.

The last few months has seen a complete dispersion of three of the largest pure-bred herds in the country and hundreds of other herds of high-grade and registered dairy cattle have been scattered. Out of it all, will probably come a refining of the dairy business and an appreciation on the part of the public that the dairyman is an essential part of the economic machinery of any community. Even now, some of the city editors who said harsh things last fall are seeing the folly of their ways and are facing about. Yet the saucy and untrue editorials which they published some time ago have done their insidious damage. The demand for milk has fallen off considerably and with absolutely no reason other than that there has been so much agitation against the dairyman. It seems strange after all has been said and done that the dairyman, of all classes of farmers, should be picked out as the object of a great offensive by the high command of editorial ability. A good dairyman is not only a public benefactor and a necessity in the development of the youth of the country, but very often he works for a mere pittance and in the last year or so has not received money commensurate to the labor and feed and capital necessary to further his undertaking.

As we look up through the periscope it is very easy to see that there are brighter days ahead for the dairyman. Many a goodly ship has gone down on the dairy highway and as is always the case, we profit as much from failures as from successes. The fact that desirable animals in recent public sales have sold for good prices is proof positive that big breeders can see ahead. They feel that dairying will come into its own. It is doubtful if the milk business alone will ever be an especially lucrative one, since the bulk of the

dairy products in the United States are produced by people having three or four cows. They regard the butter and cream more as a by-product. This fact will always keep dairying a relatively unprofitable business unless it has some peculiar feature that would enable the owner to get an income from products other than milk and cream. If pure-bred cattle are kept, the dairyman has a chance to make a large proportion of his money from the surplus breeding stock. It may be that the milkman can develop a special trade in cottage cheese or some other product that will enable him to have for sale a number of by-products. Some such trade as this often makes it possible for dairymen to double their incomes.

Beyond all this is the observation that dairying is a business that furthers the best interests of the community. The dairyman who supplies promising growing babies and future presidents with milk that is absolutely essential for the normal development of their bodies is a public benefactor and his value is to a large extent dependent upon how he regards his job. Moreover, dairying is not a business that can be mastered in a short while. Few men are fortunate enough to do anything really worth while in three years and the majority of men are not heard of even in five years, while at the end of ten years not more than one out of every fifty has accomplished anything worth while in the matter of constructive breeding. This makes it more desirable for young men to take up the work and devote to it their best energy.

The fertility of many farms is a problem that is automatically solved through the use of dairy cattle. It has been proven beyond doubt that land may be kept fertile by grain farming, provided enough legumes are grown and plowed under from year to year. Theoretically and practically this is the case, but actually it has never happened in farm practice except on very rare occasions. Dairy regions are by all signs and appearances prosperous and while the farmer may not be able to make twenty or twenty-five per cent on his investment, he is practically guaranteed a steady income as well as a labor distribution that has a great many points in its favor.

Every indication is that there will be an adjustment of prices that will give the dairy farmer an opportunity to get for his product the cost of production plus a certain fixed per cent of profit. I see no reason why it should not be as feasible to set a price like this on the products of the farm as well as those that are manufactured. That competition is the life of business is only part of the truth and the fact is that competition is allowed to make itself evident only now and then. Furniture manufacturers do not put their product on the market in a competitive way. They do not put it out and ask the other fellow what we will give for it; but they simply determine its cost and add onto this enough to cover interest on the investment, profits and sales. The competition is only of a very peculiar variety and about all that can be said to show this fact is that two makes may both be on the market at the same time. When the goods do not sell readily, the factories, of course, stop rushing quite so hard and production naturally adjusts itself to the demand.

So, it seems, that the same thing (Continued on page 622)



RED-TOP ON SANDY LAND.

Owing to the high-priced clover seed and the dry seasons, I would like some information on sowing red-top and timothy seed mixed, and if it does well on sandy soil.

Oceana Co.

D. B.

One of the most serious problems of farmers in recent years, particularly those on sandy soils, has been the loss of the grass seedings by dry weather. It is indeed discouraging to sow clover seed year after year and have failure more often than success, yet many continue to do so, hoping the weather conditions will be more favorable the next time.

On the writer's farm the clover seeding killed out last year, but on another field with barley as a nurse crop alfalfa was sown broadcast after drilling. It survived the summer and promises to make a fair crop. While grass crops in general make the best growth on the heavier soils if properly drained, there is no reason to believe that Red-Top or timothy will not grow fairly well upon sandy soil. Both are quite hardy and drouth resisting, and undoubtedly will survive a season that the clovers will not withstand.

It does not seem advisable to the writer to sow the two grasses mixed for two reasons. First, Red-Top will germinate and grow fast enough to smother most of the common weeds and probably would also the timothy, which is slow in starting. Second, and the more important reason is because the two do not mature for hay at the same time, Red-Top being somewhat earlier than timothy when cut for hay.

Because of its light weight, Red-Top is more difficult to sow than the heavier seeds. The most satisfactory method is with a grass seeding drill. If one is not obtainable and a nurse crop is used, the seed can be sown with a grain drill.

W. J. R.

SWEET CLOVER.

Would you please give me some information about sweet clover? Which is the best for this climate, the white or the yellow blossom, and when is the proper time to sow? I have a field of about seven acres, near the barn, which I want to keep for pasture. I cut one crop of hay from this field last year. We did not get a very good catch of clover so I thought by sowing sweet clover this spring it would make some pasture this year. Would the sweet clover catch on a sod of this kind without plowing it? The field is kind of a sandy soil. I thought of harrowing it with the spike-tooth harrow before seeding, and again after seeding. I would like to get sweet clover started in this field, as it is handy for pasture.

Sanilac Co.

J. L. S.

The white blossom variety is considered to be the best, especially for pasture. It is a hardier, more vigorous growing plant. For hay, however, the yellow blossom variety is sometimes preferred as this does not grow so rank and can be cured more easily.

I think you ought to disc up this ground before you sow the seed and then it ought not to be pastured until the sweet clover gets a start. Had you sown the seed on this ground this winter probably the action of the frosts would have covered it sufficiently so that it would have germinated. Some sweet clover, however, remains in the ground quite a long time before it germinates. It has such a thick outer coat that it is almost impervious to moisture and sometimes seeds will remain in the ground for a year before they germinate. There is a new machine called the "scarifier" which sandpapers or scarifies this outside coat so that it is not so impervious to moisture and then we get quicker germination. I think you ought to get some pasture late in the season.

C. C. L.

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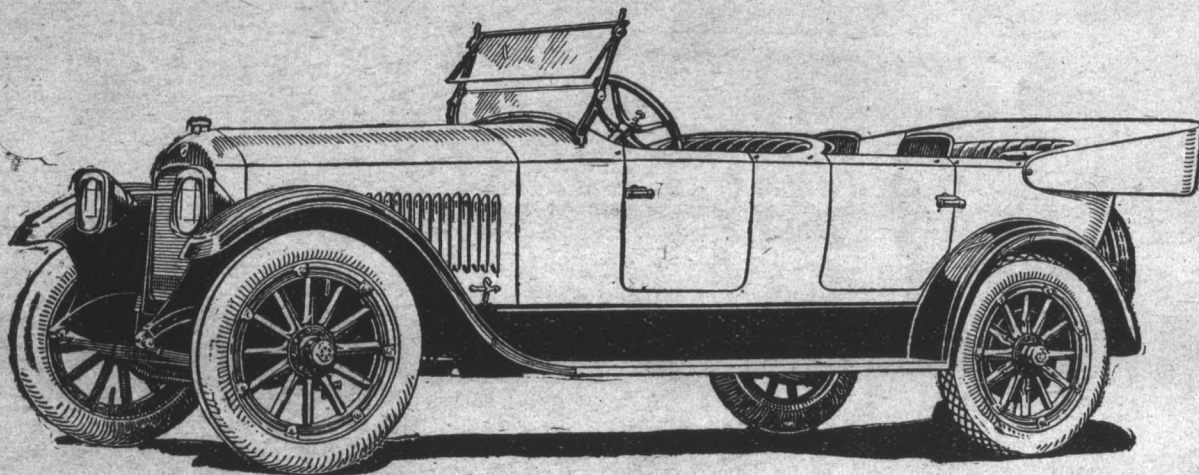
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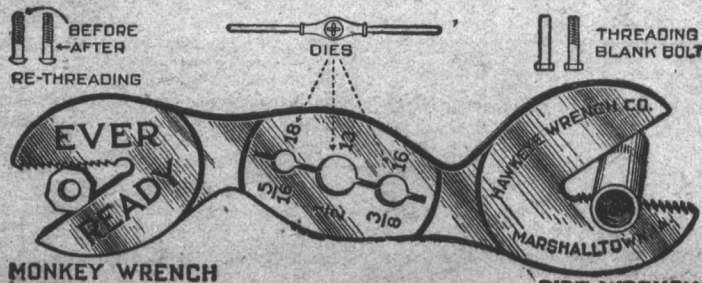
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Live Stock Outlook

NEVER in the history of the live stock industry of the United States have cattle, hogs and sheep sold anywhere near as high as they have done for a year past, and there are no indications that prices will go lower for months to come, as it is practically certain that American farmers will have all they can do to feed not only the people of this country but also the countries of Europe. Beef and hog products will continue to be largely wanted for exportation, but the demand is expected to center very largely on lard and cured hog meats, although canned beef will also be in large demand.

Probably hog raising holds out the most alluring promise to the average farmer, as hogs can be raised and matured in much the shortest time and on the smallest capital. Stockmen who have followed the raising of hogs for a long period consider it much more profitable than cattle feeding, as feeding steers costs a lot of money at the start, provided they are of a desirable kind, and the average buyer has to borrow money on them at a high rate of interest.

On the other hand, the average farmer is in a position to raise his own hogs without borrowing any money. A successful farmer-stockman of southeast Nebraska who has followed hog raising for years, raises two crops of hogs every year, while a farmer of southeastern Iowa feeds no cattle, but has stuck to hog breeding and raising for six years, finding it highly profitable. His shoats are farrowed in March and April, and they are marketed when weighing from 225 to 300 pounds, the farmer raising from 150 to 200 hogs a year.

Recent advances have landed hogs at around the highest prices ever paid, while provisions have experienced a great boom, pork going up as much as \$1.00 a barrel in a single day. As a pointed of how things are going, it may be stated that exports from North America in a recent week included 70,916,000 pounds of cured hog meats, comparing with 39,099,000 pounds a week earlier and 17,034,000 pounds for the corresponding week of 1918. During the same week exports of lard amounted to 32,332,000 pounds, comparing with only 6,282,000 pounds a year ago.

Restocking the Pastures.

The time has arrived for restocking pastures with cattle, and farmers are placing buying orders for feeder cattle with commission firms in Chicago and other markets. As is always the rule, the men who do their buying the earliest get the best bargains, and belated buyers are forced to pay much higher prices. All kinds of feeders and stockers have had marked advances in prices since their upward movement began several weeks ago, and of late the rise in Chicago market prices has been more marked on the cheaper class than on choice weighty feeders. Recent sales of stockers and feeders took place largely at a range of \$11 to \$14 per 100 pounds, with not many sales above \$14.50, as prime lots of feeders with a little flesh fall largely into the hands of the packers, who outbid country buyers in the Chicago market. Limited number of the choicer class of feeders are taken to ship to feeding districts at \$14.75 to \$15.75, while ordinary to fair stock steers go at \$8.75 to 9.75 or higher.

Heavy Cattle Scarce.

While the leading western markets have received in the aggregate larger (Continued on page 645).

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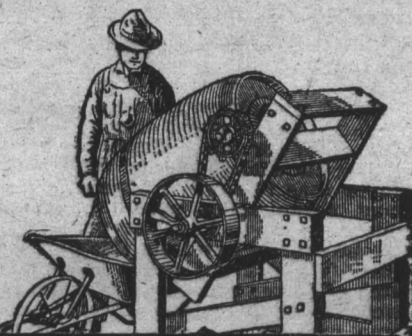
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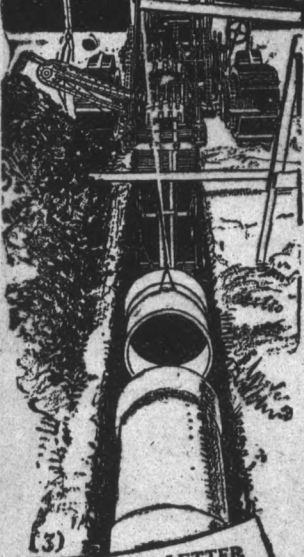
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Manure furnishes humus. It also supplies plant food. It both adds and stimulates bacterial life in the soil. For one or the other of these three reasons, or perhaps for all three, the use of manure on land increases crop growth; and because the value of the increase produced is practically always greater than the cost of applying the manure, it is good business to save and use manure as a fertilizer.

To some fertilizer men it may seem that manure is a competitor of fertilizer, but this is not the case. Manure and fertilizer are two very different things. They are supplementary, but not antagonistic. Fertilizer cannot on most farms fulfill all the duties of animal manure. Neither can manure furnish all of the plant food needed by the nation's crops. Furthermore, waste of manure is an economic loss. The chances are "dollars to doughnuts" that in the long run those farmers who allow manure to waste are the ones who very shortly will have no money with which to buy fertilizer. Good practice in conservation and application of manure goes hand in hand with sound practice in the use of fertilizer.

Let us take, for illustration, a practice all too common—that of allowing the manure pile to remain loose and open for weeks, even for months, before spreading. Just as well may the farmer set a torch to the pile, for just as surely will it be burned up and destroyed, with both organic matter and ammonia lost to the winds of the heavens. The value of the increase in crop which this might bring is lost, and to this extent the farmer is less prosperous and less able to improve his agriculture.

On the other hand, suppose the farmer practices the simple expedient of either applying the manure when fresh, as can be done in large sections of the country, or, if it must be stored for any length of time, keep it packed and moist, thus preventing destructive heating. The cost is very little. The saving in humus is immense. The prevention of loss of ammonia is even still more important. Those farmers who follow the last practice can keep their soils alive, in good condition, and in such shape as to make the best possible use of fertilizer. On the other hand, those farmers who waste manure use their fertilizer at a disadvantage, with loss alike to themselves and to all those industries depending on agriculture for their prosperity.

There are a number of ways in which fertilizer is supplementary to manure. It may be used to balance the plant food ration furnished by manure. It may be used to piece out the inadequate supply of manure. In fact, it may even be used to grow those crops from which more manure is made or to replace manure by the growing of green manuring crops. Before taking up these several points, however, let it be clearly understood that the better the use made of manure the greater the opportunity for the fertilizer industry.



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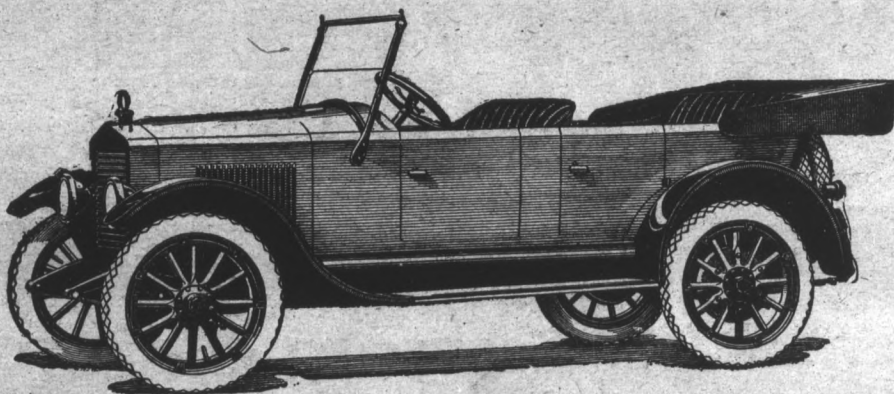
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At the present cost of seed you want a yield that will pay you well. An investment in Planet Jr. tools is good-crop insurance. They enable you to cultivate so thoroughly that you get bigger and better crops. And they operate so rapidly and easily that you save both time and labor. Their substantial construction makes them last a lifetime and pay for themselves over and over again. They are savers at every stage of the sowing and cultivation—just what every farmer and gardener needs! Fully guaranteed.



Planet Jr.

No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow is a special favorite, and there are more of them in use

throughout the world than any other seeder made. Opens the furrow, sows all garden seeds (in hills or drills), covers, rolls down and marks the next row all at one operation. Hoes, plows, and cultivates all through the season. A hand machine that will pay for itself in time, labor and seed saved in a single season.

No. 8 Planet Jr. Horse-Hoe does a greater variety of work in corn, potatoes, and other crops requiring similar cultivation, and does it more thoroughly than any other one-horse cultivator made. It is stronger, better made and finished. Lasts longer. Its depth regulator and extra long frame make it steady-running. Cultivates deep or shallow and different widths of rows.

S. L. ALLEN & CO. Inc.
Box 1107M Philadelphia

72-page Catalog, free! Illustrates Planet Jr. doing actual farm and garden work, and describes over 55 different tools, including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard, Beet and Pivot-Wheel Riding Cultivators. Write postal for it today!

No. 8

Equip Your Barn The West Bend Way

"West Bend" means time-saving, labor-saving, money-saving. It is the name that guarantees you efficiency, economy and satisfaction in fitting up your barn. West Bend Barn Equipment is steadily growing in popularity because it has so many practical time-saving features that are not found in any other line.

West Bend One Lever Control and West Bend Swinging Stanchions

—the greatest improvement ever made in dairy barn equipment. With this remarkable time-saver you can stand at one end of a row of 50 cows, throw a single lever and lock them all in their stanchions, or release them—if you use West Bend Swinging Stanchions and Cow Stops. With the same equipment you can release any cow or lock her in separately. It's the greatest time-saving, labor-saving device in modern barn equipment. With this equipment you can lock in or release 50 cows in about the same time you would individually spend on one cow with ordinary equipment and do it quicker and with absolute safety, for you do not have to approach the cows' heads.

Cows Can't Get their Heads In Wrong

The West Bend Automatic Cow Stop prevents the animal putting its head any place but the right one. West Bend Barn Equipment costs no more than the "other kind"—but there is no comparison between them. The West Bend Line is complete, including Stanchions, Stalls, Bull and Calf Pens, Feed and Litter Carriers, Watering Systems, Barn Ventilators, etc. We can equip any barn, large or small.

Get This Free Book Before You Buy Barn Fixtures of Any Kind

and details of our free service department. Find out all about the West Bend Line before you place an order for barn equipment of any kind. We save you money and sell you satisfaction. Mail the coupon now.

WEST BEND BARN EQUIPMENT CO., 280 So. Water St., West Bend, Wis.

Ask your local barn equipment dealer about the West Bend Line. Write us for complete catalog and details of our free service department. Find out all about the West Bend Line before you place an order for barn equipment of any kind. We save you money and sell you satisfaction. Mail the coupon now.



One Throw Of The Lever Operates 2 to 50 Swinging Stanchions and Cowstops



West Bend BARN EQUIPMENT

FREE COUPON BOOK

Name _____
Address _____

Mention The Michigan Farmer When Writing to Advertisers

WILL THIS BE AN APHIS YEAR?

WILL aphids be bad this spring and summer? Fruit growers want to know so as to be prepared with the proper spray and apply it at the right time. These small insects are well-known to all orchardists for they not only injure the apple trees by sucking the sap which curls the leaves, but they also stunt the forming fruit. These, later in the season, appear as small and misshapen culls. The aphid does not pass the winter in the adult stage but as a shining black egg which was laid late last summer or fall on the apple twigs. These may be found at the base of the buds, on old leaf-scars or even on the sides of the twigs. The writer has found many of these eggs early this spring, in orchards in different parts of the state. From observations it looks as if the aphid will be much more abundant than last year. Already the aphid is beginning to hatch and soon the newly hatched insects will get on the newly expanded leaves and will make them curl when they are hard to hit with a spray.

An early spring, with warm, dry weather following is unfavorable to the aphid, and a cold, wet, late spring is favorable to them.

Control.

Almost everyone interested knows what to spray if not when to make the application. Inasmuch as these are sucking insects a contact spray must be used. Apply a spray of nicotine sulphate, using a pint of black leaf forty per cent, or some other forty per cent nicotine sulphate, to one hundred gallons of water, adding two or three pounds of soap to the mixture; or else add a pint of the forty per cent nicotine sulphate to one hundred gallons of lime-sulphur or Bordeaux mixture. Stir the nicotine into the solution just before applying. If it is used with lime-sulphur don't use soap.

This spray should be applied as soon as the aphid are hatched which is about the time the leaf-buds burst, or a spray put on when the buds show pink will help. A thorough job done at the right time will control the aphid.

DON B. WHELAN.

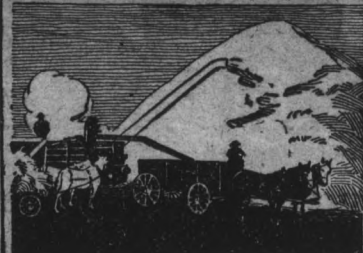
THE DAIRY PERISCOPE.

(Continued from page 622).

might be used in arriving at legitimate prices in milk production. The National Board of Agriculture mentioned some time ago would be useful here. It ought not to be necessary for any man to sell a product at less than it costs him and it would be a very unwise government that would allow such a thing to happen in many instances. If we were to assume the price of milk set in this fashion, we might hear somebody asking, "What is to be done with the surplus?" but it remains a fact that the surplus would take care of itself just as well as the manufacturers' surplus does.

With a given price set on milk, farmers could adjust their production to meet the needs of the various seasons. Cows would be bred to freshen in the fall so that as much milk as possible could be delivered at the "cost plus" price. If we were to imagine the price of milk fixed at cost plus, it would be to the best interests of every farmer to convert his cows into fall fresheners, not because the price of milk was any higher in the fall, but because of the fact that the manufacturer would be able to use more of the product. So far as that is concerned, a cow that freshens in the spring adds insult to injury because she produces the bulk of her milk just when the product is in least demand.

The periscope shows a cloud with a silver lining. People must have milk and they appreciate the fact now more than ever before. It is a constructive business and quite necessary in keeping up the fertility of a farm. There is a rosy glow in the east and the sky is clearing in the west.



The Thresher for Your Own Work

The Nichols-Shepard "Junior" Red River Special is the ideal thresher for the farmer who wants to do his own threshing. It is a small machine but does big work.

It beats out the grain just like the big Red River Special. It has the "Man Behind the Gun," the Beating Shakers, and a perfect cleaning mill.

Two sizes: 22 x 36 and 28 x 40. The smaller, without extra attachments, is easily operated by any farm power that can deliver 12 H. P. at the cylinder.

"JUNIOR" Red River Special

Sold fully equipped with Self Feeder and Wind Stack, or with Hand Feed Parts and Common Stack, as desired. Just right for individual farmers and for custom threshing where jobs are small and the country is rough and hilly.

James Arnett of Bradwardine, Manitoba, says, October 25, 1918: "The 22x36 Junior Red River Special purchased this year is a strong, durable machine. We had no breakages, and lost no time. We had no trouble from start to finish. It threshed the grain out of the straw thoroughly, and did a first-class job of cleaning."

Do not judge the "Junior" Red River Special with other so-called small threshers. It is not a plaything. It is built to earn money threshing and will save the farmers' thresh bill like the Big Red River Special.

Write for Special Circular

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

World's Best Roofing Freight Paid

"Reo" Cluster Metal Shingles, V-Crimp, Corrugated, Standing Seam, Painted or Galvanized Roofings, Sidings, Wallboard, Paints, etc., direct to you at Rock-Bottom Factory Prices. Positively greatest offer ever made. We Pay the Freight.

Edwards "Reo" Metal Shingles

cost less; outlast three ordinary roofs. No painting or repairs. Guaranteed rot, fire, rust, lightning proof.



Free Roofing Book
Get our wonderfully low prices and free samples. We sell direct to you and save you all in-between dealer's profits. Ask for Book No. 487.

LOW PRICED GARAGES

Lowest prices on Ready-Made Fire-Proof Steel Garages. Set up any place. Send postal for Garage Book, showing styles. THE EDWARDS MFG. CO., 417-487 Pike St., Cincinnati, O.

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25 Cords a day One Man Log Saw

Strong, Simple, Dependable. A Fuel maker and work saver. Cuts any size logs into any lengths. Easy to move from log to log and from cut to cut.

OTTAWA ENGINE LOG-SAW

Does the work of 10 men. Makes wood sawing easy and profitable. When not sawing wood use as portable engine for pumping water and on other power jobs. Saw blade easily removed. Write for our low price.



90-DAY TRIAL

BUY FOR LESS

Save \$15 to \$200 NOW

CASH OR EASY TERMS
Write for Reduced Prices on WITTE Engines—all sizes—2 to 30 H.P.—Kerosene—Gasoline—Stationary—Portable—Saw-Rig. If you need POWER to pump, saw, grind, fill silo, or do other hard work, be sure to get my money saving offer. I make better engines—guaranteed longer—sell for less. Valuable Book FREE.—Ed. H. Witte, Pres. **WITTE ENGINE WORKS**
2196 Oakland Ave., Kansas City, Mo.
2196 Empire Bldg., Pittsburgh, Pa.

Plan for Selling Wool

(Continued from page 613).

and have a uniform way of wrapping and tying the fleece. He says paper twine is the best, as the wool fibers do not adhere to it, but with the sisal or manila twine there is always some wool lost.

Paid to Grade Fleeces.

The value of grading was emphasized while the demonstration was being given. W. H. Young, Department of Agricultural Extension, University of Illinois, who was a farmer in Menard county, Illinois, until two years ago, says grading wool pays. He said they had a grader to come into their neighborhood after the wool was stored and grade it for them. Then it was sold according to the grades. "When bids were made we knew about how much we should get for certain grades," remarked Mr. Young, "because we watched the quotations. If we shipped to dealers we knew about what we should get for certain grades of wool."

After inspecting the plant another ride of about ten minutes was taken to the Boynton Wool Scouring Company. They were taken all through the process of scouring wool. A. Rose, secretary and treasurer of the scouring mill, took the group through every phase of the work. One might think that wool is wool before going there, but it was soon found that there is wool and wool—dirty wool and clean wool.

See Burrs Removed.

They were first shown the wool sorters skirting the individual fleece. From three to fourteen throws may be sorted from a fleece. After the dirty wool is separated it is cleaned, and the first operation is that of burr picking, where all the cockleburs are taken out by means of machinery. After the burrs are removed the fleece is scoured with soap and water and dried. Then treated with an eight per cent solution of sulphuric acid to destroy the vegetable matter such as sticks and weeds. After this process it is dried and baked, changing the foreign matter into charcoal.

After charring the foreign matter the wool is run through rollers, where the particles of carbon or charcoal are crushed. From the rollers it is dropped into a blower, where the crushed charcoal is separated from the wool. Again the wool is washed in soap and water, alkali in reaction, to neutralize the acid. From these vats it is passed through a drier, and in the dry, fluffy form it is passed through blow pipes into bins ready for the carding mill.

During the process of scouring the wool fat is separated and put in cans. The carbon, manure, scraps of wool, and other waste products are thrown into a pile used as fertilizer. From fifteen to twenty carloads of fertilizer accumulates at this plant every year.

