

# MICHIGAN FARMER

AND  
**LIVE STOCK**  
PUBLISHED WEEKLY.

**JOURNAL.**  
ESTABLISHED 1843.

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

VOL. CL. No. 13  
Whole Number 3986

DETROIT, MICH., SATURDAY, MARCH 30, 1918

\$1.00 A YEAR  
\$3.00 FOR 5 YEARS

## Opposition to Boys' Reserve Speedily Waning

**C**AN boys—untrained city boys of from sixteen to twenty years of age—be used to advantage on the farm? I put the subject as a question because there are still doubting Thomases and ultra-cautious Van Twillers mournfully shaking their heads in the negative—though happily their number is immensely smaller this spring than it was a year ago.

Of course, there are types of farms in our fruit and beet districts where the employment of young people at certain times of the year has always been more or less of a common practice, but barely a twelfth month has slipped by since the movement for their general mobilization for all kinds of farm work had its inception. Three out of every four farmers—and for that matter three out of every four men who were in touch with the agricultural affairs in any way—were lined up at the time among the scoffers. For my own part, I happened to be living in a community where the reception of the boy idea was not merely cool—it was downright frosty. And I must confess I deemed the scepticism of my neighbors to be pretty well justified.

However, that was a year ago. We are in the spring of 1918 now and as becomes men of open mind, most of these sceptics have turned over a new leaf—myself among them—because the Michigan boy, where he has been given a fair chance, has for the most part made good as a farm helper, made good, as history tells us boys have always made good.

Of course, there have been failures, as might be expected in any project involving a large number of individuals, but their number as compared with the total number of boys who enlisted for farm service in the campaign of production has been few—in fact, I don't know of a single one myself.

On the other hand, I do know of boys who in answering the calls to farms have buckled down and come through with colors flying. For example, a Grand Rapids boy, sixteen years old, the son of well-to-do parents, with other Grand Rapids high school youths, enlisted last spring in Kent county for work during the summer of 1917, not because he had to, but because he wished to perform some patriotic service—even if it should be nothing more glorious than cleaning out calf stalls.

He signed up in the office of County Agent Smith for a job at \$10 a month, and then climbed into a high-power automobile and was driven by his chauffeur to a farm well in the country. The chauffeur dropped him at the gate and the boy doffed his tailored clothes for over-

**In 1917 Hundreds of Chicago's Young Men Went to Assist Farmers in Caring For and Harvesting the Crops. Ninety Per Cent Proved Satisfactory According to Carefully Gathered Data. This Year These Farmers and Their Neighbors are Eager to Get the Young Men Back.**

alls—this was a boy mind you, who'd never been near enough to work before to soil his hands.

The farmer set him to cleaning calf stalls—because none of his other men on the farm would deign to look at the job.

"Didn't bother that boy any, though," the farmer told me. "He got down to business without a grumble. In fact, that's the way he did everything. He

er individual on that particular place.

Then there was another youth who started out in June at \$15 a month, but who picked up the ways of the farm so readily that his employer voluntarily raised him to \$30 by the first of September, making him a full-fledged hired man.

Statistics show that during last summer more than seven hundred boys, between sixteen and twenty years of

every one of these letters commended the boys and their work and expressed a desire to have a boy sent to them again this year.

Without doubt, many who are ridiculing this movement, are conscientious in the course they are taking, but the conclusions upon which they base their opposition have been deduced from the erroneous data. In most cases it is assumed that these boys will come to the farmer entirely uninformed and inexperienced concerning the work. Nothing could be farther from the facts in the case. No boys will be sent out this year without first having been carefully instructed concerning the duties which they will be expected to perform. In Detroit, for example, the school board and the principal are cooperating with the government officials in a thorough campaign of preparation and instruction for the work in hand. The school year has been shortened by two months so as to make it possible for the boys to go out May 1, and \$12,000 has been appropriated for the purpose of financing the inspection and care of the boys while they are engaged with their country employers.

All of the Detroit boys, who enroll, will be given a thorough course in the elementary details of handling machinery, horses and cattle. The boys will be taught to clean and harness horses properly, to clean stables, harnesses and vehicles. They will be taught how to operate and care for, and will be made thoroughly conversant with the various details of farm machinery, by practice work in taking it apart and putting it together again.

The men who have charge of the organization of the Michigan Boys' Working Reserve have had an intimate experience with the education and management of boys; many of them are old, experienced farmers, who firmly believe that they see in this boy movement some relief for the farm labor problem in Michigan and who are very anxious that their brother farmers shall see the matter as they see it.

Of the Reserves Gov. Sleeper writes:

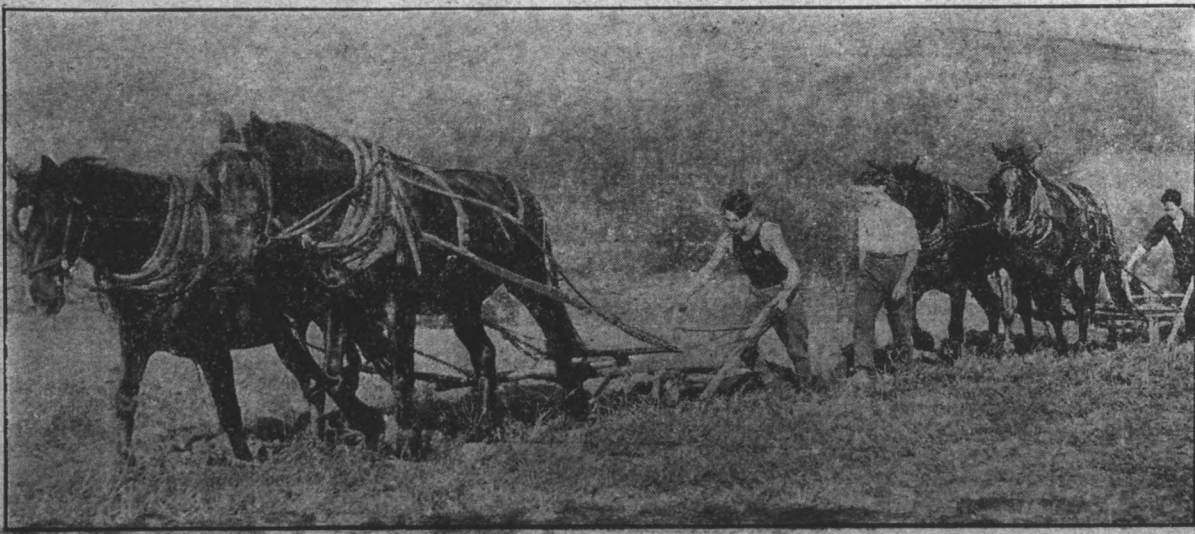
"Under the abnormal conditions which prevail, the town and country must cooperate as never before; and the way has been found. Boys in the cities and towns should realize that by enrolling for work on the farms they are undertaking a real patriotic service. Boys on the farms should remain there, and enroll in the Reserve. The United States Government will recognize these boys as soldiers of the soil, and they will be entitled to wear the honored emblem of this branch of the service."



These High School Boys from the Best City Families have Practical Schooling in Care of Horse, Farm Machinery