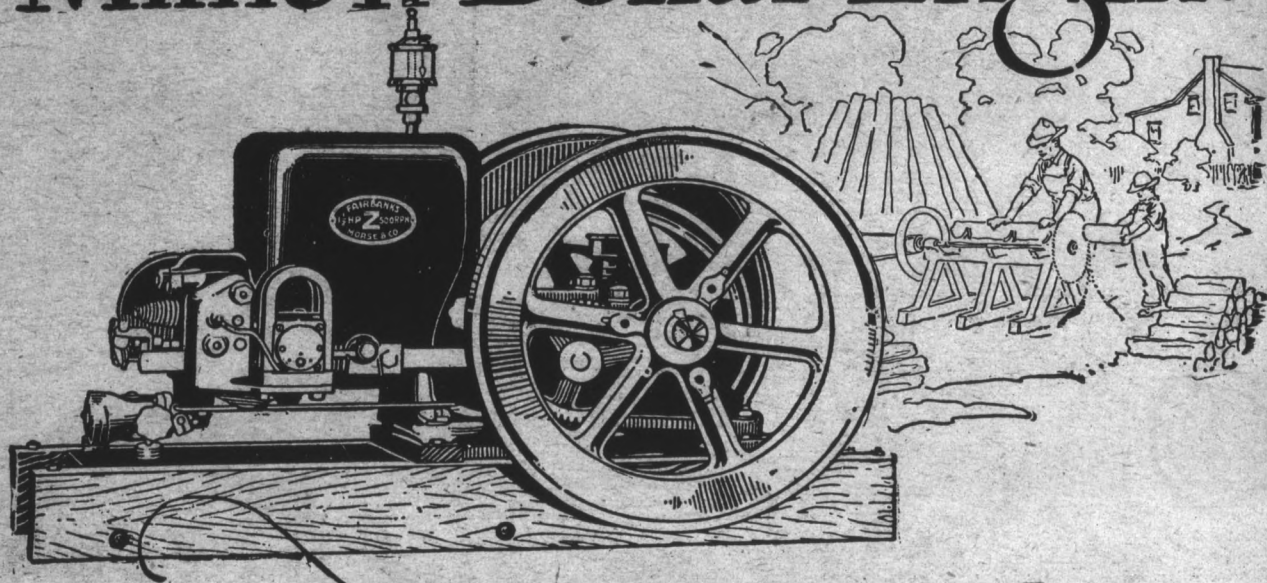
With a clear conception of the possibilities of cooperating in the work of wool marketing, these men have gone back to their counties to begin their campaigns. They will attempt to show the wool growers of Illinois the many advantages of concentrated method in selling wool.

MANGEL WURZELS WITH SILAGE.

Would you consider it profitable to feed mangel wurzels to cows with ensilage? How much seed should be planted on a half acre of ground? Washtenaw Co. J. J. W.

Mangel wurzel beets are a splendid succulent food for cows, probably better than corn silage, but the succulence of the silage will take the place of the beets and you can raise the silage so much cheaper than you can the beets that a man who has a silo does not consider it worth while to grow beets in addition. It takes too much labor to grow beets. C. C. L.

A New Fifteen Million Dollar Engine



FIFTEEN million dollars worth of "Z" Engines are on over 200,000 farms—proving a remarkable engine service. The new 1½ H. P. "Z"—just perfected—completes a line of **KEROSENE** engines—1½ H. P. to 15 H. P.—all of which merit the keenest interest of every farmer. The rare combination of scientific design—fool-proof construction—efficient operation—lowest possible fuel cost—certainly establishes the supremacy of the "Z". Go to your dealer—see the "Z"—then you'll quickly learn why progressive dealers feature the "Z" line after comparing it with all others.

*Also runs on
Distillate
Coal Oil
Tops or
Gasoline*

Throttling Governor—Built-In Oscillating Magneto

Prices, 1½ H. P. \$61.00—3 H. P. \$100.00

6 H. P. \$179.00

F. O. B. Factory

Fairbanks, Morse & Co.
MANUFACTURERS CHICAGO

One Hundred Bushels More

"I used Pyrox this season and am more than pleased. The vines were green when others were dead and they are yielding 75 to 100 bushels to the acre more than those not sprayed. Its adhesive power can't be beaten."

—HARLAND BARNES, Gardiner, Maine.

You can protect your crops and increase the yields

if you spray with **Pyrox** "The Spray That Adds to Your Profits"

Pyrox is a smooth, creamy paste which is all ready to use simply by mixing it with cold water. Just measure out the proper amount and mix it with water for your spray solution. Pyrox sticks like paint. Re-spraying is necessary only to cover the later new growth.

Get this Pyrox Crop Book. It tells how to protect your crops against bugs, worms and disease. Send for a copy today. A postal card will bring it.

Bowker Insecticide Company
43-E Chatham St., Boston 1006 Fidelity Bldg., Baltimore

Make Money Spare Time

A few counties open for resident farmers, as exclusive selling representatives for high-grade line of Star-O-line Building Products. Liberal arrangements for men who are well known in their locality and enjoy the confidence of their neighbors. No capital investment required. Write for full particulars. Address Building Supply Department M-100 White Star Refining Co. Detroit, Mich. Manufacturers Extra-Quality Motor Oil and Star-O-line Products

Early Yellow Dent

SEED CORN

Best in the state, agency goes with first order \$3.75, \$5.00 and \$8.00 per bu. shelled, according to strain. All graded, germination guaranteed.

D. WOODWARD & SON,
Corn Breeders, Clinton, Mich.

DICKEY GLAZED TILE SILOS

"The Fruit Jar of the Field"

SPECIAL OFFER to those who write now!

W. S. DICKEY CLAY MFG. CO.
Macomb, Ill. Kansas City, Mo. Chattanooga, Tenn.

AGENTS WANTED

Live agents wanted in unoccupied territory for WESTERN KEROSENE Carburetors for FORD Cars. An all-year-round seller. Biggest corporations equipping exclusively. Thousands in use—50% fuel saving, money-back guarantee. Big profits. Write for agency today. WESTERN CARBURETOR COMPANY, Alma, Michigan.

Please mention the Michigan Farmer when writing to advertisers.



Getting the most from Mother Earth

Correct TRACTOR Lubrication

How to read the Chart

The four grades of Gargoyle Mobiloils for tractor lubrication, purified to remove free carbon, are:

Gargoyle Mobiloil "A"
Gargoyle Mobiloil "B"
Gargoyle Mobiloil "BB"
Gargoyle Mobiloil Arctic

In the Chart below, the letter opposite the tractor indicates the grade of Gargoyle Mobiloils that should be used.

TRACTORS	1918 Models		1917 Models		1916 Models		1915 Models	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Albaugh-Dover (Square Turn)	BB	A	BB	A	BB	A	BB	A
Allis-Chalmers	BB	A	BB	A	BB	A	BB	A
All Work	B	B	B	B	B	B	B	B
Andrews	BB	A	BB	A	BB	A	BB	A
Appleton	BB	A	BB	A	BB	A	BB	A
Aultman-Taylor	BB	A	BB	A	BB	A	BB	A
(18-36)	BB	A	BB	A	BB	A	BB	A
Avery	B	B	B	B	B	B	B	B
(5-10 HP)	B	B	B	B	B	B	B	B
(Louisville)	BB	A	BB	A	BB	A	BB	A
Bates Steel Mule	B	B	B	B	B	B	B	B
Bean Track Pull	B	B	B	B	B	B	B	B
Best	B	B	B	B	B	B	B	B
(8-16)	B	B	B	B	B	B	B	B
Big Bull	B	B	B	B	B	B	B	B
Bower City	B	B	B	B	B	B	B	B
Buckeye (Indiana)	BB	A	BB	A	BB	A	BB	A
(Giant Baby)	BB	A	BB	A	BB	A	BB	A
(Ohio)	BB	A	BB	A	BB	A	BB	A
Case	A	A	A	A	A	A	A	A
(9-15)	A	A	A	A	A	A	A	A
(10-20)	A	A	A	A	A	A	A	A
(12-25)	BB	A	BB	A	BB	A	BB	A
(20-40)	BB	A	BB	A	BB	A	BB	A
Chase	BB	A	BB	A	BB	A	BB	A
Cleveland	BB	A	BB	A	BB	A	BB	A
Common Sense	BB	A	BB	A	BB	A	BB	A
Corn Belt	BB	A	BB	A	BB	A	BB	A
Creeping Crab	BB	A	BB	A	BB	A	BB	A
Emerson-Brantingham (E.B.)	BB	A	BB	A	BB	A	BB	A
(E.B. 9-10)	BB	A	BB	A	BB	A	BB	A
(Big Four)	BB	A	BB	A	BB	A	BB	A
(Rosebud)	BB	A	BB	A	BB	A	BB	A
Farm Horse	B	B	B	B	B	B	B	B
Flour City	B	B	B	B	B	B	B	B
(Heavy Duty)	B	B	B	B	B	B	B	B
Galloway	B	B	B	B	B	B	B	B
Geo. Pull (Rumely Co.)	B	B	B	B	B	B	B	B
Grain Belt	BB	A	BB	A	BB	A	BB	A
Gray	BB	A	BB	A	BB	A	BB	A
Happy Farmer	BB	A	BB	A	BB	A	BB	A
(Model B)	BB	A	BB	A	BB	A	BB	A
Hart Parr	BB	A	BB	A	BB	A	BB	A
Heider	BB	A	BB	A	BB	A	BB	A
Holt Caterpillar	BB	A	BB	A	BB	A	BB	A
(Model 45)	BB	A	BB	A	BB	A	BB	A
(Model 18)	BB	A	BB	A	BB	A	BB	A
Huber	BB	A	BB	A	BB	A	BB	A
Imperial Forty	BB	A	BB	A	BB	A	BB	A
Ingersoll	BB	A	BB	A	BB	A	BB	A
Kardell	BB	A	BB	A	BB	A	BB	A
K. C. Prairie Dog	BB	A	BB	A	BB	A	BB	A
Kinkaid	BB	A	BB	A	BB	A	BB	A
Lion	BB	A	BB	A	BB	A	BB	A
Little Chief	BB	A	BB	A	BB	A	BB	A
Little Giant	BB	A	BB	A	BB	A	BB	A
Maytag	BB	A	BB	A	BB	A	BB	A
Minneapolis	BB	A	BB	A	BB	A	BB	A
Modell (I. H. Co.)	BB	A	BB	A	BB	A	BB	A
(8-10) (I. H. Co.)	BB	A	BB	A	BB	A	BB	A
Moline Universal	BB	A	BB	A	BB	A	BB	A
New Age	BB	A	BB	A	BB	A	BB	A
Nichols & Shepard	BB	A	BB	A	BB	A	BB	A
Nelson	BB	A	BB	A	BB	A	BB	A
Oil Pull (Rumely Co.)	B	B	B	B	B	B	B	B
(14-28, 10-20, 20-40)	B	B	B	B	B	B	B	B
(Rumely Co.)	BB	A	BB	A	BB	A	BB	A
Parrett	BB	A	BB	A	BB	A	BB	A
Peoria	BB	A	BB	A	BB	A	BB	A
Pioneer	B	B	B	B	B	B	B	B
Plow Boy	BB	A	BB	A	BB	A	BB	A
Plow Man	BB	A	BB	A	BB	A	BB	A
Pontiac	BB	A	BB	A	BB	A	BB	A
Rumely	BB	A	BB	A	BB	A	BB	A
(8-16)	BB	A	BB	A	BB	A	BB	A
Russell	BB	A	BB	A	BB	A	BB	A
(Little Four)	BB	A	BB	A	BB	A	BB	A
Sandusky	BB	A	BB	A	BB	A	BB	A
Simplex	BB	A	BB	A	BB	A	BB	A
Standard	BB	A	BB	A	BB	A	BB	A
Strait	BB	A	BB	A	BB	A	BB	A
Titan (I. H. Co.)	BB	A	BB	A	BB	A	BB	A
Tom Thumb (4 cyl.)	B	B	B	B	B	B	B	B
Twin City	B	B	B	B	B	B	B	B
(Model 16)	BB	A	BB	A	BB	A	BB	A
(Model 18)	BB	A	BB	A	BB	A	BB	A
Walls Cub	BB	A	BB	A	BB	A	BB	A
(Junior)	BB	A	BB	A	BB	A	BB	A
Waterloo Boy	BB	A	BB	A	BB	A	BB	A
Wisconsin	BB	A	BB	A	BB	A	BB	A
Yuba	BB	A	BB	A	BB	A	BB	A

The part played by Correct Lubrication

WITH ever-widening markets for their crops, progressive farmers realized that animal power long ago reached its limit of production.

So they turned to mechanical power, as have men in other industries. With mechanical power they made the trip to town a matter of minutes instead of hours. They plow deeper, work faster, and cultivate a much bigger acreage.

The automobile and the tractor have become standard agricultural implements—one to shorten distances and the other to shorten labor.

The great war demonstrated two things:

- 1.—That mechanical power multiplies crop results.
- 2.—That mechanical power, operated and maintained at highest efficiency, gets the *ultimate* out of Mother Earth—at costs per acre far below any ever before recorded.

Whether you use an automobile or a tractor—or both—

you know the difference in power results and economy, between engines that operate at maximum efficiency at all times and those which are constantly breaking down in service.

Through long, successful years, one engine user after the other has turned to the correct grade of Gargoyle Mobiloils because the correct grade keeps their engines delivering their best. Our engineers, after years of careful research, have produced the two Authoritative Charts of Recommendations shown here. These Charts tell at a glance the correct grade of Gargoyle Mobiloils for any make of automobile or tractor for both summer and winter use.

Farmers who operate automobiles successfully, farmers who get the most out of their tractors, regard the Vacuum Oil Company's Chart of Recommendations as authoritative guides to correct lubrication.



Mobiloils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container.

VACUUM OIL COMPANY, New York, U. S. A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world

Domestic Branches: New York Philadelphia Detroit Minneapolis Kansas City, Kan.
Boston Pittsburgh Chicago Indianapolis Des Moines

Correct AUTOMOBILE Lubrication

How to read the Chart

The four grades of Gargoyle Mobiloils, for engine lubrication, purified to remove free carbon, are:

Gargoyle Mobiloil "A"
Gargoyle Mobiloil "B"
Gargoyle Mobiloil "E"
Gargoyle Mobiloil Arctic

In the Chart below, the letter opposite the car indicates the grade of Gargoyle Mobiloils that should be used. For example, "A" means Gargoyle Mobiloil "A", "Arc" means Gargoyle Mobiloil Arctic, etc. The recommendations cover all models of both passenger and commercial vehicles unless otherwise noted.

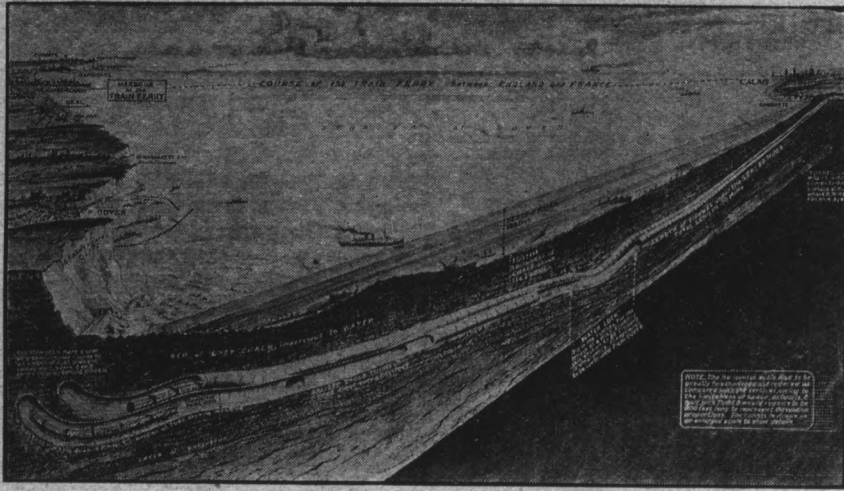
This Chart is compiled by the Vacuum Oil Company's Board of Engineers and represents our professional advice on Correct Automobile Lubrication.

AUTOMOBILES	1918 Models		1917 Models		1916 Models		1915 Models		1914 Models	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Abbott	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Abbott-Detroit	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Allen	A	A	A	A	A	A	A	A	A	A
Apperson	A	A	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
Auburn	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(6 cyl.)	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(6-12 & 6-30)	A	A	A	A	A	A	A	A	A	A
(6-30) (Teeter H.)	A	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(6-30) (Cont'l.)	A	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Autocar	Arc	Arc	A	Arc	A	Arc	A	Arc	A	Arc
(2 cyl.)	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
Briggs	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
(8 cyl.)	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
Buick	A	A	A	A	A	A	A	A	A	A
Cadillac	A	A	A	A	A	A	Arc	Arc	Arc	Arc
Case	Arc	Arc	A	Arc	A	Arc	A	Arc	A	Arc
Chalmers	A	A	A	A	Arc	Arc	Arc	Arc	A	A
(6-40)	A	A	A	A	A	A	A	A	A	A
(6-30)	A	A	A	A	A	A	A	A	A	A
Chandler Six	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Chevrolet	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	A	Arc
(6-40)	A	A	A	A	A	A	A	A	A	A
(F A)	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
Cole	A	A	A	A	Arc	Arc	Arc	Arc	Arc	Arc
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
Cunningham	A	A	A	A	A	Arc	Arc	Arc	Arc	Arc
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
Dart	A	Arc	A	Arc	A	Arc	Arc	Arc	A	A
(Mod. S-K)	A	A	A	A	A	A	A	A	A	A
(2 & 3 1/2 ton)	A	A	A	A	A	A	A	A	A	A
Detroit	Arc	Arc	Arc	Arc	Arc	A	Arc	A	A	A
Dodge Brothers	A	Arc	A	Arc	A	Arc	E	E	A	A
Dort	A	Arc	A	Arc	A	Arc	A	Arc	A	A
Empire	Arc	Arc	A	Arc	A	Arc	Arc	Arc	Arc	Arc
(6 cyl.)	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Federal	A	A	A	Arc	Arc	Arc	Arc	Arc	Arc	Arc
McFarlan	A	A	A	A	A	A	A	A	A	A
(8-20)	A	A	A	A	A	A	A	A	A	A
(Special)	A	A	A	A	A	A	A	A	A	A
Fiat	B	A	B	A	B	A	B	A	B	A
Ford	E	E	E	E	E	E	E	E	E	E
Franklin	A	A	A	A	A	A	A	A	A	A
Grant	A	A	A	A	Arc	Arc	Arc	Arc	A	A
Hal-Twelve	A	A	A	A	A	A	A	A	A	A
Haynes	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
(12 cyl.)	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
Hudson	A	A	A	A	Arc	Arc	Arc	Arc	Arc	Arc
(Super Six)	A	Arc	A	Arc	A	A	A	A	A	A
Hupmobile	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
Kelley Springfield	A	A	A	A	A	A	A	A	A	A
Kings	A	A	A	A	A	A	A	A	A	A
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
(Com.)	A	Arc	A	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Kiesel	A	Arc	A	Arc	A	A	A	A	A	A
(Mod. 40)	A	Arc	A	Arc	A	A	A	A	A	A
(12 cyl.)	A	A	A	A	A	A	A	A	A	A
Lexington	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	A	A
Lippard-Stewart	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	A	A
(6 Mod. M)	A	A	A	A	Arc	A	A	A	A	A
(Mod. M.V)	A	A	A	A	A	A	A	A	A	A
Locomobile	A	E	E	E	E	E	E	E	E	E
McFarlan	A	A	A	A	A	A	A	A	A	A
Madison	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
Marmon	A	A	A	A	A	A	A	A	A	A
Maxwell	Arc	Arc	Arc	Arc	A	A	Arc	A	Arc	Arc
Mercer	A	A	A	A	A	A	A	A	A	A
(22-70)	A	A	A	A	A	A	Arc	Arc	A	A
Mitchell	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
(8 cyl.)	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
Moline-Knight	B	A	A	A	A	A	A	A	A	A
National	B	Arc	Arc	Arc	A	Arc	A	Arc	A	A
(12 cyl.)	A	A	A	A	A	A	A	A	A	A
Oakland	A	A	Arc	Arc	Arc	Arc	Arc	Arc	A	A
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
Oldsmobile	A	A	A	A	Arc	Arc	Arc	Arc	Arc	Arc
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
Overland	Arc	Arc	Arc	Arc	Arc	Arc	A	Arc	A	Arc
Packard	A	A	A	A	A	A	A	A	A	A
(12 cyl.)	A	A	A	A	A	A	A	A	A	A
(Com.)	A	A	A	A	A	A	A	A	Arc	Arc
Page	A	A	A	A	A	A	A	A	A	A
(6 cyl.)	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(6-36)	A	A	A	A	A	A	A	A	A	A
(6-38)	A	A	A	A	A	A	A	A	A	A
(6-40)	A	Arc	A	Arc	A	A	A	A	A	A
Paterson	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Pattender	A	A	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(12 cyl.)	A	A	A	A	A	A	A	A	A	A
Peerless	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
Pierce Arrow	A	A	A	A	A	A	Arc	Arc	Arc	Arc
(Com'L)	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Premier	A	A	A	A	A	A	A	A	A	A
Regal	Arc	A	Arc	Arc	A	A	A	Arc	Arc	Arc
(8 cyl.)	A	A	A	A	A	A	A	A	A	A
Renault (French)	A	A	A	A	A	A	Arc	A	A	A
Riker	A	Arc	A	Arc	A	Arc	A	Arc	A	Arc
Saxon	E	E	E	E	E	E	E	E	E	E
Selden	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(24 ton)	A	A	A	A	A	A	A	A	A	A
Simplex	A	A	A	A	A	A	A	A	A	A
Stearns-Knight	B	A	A	B	A	B	A	B	A	B
(8 cyl.)	B	A	A	B	A	B	A	B	A	B
Studebaker	A	Arc	A	Arc	A	Arc	Arc	Arc	A	Arc
Stutz	A	A	A	A	A	A	A	A	A	A
Velle	A	A	A	A	A	A	A	A	A	A
(6 cyl.)	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(6 & 25 ton)	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(24 ton)	A	A	A	A	A	A	A	A	A	A
Westcott	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
White	A	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
(16 valve)	A	A	A	A	A	A	A	A	A	A
Willys	A	A	A	A	A	A	A	A	A	A
Willys Six	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc
Winton	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc	Arc

WORLD EVENTS IN PICTURES



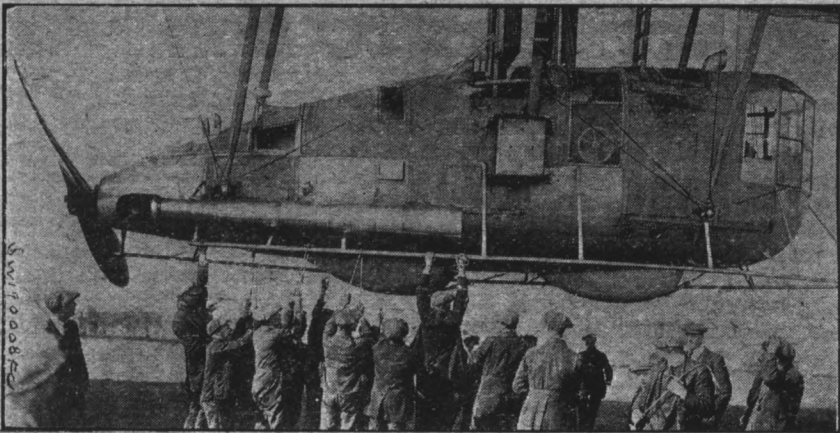
Audrey Munson, Beautiful Witness in Mysterious Dr. Wilkin's case. She is expected to make important and interesting revelations at the trial.



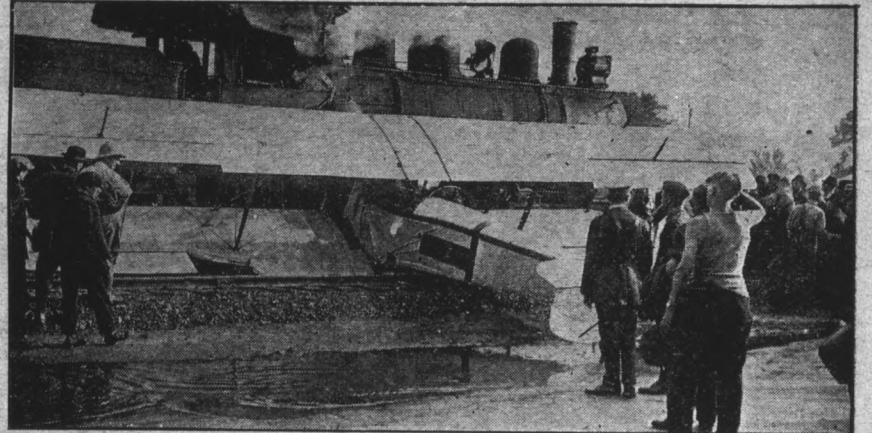
Proposed New Tunnel under the Channel from France to England will Enable Passenger Trains to Travel the Distance in Forty-five Minutes, and Paris will be but Six Hours from the English Shores.



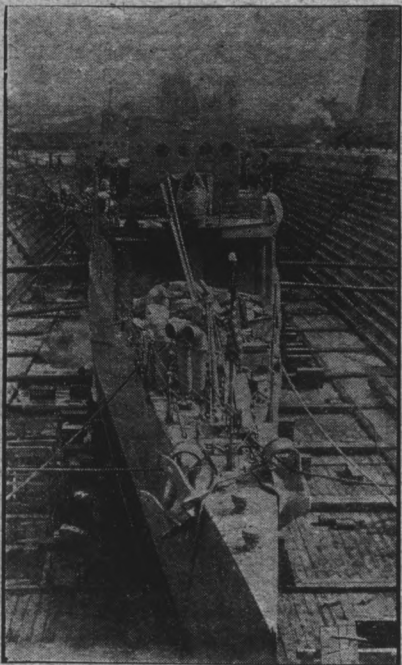
Charming Marguerite Damara, Wearing an Evening Bonnet made of an Old Silk Hat that once belonged to President Wilson.



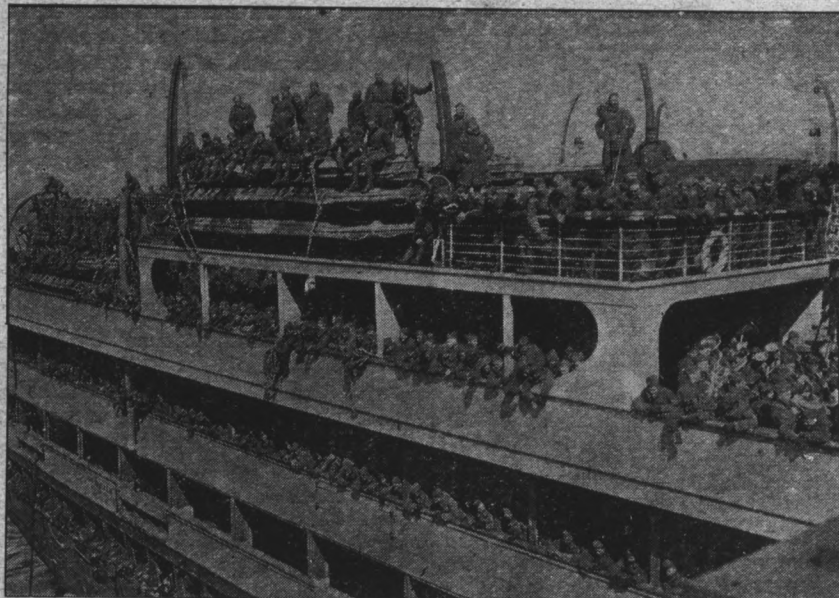
Gondola of the R-34, Britain's Largest Airship, which will probably Attempt a flight Across the Atlantic at an Early Date. The Ship is 670 Feet Long.



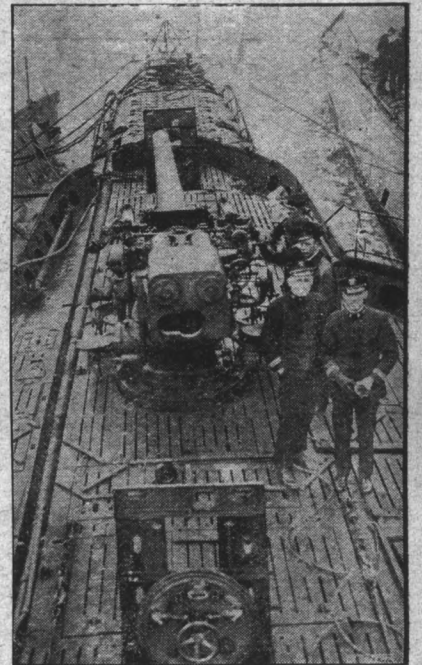
While the Air Man was Doing "Stunts" High in the Air, the Engine went Dead and the Plane Shot Out of Control. Upon Landing it Collided with a Locomotive, with Result Shown.



One of the 125 Ford Eagle Boats to be sent to aid the U. S. Forces at Archangel, Russia.



"The Yanks Are Coming." Heroes from Ohio, Wisconsin, Oregon and Michigan Arriving Home on the "Aquitania." The Boat is seen Docking at New York while the returning Heroes Swarm the Decks, Cheering and Singing to the tune of the Band.



Captured German U-Boat to be Exhibited in United States Waters as part of Victory Loan Drive.



To make the Left Hand do the Work of the Right is the Aim of Uncle Sam's Instructors at this Reconstruction Plant at Colonia, N. J. These Men have Lost the Use of their Writing Arm and Must Write with the Other.



Photo of Danzig, Under Discussion by Marshal Foch and the Peace Conference. Danzig is Situated about 150 Miles from the Russian Border and is the Capital of West Prussia.



SOLVAY LIMESTONE

Increases the Value of Your Land

WHEN you add Solvay Pulverized Limestone to your land you are actually increasing the land's value.

Any soil is as valuable as the crop it grows.

Solvay Pulverized Limestone by counteracting the acid in the soil, helps stimulate plant growth and produces bigger, more valuable yields.

Furnace dried—so finely pulverized that 95% of it will pass through a 50-mesh screen—high in lime carbonates—Solvay soon pays for itself in satisfaction and results.

Shipped in carloads either in bulk or in 100 poundsacks.

Arcaian Sulphate of Ammonia—20.75% nitrogen—will stimulate the growth of your crops and vegetables. Let us quote your needs. Prompt shipments.

THE SOLVAY PROCESS COMPANY
2091 Jefferson Avenue Detroit, Michigan

SALTED FISH

Low Prices. Low Freight Rates

Net weights	100 lb.	50 lb.	20 lb.	10 lb.
Lake Herring	\$6.00	3.80	1.65	.96
Round Shore Herring	6.25	3.93	1.70	1.00
Split Ocean Herring	6.50	4.05	1.75	1.03
Alaska Herring	10.00	5.80	2.45	1.38
Whiting (Sea Pike)	6.00	3.80	1.65	.96

WISCONSIN FISHING CO.
Dept. Y. Green Bay, Wis.

CARLOAD

PETOSKEY-RUSSET SEED POTATOES from hill-selected stock. Field rogued by experts; Reference, County Agent.

GEO. S. PIERSON, Kalamazoo, Mich.

Wanted Two married men to work on dairy and poultry farm in Wayne County. Apply A. W. Chase or H. Kemp, 919 Hammond Bldg. Detroit, Mich. Main 4491

Sweet Clover seed. Special sacrificed, hulled and unhusked. Circular and prices on request. John A. Sheehan, R. 4, Falmouth, Ky.

HORSES

Pure Bred

Belgian Draft Horses

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

Stallions and Mares

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

HOWARD KUHN, R. 1, Clinton, Mich.

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

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

Percherons, Holsteins, Angus, Shropshires, Durocs

DORR D. BUELL, Elmira, Michigan.

Percheron Stallions and mares at reasonable prices; inspection invited.

F. L. KING & SON, Charlotte, Mich.

When Writing to Advertisers, Please say "I Saw Your Ad. in The Michigan Farmer".

Verdict \$4,075

Automobile Damage Suit

Kalamazoo, Mich.,
April 2, 1919.

In the circuit court today the jury brought in a verdict of \$4,075 against J. Allen Snyder to recover for injuries sustained by Frederick Uithoven as a result of an automobile accident in which it is claimed that Frederick Uithoven has suffered injuries of a serious nature. J. Allen Snyder was insured in one of the small insurance companies which gave him protection for \$800 for liability and he will have to pay the amount of \$3,275.

As the result of this verdict automobile owners are much interested in the policy of insurance they take. The Big Mutual Automobile Insurance Company, of Howell, protects the owner of the car against damage claims made against him above \$25 up to \$5,000. During the five seasons that the company has been operating no member has had to pay to exceed \$25 upon a claim, as the policy has been sufficient to take care of large claims.

Automobile salesmen are taking more interest in insurance and are recommending the Citizens' Mutual Automobile Insurance Company, of Howell, as it has a large reserve fund of \$65,000 and monthly income sufficient to pay \$15,000 of claims per month.

This is the only mutual that has so large a reserve fund to meet the serious losses.

HARROWS

Flexible wood beam and Spring tooth harrows direct from factory to you at wholesale prices.

Helena Woodworking Co., Helena, O.

How We Got Our R. F. D.—No. III

By J. H. Brown

THERE are now over two thousand rural mail carriers in the state of Michigan. This is quite a jump from the two pioneer carriers of 1896 who started out, each with his horse and road cart, from the Climax post office over and through all sorts of roads. A few days ago we drove to the village to take this latest picture of the same carriers and found they were obliged to still use horse-pulled vehicles during these open winter days because the roads around Climax generally are so bad that automobiles cannot navigate through the mud and over frozen hubs and ruts.

Steps have been taken by the farmers and citizens to connect the village with the state reward roads that traverse in every direction in that section, except through this noted village and prairie. The black prairie soil is deep and sticky when it is wet, and there is but one piece of gravel road running south from the village limits. The neglect of the road builders will soon be corrected by the new Covert road running east. Another road strip running north, to be built by the county road commissioners, has been promised for next year. Then, for the first time since the county road system was adopted several years ago, Climax will be connected with good roads running in every direction. Then these pioneer rural carriers, the farmers on the rural routes, and tourists driving through, will have good roads to drive across this beautiful and noted prairie for the first time since 1825.

This picture shows the carriers with their mail loaded up all ready to drive over their original routes about as they did twenty-two years ago last December 3. Lewis Clark is seated in the top buggy at the left and Willis Lawrence in the open rig. Each wears a heavy fur overcoat. We took this picture for the Michigan Farmer, and nearly all the two thousand rural carriers in the state will see it, along with the others, in this and previous issues. Probably there is not a single one of these carriers who does not deliver each week copies of this paper to the farmers of on his route. In fact, it is because so many of these carriers and the farmers of Michigan have repeatedly asked for the story and pictures of the first R. F. D., and the new memorial monument, that we have written this complete illustrated story for the first time.

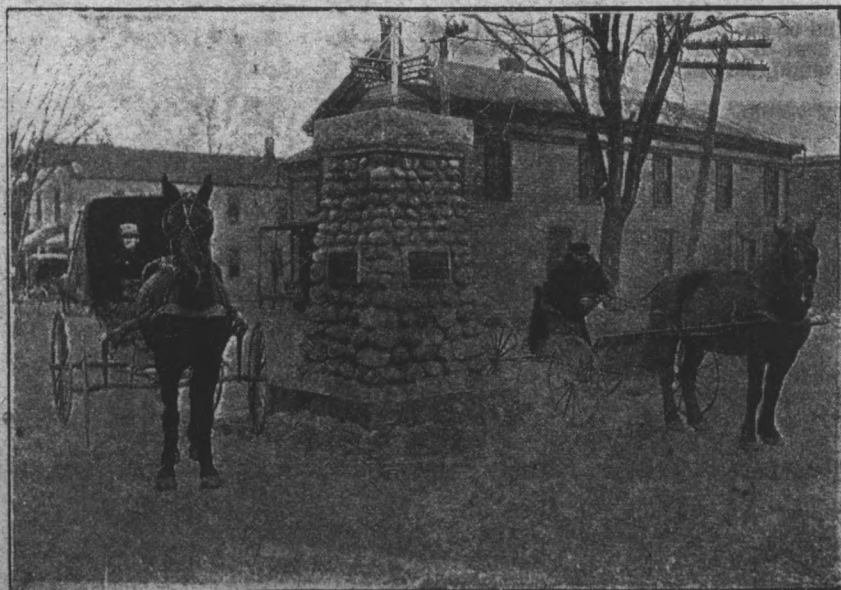
The first picture also shows the old Ide Building back of the monument, one of the oldest in the village. The exact center of the monument base (the right angle of the iron sewer pipe for the electric light cable) is over the vitrified clay section corner post set down by Frank Hodgman many years ago when he was county surveyor. The old parchment deed of the quarter-section taken up by the first permanent settler in 1830, signed by President Andrew Jackson, was given us to deposit in the copper box in the solid concrete under the cap stone. This box was well filled with various things of historical importance.

The picture also shows the monument completed, all but a much-needed heavy pipe railing around the base. This may be provided in the near future. The new road signs, recently secured, we erected on a mid-winter day in January when it was mild and pleasant. We drilled the holes in the heavy galvanized pipe shaft above the cap stone bare-handed and with our heavy coat discarded. Then we bolted on the iron scroll brackets and suspended the road signs. The sign pointing north gives the distance to Battle Creek, ten and a half miles. To Camp Custer, seven miles. The reverse side of each sign has the following: "Climax R. F. D. Memorial. First in the U. S. A."

It was the biggest day in the history of Climax village when the monument was dedicated. Several thousand people were present, including invited guests and speakers from the state and Washington. Over seventy loaded automobiles formed at the city hall and Monument square in Battle Creek, driven by the leading business men, and carrying delegates of the Michigan Rural Letter Carriers' Association and prominent state and national officials.

The writer, as general chairman, led the parade in his car and carried Mrs. W. H. Wait, state regent of the Daughters of the Revolution; Master John C. Ketcham, Michigan State Grange, and President W. H. Jehnzen, of the Michigan Letter Carriers' Association. With a band ahead in two trucks, this long parade drove ten miles to Climax and was met at the monument by the village delegation. The band played "The Star Spangled Banner" while little Kathryn Brown unveiled the monument and raised the small flag to the top of the staff above the light globes. We introduced the above-mentioned speakers, who presented the bronze tablets. During and after the ceremony of dedication moving pictures were taken by the Pathe corporation operator. Messrs. Clark and Lawrence, in their old horse and road cart rigs, with mail pouches over their shoulders, started out from the old post office and drove slowly past the monument, just as they did twenty years before, while the picture machine on a high platform recorded the scene. (Later on this film was shown in the leading theaters in every large city in the United States).

Then the parade was led by the band a few rods further to the large and fine school grove. A large platform and hundreds of chairs and seats had been



Lewis Clark and Willis Lawrence about to Start Over the Old Routes.

provided. Over two hours were spent listening to music and addresses by United States Senator Chas. E. Townsend, Congressman J. M. C. Smith, Lieut. Governor Dickinson, President Frank S. Kedzie, M. A. C., Master J. C. Ketcham, Mrs. W. H. Wait, State Highway Commissioner, Frank F. Rodgers, President W. H. Jehnzen, and others.

Officers of the Michigan Rural Letter Carriers' Association present were Rex Anthony, of Ada; George Smith, of Kalamazoo; F. A. Butler, of Chalevoix; John Brinkman, Holland; George Fleury, Monroe; Mrs. Sylvia L. McMillen, Greenville. Mr. Butler has been secretary for several years. Mrs. McMillen was the only woman delegate and had carried mail on her route out of Greenville for fourteen years.

The 1919 convention of the Association will be held in Ionia sometime in July. We have attended a number of the annual meetings during the last twenty years, and hope to be present at the next one and take pictures of the officers and delegates for the Michigan Farmer. The last meeting was held in Springport, the home of Ard Ludlow, one of the prominent rural carriers of the state. The rural carriers of Michigan have carried millions of copies of the Michigan Farmer on the more than two thousand routes of both peninsulas. But history has recorded the fact that the very first copies of the Michigan Farmer ever punched into a rural mail box were handled by Lewis Clark and Willis Lawrence on the Climax original route on December 7, 1886.

THREE EASTER.

BY M. B. RANDOLPH.

Eastern Morn; and Harold stood
His angry heel in the ground;
The cuckoo's song came from the wood
And the grass was green around;
But his brow was dark with jealous wrath
As he mused on his bridal day:
She loves me not, he said, and my path
Lies over the ocean gray;
Oh, cursed be this Christian faith
That has stol'n her heart away.
She loves the bells that call to prayer
And the anthems that they sing;
I love the wind that leaps from its lair,
The tempest on its wing;
She loves the still cathedral nave,
The altar and the vow.
I love my ship that dares the wave
The raven at her prow.

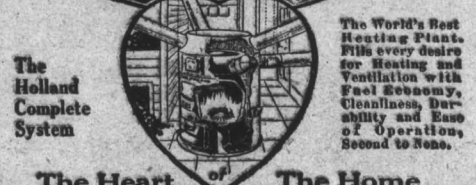
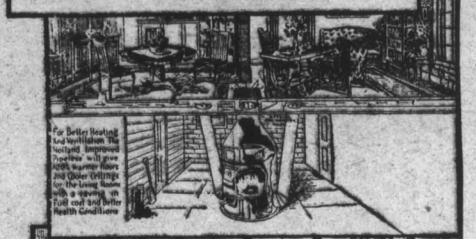
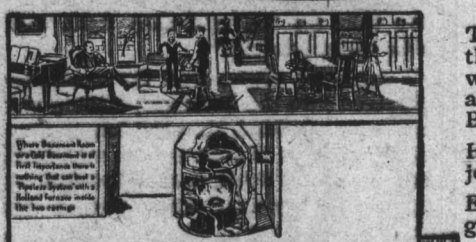
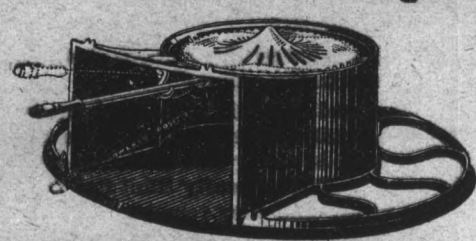
My faith is the faith of the bold Viking,
And I pledge my word on Odin's ring,
I'm off for the wild wars now.
Valhalla's halls are fair and wide,
And I fall in the deadly fray,
I'll go where the bright valkyrie bide,
And dwell with them for aye.
She loves me not, again he said,
She loves the childish Word
That tells of One whose blood was shed
They call the risen Lord;
Priests for women and prayers for the dead
But men for the sea and the sword!

Easter Morn, a year and a day;
Sweet is the Northland's breath;
Fair Ethel takes the altar's way,
The pallid bride of Death.
Harold, home from the stormy main,
Leans on his shield to weep:
The cuckoo's song is a haunting pain,
O, fairest of all that I have slain.
Awake! awake from thy sleep!

Eastern Morn, and from the grove
Comes the cuckoo's song of love;
Welcome now the spring refrain
Shorn of grief and haunting pain;
The skies are blue; the earth is rife
With breath of budding things;
Harold thrills with strange new life
And his free-born spirit sings:
Ocean rovers, long adieu—
Spoil and plunder call for you,
The raven's sign is naught to me,
I reckon not loss or victory.

My sword and shield hang side by side,
My ship rests at the pier;
Heaven's halls are fair and wide
And Ethel waits me there.

He seeks the place where prayers are said,
He listens to the Word
That tells of One whose blood was shed,
He owns the risen Lord.



The World's Best Heating Plant. Fills every desire for heating and ventilation with fuel economy, cleanliness, durability and ease of operation. Second to none.

SANITARY INDOOR TOILET

Royal Sanitary Toilets bring the comfort of indoor toilets to country homes, cottages, schools—wherever running water is not available. No longer necessary to depend upon rear lot outhouses with their discomfort and menace to health.



Milking Machines?

Do you want to know, really KNOW? Are you satisfied with the talk of a glib salesman or the off-hand experience of a few neighbors or are you an up-to-date man with up-to-date views and do you want to know the facts, impartial, cold blooded facts, good facts, bad facts, all facts, about milking machines—then write as follows: "Dairy Expert, B.P. Co., 4814 Third Floor Madison Terminal Building, Chicago. Send without cost or obligation your report on milking machines." When writing also state how many cows you milk and what milking machine, if any, you have now. Adv't.

YOUNG man of 19 yrs. of age having a thorough scientific knowledge of Fruit Growing, Bee-keeping and Livestock would like to locate with a good family in Michigan. Fruit Well. Good farm home and steady work desired. Might be able to invest small sum in business if satisfactory. F. J. Ruhl, 184 National Ave., Detroit.

Why Does a Bonfire Burn Without Smoke?

THE next time you build a bonfire watch it burn from the outer edges and over the top. It burns without smoke until you throw something on that chokes the flame. Then smoke rolls up in clouds. But as long as the flames are unhampered there is no smoke.

The fire in the HOLLAND Furnace burns like the free-burning bonfire—from the sides and over the top. The fuel is thrown to the outer edges by the cone center grate. Air is mixed with the soot and gases, so they burn instead of escaping up the chimney in smoke. You get all the heat units out of the fuel—not just in the center of the firepot but right out against the walls—which means 100% heat radiation.

HOLLAND

The Furnace With the Cone Center Grate

Over half the homes in Holland, Michigan, are heated with HOLLAND Furnaces. That shows how HOLLANDS are used where people know them best.

This HOLLAND cone center grate is the easiest grate in the world to operate. It rests on a center pivot; operates with a swinging, tilting motion, breaks up the clinkers, and keeps the fire fresh near the outer walls of the firepot. Burns any kind of fuel.

HOLLAND Furnaces are built without bolts and with less joints than any other furnace made.

Every HOLLAND Furnace is backed with a permanent guarantee covering all material and workmanship. HOLLAND Furnaces are sold at low cost because of HOLLAND simple construction and our economical marketing methods.

Pipe or Pipeless Installation

Three different types: (1) the regular pipe furnace with warm air register in all parts of the house; (2) the improved pipeless with one register above the furnace for warm air, and separate flues for bringing cold air back to the furnace; (3) the pipeless with only one big register, bringing warm air up through the center and allowing cold air to return down between the inner and outer casings.

Mail the Coupon or a Postal

No matter what type of heating system you want, you can get it in a HOLLAND—the furnace with the cone center rocking grate, backed with HOLLAND service and sold at money saving cost. Write today for the HOLLAND catalog.

Ask for Catalog No. F

Holland Furnace Co.
World's Largest Sellers of Furnaces

Two Factories: Holland, Mich., and Cedar Rapids, Ia.

150 Branches



MR. V. W. CHERVEN
Chief Heating Engineer
Holland Furnace Co.

Get the Free Service of a Great Heating Engineer. Send us a rough sketch of your floor plans and let our Chief Heating Engineer, Mr. V. W. Cherven, show you the type of heating system that will fit your home best. Mr. Cherven served as Superintendent and General Inspector of Warm Air Heating for the United States during the war. He is admittedly America's foremost heating engineer. He has had years of experience and has designed and supervised the installation of thousands of complete warm air heating systems. Put your heating problem in his hands and save money—and own a comfortable home.

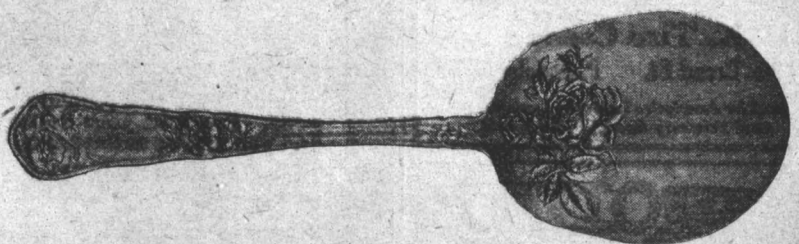


Holland Furnace Company
Holland, Michigan

Please send me your Catalog No. F

Name
Address

Our Reliance Berry Spoon



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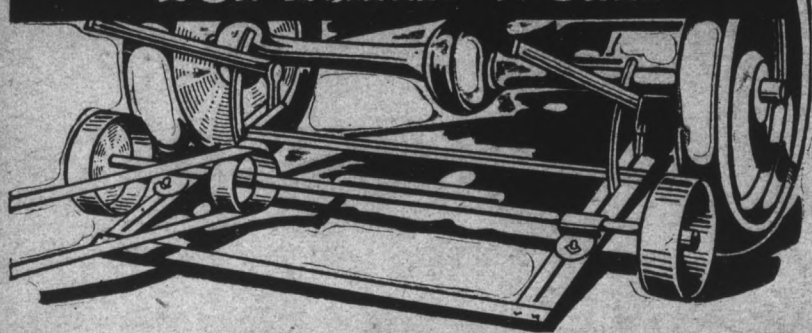
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"Beyond the Frontier"

"Monsieur de Baugis has the privilege of Sieur de la Salle's quarters," he answered, eager to explain, "and besides brought with him many comforts of his own. But for the Iroquois we would be quite happy."

"They have proven dangerous?"

"Not to us within the fort. A few white men were surprised without and killed, but, except for shortness of provisions and powder and ball, we are safe enough here. Tomorrow you will see how impregnable is the Rock from savage attack."

"I have heard there are a thousand Iroquois in the valley."

"Ay, and possibly more, and we are but a handful in defense, yet their only approach is along that path you came tonight. The cowardly Illini fled down the river; had they remained here we would have driven the vermin out before this, for 'tis said they fight well with white leaders."

I made no reply, and the man disappeared into the darkness, closing the heavy door behind him, and leaving me alone. I made it secure with an oaken bar, and sank down before the fire on a great shaggy bear skin. I was alone at last, safe from immediate danger, able to think of the strange conditions surrounding me, and plan for the future. The seriousness of the situation I realized clearly, and also the fact that all depended on my action—even the life of Rene de Artigny.

I sat staring into the fire, no longer aware of fatigue, or feeling any sense of sleepiness. The thick log walls of the cabin shut out all noise; I was conscious of a sense of security, of protection, and yet comprehended clearly what the new day would bring. I should have to face Cassion, and in what spirit could I meet him best? Thus far I had been fortunate in escaping his denunciation, but I realized the reason which had compelled his silence—pride, the fear of ridicule, had sealed his lips. I was legally his wife, given to him by Holy Church, yet for weeks, months, during all our long wilderness journey, I had held aloof from him, mocking his efforts, and making light of his endeavors. It had been maddening, no doubt, and rendered worse by his growing jealousy of De Artigny.

Then I had vanished, supposedly drowned in the great lake. He had sought me vainly along the shore, and finally turned away, convinced of my death, and that De Artigny had also perished.

Once at the fort, companionship with De Baugis, and with no one to deny the truth of his words, his very nature would compel him to boast of his marriage to Adele la Chesayne. No doubt he had told many a vivid tale of happiness since we left Quebec. Ay, not only had he thus boasted of conquests over me, but he had openly charged De Artigny with murder, feeling safe enough in the belief that we were both dead. And now when we appeared before him alive and together, he had been for the moment too dazed for expression. Before De Baugis he dare not confess the truth, yet this very fact would only leave him the more furious. And I knew instinctively the course the man would pursue. His one thought, his one purpose, would be revenge—nothing would satisfy him except the death of De Artigny. Personally I had little to fear; I knew his cowardice, and that he would never venture to use physical force with me. Even if he did I could rely upon the gallantry of De Tonty, and of De Baugis for protection. No, he would try threats, entreaties, slyness, cajolery, but his real weapon to overcome my opposition would be De Artigny. And there he possessed power.

I felt in no way deceived as to this. The ugly facts, as Cassion was able to

present them, would without doubt, condemn the younger man. He had no defense to offer, except his own assertion of innocence. Even if I told what I knew it would only strengthen the chain of circumstances, and make his guilt appear clearer.

De Tonty would be his friend, faithful to the end; and I possessed faith in the justice of De Baugis, yet the facts of the case could not be ignored—and these, unexplained, tipped with the venom of Cassion's hatred, were sufficient to condemn the prisoner. And he was helpless to aid himself; if he was to be saved, I must save him. How? There was but one possible way—discovery of proof that some other committed the crime. I faced the situation hopelessly, confessing frankly to myself that I loved the man accused; that I would willingly sacrifice myself to save him.

I felt no shame at this acknowledgment, and in my heart there was no shadow of regret. Yet I sat there stunned, helpless, gazing with heavy eyes into the fire, unable to determine upon a course of action, or devise any method of escape.

Unable longer to remain quiet, I got to my feet, and my eyes surveyed the room. So immersed in thought I had not before really noted my surroundings, but now I glanced about, actuated by a vague curiosity. The hut contained two rooms, the walls of squared logs, partially concealed by the skins of wild animals, the roof so low I could almost touch it with my hand.

A table and two chairs, rudely made with axe and knife, comprised the entire furniture, but a small mirror, unframed, hung suspended against the farther wall. I glanced at my reflection in the glass, surprised to learn how little change the weeks had made in my appearance. It was still the face of a girl which gazed back at me, with clear, wide-open eyes, and cheeks flushed in the firelight. Strange to say the very sight of my youthfulness was a disappointment and brought with it doubt. How could I fight these men? How could I hope to win against their schemes, and plans of vengeance?

I opened the single window and leaned out, grateful for the fresh air blowing against my face, but unable to perceive the scene below shrouded in darkness. Far away, down the valley, was the red glow of a fire, its flame reflecting over the surface of the river. I knew I stared down into a great void, but could hear no sound except a faint gurgle of water directly beneath. I closed the window shutter, and, urged by some impulse, crossed over to the door leading to the other apartment. It was a sleeping room, scarcely more than a large closet, with garments hanging on pegs against the logs, and two rude bunks opposite the door. But the thing which captured my eyes was a bag of brown leather lying on the floor at the head of one of the bunks—a shapeless bag, having no distinctive mark about it, and yet which I instantly recognized—since we left Quebec it had been in our boat.

As I stood staring at it, I remembered the words of De Baugis, "your husband has been my guest." Ay, that was it—this had been Cassion's quarters since his arrival, and this was his bag, the one he kept beside him in the canoe, his private property. My heart beat wildly in the excitement of discovery, yet there was no hesitation; instantly I was upon my knees tugging at the straps. They yielded easily, and I forced the leather aside, gaining a glimpse of the contents.

CHAPTER XXVII

I Send for De Tonty.

I DISCOVERED nothing but clothes at first moccasins, and numerous undergarments—together with a uniform, evidently new, and quite gorgeous. The removal of these, however,

revealed a pocket in the leather side securely fastened, and on opening this with trembling fingers, a number of papers were disclosed.

Scarcely venturing to breathe, hardly knowing what I hoped to find, I drew these forth, and glanced hastily at them. Surely the man would bear nothing unimportant with him on such a journey; these must be papers of value, for I had noted with what care he had guarded the bag all the way. Yet at first I discovered nothing to reward my search—there was a package of letters, carefully bound with a strong cord, a commission from La Barre, creating Cassion a Major of Infantry, a number of receipts issued in Montreal, a list of goods purchased at St. Ignace, and a roster of men composing the expedition.

At last from one corner of the pocket, I drew forth a number of closely written pages, evidently the Governor's instructions. They were traced in so fine a hand that I was obliged to return beside the fire to decipher their contents. They were written in detail, largely concerned with matters of routine, especially referring to relations with the garrison of the fort, and Cassion's authority over De Baugis, but the closing paragraph had evidently been added later, and had personal interest. It read: "Use your discretion as to De Artigny, but violence will hardly be safe; he is thought too well of by La Salle, and that fox may get Louis' ear again. We had best be cautious. Chevet, however, has no friends, and, I am told, possesses a list of the Le Chesnayne property, and other documents which had best be destroyed. Do not fail in this, nor fear results. We have gone too far to hesitate now."

I took this package, and thrust it into my breast. It was not much, and yet it might prove the one needed link. I ran through the packet of letters, but they apparently had no bearing on the case. Several were from women; others from officers, mere gossip epistles of camp and field. Only one was from La Barre, and that contained nothing of importance, except the writer urged Cassion to postpone marriage until his return from the west, adding, "there is no suspicion, and I can easily keep things quiet until then."

Assured that I had overlooked nothing, I thrust the various articles back, restraped the bag, and returned to the outer room. As I paused before the fire, someone rapped at the door. I stood erect, my fingers gripping the pistol which I still retained. Again the raps sounded, clearly enough defined in the night, yet not violent.

"Who is there?" I asked.

"Your husband, my dear—Francois Cassion."

"But why do you come? It was the pledge of De Baugis that I was to be left here alone."

"A fair pledge enough, although I was not consulted. From the look of your eyes little difference if I had been. You are as sweet in disposition as ever, my dear; yet never mind that—we'll soon settle our case now, I warrant. Meanwhile I am content to wait until my time comes. 'Tis not you I seek tonight, but my dressing case."

"Your dressing case?"

"Ay, you know it well, a brown leather bag I bore with me during our journey."

"And where is it, Monsieur?"

"Beneath the bunk in the sleeping room. Pass it out to me, and I will ask no more."

"'Twill be safer if you keep your word," I said quietly, "for I still carry Hugo Chevet's pistol, and know how to use it. Draw away from the door, Monsieur, and I will thrust out the bag."

I lowered the bar, opening the door barely wide enough to permit the bag's passage. The light from the fire gleamed on the barrel of the pistol held in my hand. It was the work of an in-

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stant, and I saw nothing of Cassion, but, as the door closed, he laughed scornfully.

"Tis your game tonight, Madame," he said spitefully, "but tomorrow I play my hand. I thank you for the bag, as it contains my commission. By virtue of it I shall assume command of this Fort St. Louis, and I know how to deal with murderers. I congratulate you on your lover, Madame—and good night."

I dropped into the nearest seat, trembling in every limb. It was not personal fear, nor did I in my heart resent the insult of his last words. De Artigny was my lover, not in mere lip service, but in fact. I was not ashamed, but proud, to know this was true. The only thing of which I was ashamed was my relationship with Cassion; and my only thought now was how that relationship could be ended, and De Artigny's life saved. The paper I had found was indeed of value, yet I realized it alone was not enough to offset the charges which Cassion would support by his own evidence and that of his men. This mere suggestion in La Barre's handwriting meant nothing unless we could discover also in Cassion's possession the documents taken from Chevet. And these, beyond doubt, had been destroyed. Over and over again in my mind I turned these thoughts, but only to grow more confused and uncertain. All the powers of hate were arrayed against us, and I felt helpless and alone.

I must have slept finally from sheer exhaustion, although I made no attempt to lie down. It was broad daylight, when I awoke, aroused by pounding on the door. To my inquiry a voice announced food, and I lowered the bar, permitting an orderly to enter bearing a tray, which he deposited on the table. Without speaking he turned to leave the room, but I suddenly felt courage to address him.

"You were not of our party," I said gravely. "Are you a soldier of M. de Baugis?"

"No, Madame," and he turned facing me, his countenance a pleasant one. "I am not a soldier at all, but I serve M. de Tonty."

"Ah, I am glad of that. You will bear to your master a message?"

"Perhaps, Madame," his tone somewhat doubtful. "You are the wife of Monsieur Cassion?"

"Do not hesitate because of that," I hastened to stay, believing I understood his meaning. "While it is true I am legally the wife of Francois Cassion, my sympathies now are altogether with the Sieur de Artigny. I would have you ask M. de Tonty to confer with me."

"Yes, Madame."
"You have served with De Artigny. You know him well?"

"Three years, Madame; twice he saved my life on the great river. M. de Tonty shall receive your message."

I could not eat, although I made the endeavor, and finally crossed to the window, opened the heavy wooden shutters, and gazed without. What a marvelous scene that was! Never before had my eyes looked upon so fair a view, and I stood silent, fascinated. My window opened to the westward, and I gazed down from the very edge of the vast rock into the wide valley. Great tree tops were below, and I had to lean far out to see the silvery waters lapping the base of the precipice, but, a little beyond, the full width of the noble stream became visible, decked with islands, and winding here and there between green-clad banks, until it disappeared in the far distance. The sun touched all with gold; the wide meadows opposite were a vivid green, while many of the trees crowning the bluffs had already taken on a rich autumnal coloring. Nor was there anywhere in all that broad expanse, no sign of war or death. It was a scene of peace, so silent, so beautiful, that I could not conceive this arid land of

savage cruelty. Far away, well beyond rifle shot, two loaded canoes appeared, skimming the surface of the river. Beyond these, where the meadows swept down to the stream, I could perceive black heaps of ashes, and here and there spirals of smoke, the only visible symbols of destruction. A haze hid the distant hills, giving to them a purple tinge, like a frame encircling the picture. It was all so soft in coloring my mind could not grasp the fact that we were besieged by warriors of the Iroquois, and that this valley was even now being swept and harried by those wild raiders of the woods.

I had neglected to bar the door, and as I stood there gazing in breathless fascination, a sudden step on the floor caused me to turn in alarm. My eyes encountered those of De Tonty, who stood hat in hand.

"Tis a fair view, Madame," he said politely. "In all my travels I have seen no nobler domain."

"It hath a peaceful look," I answered, still struggling with the memory. "Can it be true the savages hold the valley?"
"All too true—see yonder, where the smoke still shows, dwelt the Kaskaskias. Not a lodge is left, and the bodies of their dead strew the ground. Along those meadows three weeks since, there were the happy villages of twelve tribes of peaceful Indians; to-day those who yet live are fleeing for their lives."

"And this fort, Monsieur?"

"Safe enough, I think, although no one of us can venture ten yards beyond the gate. The Rock protects us, Madame, yet we are greatly outnumbered, and with no ammunition to waste. 'Twas the surprise of the raid which left us thus helpless. Could we have been given time to gather our friendly Indians together the story would have been different."

"They are not cowards then?"

"Not with proper leadership. We have seen them fight often since we invaded this land. 'Tis my thought many of them are hiding now beyond those hills, and may find some way to reach us. I suspected such an effort last night, when I sent out the rescue party which brought you in. Ah, that reminds me, Madame; you sent for me, did you not?"

"Yes, M. de Tonty. I can speak to you frankly? You are the friend of Sieur de Artigny?"

"Faith, I hope I am, Madame, but I know not what has got into the lad—he will tell me nothing."

"I suspected as much, Monsieur. It was for that reason I have sent for you. He has not even told you the story of our journey?"

"Ay, as brief as a military report—not a fact I could not have guessed. There is a secret here, which I have not discovered. Why is M. Cassion so wild for the lad's blood, and how came there to be trouble between Rene, and the fur trader? Bah! I know the lad is no murderer, but no one will tell me the facts."

"Then I will, Monsieur," I said gravely. "It was because of my belief that Sieur de Artigny would refuse explanation that I sent for you. The truth need not be concealed; not from you, at least, the commander of Fort St. Louis—"

"Pardon, Madame, but I am not that. La Salle left me in command with less than a dozen men. De Baugis came later, under commission from La Barre but he also had but a handful of followers. To save quarrel we agreed to divide authority, and so got along fairly well, until M. Cassion arrived with his party. Then the odds were altogether on the other side, and De Baugis assumed command by sheer force of rifles. 'Twas La Salle's wish that no resistance be made, but, faith, with the Indians scattered, I had no power. This morning things have taken a new phase. An hour ago M. Cassion assumed command of the garrison by virtue of a commission he produced from the

Governor La Barre, naming him major of Infantry. This gives him rank above Captain de Baugis, and, besides, he bore also a letter authorizing him to take command of all French troops in this valley, if, in his judgment, circumstances rendered it necessary. No doubt he deemed this the proper occasion."

"To assure the conviction, and death of De Artigny?" I asked, as he paused. "That is your meaning, Monsieur?"

"I cannot see it otherwise," he answered slowly, "although I hesitate to make so grave a charge in your presence, Madame. Our situation here is scarcely grave enough to warrant his action, for the fort is in no serious danger from the Iroquois. De Baugis, while no friend of mine, is still a fair minded man, and merciful. He cannot be made a tool for any purpose of revenge. This truth Major Cassion has doubtless learned, hence assumes command himself to carry out his plans."

I looked into the soldier's dark clear-cut face, feeling a confidence in him, which impelled me to hold out my hand. (Continued next week).

"By the Way"



OH, FRAGRANT BELLS OF EASTER.

BY RUTH RAYMOND.

Oh, fragrant bells of Easter
You softly ring at dawn,
In mossy dell and woodland,
By garden bed and lawn,
Where winter's snows have melted
The brooks again are free
To ripple on in gladness
And share your minstrelsy.

Oh, chosen bells of Easter
'Tis yours to bud and bloom
To tell the wondrous story
Of life from out the tomb,
Where war has left its fallows
You lift above the sod
Your loving cups, sweet censurs
That bear the Peace of God.

THEIR WORRY.

The folks over in Europe are not so much afraid of potatoes going down in April as of their not coming up in May.

It's a wise mother that knows as much as her seventeen-year-old daughter.

A COMPROMISE.

"Look here, Hiram," said Si, "when are you going to pay me that eight dollars for pasturin' your heifer? I've had her now for about ten weeks."

"Why, Si, that critter ain't worth more than ten dollars."

"Well, suppose I keep her for what you owe me?"

"Not by a jugful! Tell you what I'll do; you keep her two weeks more and you can have her."

SOLVE THIS ONE.

"Mother," said little Johnny, "do missionaries go to heaven?"

"Why, of course, dear," his mother replied.

"Do cannibals?"

"No, I'm afraid they don't."

"But, Mother," the little boy insisted, "if a cannibal eats a missionary he'll have to go, won't he?"

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30% More Wearing Material Than in Old-Style Tires of Equal Rating

No old-style tire can attempt to run as far or ride with the easy spring of the Uniform Miller Cord. In the first place the Miller is made of the finest materials and contains more of them than any ordinary tire of equal-rated size. The Miller is also heavier and thicker.

For proof behold the picture below, drawn from an actual photograph. Both tires are rated 30 by 3½ inches, but the Miller is bigger 'round and bigger through. It gives you 30 per cent more actual wearing material and over 11 per cent more air capacity.

Height of Miller 30-in. Cord

Height of Ordinary 30-in. Tire



Buoyant, Elastic

The Miller is built of thousands of cable cords, floated in new live rubber, layer on layer. These tires are the latest, most improved type. They give and take as they roll on the rough of the road, protecting the car or truck from destructive vibration. They are the longest wearing, the lowest in cost per mile.

Men who equip with Miller Cords are amazed at the ease and comfort the old car gives.

Geared-to-the-Road

The famous Geared-to-the-Road tread has many caterpillar feet that engage the ground like cogs, giving positive traction and safety in slippery weather.

Like all Miller Tires, these Cords are uniform. Casing after casing they give long-distance mileage, because every tire is built the same. And built to a championship standard.

Don't fail to get a set of Miller Cords. They make any car look handsomer and bigger.

The Miller Rubber Co.
F61 Akron, Ohio

Makers of Miller Red and Gray
Inner Tubes—the Team-Mates
of Uniform Tires—
Also Miller Surgeons
Grade Rubber Goods
for homes as well
as hospitals.

"I am penalized
if one comes
back"

To Dealers:
Your territory may
be open—WRITE.

Miller
GEARED-TO-THE ROAD
UNIFORM MILEAGE
Tires

THE
UNITED STATES
DISC SEPARATOR

World's Record Skimming in Your Dairy

Most world's records are things to read about only. The United States Cream Separator is the one exception.

You can make a world's record every day in close skimming by using the world's record cream separator.



Besides this the United States Disc Separator has constantly introduced new mechanical achievements that mean easy cleaning, easy running and long life. Seven exclusive patents on such refinements have been granted within two years.

Ask your dealer to demonstrate.

Vermont Farm Machine Company
BELLOWS FALLS, VT.

Chicago Portland, Ore. Salt Lake City
U. S. Farm Lighting Plants and Engines

Watch your newspaper for this advertisement telling where you can see the United States Separator. Agents and dealers wanted in some localities.

Save Money on Newspapers

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

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

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

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

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

The Michigan Farmer, Detroit

The Tongue Test

Put a little alum on the end of your tongue and you will have the reason why alum baking powder should not be used in food.

England and France forbid the sale of baking powder containing alum.

You can tell whether baking powder contains alum by reading the label.

ROYAL Baking Powder

Absolutely Pure

Contains No Alum—

Leaves No Bitter Taste in the Food

Stop and Think!

Why are Americans using such great quantities of

POSTUM CEREAL

Health value, wonderful flavor and practical economy make Postum the ideal American table drink.

Boil just like coffee—

(15 minutes after boiling begins)

—but remember that, unlike coffee, this beverage contains no drugs to upset stomach, heart or nerves. It is absolutely pure and without harm, made from the best of roasted wheat and wholesome molasses.

You can get the original Postum at grocers. Two sizes—

Usually sold at 15c and 25c

When You Write to Advertisers Please Mention This Paper.

Woman's Interests

Rural Clubs for Women



Demonstration in the Planting of Shrubs for the Home Grounds.

RECONSTRUCTION problems are looming up so big and formidable as to leave us aghast at the gigantic work before us. Unless we are careful, we shall find ourselves dissipating our strength and staggering around in foolish, meaningless circles accomplishing nothing.

Deborah requested me to write up the part the rather unique Rural Clubs are playing on the reconstruction stage in this state. There are at present nine progressive groups of ladies living in the country districts who for the most part are studying their community interests with the aim of improving their living conditions.

The war has taught us many facts about living which we should never have appreciated otherwise. The soldiers have been kept more or less happy through the community huts where all manner of inducements were evolved with which to keep up the morale of the army. We have an army of workers, and among the groups of workers we have the farm women, who should have every possible advantage and convenience that they may get the most good from life, to keep up the morale of the country.

The purpose of the Rural Clubs is to teach home economics, promote sociability, and advance community interests. The clubs meet twice a month to carry out the programs outlined in their year books. One of the purposes of the clubs is to teach its members how to make constitutions and by-laws, programs, to conduct meetings, both general and committee, in a parliamentary way, and to know where to secure information for themselves. In other words, to become efficient community leaders. The constitution and

by-laws would vary for different groups. It would be well for those desiring to organize a club to write the Division of Extension of Home Demonstration Work, East Lansing, for copies of constitution and by-laws. These can be changed to meet local conditions.

Since the success of women's club work will depend almost entirely upon the programs presented at the regular meetings, it occurs to me that the reader should have a clear idea of the essentials of a good program. One club realized that with united effort and through the assistance of the home demonstration agent and the county agricultural agent they could learn much about poultry raising to increase production and earn more spending money, so their year's program included many talks and some demonstrations to help in gaining their goal. They are as a whole community, breeding better poultry. A second club decided to work for improvements in the district schools, and have been successful in placing equipment for hot lunches in two district schools, to the great joy of the children.

Another club discovered that they needed lessons in sewing, so this program was prepared:

April 5.—Simple stitches, basting, running, hemming, combination, overhanding and blanket stitch.

April 19.—Buttonholes.

May 3.—Patches, hemmed, overhand ed and flannel; mending table linen; darning dress materials and hosiery.

May 17.—Embroidery stitches: Outline, feather, coral chain, satin stitch, and French knots.

May 31.—Cutting kimona, nightgown and apron.

June 14.—Making of undergarments.



Members of the Fabius Seasonal Club.

June 28.—The use of copyrighted patterns; cutting and fitting a skirt.
 July 12.—Cutting and fitting a waist.
 July 26.—Finishing garments.
 August 9.—Selection of corsets and underwear, by expert saleswoman.

August 23.—The principles of color, rhythm and harmony applied to dress. Design dress or select from fashion book.

Sept. 6.—Clothing for boys and girls from babyhood to school age; dresses for the girl from six to thirteen; suitable wardrobe for the high-school girl.

The following schedule of work for one of the state's most active and progressive clubs will show more clearly the essentials of a good program than any suggestions that might be offered. This schedule covers eleven months' work:

February 1—Poultry.

Chicken diseases; feed for young chickens; poultry raising versus egg production; the essentials of a good poultry house; roll call; one-minute talks on "My experience with poultry."

February 15.

Evening—Valentine party, arranged for by the entertainment committee.

March 1—Household Management.

A simple system for keeping household accounts; system in housework; labor-saving methods; home-made conveniences; roll call: "My best labor-saving devices."

March 15.

Pot-luck supper and social, in charge of committee.

March 29—The House.

How can the traditional housecleaning be eliminated? Floors, walls and ceilings with regard to suitability and durability; principles of art and design applied to house furnishings; roll-call: "My experience with floor or wall coverings."

April 12—The Orchard and Garden.

Beautifying the home grounds; methods of making and care of hot-beds; some common diseases and insect pests of garden and orchard; debate, "Resolved that it is cheaper to buy fruit than to raise it." Roll-call: "Varieties of vegetables and flowers I have grown successfully."

May 10—Poultry.

Marketing poultry; the community egg circle; profits in poultry; methods of preserving eggs for winter use; roll call: "My favorite breed of poultry and why I like it."

June 14—Food Preservation.

Demonstration of canning of fruits and vegetables by the cold-pack method; jelly making; discussion: "Difficulties in canning or jelly making."

July 12—Planning and Serving Meals.

Demonstration in table setting and serving; the well planned meal; suitable food for children; food for the aged.

August 9.

Annual picnic in charge of the committee.

Sept. 13—The School.

School lunches; sanitation of school grounds and school house; how can we make our school grounds more attractive? Cooperation between parents and teacher, as the teacher sees it; cooperation between parents and teacher as the parent sees it; roll call: "An incident of my own school days."

October 14.

Modern Farm Home Conveniences.

Demonstration: A home which has modern conveniences; roll call: "Some inconvenience in my house."

November 8—Clothing.

Home-made versus ready-made clothing; what constitutes an adequate wardrobe for a farm woman? Materials and designs for school girls' dresses; roll call: "Ways of making over clothing."

November 22—Home Life.

The guest in the home; home amusements; books and magazines in the home; Thanksgiving dainties; roll

The Joyous Welcome Home

The day had been a tough one. Everything seemed to go wrong.

Under such conditions a man does not lay aside his work with any degree of satisfaction.

On his way home his mind is going over the difficulties encountered and he finds himself dissatisfied with pretty nearly everything and everybody.

He's got the Blues.

Not so with the family. The youngsters, looking for father, spy him a block or more away and there's a mighty footrace to see who can reach him first.

He sees them comming. The springtime of youth is in their faces, the sunshine of joy in their eyes; there is music in their voices. Daddy's home again!

The good wife's welcome is no less cordial and, better yet, the evening meal is ready, and what bread, such as only

Lily White

"The flour the best cooks use"

will make!

It is tender, and deliciously flavored. The kind that fairly melts in the mouth.

Everything else is proportionately good, and what a change!

The sunshine and Warmth of Home Ties have scattered the doubts and misgivings of every day life.

The Blues have vanished! Father is now in the right mood to enjoy to the fullest the usual after-dinner romp with his little "pals," and regrets that mother tucked them away in their beds so early.

Of course it might have been different!

Supposing the children had been unwell because of having eaten heavy biscuits or soggy pastry for lunch, and the wife out of sorts on account of poor success with baking and a late dinner?

That combination, with father having the blues, would have made a fine setting for a family "rumpus."

Don't take any chances. Always buy LILY WHITE, "The flour the best cooks use," and be assured of thorough baking success and complete harmony.

VALLEY CITY MILLING COMPANY
GRAND RAPIDS, MICHIGAN

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. 2373—Girls' Dress. Cut in five sizes, 4, 6, 8, 10 and 12 years. Size 12 requires 3½ yards of 44-inch material for the dress with jacket. The jacket alone will require 1½ yards. Price 10 cents.



No. 2757—Girls' Dress. Cut in three sizes, 12, 14 and 16 years. Size 16 will require 4½ yards of 36-inch material. Price 10 cents.



No. 2532—Ladies' "Cover-All" Apron. Cut in four sizes, small 32-34; medium 36-38; large 40-42; extra large 44-46 inches bust measure. Size medium requires 5½ yards of 36-inch material. Price 10 cents.

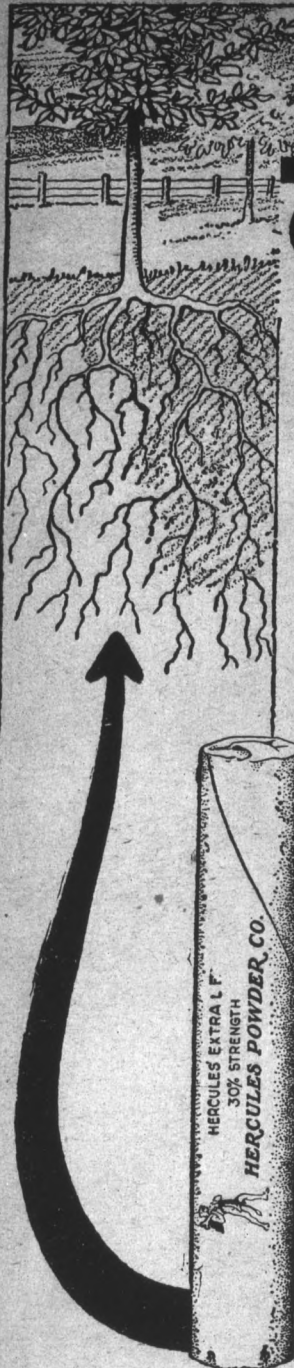


No. 2739—Ladies' House Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 7½ yards of 27-inch material. Width of skirt is about 2¼ yards at the foot, with plaits drawn out. Price 10 cents.

No. 2435—Ladies' Apron. Cut in four sizes: small 32-34; medium 36-38; large 40-42; extra large 44-46 inches, bust measure. A medium size requires 4½ yards of 36-inch material. Price 10 cents.



No. 2485—Ladies' House Dress. Cut 46 inches bust measure. Size 38 requires seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The dress measures about 2¾ yards at the lower edge. Price 10 cents.



Give those Roots a Chance

BLASTING the holes for your new orchard means more than a saving of hard work—it means a better orchard, more perfect fruit and bigger profit. When dynamite is used to dig the holes, it loosens the earth in such a way that the young tree's roots have a chance to spread and grow naturally.

If you expect to have your trees do their best give their roots a chance by blasting the holes you plant them in, with

HERCULES DYNAMITE

Send to the Hercules Powder Co. for a copy of their 68 page illustrated book "Progressive Cultivation". They will send it to you free if you sign and send in the coupon printed below. This book will tell you of the many ways in which you can use dynamite to help you with the heavy work on your farm—and how, by its use, you can cut your labor costs and increase your profits.

Every farmer should have this book. Your copy is waiting for you—send for it today.

HERCULES POWDER CO.
87 W. 10th Street
Wilmington Delaware

Hercules Powder Company
87 West 10th St., Wilmington, Del.



Gentlemen:—Please send me a copy of "Progressive Cultivation".

I am interested in dynamite for

Name

Address

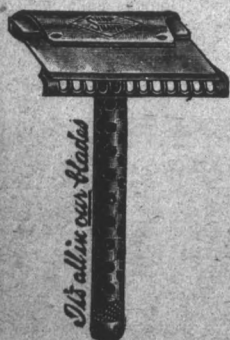
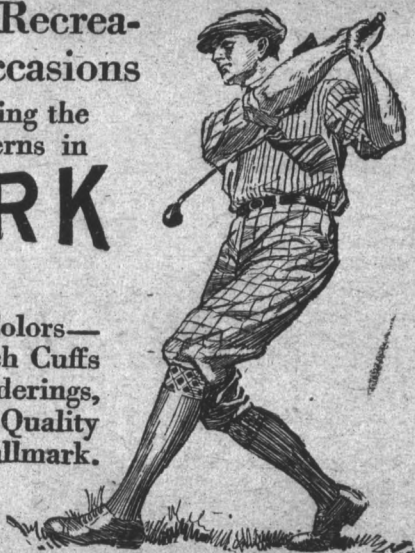
Quality SHIRTS for Recreation and Business Occasions

Your dealer is now showing the newest models and patterns in

HALLMARK SHIRTS

The Patterns are "Vat" Colors—Guaranteed fast. The French Cuffs are Prestwich—fewer launderings, longer wear. Demand the "Quality Kept Up" kind—ASK for Hallmark.

HALL, HARTWELL & CO., Troy, N.Y.
Makers of Slidewell Collars



SHRP-SHAVR Safety Razor

A thoroughly tested, guaranteed razor. The frame is constructed at the forty-five degree angle, which insures a clean, close cut. This razor will do all any safety razor will do. Easy to take apart and clean. Made in durable silver finish. Extra blades can be purchased at a nominal price. One of the most simple and efficient safety razors made.

Sent for two subscriptions, or one subscription and 35 cents.

call: "Something for which I am thankful."

November 29.

Party, in charge of committee.

December 6—Health.

Some common diseases and how they can be prevented; the home medicine cabinet; the care of the sick in the home; roll call: "A health suggestion."

I have given these detailed programs because they "tell the story" and may

aid you in forming such a club in your community. If there is a home demonstration agent in your county, get in touch with her for help. Send her a postal card and state your ambition; she will respond promptly and give you splendid cooperation. We are going to gain hearty cooperation between these rural clubs in a county federation which will work for a more efficient solution of county community problems."

Easter Eggs and Bunnies

By Julia R. Davis

THE question is often asked, why the rabbit seems to be responsible for the beautifully colored Easter eggs. The following explanation may case some light on this mystery.

Centuries before Christianity gave to Easter a spiritual meaning, the ancients made it their spring festival in celebration of the reawakening and re-vivifying of earth after her cheerless winter sleep.

April, the first spring month, was sacred to the goddess Ostara, who golden-haired, flower-crowned, and robed in shining white, attended by clouds of butterflies, flights of swallows, flocks of storks, and troops of hares, floated to earth when the long winter was ended, bringing the spring-time with her.

Now it appears from a very ancient, but little known tradition, that the rabbit, or rather the hare, sacred to Ostara, was originally a bird, very possibly the swallow. The goddess finding her winged messenger was not fitted to endure all the toils and all climates, transformed her into a brisk, quick-footed little quadruped with long ears, a warm furry coat, and no tail to speak of, ready and able to summon belated spring from wherever she might be lingering, and to guide her safely even

among the icebergs of the frozen north. Thenceforward the hare, the emblem of fertility, was known as the friend and messenger of the spring goddess; and in memory of her former existence as a bird, the hare once a year at Easter, lays the gaily colored eggs that are the symbol of the awakening of earth and the renewal of life.

This is the mythological explanation of the connection of Easter eggs and bunnies, but there are many other stories telling why the sportive hare is responsible for the bright-hued eggs at this spring festival.

To the Christian the special significance of Easter lies in its triumphal assertion of the fact of immortality. Not the impersonal, unconscious merging of the individual in impassive immensity which Buddhism teaches; not the mere prolongation of physical and sensual life which the Koran promises, but the true immortality of the spirit, that nobler part of man which distinguishes him infallibly from the rest of creation.

A hope, a trust, a confidence, even in the future life is common to all races of men. It is no reproach, therefore, that our Easter day has been identified with the old pagan festival of returning spring and resurrected life.

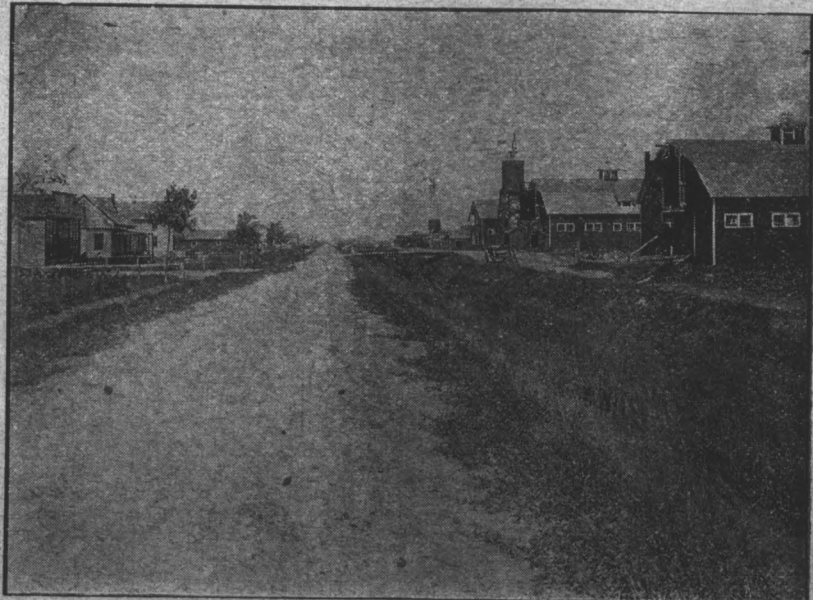
High Farming on a Big Scale

(Continued from page 611).

ble in keeping the workmen on the operations on a more economic basis. farm in such an out-of-the way place. During the annual floods the land was

After improving and operating several hundred acres of the prairie land originally acquired, which had cost them from four to ten dollars an acre, for several years, and proved the practicability of the scheme, the owners sold all their holdings to the Saginaw Realty Company, composed of Harry T. and William J. Wickes, Albert M. Marshall, Samuel G. Higgins and others. This company, having ample financial means backed by the enterprise of its members, proceeded to extend and develop the extensive acreage and to equip the farm with modern appliances and tools, thus placing the

large scale for the reclamation of the



Main Stone Road Through Center of Prairie Farm.

waste lands, and began to heap up banks of earth in the form of dikes, to hold back the flood waters in the submersible basin near where Swan Creek and Bad River join the Shiawassee.

This is the bottom of the vast Saginaw drainage system, and is the best and the worst land hereabouts. It is the worst because several square miles of it lie only a little more than three feet above the level of Lake Huron, and the best is that from the beginning of time it has been the settling basin of rich alluvium brought down by rivers, from heights of four hundred to eight hundred feet, which flow for nearly one hundred miles through fertile areas.

This pioneer effort in reclaiming the Saginaw marshes was a costly one. The land had to be won from the waters foot by foot, but each acre of land made dry proved so productive that the promoters were lured on, and eventually arrived at the conclusion that the value of the land thus improved far exceeded the cost of controlling the flood waters. The diking was done by big dredges starting at the rivers and nosing their way into the land, scooping up the muck to form canals and "borrow ditches," and depositing it along the outside edge of the area to be drained. As the dredges advanced the water flowed in, carrying them along in the channels which afterward were useful in draining off the water from the land. At the lowest point of the area the dike was made twenty feet high, and at other places the average height was seventeen to eighteen feet, while the ditches were about twelve feet deep, with a gradient of three inches to the mile to carry off the waste waters.

When the entire tract was enclosed, and lateral and cross ditches dug and dikes thrown up, the total length of dike was thirty-six miles. Along the top of some of these dikes good roads were laid out and gradually improved to afford easy communication with all parts of the big farm. The main roads are surfaced with stone and oiled to render solid and enduring highways. At the lowest point of the farm, near its northwest corner, where the ditch assumes the size of a canal navigable to scows and motor boats, a pump house was erected. Installed in the building are four centrifugal pumps, which in time of high water lift the excess water from the canal and discharge it into the river beyond. In flood times these pumps work night and day and relieve the farm ditches of one hundred and sixty thousand gallons of water an hour. The dikes hold back the flood waters, the canal and ditches drain off the surplus rainfall on the enclosed lands, and the pumps discharge the excess water into the swift current of the river, thus preserving and rendering the soil fit for cultivation during all the planting and growing season.

"Mosquito Roads" Lead to Farm.

There are two ways of getting to the Prairie Farm from Saginaw. In the dry seasons one can go direct from the city by way of East street and turning to the right about nine miles from the city limits, or twelve miles from Genesee avenue and the river, drive straight into the farm settlement four miles beyond. The other route is by railroad to St. Charles, and a drive of nine and one-half miles over the "Mosquito Road" through swamps to right and left. Once on this road there are few chances of getting off, as wide, deep ditches line it all the way. There are surprises en route, as the road goes gently downward into the heart of the swamp, grass and timber land. Every mile or so billows of land roll up out of the welter of mud, and along these ridges appear prosperous farms, with good houses, big barns, and here and there a silo indicating that dairy farm-



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NATIONALLY PRICED
Four Models. War Tax Paid
White House Model - \$600
Country Seat Model - 535
Town House Model - 485
Suburban Model - 450

The Gulbransen Entertains and Educates

CHILDREN love the music of the Gulbransen. It will keep them quiet for hours, or give them the time of their sweet young lives.

All this without any special effort on your part. Your favorite music will appeal to them. Your taste becomes their taste. They are educated—painlessly—to appreciate good music.

To entertain little tots here are some Mother Goose rhymes put to music; the words on the roll:

Tom, Tom, the Piper's Son
Sing a Song of Six Pence
Little Bo Peep

Twinkle, Twinkle, Little Star
Mary Had a Little Lamb
The Story Book Ball

Also Game Song Rolls such as these:

London Bridge
Round the Mulberry Bush
The Farmer in the Dell
The Monkey Man

For children learning to play by hand there is a course of thirty-six Study Rolls. The child learns faster because the roll is always at hand to "play it like teacher does." Duet Rolls play one part, the other to be played by hand. The easy key touch of the Gulbransen is a great help to little hands.

An understanding of finer music—by young or old—can be gained through Historical Rolls and Story Rolls. A description of the composer's idea appears on

the roll like the words of a song. A few:
Cavalleria Rusticana
Evening Star, from Tannhauser
Favorite Strains from Faust
Narcissus
Rustle of Spring
Merry Wives of Windsor

The Gulbransen dealer has these rolls for you to try. Play them on the Gulbransen yourself at his store. Let the children play to show how easy the pedals work. No effort at all. A creeping baby once played the Gulbransen, as shown in the picture at the left, and gave us the idea for our trade mark.

The Gulbransen is the ideal player for the home with children. Easy to play, easy keyboard touch—and playing it won't hurt it. It can even stand abuse.

Our dealer shows the Baby at the Pedals in his window and newspaper advertising. If you do not know him, write us for his address and our catalog.

GULBRANSEN-DICKINSON CO.
825 No. Sawyer Avenue, Chicago

(Pronounced Gul-BRAN-sen)

GULBRANSEN

Player-Piano

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

Gombault's

Gaustic Balsam

IT HAS NO EQUAL

For the Human Body
—It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils, Corns and Bunions, GAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

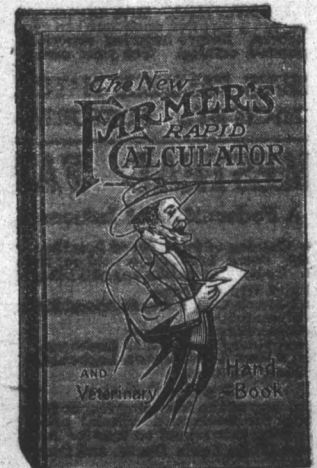
A Perfectly Safe and Reliable Remedy for
Sore Throat
Chest Cold
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Sprains
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Sore Lungs
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and all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cochitell, Tex.—"One bottle Gaustic Balsam did my rheumatism more good than \$125.00 paid in doctor's bills."
Price \$1.75 per bottle. Sold by druggists, or sent by express prepaid. Write for Booklet B.
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

Farmer's Rapid Calculator and Veterinary Book

Indispensable to the farmer, valuable to all members of the family. This little book contains veterinary information, interest tables, methods of calculation, weights, measures, dimensions, etc., and a farm record which contains a simple method of keeping record of receipts and expenses of all branches of farm work. Convenient size, 3½ x 6½ inches, fits in the pocket, durable cloth binding. A time-saver every farmer should have.

Sent prepaid for two subscriptions or for one subscription and 15 cents additional.



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Put your spare time to pleasant and profitable use by cooperating with us in the securing of Michigan Farmer subscriptions.

A good way to get money for Thrift Stamps, Liberty Bonds, or to help in the high cost of living. From two to three dollars a week can be earned with little effort.

Details furnished upon request.

THE MICHIGAN FARMER

Detroit, Mich.

MOLINE HAY TOOLS



The Moline Line of Implements

Plows
(steel and chilled)
Harrows
Planters
Cultivators
Grain Drills
Lime Sowers
Mowers
Hay Rakes
Hay Loaders
Hay Stackers
Grain Binders
Corn Binders
Pitless Scales
Spreaders
Wagons
Moline-Universal Tractors
Stephens Sallent Six
Automobiles

Use Moline Hay Tools this year and you will accomplish two things—obtain a better grade of hay and save a great deal of time.

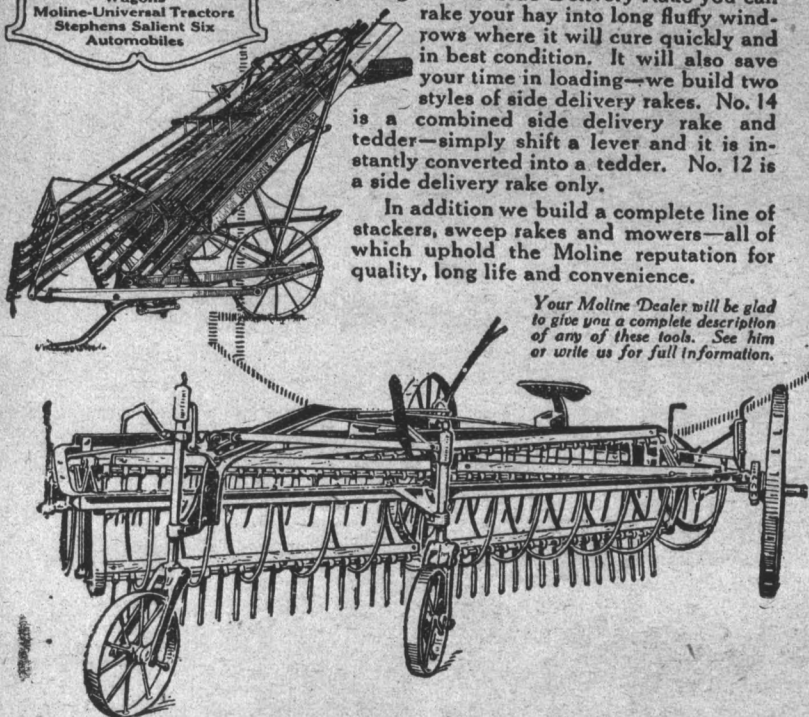
Regardless of your hay tool requirements, there is a Moline Haying Tool to give you better and quicker results under all conditions.

Moline Gearless Hay Loader operates entirely without the use of gears, sprockets, chains, rope webs, etc. It gives you less trouble than any loader made, and because of its long, easy 5-ft. stroke, loads hay without breaking or shattering. Loads light swaths or heavy windrows without adjustment. We also build a double cylinder loader known as Moline Loader No. 5, which is preferred in some localities.

By using Moline Side Delivery Rake you can rake your hay into long fluffy windrows where it will cure quickly and in best condition. It will also save your time in loading—we build two styles of side delivery rakes. No. 14 is a combined side delivery rake and tedder—simply shift a lever and it is instantly converted into a tedder. No. 12 is a side delivery rake only.

In addition we build a complete line of stackers, sweep rakes and mowers—all of which uphold the Moline reputation for quality, long life and convenience.

Your Moline Dealer will be glad to give you a complete description of any of these tools. See him or write us for full information.



MOLINE PLOW CO. MOLINE, ILL.
MANUFACTURERS OF QUALITY FARM IMPLEMENTS SINCE 1865

POULTRY

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

Barred and White Rocks,
Rose and Single Comb Rhode Island Reds,
White Wyandottes,
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Single and Rose Comb White Leghorns,
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Eggs from any of the foregoing breeds for settings or in quantities for incubators. Special price for 500 to 1000 eggs during season; and on eggs for broilers.

Eggs from White Pekin Ducks, and from Gray Toulouse Geese.

Hares—Belgians and Flemish Giants.

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



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Lay 40 to 50 eggs each per year. Why raise chickens to eat when these are much more profitable and raised as easily? Weigh 3 pound at six months, and bring \$1.00 a pound in the market. Set the eggs under chickens—feed and care for the young the way you would chickens. Are economical as they only require one-half as much food. Are very hardy and not subject to disease. Best eating bird in America. Eggs guaranteed from vigorous healthy unrelated stock.

\$ 6.00 for 15 eggs
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Lay 50 to 60 eggs per year. We guarantee our breeding stock to be the best in the country as they are entirely wild trapped Mallards and not the coarse semi-wild strain.

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

\$1.50 per egg

Bloomfield S. C. Rhode Island

Red Chickens

Fine laying strain of prize birds

\$ 5.00 for 15 eggs
\$25.00 for 100 eggs

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

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The average cost of producing a BABY CHICK under the hen is 22½ cents. We will supply you with the breeds listed below at 12½ cents to 20 cents.



Barred Rocks
White Rocks
Buff Rocks
Brown Leghorns
White Leghorns
Buff Leghorns
White Wyandottes
Rhode Island Reds
Black Minorcas
Anconas
White Orpingtons
Buff Orpingtons
Assorted, for Broilers

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

The Smith Standard Company
1967 W. 74th St., Cleveland, Ohio

ing and cattle raising are rural industries being developed.

As the visitor emerges from the wood patch, near the farm entrance at the southwest corner of the farm, cultivated fields of vast extent burst into view. He turns north on the hard, oiled road which traverses the chest of a low dike bisecting the farm. A mile ahead is Alicia village, the largest settlement for miles around. Here are four score yellow, framed cottages, housing workmen's families, a large clubhouse, a general store and an assembly hall. Across the road are several large barns, cattle sheds, wagon, machinery and tool houses and a large grain elevator. This structure and the mint distillery a little farther on, are situated close to the spur track which connects the farm with the Grand Trunk Railway, six miles eastward.

A Big Labor Force Required.

During the rush of summer work three hundred to three hundred and fifty farmers and laborers are employed on the farm, and in winter about seventy-five men (those with families who live there the year around) are kept busy attending the stock, repairing wagons and harness, and getting all equipment in readiness for the spring and summer campaigns.

A Variety of Crops.

Driving along the central dike northward to the center of the farm, thence westerly about two miles brings the visitor to the lowest point of land, to which all the water in the ditches flows and where it is pumped out. Looking back from the top of the dike one has a clear view of the beet and mint fields. Beets and peppermint, with corn and rye, are the principal crops grown in great quantities on extended acreage. Cabbage is also a large crop and, late in summer when the shipping season is on, scores of teams may be seen hauling huge loads from the fields to the loading track in Alicia. In 1918 there were seven thousand acres of rich muck land under cultivation, and the productive area is constantly being increased. Eventually the entire farm of more than ten thousand acres will be brought under the plow, this work being aided by the government engineering scheme outlined above. All the plowing is done by gang plows drawn by steam and motor tractors, twelve plows to the gang; and much other heavy work previously done by

Belgian draft horses now falls to mechanical power. The Prairie Farm is believed to be the largest farm project under one ownership and management east of the Mississippi.

A Bit of Holland in Michigan.

A times when all this section of the county is under water, when the Prairie Farm reposes within its earthen walls like a beleaguered country, it reminds one very strongly of a section of Holland set down here in Michigan. Then the flood waters rise to a height of seventeen feet on the outside of the earth dikes, and there are watchful days and nights for the male population. The dikes have to be constantly patrolled and threatened leaks and breaks immediately repaired. There are native foes, too, to the dike, the muskrat and the woodchuck. The latter is the one dreaded as he burrows deep enough to cause much damage, and men are employed to hunt them out.

Here and there in the dark brown field gray patches are noticed. These are the clay subsoil, touched by the motor-driven plows and being worked up into the lighter surface soil—much to its betterment it is claimed. Only a little under the muck soil is a clay bed as dry as bone dust. There are driven wells, as also tiled wells, and here and there excellent water is found at a depth of about thirty feet.

An Isolated and Monotonous Life.

The inhabitants of the big farm lead an isolated and monotonous life, especially in flood times when communication with the outside world is almost entirely cut off. Exit by boats in the swirling currents of swollen streams is difficult and dangerous. Still the living conditions are steadily improving, and the farm dwellers have the conveniences of electric light and running water in their homes, supplied free by the farm's own generating and water plant, and also the use of telephones. There is also a regular postal service to Alicia village, whose summer population is seven or eight hundred.

In all the varied work of planting, cultivating and harvesting the extensive crops, about three hundred head of heavy Belgian draft horses are required; and in summer about seventy-five teams, some of which are three-

Early Hatching Profitable

MANY of the discouragements with poultry come during the winter, and especially during the early winter when farmers try to make their pullets lay, and fail. The feed bills increase and the egg returns do not arrive to help cancel the bills. A balanced ration may be used and the best systems of poultry management adopted and yet good results do not follow. Where is the mistake? It is in the spring at hatching time. The pullets are not hatched early enough and in the fall they have not reached the maturity necessary for egg production and consequently they have good appetites but do not lay.

On the farm much of the profit with poultry depends upon the way the birds use their range to gather insects and weed seeds. In the spring when the insect life is starting, the young pullets should be large enough to chase them through the grass and obtain the animal food which makes rapid growth in young poultry. Early hatching is necessary to have birds large enough to range on the first fine days of spring. This season which is so valuable in growing poultry should not be lost.

We often heard of the value of early broilers which bring the best prices on the market, and that is true. However, the early pullets which are to be saved are a much more important consid-

eration. For example, a farmer has poultry houses for two hundred pullets in addition to the mature hens which he keeps over for broilers. If those pullets lay, and fail. The feed bills increase and the egg returns do not arrive to help cancel the bills. A balanced ration may be used and the best systems of poultry management adopted and yet good results do not follow. Where is the mistake? It is in the spring at hatching time. The pullets are not hatched early enough and in the fall they have not reached the maturity necessary for egg production and consequently they have good appetites but do not lay.

The weather has an important influence on the growth of chicks. They seem to do better in the early spring when some of the days are cool than in the summer when the weather may be uniformly hot and dry. It often seems that chicks should not be hatched early when there is a danger of cold rains and possibly snows, and yet we have the evidence that these young chicks thrive if they are given the proper attention in feeding and brooding.

We have found that overheating is fully as dangerous to chicks as chilling. In the use of the incubator, it will be found that the eggs can cool with no danger but if they are overheated or half cooked, the vitality of the

chicks is severely injured. Thus the chicks are in as much danger in the summer as in the cold weather of spring.

When breeding stock is sold in the fall it must have obtained a fair size in order to appeal to the buyer. Cockerels that are sold for breeders are the most desirable if they are early hatched birds. They reach maturity and make better birds to mate with the breeding hens in the spring. Early hatching requires some care and early brooding is not the work for careless workmen but hatching and brooding require skill and thoughtfulness at all seasons. It follows that there are many important reasons in favor of early hatching and nothing against it.

CABARET FOR CHICKENS.

PULLETS dining until nine o'clock every night, even in the smallest towns and on farms, and outlaying the most seasoned hens, electric or other lights in every coop, summer prices for eggs in winter, and better health for chickens were predictions for the immediate future in the poultry world made by Professor James E. Rice, of the Department of Poultry Husbandry, Cornell University, at the sectional meeting of the New York State Federation of Poultry Associations.

Professor Rice declared that tests carried on at Cornell during a period of forty-eight weeks, of which the most accurate records of the laying capacity of more than two hundred hens and pullets and the effect of lights on the egg production were kept, has proved beyond doubt that lights in the chicken coops have a direct effect on the production of eggs. The coops were kept lighted until nine o'clock every night throughout the test, and the egg totals showed that one hundred hens and pullets in the lighted chicken house produced 1.35 2-10 dozen more eggs than the chickens in the unlighted coops that went to bed when the sun went down. "Early to bed doesn't get a regular chicken anything," was the chief fact demonstrated.

The reason for the increased production of eggs in lighted coops was given by Professor Rice as being that the hens had more time in which to eat. There was no long wait between supper and breakfast. The same amount of feed was required by the busy layers as by the hens that were not laying, however, he said, but the hens who had the artificially long day "Fletcherized" their chicken feed and did not get up in the morning "played out" and ravenous.

In money, wholesale prices, the increased dozens of eggs in the lighted coop amounted to \$71.88. In each chicken house the hundred layers were fifty-fifty pullets and older hens and the pullets beat the seasoned layers in number of eggs produced. The light had no other effect on the poultry except that they maintained somewhat better health.

The average increase in production of eggs for hens in lighted coops was placed at "one dozen or more" per year by Professor Rice. The poultryman has absolute control over the egg production, as was discovered at Cornell, by turning the light switch. Laying pullets quit laying when the lights were turned off for a period and began again when the lights went on. The strike for late suppers was actually made by twenty-five pullets.

Professor Rice explained that the reason for so much profit was made on the eggs was because the hens continued laying through the late autumn and early winter when the price of eggs is highest. He said that all the light is for is to keep the hen at her feeding. Observing that the chicken is native to tropical countries where they have a twelve-hour day, he said the long nights, just at the beginning of winter had a tendency to exhaust the vitality of the hens.



A Great Plowing Engine

This Case 10-20 Kerosene Tractor

THE country over, there is consistent and continuous applause rendered the Case 10-20 Kerosene Tractor.

In all the written and spoken recommendations, there always stands out prominently the comment that its performance and economy are unbeatable.

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Under ordinary conditions this Case 10-20 pulls three plows. It develops 14.7 horsepower at the drawbar, which is 47 per cent in excess of its rating. This is the most liberal reserve power we know of in a tractor of this rating.

Such power means that there be no hesitancy at hard plowing. A great many owners have commended this Case 10-20 for breaking sod. For every hard job it is a record-maker.



Its fame for draw-bar work is matched by that of its belt work. It will drive a Case 20 x 36 Thresher, with feeder and windstacker, and other machines requiring similar power. The belt pulley is properly placed, avoiding the usual awkwardness.

If you are interested in a two or three-plow tractor for heavy duty work and one which is built to the highest standards, do not fail to write for a complete description of this Case 10-20.

We can offer you quick service in delivery, because of our immense manufacturing facilities. You will be proud to own one of these popular tractors.

Write today for complete information or visit a Case dealer.

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Our book, "CARE OF BABY CHICKS," and a package of GERMONE are the best insurance against chick losses. Those formerly losing more than half they hatched now raise better than 90 per cent. To you who have never tried GERMONE, we will send postpaid, book and package as above. You pay, if satisfied, 75c; 60 days' trial. We trust you.

Druggists and seed dealers sell GERMONE, the best poultry remedy and preventive. For old and young, —bowel trouble, colds, roup, musty or spoiled food, limber neck, chicken pox, sour crop, skin disease, etc. Sick chicks can't wait. Do it now.

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100,000 BABY CHICKS

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

ANCONAS Both Combs. Eggs \$1.50 per 15. W. E. WEST & SON, R. 1, East Lansing, Mich.

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

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

Baby chicks from Bred-to-Lay S. C. White Leghorns \$12 per 100. Thompson Strain Bred Plymouth Rocks \$10 per 100. Safe delivery guaranteed. Send for chick folder and order early. Custom hatching to per egg. Russell Poultry Ranch, Petersburg, Mich.

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

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

Barred Rocks egg contest winners, eggs from strains with records to 200 a year. \$2.00 per setting prepaid by P. O. Circular free. **FRED ASTLING, Constantine, Mich.**

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

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Baby Chicks Hatching eggs, seven leading varieties, best quality. Lowest prices. Catalogue free. **Goshen Poultry Farms, R. 19, Goshen, Ind.**

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BABY CHICKS—11 Varieties, \$10 per 100 up, 2 weeks old 25c up, 4 weeks 45c up. Hatching eggs \$1.50 per 15 and \$3 per 100. **Brd. White and Buff Rocks, Buff and White Orp., S. & R. C. R. I. Reds, White Wyand., S. C. W. Leg., S. & R. C. Br. Leg., Alderale Pups, Cir. free.** Sunny Side Poultry Farms & Hatchery, Blanchester, O.

Baby Chicks: S. C. White and Brown Leghorns. Eggs. Guaranteed to reach you in first class condition by parcel. Catalogue with price list free. **WOLVERINE HATCHERY, R. 2, Zeeland, Mich.**

Baby Chicks and Eggs. Barron English White Leghorns, "The Big Kind," 248 to 303. Egg stock. White Mrs. E. L. GARLOCK, R. 7, Howell, Mich.

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

Chicks, We ship thousands, orders booked now for spring delivery, booklet. **FREEPORT HATCHERY, Box 12, Freeport, Mich.**

Chicks Barron Strain White Leghorns. Pay a little more and get a good start next season. Early hatched chicks are always the best. My cockerels come from hens with an egg record of over 250 eggs their pullet year. March \$16, April \$15, May \$14 per 100. Circular free. **Folly Cove Farms, R. 1, Holland, Mich.**

LOOK BABY CHICKS \$11 A 100 UP

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

CHICKS AND EGGS

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

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Blue CUSTOM HATCHING HENS Fifteen dozen eggs incubated and chicks boxed and shipped \$6.50. Less than full compartment 50c per dozen. Order April chicks now. Many varieties send for circulars. **Crescent Egg Company, Allegan, Mich.**

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

English Barron S. C. White Leghorn chicks at \$14.00 per 100; \$5 per 500 immediate special delivery. 6,000 chicks each week. Guarantee safe delivery full count of lively sturdy quality chicks that will mature into most profitable and persistent layers. Hatching eggs \$6 per 100. Write us your wants and send for valuable catalogue gives rearing & feeding methods. **DEVRIES LEGHORN FARM, Zeeland, Mich.**

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

Baby Chicks S. C. White Leghorns, Ferris strain \$15 per hundred postpaid. Safe delivery guaranteed. **Ralph Totten, Pittsford, Mich.**

Fenton Chicken Hatchery, Fenton, Mich. F.M. Milliken, Proprietor. Thoroughbred Day Old Chicks, 25 for \$5.50; 50 for \$10.00; 100 for \$18.00; Single Comb W. Leghorns from Barron English Strain. White, Buff and Barred Plymouth Rocks. Buff Orpingtons, Anconas, W. Wyandottes, R. I. Reds, B. Leghorns.

Fowler's Buff Rocks Cockerels \$4 up. Utility eggs for hatching \$2.00 for 15. **R. B. FOWLER, Hartford, Mich.**

For sale "Buy the Best" eggs for hatching from 20 egg strain Barred Plymouth Rock. \$2.00 per 15. \$4.00 for 45 eggs. **H. B. PROCTOR, Grand Haven, Mich.**

Hatching eggs Plymouth Rocks, all varieties. Sheridan Poultry Yards, R. 4, Sheridan, Mich.

John's Big Beautiful Barred Rocks are hen hatched, quick growers, good layers 30 eggs \$3, 100 \$8. Postage paid. Circulars, photos. **John Northon, Clare, Mich.**

Pine Crest White Orpingtons. Egg that will hatch good, strong chicks 3 and 5 dollars per 15. (No baby chicks or eggs by 100). **Mrs. WILLIS ROUGH, Pine Crest, Royal Oak, Mich.**

R. C. Br. Leghorn eggs \$1.50 per 15, \$3 per 100. Pekin duck, \$1.50 for 8. W. Chinese goose eggs 40 cents each. **Mrs. CLAUDIA BETTS, Hillsdale, Mich.**

R. C. Rhode Island Red eggs \$2 per setting from grand type and colored birds. Breeding chix \$3. Send for mailing list. **B. J. WILSON, Ohio, Mich.**

S. C. Brown Leghorns. Heavy laying strain. Farm range. Eggs 15 \$1.25; 30 \$2.25; 45 \$3; 100 \$6. Postpaid. **Floyd Robertson, R. 1, Lexington, Ind.**

S. C. Anconas, W. Leghorns. Book orders now for Day Old Chicks and Hatching eggs. Circular free. **Elmhurst Poultry Farm, Brighton, Mich.**

Additional Poultry Ads. on Page 647

Rich Soils

Every farmer takes pride in having a rich, productive soil and big crops. The right fertilizer used properly will transform a poor soil into a rich one. This is what the

A·A·C· Fertilizers

have been doing for others. Let them do the same for you! The larger the crop, the greater the amount of roots and other crop residues remaining to further enrich the soil. Write for prices and also for

Corn and Its Culture

a 62 page book by Dr. H. J. Wheeler, formerly Director of the Rhode Island Experiment Station. It contains information concerning all phases of corn culture, including varieties, seed testing and selection, soils adapted to its growth, methods of planting and cultivating, fertilization, crop rotations, liming, harvesting and storing, and many other essential features. Every farmer who grows corn should have this book. It can be secured by addressing any of the offices named below.

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Agents Wanted in Unoccupied Territory

Our Boys' and Girls' Page

Soldiers of the Farm

By E. L. Vincent

UP in the pasture on my farm quite a number of little hickory trees are growing. Squirrels must have carried nuts from two or three trees down in the valley and dropped them along in various places, and here they have sprouted, so that if nothing happens to them the time will come when we will have a good crop of nuts.

And I have spared those trees when I have been cutting brush in the pasture, not simply because of the nuts I think they will some day bear, but also for the reason that after a while the wood of the trees will be valuable. And those little saplings are even now the toughest, hardiest trees you could pos-

sibly think of. Other trees that grow deeper in the woods are turned up by the wind and spoiled; but I never yet saw a hickory which grew out in the open that was hurt anyway by storms that now and then sweep over the country. There they stand, rooted firmly, hardy to withstand every blast, and growing more and more so every day. I am sure I shall always find my little hickories in their places, no matter how hard the wind may blow.

Why are these trees so strong to bear up against tempests? Just because they have grown up in the very midst of the storms. Every time rain or snow or hurricane comes, the hickories catch a terrible thrashing. They get the sunshine, yes; but also the storm. And that is why they are so stout. The trees that grow up in the woods are in a great measure protected from wind and storm by those that are around them. They grow taller because of the shade—always trying to get up to the light, you see—but they have not the power to resist the hard blows when they come, as they are sure to come first or last.



Boy and Girl Club Members Gather at M. A. C.

Boys and girls sometimes think they are getting pretty hard knocks on the farm. Makes them squirm. I know how that goes. I have not forgotten how it was when I was a boy. If you knew all about the road I have traveled, you would know that when I speak of the things which come to try young folks I know what I am talking about. But my own boys thought the same way. I suppose their boys will think their lives have hard places, too.

But when we are tempted this way, it is a good thing to remember the little hickories up in the pastures. Strong because of the hard blows! Is there not a good deal of comfort in that? For we all want to be strong. Where is the boy or the girl that would be satisfied to have folks say, "They haven't a bit of grit in them! Can't stand up against anything! Never would do to put them in a place of responsibility; they would fail in no time."

Soldiers of the farm. What made the boys over in France able to win? You know. Before they went, and for some time after they reached the other side, day after day they were required to drill and drill and drill, often until they were ready to drop. But it made them strong. Then, too, they had

suit us. The thing to do is to be brave, true, earnest and to love the very things that now seem to us the hardest, for they are making us fit for tomorrow and its big battles. Are we all good soldiers of the farm? I hope we are.

HOW I MADE MY CROP OF POTATOES.

BY WALLACE KREIGER.

Michigan State Potato Club Champion.

I ENROLLED as a member of the Potato Club for the purpose of learning the cheapest way of raising potatoes and also earning some money of my own. The purpose of the club is to teach us boys how to raise potatoes. It also teaches us to be business-like, as we have to keep an account of expenses and profits.

The kind of soil on my potato crop

Our Prize Contest

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

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

"The best war story I ever heard."

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

"The best hike I ever took."

(Subject of letter to be mailed by May 12):

"The worst bargain I ever made."

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

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

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

This Plug Gives Fordowners better service

The plug with the Green Jacket



Think back! How many plugs have you thrown into the junk heap during the last year because they cracked or chipped or leaked, or because they short-circuited, or "just wouldn't work?" What put them out of commission? Nine times out of ten, **cracked porcelain**. The remedy is plain. Use the Splitdorf Plug, the plug with the unbreakable mica core. It cannot crack, chip or leak. And as it lasts so much longer, it is really much less expensive than plugs made with porcelain cores. Although Splitdorf Plugs cost the manufacturers more than any other plug they'll cost YOU no more than the ordinary plug. All Splitdorf Standard Plugs, except Specials, \$1.00. (In Canada \$1.25.)

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Tag your stock—best and cheapest means of identification for Hogs, Sheep and Cattle. Name, address and number stamped on tags. Catalog mailed free on request. F.S. Burch & Co. 145 W. Huron St. Chicago



is a sandy loam. First I plowed my plot of ground, it being a hay meadow before. Then I disced the ground and later on plowed it again and finally harrowed the ground, and then I was ready for planting.

The kind of seed used was Green Mountain selected from last year's crop. The Green Mountain potato is medium in length with an oblong form and the skin is white and eyes shallow.

I cut my seed potato in pieces from one to three eyes on each piece. I planted my potatoes in rows twenty inches between each hill and three feet between each row. About two weeks later I harrowed the potatoes until they came up and then I was ready to cultivate. I cultivated my crop about four times during the season in order to do away with all weeds.

I had no trouble with diseases on my crop of potatoes but was troubled with insects for which I used Paris green.

About October 3, I began to harvest my crop of potatoes. I dug them with a potato digger and received one hundred and twenty-three bushels of potatoes on one-fourth acre of land. I sold forty bushels and stored the rest away.

The expenses on my potato crop this year was nine dollars and forty-five cents. The value of the potato crop was one hundred and eighteen dollars and eighty-five cents, leaving me a profit of one hundred and nine dollars and forty cents.

OFFERED SHEEP ON A FOUR-YEAR CONTRACT.

ONE of the best plans yet offered for boys' and girls' sheep clubs, says T. L. Bewick, Wisconsin State Club Leader, is the four-year contract of a Wisconsin sheep company. At the end of four years the young shepherd will have a flock that represents one-half the increase of the flock, as well as one-half the original number of ewes providing any remain at the end of the four years. The boy or girl must become a member of the county sheep club working under the supervision of the county agricultural agent or club leader.

The terms of the contract include agreement on the part of the boys and girls to house and care for the ewes they receive from the company and to have them bred to a pure-bred ram, which the company is to furnish.

The company shares the sales receipts from the wethers, to be sold each year as directed, and half the wool sheared from the sheep, to be divided and sold at the time of shearing as directed by them. The boys and girls are to have all the wool sheared from the ewe lambs.

Special precautions are to be taken against loss from dogs, and the sheep must be housed each night in a suitable shed, but the company stands half the loss unless it is due to carelessness. Judgment on this will be left to the supervisor.

Today's Riddle



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The Most Effective Non-Skid Tire Manufactured

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means the limit in human safety

—AND YOU'LL BUY LESS TIRES

Constructed with unusually strong side walls, and a tough wear-resisting tread

BRAENDER NON-SKID TIRES

still hold the World's Record for Tire Endurance established in competition with other makes years ago. They can be depended upon to give a service running over with satisfaction and good measure.

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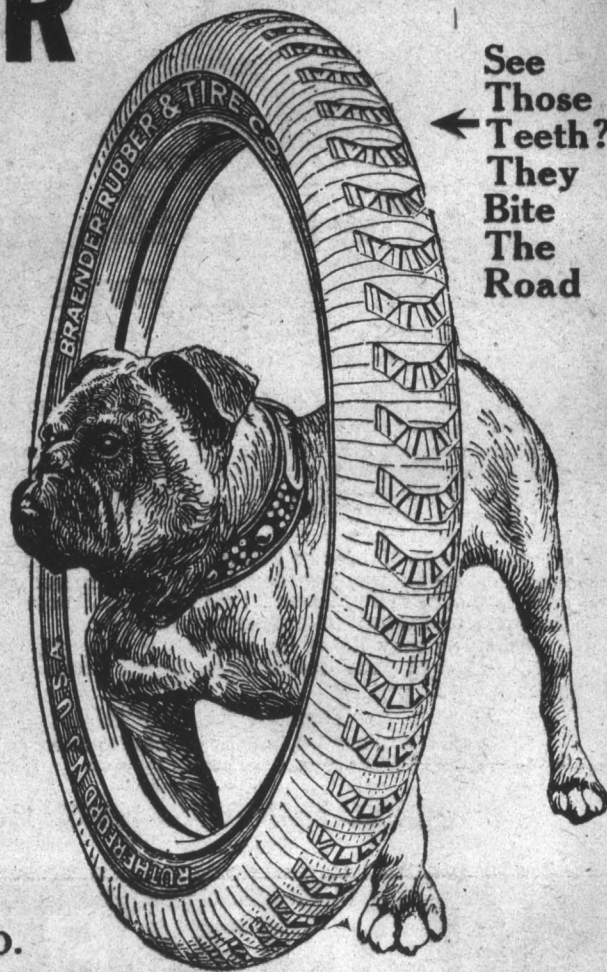
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Ask your dealer for them.

If he cannot supply you, write the nearest factory branch, or

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YOUR UNPAID DOLLARS

What They Saved America

IT is a real American village. It is 20 miles west of the Mississippi River; its population—about 2,600.

It gave its sons to war with an open hand and a glad heart.

Then—

The richest man in the village aged ten years in ten days. His only son lay dead in France.

The village butcher boy—born in Ireland—smiled for the last time in France. He died fighting for America.

The village Beau Brummel won the Croix de Guerre and lost his sight.

One family sent three sons and lost two.

Gas claimed a mere school boy of 19 years.

The realities of this village are the "might-have-beens" of all America. But thank God, America as a whole never really felt the hand of war—as England felt it, as France felt it, as our neighbor across the border, Canada, felt it.

And why?

Because your dollars stopped the war. Your dollars made possible those tremendous preparations for a long war which resulted in a short war. Your dollars bought such an array of tanks and trucks, guns and gas, bayonets and bombs, planes and

pontoons, shot and shell, that Germany wilted—a year ahead of schedule.

Half a million American boys were saved.

The dollars that did it are still in your pocket.

For America prepared on Faith. She knew that true Americans held their dollars cheaper than their sons. She knew that American thrift would gladly take the place of American blood.

America now asks you for those unpaid dollars.

Let your heart say how thankful you are that half a million American sons were saved.

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"What's the matter with your horse?"

Got a bad cut or sore? Gone lame on you?

But "what's the matter" is not the point. What are you doing for it?

Why don't you use Hanford's Balsam of Myrrh! You ought to have a bottle on hand all the time anyway.

Then, whenever a horse gets any kind of a wound, pour on a little of this fine antiseptic to cleanse the wound and to prevent any future infection by its forming a dirt and dust-proof film over the wound.

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That you may know its merits for yourself, present this advertisement at your dealer's and buy a bottle (in any of three sizes). And

Test It At Our Risk!

If not completely satisfied, take empty bottle to dealer and get your money back. No questions asked!

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HANFORD'S Balsam of Myrrh

BREEDERS' DIRECTORY

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

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

This goes to show the quality of the

ABERDEEN ANGUS

that Mr. Scripps is breeding. He enjoys seeing good stock on "Wildwood" and believes that

THE BEST IS NONE TOO GOOD.

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

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

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

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

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Established in 1900.

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WOODCOTE STOCK FARM, Ionia, Mich.

Cloverly Angus Bred cows, heifers and bull calves of good breeding. GEO. HATHAWAY & SON, Ovid, Mich.

Two purebred Angus bulls aged thirteen and fourteen months, correspondence invited or come and see them. T. J. LYON, Homer, Mich.

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

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

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GUERNSEYS—REGISTERED BULL CALVES

Containing blood of world champions. HICKS' GUERNSEY FARM, Saginaw, W.S. Mich.

Guernseys Grade Heifer Calves Registered Bull Calves; write your requirements. WALTER PHIPPS FARM, 80 Alfred St. Detroit, Mich.

For Sale Registered Guernsey Bull, one year old.

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My entire herd of Guernsey Cattle for sale; must be sold before May 1, 19; must leave the farm. JOHN EBELS, R. 2, Holland, Mich.

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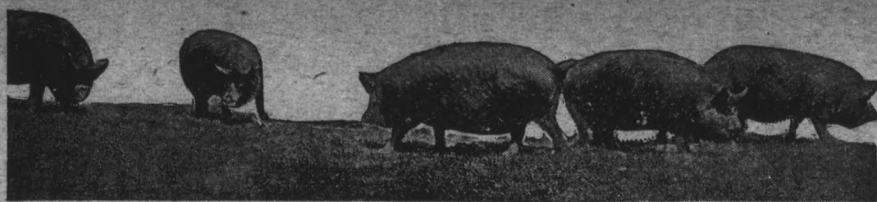
The young bulls we have for sale are backed up by many generations of large producers. Buy one of these bulls, and give your herd a "push". Full descriptions, prices, etc. on request. McPherson Farms Co., Howell, Mich.

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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.

831.43 lb. butter in 305 days 39.2 in 7 days; gdam, Jo han Heng-Lad, gdsire 21.73 lb. dam of bull calf 1/4 white, 3 heifer calves 27 lb. sire not related. Terms easy. M. L. McLAULIN, Redford, Mich.



Making Pork at Less Cost

By W. F. Taylor

SOME time ago I wrote an article upon economical pork production, which appeared in this paper. In that communication I discussed the results of bad rations upon the growth of certain lots of pigs, giving a few personal experiences along with others. Since that time I have received some letters and have had a number of conversations bearing upon the article in question. In nearly every case, the writer of the letter, or the person who referred to the article in conversation has written or spoken of his success in growing pigs. I am anxious to acknowledge now that in the article I have failed sadly in the thing I was desirous of doing. It was my hope and my purpose to prove beyond reasonable doubt that pigs must have either milk or tankage in the ration in order to make profitable growth. Incidents cited in my own experience were those which I considered failures. Of course, I might have told some good stories along with the others, and had I been trying to prove myself a hog man I should doubtless have done so; but it was my purpose to demonstrate by my own mistakes that to endeavor to grow a bunch of pigs without careful attention to a few important facts in nutrition, is to fail of the best results.

A prominent breeder of hogs was talking with me the other day about this matter, and he said, "Taylor, you will have to write another article in order to get your gospel of skim-milk and tankage across." So, here goes.

The thing for which we should strive is economical production. Two practical questions are suggested to me whenever I sell a bunch of pigs—how much are they going to weigh? What have they cost me? Of course, in a general way, it may be said that the hog that makes a large growth in a short time has done so economically, but many exceptions may be found to this rule. To have bought corn last year at two dollars a bushel and to have used it for hog feeding might have grown large hogs in a short time, if the ration were properly balanced with tankage or skim-milk, but the economy of the operation might be seriously questioned. Again, while a bunch of hogs might grow very much less rapidly in the yard behind a lot of steers, the growth would be obtained at very little cost since the hogs would live largely on what might otherwise have been wasted.

The consuming public demands large quantities of pork. If the farmer is to produce it and receive "cost of production, plus a reasonable profit," he must solve two problems—the problem of cheaper production, and that of more efficient marketing. I do not know which should be placed first; we have them both on our hands to solve, and perhaps we may work them out together. In the judgment of the writer, this is the proper way.

As we have said, it is not enough to have produced a bunch of large hogs in a few short months. I recall the story of a friend who had been asked to give his experiences in pork production at a Pomona Grange meeting a few years ago. It was a good story in so far as the size of the hogs could contribute to it. The pigs had come right on from the first without a hitch. They had grown at the rate of over a pound and a half a day, from the farrowing to the day they were killed. The man was delighted and he told

his story with the air of one who has been, and seen and conquered. At the end of his narrative he told us that he had figured the cost of those hogs, and that he made thirty-seven cents a bushel on his corn.

I had not the heart to bother him then, before that crowd, but afterwards I said to him, "But, Brother, that corn was worth eighty cents a bushel at the market and instead of making you any money, those bad hogs cost you all your labor, all your risk, and forty-three cents a bushel for the corn they ate."

Of course, there were other cost items to be reckoned. The value of pigs at time of weaning, interest and depreciation on value of equipment, etc. But we were not thinking about those things at that time, so really things were worse than I told him.

But we must figure all items of cost, find out exactly where we are at in this business of pork production, and then face the facts with a determination to cut down production costs by better methods.

First, we must realize the value of skim-milk. I was in a community the other day, where a part of the people patronize the condensary, and others still send their cream to the creamery. I think the majority were convinced that the condensary offers the better market for the product of their dairies.

As a matter of fact, in the long run I doubt it. Of course, it will depend on some things which are not just now knowable, but it may quite safely be said that the man who still markets his cream at the creamery has an average chance, providing he makes good use of his skim-milk.

If he feeds it to his hogs in too large quantities, he loses out. If he does not feed enough he gets less for what he does feed, but if he balances the milk in the ration with the right amount of grain, properly chosen and fed in right quantities, he is bound to get a good round price for the skim-milk, the grain, and to have something left to reward him for his labor and take care of the overhead.

Thousands of farmers in Michigan are not situated where they can sell market milk, either to the condensary or for the city milk supply. Their skim-milk must be marketed at home, either as feed for the calves, or the hogs or poultry. If one has a purebred herd, he can afford to feed much of the milk to the calves. Some, however, will remain after they have had their share.

Very often the amount is not large enough to go around among all the hogs and hens, and so we simply give it to them without much thought save to wish there were more of it.

One thing we must remember, if we are to secure the largest returns from that milk, and from the grain fed in connection. Milk and grain must be fed in relative amounts, or some things must be supplied to supplement the lack of milk. If young pigs are to grow normally they must have something from which to make bone. Small pigs will grow very fat on a ration of corn, but their bodies will not grow normally because to grow good strong bodies requires bone growth, and the pig can not grow bone without a goodly quantity of lime, and a considerable phosphorus which are not in the corn in sufficient amounts. Then, too, there are other requirements of growth

which can not be met with any grain, but which only animal food can supply to the young pig.

Skim-milk meets the needs of the growing pig, with the addition of the right amount of grain.

It has been proven again and again that tankage will take the place of skim-milk, and where it can not be had locally at the right prices, we should look up some other source of supply.

Usually pasture of clover, alfalfa or bluegrass, or even rye, will tend to cheapen the production of pork, but at present high prices of hay, I should hesitate long before turning a bunch of hogs into a good field of alfalfa.

In the judgment of the writer, if the hog of today is to be produced at a profit, he must be compelled to live principally upon by-products. Given skim-milk or tankage with the right amounts of grain to balance, passing his time with the fattening steer picking the corn out of the droppings, pasturing on rough ground, and consuming feeds which are the by-products of bean elevators, or breakfast food factories, the hog has a right to live until he is fit to die, but if the only thought on our part is to make him grow, and then after a while to fatten him without regard to the cost of what he is eating, then he will not furnish a satisfactory market for the grains grown on the farm, nor pay the mortgage, nor send the boy to college, nor do any of the things so necessary to successful living in the open country.

We are not at all discouraged—the world is learning something new about hog feeding each year. Last year some friends of mine did good work with corn and soy beans in pork production. It is often possible in the southern counties to grow large crops of corn and soy beans and feed them to hogs at a liberal profit. The hogs have time to harvest them, and they leave the droppings and a considerable amount of vegetable matter to be turned into the soil. Indeed, I am sure that one might follow this system for a long time without any falling off in crop yields.

The time has come when we must consider every system of farming with reference to its effect upon the soil.

A good soy bean crop hogged down, insures the increase of nitrogen in the soil, providing the inoculation is good.

The great importance of growing our own nitrogen rather than to dream of buying it at present prices in commercial fertilizers must appear to anyone who will stop for a minute and think. If we can use the hog with profit as a consumer of by-products from the farm and elsewhere, if by better breeding and wiser and more intelligent feeding we can grow larger quantities of meat from less feed, and finally if the hog may become our agent in the reclamation of soils depleted in nitrogen, and that, too, with a liberal profit, then the importance of this humble animal increases in our estimation.

So let us welcome the hog breeder, let us give our support to the pig club, and to every means that will give the world its supply of pork with less of toil and more of profit to the grower.

LIVE STOCK NEWS.

According to late reliable information; the spring lamb crop of Tennessee and Kentucky shows an increase of from fifteen to twenty-five per cent over that of last year, and Tennessee lambs may be expected to be marketed freely by the latter part of May, the supply becoming liberal by June. The Kentucky lambs were bred later than usual, however, and they will not be marketed very liberally before the month of July.

Silage-fed cattle are being marketed extensively in Chicago and other western packing centers, and silage is now firmly established in all parts of the country as a stock feed.

Illinois stockmen are discovering that cattle do extremely well on rations comprising ground corn and cob meal, clover hay and molasses feed. The molasses feed is found to make the best and cheapest gains.

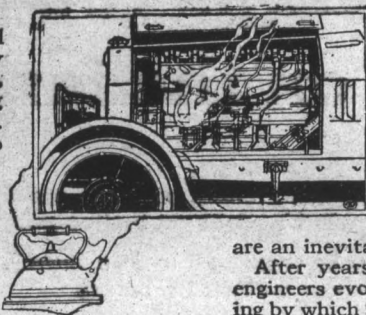


Ordinary Oil after use
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Yet you started with a full supply—more than enough, you felt sure, to bring you safely home again. If you take the cap off the oil filler you will see the oil evaporating in a thin cloud of smoke. The intense heat of the engine—200° F. to 1000° F.—causes ordinary oil to evaporate rapidly.



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Holstein - Friesian Cattle

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FLINT MAPLECREST BOY

His sire is Maplecrest Korndyke Hengerveld. His three nearest dams each over 30 lbs. of butter in 7 days. His dam and granddam both made over 1232 lbs. of butter in one year. It is the yearly cow we are looking for to deliver the goods. Flint Maplecrest Boy's Dam is Gluck Vassar Bell, 30.57 lbs. of butter in 7 days and 121 lbs. in 30 days. Her butter fat test is 5.27. This looks about right to the man who goes to the creamery. We have bull calves from 2 weeks to 12 months old. From A. R. O. dams and sired by Flint Maplecrest Boy, which we will sell at a dairy farmers price breeding considered. Just think 40 more cows to freshen which means more bull calves. Let us know your wants. We will make terms on approved notes.

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100--REGISTERED HOLSTEINS--100

When you need a herd sire remember that we have one of the best herds in Michigan, kept under strict sanitary conditions. Every individual over 6 mos. old regularly tuberculin tested. We have size, quality, and production records backed by the best strains of breeding.

Write us your wants.
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45 Registered Holstein Friesian Cattle 45

At Sebewaing, April, 24, rain or shine

Young females, mostly fresh, bred to 33.34 lb. sire. Tuberculin tested.

Mostly out of A. R. O. dams. Free trans. from depot.

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At Maple Avenue Stock Farm are under Government supervision. The entire herd have just been tuberculin tested and not one reactor. A good place to buy that bull you are looking for, and I have two very fine, richly bred, and splendid individuals ready for any amount of service. I want to answer any question you may ask about them.

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Registered Holstein Bull calves from A. R. O. cows up to 29.32 lbs. butter in 7 days, grandsons of the \$50,000 bull.

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For sale a fine registered Holstein bull calf from large producing ancestors, born Dec. 18, 1918. Would make a fine sire for improving a grade herd. Price reasonable.

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For Sale Registered Holstein bull calf, born Feb. 18, 1919, mostly white. Dam daughter of 30 lb. sire. Sire Grandson of Pontiac Korndyke, write for pedigree and price delivered.

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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.

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Bulls All Sold, have two Reg. Oxford ewes at \$50.00 each. Due to lamb soon.

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\$125 Buys two high grade unregistered heifers nearly six months old, and one reg. bull 3 mos. old. Pontiac breeding. B. B. REAVY, Akron, Michigan

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BUTTER BRED JERSEY BULLS

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JERSEY BULLS

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Maple Lane R. of M. Jersey herd. Bull and heifer calves sired by a nephew the new World's Champion, Sophie's Agnes. Also R. C. Red engs and chix.

IRVIN FOX, Allegan, Mich.

The Wildwood Jersey Farm.

Bulls for sale by Majesty's Oxford. Fox 13/24 and Emment Lady's Majesty 13/24, and out of R. of M. Jersey dams. ALVIN BALDEN, Caspe, Mich.

LILLIE Farmstead Jerseys. Young bulls ready for service from R. of M. cows. A few bred heifers and cows. CLON C. LILLIE, Coopersville, Mich.

For Sale Registered Jersey bulls, ready for service and bull calves.

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Jerseys, reg. cows and heifers, choice breeding, large producers \$100 to \$150, also bull calves \$10 up. Reasonable scarcity of labor. Ten Have Farm, R. 2, Holland, Mich.

Lakewood Herefords Strong in the blood of Anxiety 4th the strain that breeds true to type and predominates the leading show and sale rings of the country. A few high class young bulls for sale. Come see, and compare. Farm adjoins town. Clt. Phone 23.

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Both sexes and all ages for sale also horned and polled bulls in service. Governor by Prince Donald by Prime Lad 9th, Militant Farmer by Imported Farmer, Fairfax Farmer by Militant Farmer, Dam by Perfection Fairfax.

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Herefords Polled and Horned blood lines embrace Fairfax. Polled Perfection and Prime Lad 9th breeding. Prices reasonable.

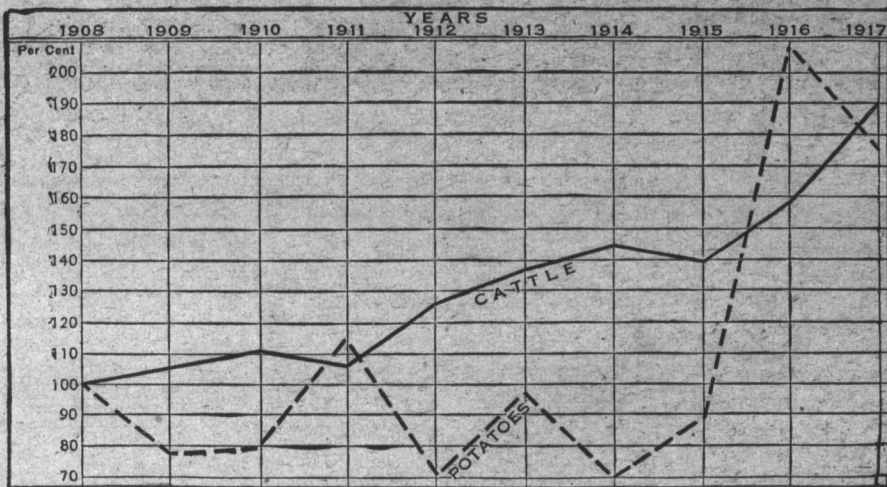
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Herefords Bob Fairfax 494027 at head of herd. Stock for sale, either sex, polled or horned, any age. Priced right. EARL O. McCARTY, Sec'y. H. B. Ass'n. Bad Azu, Mich.

For Sale 165 Hereford yearling steers, 96 Angus, 131 Shorthorn, 198 Cows and Heifers. A. C. WISEGARDNER, Fairfield, Ia.

Shorthorn Scotch bull 2 years old, 3 good bull calves 7 mos. old for sale.

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Cattle—the safest “crop” on the farm

The farmer who plants potatoes cannot tell you within 30 per cent what he will get for the potatoes next fall.

They may be worth \$6 to \$8 a barrel. He may not be able to sell them for \$2.50 a barrel.

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Shorthorn Cattle of both Sex for Sale
W. W. KNAPP, Howell, Michigan.

Shorthorns Scotch and Scotch Topped cows and heifers, priced right. Come and see them or write W. B. McQUILLAN, R. 7, Howell, Mich.

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Home of the Mich. Champions. We have just purchased the entire herd of Scotch cattle belonging to the Estate of the late A. D. Flintom, Kansas City, Mo. About Feb. 1st, we will offer a choice lot of young bulls for sale.

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Stockers & Feeders For Sale

180 Shorthorn Steers ave. 1065 lbs.
170 Hereford Steers ave. 980 lbs.
2 cars of yearling Herefords ave. 750 lbs.
These steers are dehorned and in good flesh. Wapello Co. Ia. is noted for its good cattle. Write
JOHN CARROW, R. 3, Ottumwa, Ia.

For Sale Shorthorns of Quality Scotch and Scotch Topped descendants of Archers Hope, Avondale, Maxwellton Sulton and White Hall Sulton by the Oscola Co. Shorthorn Breeders Ass. **JOHN SCHMIDT, Sec.** Reed City, Mich.

Milking Shorthorns Clay bred young bulls 3 to 10 months old.
DAVIDSON & HALL, Tecumseh, Mich.

Rosemary Farms, Williamston, Mich. young bulls ready for service. Shorthorns bred for milk & beef. Herd estab. by Prof. C. H. Burgess, Mich. Agri. College.

Shorthorns Central Mich. Shorthorn Breeders Ass. offer 37 bulls all ages, 17 females for sale. Write **Oscar Skinner, Sec., Gowen, Mich.**

Shorthorn Breeder No stock for sale at present.
CHAS. WARNER, Jr., Imlay City, Mich.

Shorthorns 100 head to select from. Write me your wants, price reasonable.
Wm. J. BELL, Rose City, Mich.

The Kent Co. Shorthorn Breeders have both males and females for sale. Ask about them.
L. H. LEONARD, Sec., Caledonia, Mich.

Milking Shorthorns of best Bates breeding and O. I. O. swine. Bulls for sale 1 mo. to 1 year old.
E. H. KURTZ, Mason, Mich.

Hogs all sold, have a nice Shorthorn bull calf, six months old, good individual price \$100 if taken soon.
JOHN D. WILEY, Schoolcraft, Mich.

Four Full Blood Shorthorn Bulls for sale.
W. PULVER & SON, Three Rivers, Mich.

Cattle For Sale Stockers & feeders, from 500 to 1600 lb. Write your wants.
ISAAC SHANSTROM, Fairfield, Iowa.

Registered Red Poll Calves and Duroc for sale. Will Cottle, West Branch, Michigan.

Don't Buy A Bull But Buy This Sire

Here is a very straight 6 months old calf out of a show cow that has an A. R. O. record of 27.09 lbs. butter, 607 lbs. milk in 7 days and a big milker for the year. His sire is a 32 lb. son of the famous \$50,000 bull.

If you want a real sire that will make you money write

LAKE SIDE DAIRY
LAKE ODESSA, MICH.

HOGS.

50 DUROC

bred sows and 50 fall pigs. You need a litter by Orion's Fancy King the biggest pig of his age ever at International fat stock show. Catalog tells all.
NEWTON BARNHART, St. Johns, Mich.

HOGS ON SHARES.

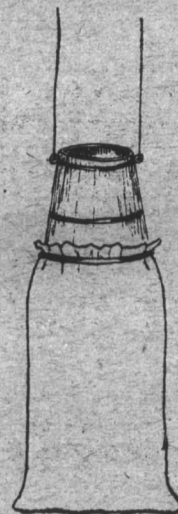
I wish a little information pertaining to a contract concerning the furnishing of a thorough-bred brood sow due to farrow this spring. An interested party provided me with \$80 with which to buy this sow. He now wishes a share that I am willing he should have. However, neither he nor I have had any experience in business of this kind. I am to have the care of the hogs and furnish all the feed. The hogs are to be fed with the expectation of marketing them all except what we want to keep for breeding purposes. If you can furnish some suggestions which is about an inch less in diam-particles I will greatly appreciate same.
Muskegon Co. G. C.

The man that furnishes all the feed and takes care of the hogs ought to have about all the profit that can be made these days and I wouldn't want to pay much more than good interest on the money invested. You could undoubtedly go to the bank and borrow the money to pay for this sow, then all it would cost you would be the interest. The uncertainty of the price of pork in the next six months or year is such that personally I would not care to take any great risks. Of course, the man who purchased this sow invested his money and if he owns the sow he takes the risk of the sow living. That relieves you of that obligation and so you might pay him what it would cost to insure this sow against death, but I can hardly see why he could expect very much more.

If the man furnished half the feed and furnished the hog, then he would be entitled to say half the profit but where he furnishes nothing only the brood sow, my judgment is that he is entitled to no more than good interest on the money plus perhaps the cost of insuring the hogs to make his investment safe.
C. C. L.

GRAIN BAG HOLDER.

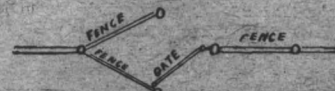
THE farmer who sacks much grain alone will welcome this. Take an old bucket and remove the bottom. Turn it upside down, slip on a hoop which is about an inch less in diam-



eter than the largest end of the bucket, and fasten the bucket to the ceiling by two wires. Slip the mouth of the bag over the bucket and push the hoop down over it. This will hold the bag securely and the more grain you pour in the tighter it will hold it. When full raise the sack to loosen it.—F. E. W.

THE NEVER-OPEN GATE.

WE have often found that certain gates are liable to be left standing open by persons passing through. Here is a very good way of overcoming this trouble. Fasten your large gate securely and place a small gate



at the place or places where you pass through frequently, similar to the illustration. This gate is really always open and yet never open to stock from which much damage often occurs when gates are left open.—W. F.

NO DROP IN MEAT PRICES?

THE American Meat Packers' Association in a statement issued April 12 declares that lower prices for meat may not be expected until the war-stricken countries of Europe are enabled to resume their quota of production.

The statement reads in part:

"The situation today in the meat industry is just about what Herbert Hoover and other food administration officials said it would be as far back as the first of the year.

"That high prices are caused largely by heavy demands rather than any control aimed to stimulate production has recently been illustrated very clearly in the case of hogs. When the minimum price fixed for hogs was removed the food administration predicted that the prices might go still higher. The prediction is now being verified.

"High prices will continue for a long time. Each day that brings final peace nearer means a greater call on this country for meat. The supply of meat is dependent first of all on the supply of live stock. European herds have been reduced by the war. To that extent world production of live stock is crippled.

"Live stock on farms in the United States at the beginning of this year exceeded the number at the beginning of 1918 by 1,036,000 cattle, 4,213,000 hogs and 963,000 sheep.

"But the armistice, instead of having reduced the demand for meat, has given us more than 200,000,000 additional mouths to feed, either wholly or in part. As shipping becomes available an increasing number of hungry nations will be accessible for provisioning.

"Great numbers of meat animals have been dressed since the first of the year. Hogs are now coming into American markets in dwindling quantities and in lesser numbers than a year ago. Yet pork products must form a large part of our exports. The price of hogs remains high.

"Statistics now available as to the effect of war on foreign herds indicate that the swine in Italy have decreased from 2,508,000 in 1908 to 1,670,000 in 1918; in France, from 7,037,000 in 1913 to 4,168,000 in 1917; in Germany, from 25,592,000 in 1913 to 12,000,000 in 1918; in the United Kingdom, from 3,940,000 in 1914 to 2,448,000 in 1918; in Denmark, from 2,497,000 in 1914 to 513,000 in 1918, and in the Netherlands, from 1,350,000 in 1913 to 1,185,000 in 1917.

"Germany sucked meat animals out of the countries she occupied, according to Mr. Hoover. Belgium lost a third of her hogs, and more than three-fourths of her cattle. Cattle decreased severely in many other countries.

"The numbers of liberated peoples who were inaccessible before hostilities ceased, but who the United States now will help to feed, include, according to a very recent statement by Mr. Hoover, nearly 7,500,000 in Belgium; 20,000,000 in Poland; 13,000,000 in Czechoslovakia; 13,000,000 in Rumania; 12,000,000 or 13,000,000 in Greater Siberia, and 20,000,000 in Finland, Armenia and other countries.

"This takes no account of the food being sent into the central empires in order to avert anarchy and governmental insolvency.

"Mr. Hoover estimates German shipping around 20,000,000 tons. This will gradually become available for food cargoes. As it does, a larger and larger part of the demand for food can be reached."

CROP CONDITIONS IN MICHIGAN.

WITH the largest acreage since 1911, and a condition equal to that of 1914, the Michigan winter wheat crop promises to be the largest in several years, according to the April report issued by Verne H. Church,

Field Agent, Bureau of Crop Estimates of the United States Department of Agriculture. A bumper crop of rye is also indicated, the acreage being the largest on record and the condition as high as in any previous year since records began.

Winter wheat was mostly planted at the normal time last fall, and obtained a good growth, both top and root, before the winter set in. While the ground was bare for considerable periods during the winter, the weather was comparatively dry and mild and practically no heaving occurred. In the southern half of the state there was no winter-killing of consequence, and a marked absence of bare spots in the fields is noted. A plentiful supply of moisture in March, followed by unseasonably mild weather has promoted an early spring growth. Reports from northern districts are less favorable. Alternate freezing and thawing in that part of the state during the closing days of the month was causing some apprehension, and the season was not sufficiently advanced to accurately determine the condition.

Rye is also in excellent condition. The acreage planted last fall was estimated to be twenty-one per cent greater than that of the previous year, an increase of over 100,000 acres; while the area harvested in 1918 exceeded all previous records by 50,000 acres.

An inquiry relative to the number of breeding sows shows, that for the state as a whole, there is an increase of four per cent over last year.

LIVE STOCK OUTLOOK.

(Continued from page 622).

supplies of hogs and sheep this year than a year ago, their cattle receipts have fallen off considerably, and recent marketings have been on a very moderate scale. It is evident from the cattle marketing now in progress in Chicago, that choice beefs, particularly those of heavy weight, are extremely scarce in feeding districts nearly everywhere, and a liberal premium is paid for the few prime heavy steers showing up. The best sale for the year was that of ten head of Hereford steers averaging 1,255 pounds at \$20.40, the sale taking place recently. No large numbers of steers are selling above \$18, and a load of steers averaging in weight as much as 1400 pounds is now a novelty. Many of the highest priced cattle sold in recent weeks averaged around 1,225 to 1,325 pounds, whereas a year ago it required a load of at least 1,400 to 1,600 pounds to top the market. Fat butcher cattle usually sell at high prices, and up to a short time ago canning cows sold high, but they sold off sharply recently because lack of government contracts kept the packers out of the market. Stockers and feeders have been selling at the highest prices ever known, and so have fat beef steers, the top at \$20.40 comparing with \$15.50 one year ago, \$13.15 two years ago, and \$10 three years ago. Usually, the widest fluctuations in cattle prices take place in the middle grades.

Fat Lambs Sell High.

If a sheepman has a shipment of strictly prime fat lambs, not too heavy in weight and well assorted, on the Chicago market, he is sure of receiving a high price, even if the market should chance to be considerably below the highest time of the month. At the best time this spring the best Colorado woolled lambs brought \$21 per 100 pounds, but since then prices have had quite a break. Recently the best woolled lambs have sold at \$19.65, and shorn lambs have comprised a large part of the offerings. Three years ago the best lambs sold at \$11.50. Shorn flocks are sold at a discount of from \$2.00 to \$3.00. With prices ruling far higher than before the war and a shortage in the country, sheep breeding is increasing in various parts of the country.

It pays to make your own stock tonic, condition powder, etc.

Tix Ton-Mix with your own salt or cereal the year around keeps animals healthy.

A \$5.00 box makes \$40.00 to \$60.00 worth of medicated salt or \$75.00 worth of "stock tonic" -- saves you big money. A \$2.00 box by parcel post will medicate a bbl. salt or 900 lbs. of cereal for cows, horses, hogs, and sheep.

PARSONS CHEMICAL WORKS
Grand Ledge, Michigan
Leona Park Farms Experiment Station

HOGS

Duroc Opportunity

What would the earning capacity of a Brookwater Boar be in your herd? A mid-west breeder states that the Brookwater boar he used added from \$75 to \$100 to every gilt bred to him. It paid this man to use one of our boars it will pay you.

We have several that we are offering at prices which appeal to the small breeder who must of necessity be a conservative buyer. We have a few that are good enough to be used in high class herds at prices in keeping with their individuality and breeding. Money invested in a good herd boar very speedily increases the value not only of what you sell but what you keep. Send for price list or better, visit the farm.

BROOKWATER FARM, Ann Arbor, Mich.
HERBERT W. MUMFORD, owner,
J. BRUCE HENDERSON, Manager.

DUROC Jersey's—A few extra good fall boars bred by Orion Cherry King Col. 2nd. Bred sows all sold. W. C. TAYLOR, Milan, Mich.

Registered Duroc Gilt

Descendents of the leading strains: Cherry King, Defender, King of Col's, The Professor, all bred to Col. Defender the 25th. No. 123705, his sire, Pal's Premier Col. T. No. 81021. Dam, Royal Defender No. 231580, one of the most promising herd boars in Michigan. Prices reasonable. Write for prices and further information.

THE JENNINGS FARMS, R. 1, Bailey, Mich.

OAKWOOD FARM

Nothing for sale at present booking orders for spring pigs (Durocs). Tax Payer and Gold Medal breeding. **RUSH BROS.,** Romeo, Mich.

DUROC-JERSEYS

E. D. HEYDENBERG, Wayland, Mich.

DUROC JERSEYS

Gilts bred for June farrow of the heavy boned type also fall pigs either sex pairs not akin.

F. J. DRODT, R. 1, Monroe, Mich.

Durocs' Feb. farrow ready to ship May 1st. \$15 two for \$25 crated, f. o. b. Bankers. Papers for registry furnished. Satisfaction or money back. 39 farrowed in 3 litters. Big bone type.

B. E. KIES, R. 5, Hillsdale, Mich.

Duroc Jerseys. A few choice gilts bred to Brookwater King Special 111467. (A full brother to Brookwater Lass D, the grand champion sow at the 1918 International). **Carey U. Edmonds,** Hastings, Mich.

Duroc Opportunity Only one left: a good, young Colonel Defender boar ready for spring service. Price \$25.00.

ALFRED LOCKHART, South Haven, Mich.

Spring Farrow sows all sold. Write me your future wants.

JOS. SCHUELLER, Weidman, Mich.

FOR Sale Duroc Jerseys of the big boned type fall pigs of either sex and taking orders for spring pigs.

CHAS. BRAY, Okemos, Mich.

Hampshires Boars at a bargain bred gilts all sold.

JOHN W. SNYDER, R. 4, St. Johns, Mich.

THE WORLD'S CHAMPION

big type O.I.C.B. Stock of all ages for sale. Herd headed by Calloway Edd, the World's Champion O. I. C. boar assisted by C. C. Scholmaster, Grand Champion boar of Michigan, New York and Tennessee state fairs. Also, C. C. Giant Buster, undefeated Senior boar pig wherever shown and Grand Champion of Oklahoma state fair. Get our catalogue of Grandell's prize hogs, Cass City, Michigan.

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.

G. S. HENSAMIN, R. F. D. 10, Portland, Michigan

Breed The Best

THE WORLD NEEDS LARGE FAT HOGS

Why lose money breeding and feeding scrub hogs? Two of our O. I. C. Hogs Weighed 2806 Pounds. We are the most extensive breeders and shippers of pure bred hogs in the world. Write today for the true story of the real O. I. C. Hogs. All foreign shipments U. S. Government Inspected

We have bred the O. I. C. Hogs since 1863 and have never lost a hog with cholera or any other contagious disease.

WRITE TODAY—FOR FREE BOOK
"The Hog from Birth to Sale"
THE L. B. SILVER CO.
196 Heights Temple Bldg.
CLEVELAND, OHIO

Chesters, March and April pigs in pairs or trios from prize winning stock prices reasonable satisfaction guaranteed.

F. W. ALEXANDER, Vassar, Mich.

Shadowland Farm

O. I. C.'s

Bred Gilts 200 to 300 lbs. from prize winning stock. A few fall yearlings and 2 yr. old sows, big type, growthy boars of all ages, guaranteed as breeders. Everything shipped C. O. D. Express paid and registered in buyer's name. **J. CARL JEWETT,** Mason, Mich.

O. I. C. and Chester White Swine

Strictly Big Type with QUALITY. I am sold out of everything but fall pigs. These pigs are as good—and I think better than any I ever bred. I am one of the oldest breeders of Big Type in the U. S.

NEWMAN'S STOCK FARM, R. 1, Maclette, Mich.

O. I. C.'S. Serviceable boar of last summer and fall farrow.

G. P. ANDREWS, Dansville, Mich.

O. I. C. Bred Gilts All Sold.

H. W. MANN, Dansville, Mich.

O. I. C. Boar, 14 months old. Large fall pigs of either sex.

C. J. THOMPSON, Rockford, Mich.

O. I. C. Gilts bred for summer farrow and a few fall boar pigs any of the good enough to ship. C. O. D.

F. C. BURGESS, R. 2, Mason, Mich.

O. I. C's 2 Choice Yearlings Boars and Clever Leaf Stock Farm, R. 1, Monroe, Mich.

O. I. C's One very good yearling boar, a few last Sept. gilts, and this spring pigs to offer, registered free. 1/2 mile west of Depot. Citizens Phone 24.

OTTO B. SCHULZE, Nashville, Mich.

O. I. C. fall gilts, ready to farrow in July. Good ones, few boars left. Priced to sell.

Will Thorman, Elm Front Stock Farm, Dryden, Mich.

FRANCISCO FARMS

SHORTHORNS—POLAND CHINAS

Three choice heifers and a few young cows to offer. Also fine good gilts bred for late spring farrow. Prices are attractive.

P. P. POPE, Mt. Pleasant, Mich.

For 25 Years We have been breeding Big Type Poland Chinas of the most approved blood lines. Our new herd boar "Michigan Buster" is a mighty good son of the great "Giant Buster", dam "Mow's Miss Queen 2". Some breeding! We are all sold out except a few fall pigs at \$25.00 each.

J. C. BUTLER, Portland, Mich.

Big Type Poland Chinas

Am offering a choice gilt, registered and cholera immune, with her ten pigs farrowed Apr. 1. Also best boar pig of April farrow raised last year; absolutely right, priced at \$15. Wesley Hill, R. 6, Ionia, Mich.

P.C. bred gilts sold. For sale herd boar prospect 17 mo. old, wt. 800 lb. with quality, sire Buster Giant, 266533, dam Nemo L. 54940 an 800 lb. sow in flesh. Sire sold for \$1500, priced reasonable. Free Livestock from Parma.

W. E. LIVINGSTON, Parma, Mich.

Big Poland Chinas with quality. For sale, summer and fall gilts, open or bred.

G. A. BAUMGARDNER, R. 2, Middleville, Mich.

L. S. P. C. Bred sows all sold, 2 boars ready for service also 1 fall boar, and fall gilts to breed for fall farrow.

H. O. SWARTZ, R. 1, Schoolcraft, Mich.

Big Type Poland Chinas pigs, sired by C. A. King Joe 26631, by King Joe 25127, Monster Big Bob 37024, by Loken's Big Bob 26777, Buster Half Ton 26825, by Great Big Half Ton 26124. Out of sows, whose pedigree, individuality and quality are of equal merit as my herd boars. Can furnish pairs and trios, not akin.

C. A. BOONE, Blanchard, Mich.

MICH. Champion herd of Big Type P.C. Nothing for sale but fall pigs; orders booked for spring pigs.

E. R. LEONARD, St. Louis, Mich.

Big type P. C. fall boars the big prolific kind, their breeding traces to the best herd in Ill. Iowa, & Neb.

C. E. GARNANT, Eaton Rapids, Mich.

Large Type P. C. Nothing for sale now. Will be marketed with better than ever this fall. If herd staff counts.

W. J. HAGELSHAW, Augusta, Mich.

Big Type P. C. boar and bred gilts. Choice Aug. pigs at a bargain.

A. A. WOOD & SON, Saline, Mich.

Big Type P. C. Choice bred sows from Iowa's greatest Big herds, the big bone prolific kind with size and quality.

E. J. MATHEWSON, Burr Oak, Mich.

Big Type Poland's all sold out, nothing for sale at present. Booking orders for spring pigs. Thanking my customers.

L. L. Chamberlain, Marcellus, Mich.

Mammoth Poland Chinas all sold. General Jones heads our herd. No. 317249, son of Gerstade Jones heads our herd. Clyde Weaver, Ceresco, Mich.

SHEEP

MORE to the Kids of Mich: I have sold all the ewes that I care to sell, but judging from the many inquiries I have received there are many of you kids who still want to get started in registered ewes. Now then, here is a new proposition: I have selected one beautiful Shropshire ewe, she will lamb in the course of the next month; she is worth at least \$50.00. I will give this ewe, absolutely free, to the boy or girl who gives me, in my opinion, the best reasons why they should be the one to get her. I may give away more than one.

S. L. WING, Kope-Kon Farms, Coldwater, Mich.

SHROPSHIRE SHEEP

We have about 50 ewes in lamb for sale, of best breeding. Registered.

LARRY E. SAUER, Seedman,

109-111 E. Ottawa St., Lansing, Mich.

BUY A SHEEP

Wait a minute, buy Hampshires. The American Hampshire Sheep Association wants to send you a handy little booklet with list of breeders. Some near you. Write **COMFORT A. TYLER,** Secretary, 22 Woodland Ave., Detroit, Mich.

For Sale Bred Reg. Shrop. Ewes at a reasonable price also ewe lambs.

H. F. MOUSER, R. 6, Ithaca, Mich.

Shropshire Sheep Nothing to offer before June 1-1919.

ARMSTRONG BROS., R. 3, Fowlerville, Mich.

LATEST MARKET REPORTS

SECOND EDITION.

The markets in this edition were revised and corrected on Thursday afternoon, April 17.

WHEAT.

Notwithstanding recent assurances of the splendid condition of the wheat crop of North America, consumption, both domestic and foreign, is expanding so rapidly that prices have advanced and are holding strong at the high figures. The government is now assured that there will be no loss resulting from guaranteeing the fixed price on wheat to the American farmer. Flour is in strong demand and the call for feed is urgent. Receipts at country and primary elevators are small. The United States visible supply decreased 8,066,000 bushels during the week. One year ago the price for No. 2 red wheat was \$2.17 per bushel. Present Detroit prices are:

No. 2 red	\$2.55
No. 2 mixed	2.53
No. 2 white	2.53

CORN.

Strength in the provision market, bad weather and a good demand has improved the corn market and pushed prices above those of last week. Offerings at country elevators have been fairly liberal but the present storms over the corn belt will hold up delivery. Primary markets are not well supplied, there being difficulty in getting supplies from the country on account of car shortage. One year ago the local price for No. 3 corn was \$1.75 per bushel. Present Detroit quotations are:

No. 3 corn	\$1.62
No. 3 yellow	1.65
No. 4 yellow	1.62
No. 5 yellow	1.59
No. 6 yellow	1.56
No. 3 white	1.65

New high levels are reached in the corn markets at Chicago, with No. 3 yellow at \$1.59@1.60½; No. 4 yellow \$1.57½@1.58½; May \$1.58½.

OATS.

Following the general reports that oat seeding has been restricted by wet ground, prices advance and hold firm. The visible supply decreased 492,000 bushels this past week. A year ago the local market quoted standard oats at 93c per bushel. Present Detroit prices are:

Standard	71
No. 3 white	70½
No. 4 white	69½

RYE.

On the local market rye is not active but from other points there come reports that exporters are looking for the grain. Here the price is up to \$1.72 per bushel for No. 2 grade.

BEANS.

The bean trade is holding steady to firmer. Prices for pea beans have changed but little. While there were quite a few imports since Wednesday of last week, these were far exceeded by exports to European points and elsewhere—the imports amounted to 2,028 tons of which 1,828 tons were Koshasis, and the exports aggregated 8,333 tons. White beans in Michigan producing sections are bringing from \$6@7. New York jobbers are taking Michigan white stock at \$7.50@7.75 and best marrows at \$11.75@12 and ordinary at \$10.50@11.50. There is nothing doing in Boston or on the local market. In Philadelphia the trade is steady at \$7.50@8 for Michigan pea beans and Chicago jobbers are paying \$7.75@8 for choice stock of the same variety from this state.

Lima bean pool recently formed in southern California and controlling 75 per cent of the remaining stock has received orders for 215 carloads for April shipment at \$6.75 f. o. b. and is refusing to accept further orders at this time. New prices will be named for May shipments. Not over two cars sold to any one dealer. All purchasers guaranteed against decline until August 1. It now appears that large holdings of Limas may be cleaned up satisfactorily and all other varieties have strengthened accordingly.

FEEDS.

A good demand keeps values firm as follows: Bran \$45@46; standard middlings \$45@46; fine middlings \$48@50; coarse corn meal \$63; cracked corn

\$67; corn and oat chop \$54 per ton in 100-lb. sacks to jobbers.

HAY.

Prices continue to advance with the situation acute, consumers failing to find enough to satisfy their needs. Quotations are. No. 1 timothy \$34.50@35; standard timothy, light mixed at \$33.50@34; No. 2 timothy and No. 1 mixed \$32.50@33; No. 1 clover at \$29@30.

Pittsburgh.—Market is somewhat easier with quotations about steady. No. 1 timothy \$34@34.50; No. 1 light mixed \$31@32; No. 1 clover, mixed, \$32@33; No. 1 clover \$31.50@32.

POTATOES.

Feeling is easier on most of the markets, with prices slightly below the recent high level. Up-state prices to farmers are a little better than last week. At Michigan points prices to growers at warehouses now range from \$1.50@1.70, with the bulk at \$1.45@1.60. Wisconsin growers are receiving from \$1.60@1.70. At Detroit U. S. No. 1 are bringing mostly \$3 per 150-lb. sack; in Pittsburgh \$3@3.10; in Cincinnati \$2.20 per cwt; in Buffalo \$2.25 per cwt; in Indianapolis \$2.15; in Chicago \$1.75@1.80.

BUTTER.

Prices have undergone a decline in the majority of the markets, although in Detroit quotations are higher. Local receipts are small and buying active. At Detroit fresh creamery stock is jobbing at 60@61c per pound. Chicago trade is on a lower basis, with creamery at 55@61c. The spread of prices on the New York market is from 62½@65c and western extra creamery brings 64c in Philadelphia.

EGGS.

The general conditions remain about the same in this market, with consumption sufficiently large to care for the liberal receipts. Extra firsts in new cases are quoted on the Detroit

market at 41½c and fresh firsts at 40½c, while storage packed firsts in new cases now bring 43@44c per dozen. In Chicago prices are about steady, with firsts at 38½@40½c; ordinary firsts 38¼@38½c; storage packed firsts 41½@42c and do extra at 42½@42¾c. New York trade is paying 41@46c and the Philadelphia trade is jobbing western extra firsts at \$13.20 and firsts at \$12.90 per case.

POULTRY.

Poultry trading is dull and steady, with quotations for live as follows: No. 1 springs 35@36c; stags 30c; fat hens 40c; small hens and Leghorns 37@38c; roosters 25@26c; geese 27@28c; ducks 38@40c; turkeys 38@40c.

WOOL.

Orders for woolen goods are coming fast now and the mills see busy days ahead. Not only are American manufacturers looking forward to supplying their usual trade, but they are finding many promising outlets in new fields for liberal quantities of goods. For instance, France has lost a third of her textile machinery, and now with higher wages and natural unwillingness of the Frenchmen to use the latest type of machinery, there is much confidence that the mills of the United States will have generous orders from that country. In England, too, higher wages, shorter hours for labor and more expensive fuel and other supplies are most certain to cut down production to the advantage of this country. Shearing in the western states has been delayed by cold storms and labor difficulties. The shearers are asking for 17½ cents as compared with the offer of sheep owners of 12½c and board. The recent high prices paid in Boston and London has encouraged the shearers to hold out in their demands, thus delaying the removal of the clip. Michigan sales have been too few to establish quotations. In some sections producers are considering the plan of ship-

ping their wool through their farm bureau or other organizations in order to realize the full value of the fleeces.

GRAND RAPIDS

Potatoes took a sharp advance the latter part of last week, selling on the city market at \$1.20@1.25 per bushel. At some points in western Michigan they advanced to \$1.60@1.75 per cwt; at others \$1.25@1.50. According to the government agent's report shipments of cars out of the state to date total 7,217, which is 958 more than to even date a year ago. The market is strong and receipts light at many shipping points. The last shipment of onions in carlots was made Saturday from western Michigan. During the season orders were filled for Cuba and to points south. Jobbers in beans pay growers in Grand Rapids market-area \$6 per cwt. for white and \$7 for red kidneys. At some shipping points in western Michigan dealers are paying \$5.50 to farmers. Several pits of rutabagas, turnips were opened last week at the growers and sold at \$1 per bushel. At all points in western Michigan hay is held at \$30@31 for loose timothy.

THE NEW YORK PRODUCE MARKET.

Butter.—Indications of the near arrival of spring have caused receivers to be more than anxious to keep their stocks cleaned up. As a result the market has been keenly sensitive during the week and the slightest variation in general conditions has caused a fluctuation. As a whole, supply has just about equaled demand and while there have been changes in price the market closed with practically the same established quotations as at the end of last week. Export demand continues strong but as there is a scarcity of shipping space purchases for shipment abroad are necessarily small. Receipts are increasing and unless more shipping space can be secured to care for a greatly increased export demand a marked decline in values can not be averted. At the close on Friday established quotations were as follows: Extras 65½c; higher scoring than extras 66@66½c; firsts 63½@65c; seconds 61@63c.

Cheese.—There has been a steadier tone to the market during the week and western markets also indicate a firmer condition. Reports indicate a material increase in production in western cheese producing areas but as yet the production in New York shows no change of any consequence. Exporters are active in the market but have taken no large quantities as yet. However, it is expected that the demand of exporters will become stronger later in the spring and will continue active throughout the season. Current make, average run cheese is quoted at 31½@33c. Cheese of higher quality is quoted half a cent higher. Held cheese which is in scant supply, is selling at 35@38c.

Eggs.—While the market has been irregular during the week the tendency has been for the market to strengthen. Receivers have been unwilling to purchase eggs outright because of the high prices asked and as a result great quantities have been placed in storage. Naturally, such withdrawals have had a sustaining effect on the market. The market closes strong with firsts quoted at 41½@43½c and extra firsts at 44@44½c. Nearby henry whites are selling at prices varying from 46@51c.

NEWS OF THE WEEK.

(Continued from page 610). fifty-eight persons were slain and one hundred hurt.—Turkish officials execute Kemal Bey who was found responsible for Armenian deportations and massacres.

Tuesday, April 15.

HE German peace envoys will be summoned to Versailles France on April 25 to sign the peace treaty.—Fighting rages in Munich, the Bavarian capital, where German government troops are endeavoring to drive out the Red guards.—The Bolshevik army in northern Russia is retreating, which leads to the belief that the allied forces in the region have received reinforcements.—Post office announces that shipments up to seven pounds may now be sent to soldiers overseas without further restrictions.

Live Stock Market Service

Reports for Thursday, April 17th

BUFFALO.

On today's market pigs sold at \$20 and other grades at \$21@21.15. Clipped lambs \$17; wool lambs \$20; calves brought \$17. Cattle trading is slow.

CHICAGO.

Hogs.

Estimated receipts today are 32,000; holdover 8,282. Market opened 10c lower but weakening and mostly 15@20c lower from high time of Wednesday. Bulk of sales \$20.35@20.70; tops \$20.80; heavy, 250 lbs up, medium, good and choice \$20.60@20.80; medium 200 to 250 lbs, medium, good and choice \$20.40@20.75; light, 150 to 200 lbs, common, medium, good and choice \$19.90@20.60; light lights, 130 to 135 lbs, common, medium, good and choice at \$18.75@20.35; heavy packing sows, 250 lbs up, smooth \$19.50@20.10; packing sows, 200 lbs up, rough \$18.50@19.50; pigs, 130 lbs down, medium, good and choice \$17.50@18.75.

Cattle.

Estimated receipts today are 8,000. Beef steers and butcher stock 15@25c higher. Calves slow; early sales are steady. Beef steers, medium and heavy weight, 1100 lbs up, choice and prime \$17.75@20; do medium and good \$14.25@18; do common \$7.55@14.40; light weight, 1100 lbs down, good and choice \$15@18.70; do common and medium \$10.25@15.40; butcher cattle, heifers, common, medium, good and choice \$8@15.65; cows, common, medium, good and choice \$5.75@15.50; bulls, bologna and beef \$8.50@13; canners and cutters, cows and heifers \$6.15@7.75; do canner steers \$7@10.25; veal calves, light and handyweight, medium, good and choice \$14@15.75; feeder steers, common, medium, good and choice at \$10.50@15.75; stocker steers, common, medium, good and choice \$8.50@13.75; stocker cows and heifers, common, medium, good and choice \$8.25@10.50; stocker calves, common, medium, good and choice \$7.75@13.

Sheep and Lambs.

Estimated receipts today are 12,000. Opening slow; good and choice lambs hold firm to higher. Lambs, 84 lbs.

down, medium, good, choice and prime \$18@19.75; do 85 lbs up, medium, good, choice and prime \$17.75@19.60; do culls and common \$14@17.75; spring lambs, medium, good, choice and prime \$15.75@18; yearling wethers, medium, good and choice \$12@15.50; ewes, medium, good and choice \$6@12; feeder lambs medium, good, choice \$15.25@17.

BUFFALO.

Wednesday, April 16.

Cattle.

Receipts 20 cars. Market 25@40c lower; prime heavy steers \$17@17.75; best shipping steers \$15@16; medium shipping steers \$13.50@14; best native yearlings, 950 to 1,000 lbs \$15@16; light yearlings, good quality \$14@14.50; best handy steers \$13.50@14.50; fair to good \$12@13; handy steers and heifers, mixed \$12@13; western heifers \$12.50@13; best fat cows \$12@12.50; butcher cows \$9@10; cutters \$7@8; canners \$5@6; fancy bulls \$10@11; butcher bulls \$9@10; best feeding steers, 900 to 1000 lbs \$11@12.50; medium feeders \$10@11; stockers \$10@10.50; light stockers \$8@9; milkers and springers \$75@150.

Hogs.

Receipts ten cars. Market higher. Heavy \$21@21.75; yorkers \$21@21.15; pigs and lights \$20@20.25.

Sheep and Lambs.

Receipts five cars; market is strong. Wool lambs \$19.75; clipped \$16.75@16.85; yearlings \$13.50@14; wethers \$13@13.50; ewes \$11@12.

Calves.

Market here advanced 50c. Tops \$17.50; grass calves \$7.

DETROIT STOCK YARDS CLOSED.

A strike since last Thursday of 800 employees in the slaughtering and cutting departments of the Sullivan Packing Company, Hammond, Standish & Co., and Parker, Webb & Co., has forced the placing of an embargo on incoming live stock that became effective Monday on all railroads entering Detroit.

Prospects are that the embargo will be raised by Monday.

MICHIGAN CROP REPORT.

Wheat.—The condition of wheat on April 1, was 94 in the state, 96 in the southern counties, 91 in the central counties, 90 in the northern counties and 87 in the upper peninsula. The condition one year ago was 70 in the state, 64 in the southern counties, 71 in the central counties, 79 in the northern counties and 95 in the upper peninsula. The average depth of snow in the state on March 15 was 0.86 and in the southern counties 0.40 of an inch, in the central counties 1.13, in the northern counties 1.34 and in the upper peninsula 4.17 inches. On March 29 the average depth of snow in the state was 0.24, in the southern counties 0.18, in the central counties 0.33 of an inch, in the northern counties "none" and in the upper peninsula 1.27 inches. The number of days protection to wheat by snow, was six in the state, four in the southern counties, seven in the central counties, 10 in the northern counties and 15 in the upper peninsula. In answer to the question, "has wheat during March suffered injury from any cause," 57 correspondents in the southern counties answer "yes" and 115 "no," in the central counties 29 answer "yes" and 48 "no," in the northern counties 20 answer "yes" and 23 "no" and in the upper peninsula three answer "yes" and 10 "no." The total number of bushels of wheat marketed by farmers in March at 96 flouring mills is 66,680 and at 54 elevators and to grain dealers 15,712 or a total of 82,392 bushels. Of this amount 57,928 bushels were marketed in the southern four tiers of counties, 18,130 in the central counties and 6,334 in the northern counties and upper peninsula. The estimated total number of bushels of wheat marketed in the eight months, August-March is 4,650,000. One hundred and twenty mills, elevators and grain dealers report no wheat marketed in March.

Rye.—The average condition of rye in the state is 95, in the southern counties 97, in the central counties 91, in the northern counties 93 and in the upper peninsula 92. One year ago the condition in the state was 77, in the southern counties 73, in the central counties 78, in the northern counties 83 and in the upper peninsula 96.

Meadows.—The average condition of meadows in the state is 82, in the southern counties 80, in the central counties 83, in the northern counties 86 and in the upper peninsula 88. The condition in the state one year ago was 85, in the southern counties 82, in the central counties 86, in the northern counties 88 and in the upper peninsula 96.

Live Stock.—The average condition of horses and swine in the state is 95, cattle 94 and sheep 97.

Fruit.—The following table shows the prospect for an average crop of the various kinds of fruit in the state and the different sections as reported by fruit correspondents:

	Sou.	Cent.	Nor.	Up.
State.	Co's	Co's	Co's	Penin.
Apples ..79	81	71	78	97
Pears ...80	80	79	84	79
Peaches .68	67	58	80	..
Plums ...84	84	85	86	100
Cherries 85	85	77	89	94
Small frt 88	85	86	89	98

In regard to the question, "what per cent of orchards are being sprayed," correspondents report 40 in the state, 41 in the southern counties, 35 in the central counties, 51 in the northern counties and 29 in the upper peninsula.

Grain seed threshed in Michigan for the season of 1918-19 up to and including April 1, 1919, per returns of threshermen is as follows:

	Acres.	Bushels.	Yield per acre.
Wntr wht...	653,001	9,169,230	14.04
Spg wht...	43,208	777,773	18.00
Rye	475,400	6,810,834	14.33
Oats	1,580,936	62,246,234	39.37
Speltz	9,412	257,801	27.39
Barley	279,698	8,359,669	29.89
Buckwht	41,687	376,535	9.03
Pears	20,897	304,278	14.42

Seed:
Timothy .. 766 .. 1,806 .. 2.36
Clover ... 75,371 .. 73,980 .. 0.98
Beans ... 363,883 .. 3,291,343 .. 9.05

This report closes the 1918 and 1919 threshing season.

With hogs advanced to about the highest prices ever paid in the history of the swine industry, farmers who had been counting on reducing their corn acreage this spring and sowing wheat are reconsidering the matter and are deciding that it will be best to grow plenty of corn and plenty of hogs. Never before were the world-wide requirements for hog products anywhere near so great as now. Hogs are biggest rent payers ever known, and there is no danger of having too many on the farm.

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We recently ran a 7 day A. R. O. test on 6 of our three and four year old cows with the following results: Butter, 21.892 lbs., 20.892 lbs., 17.882 lbs., 16.883 lbs., 15.7 lbs., 14.2 lbs. These cows were not especially prepared for the test and were not even placed in box-stalls as we did not have the room.

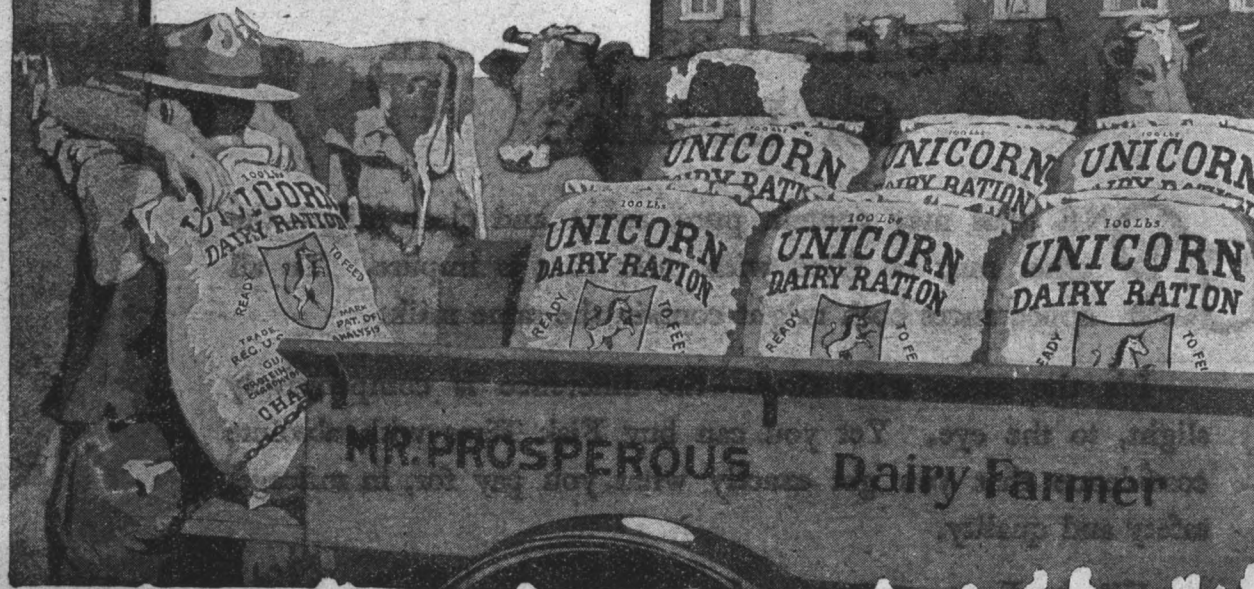
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Single Comb White Leg. Bred-to-lay, Barron strain. Eggs per 15 \$1.50; 30 \$2.75; 50 \$4.10; 100 \$7.50; 300 \$21. Order from adv. No chicks. Bruce W. Brown, Mayville, Mich.

Snowy White Rocks Fishel Strain, dandy layers. Eggs \$1.50-15; \$4.50; \$7-100 All prepaid. Mrs. Earl Dehnhoff, Vanburen, Ohio

S. C. B. Minoras. Eggs from pen 1, \$3.00 per 15, \$5.00 per 30, \$7.00 per 45, \$9.00 per 60, \$11.00 per 75, \$13.00 per 90, \$15.00 per 100. Incubator eggs \$7.00 per hundred. R. W. MILLS, Saline, Mich.

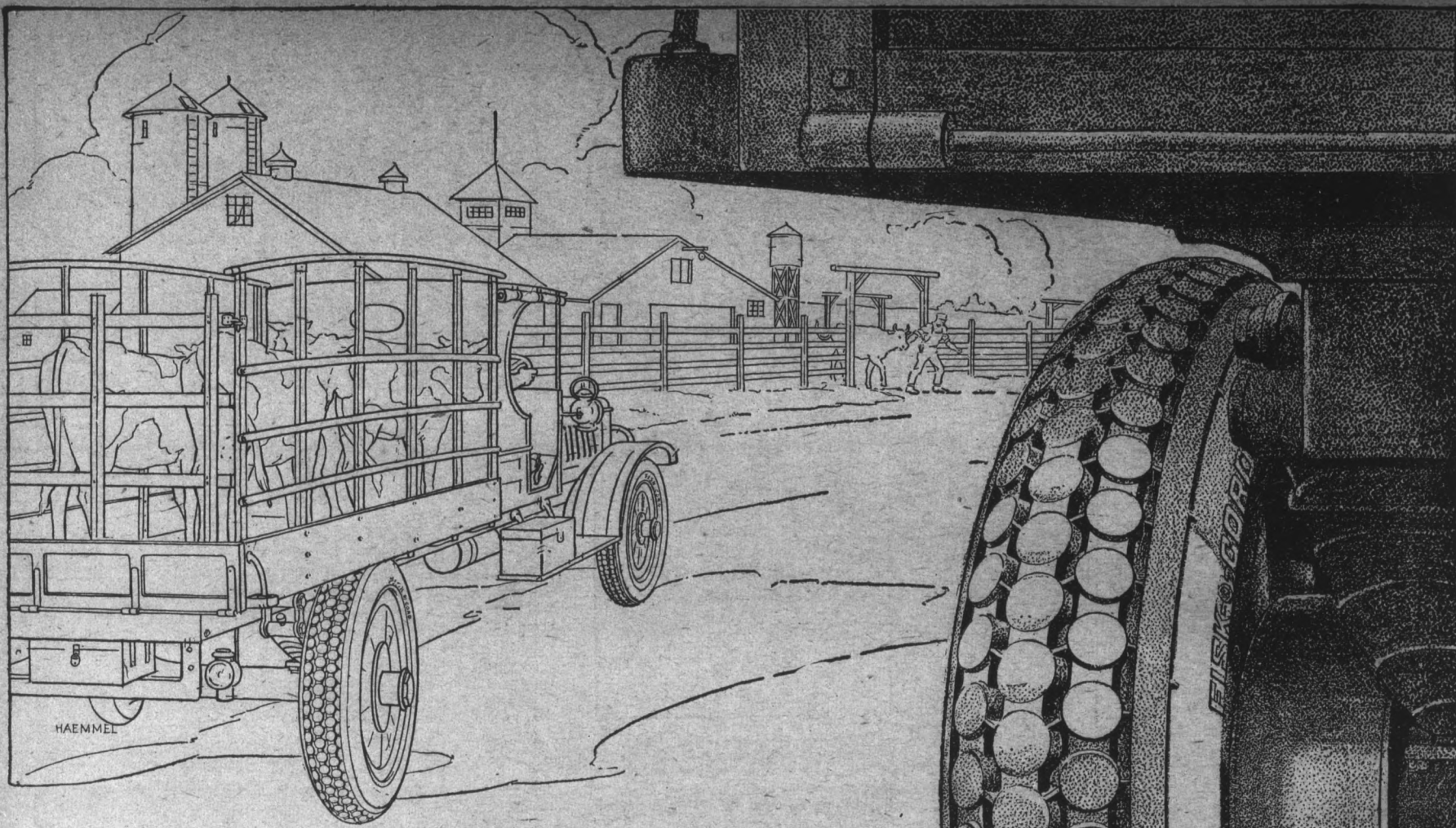
Wyandottes Free range flock 80 Duston's White Strain hens mated to 7 Martin's Regal Strain Cockerels, 15 eggs by Parcel Post \$2.00 by ex. \$3 per 100. VERN MOORE, Hartford, Mich.

White Wyandotte eggs for hatching, \$5.00, \$3.00 \$1.50 per 15, \$7.00 per hundred. Pen No. 1, \$10 per 15. DAVID RAY, 709 Norris St., Ypsilanti, Mich.

Okah White Wyandotte eggs for hatching, \$2.00 per 15, \$10.00 per 100 prepaid. E. W. BANKS, R. 3, Box 178, Lansing, Mich.

Silver, Golden & White Wyandottes from fine quality stock. Eggs by P. post prepaid \$3.00 per 15, \$5.00 per 30, \$8.00 per 50. O. W. Browning, R. 2, Portland, Mich.

Pekin ducks, either sex \$4.00 each. Mammoth Bronze turkeys, Toulouse geese, S. C. W. Leghorn cockerels, Berkshire gilts and sows. Chase Stock Farm, Marlette, Mich.



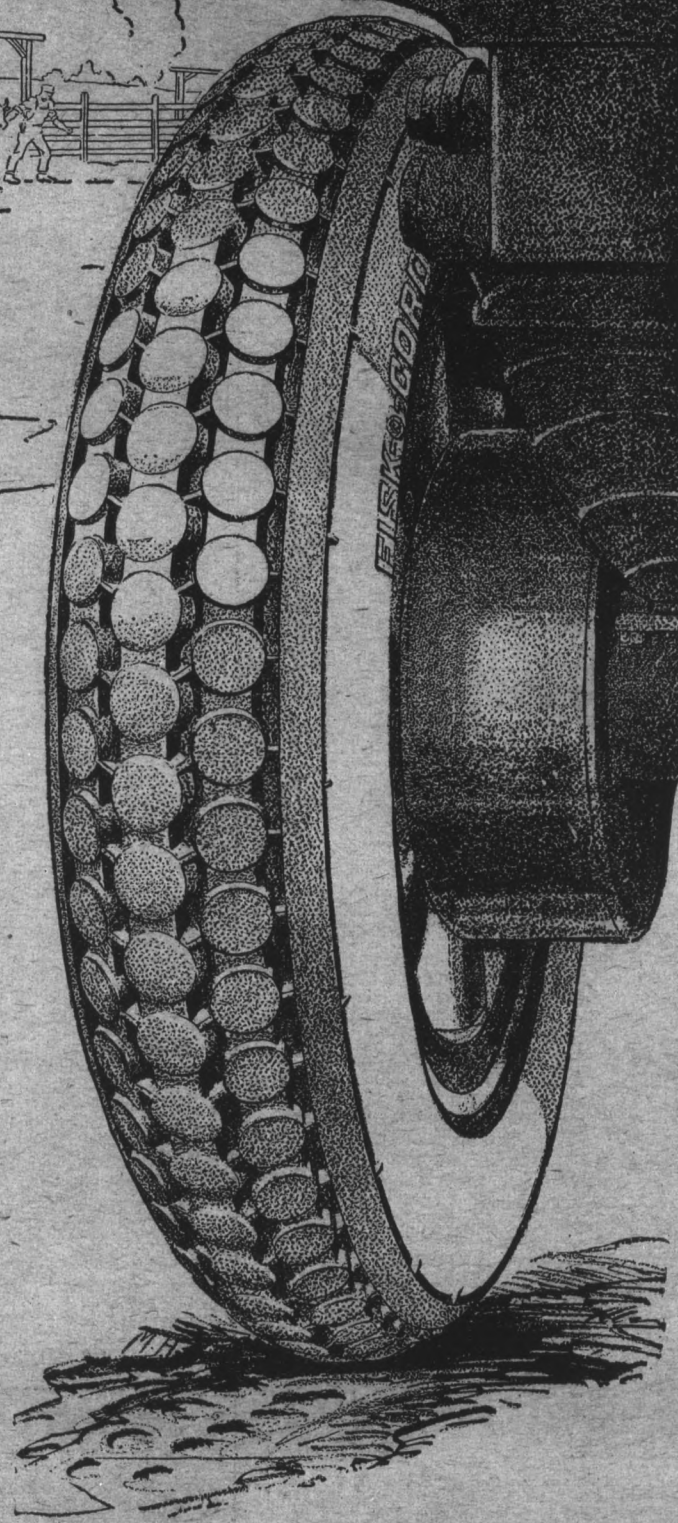
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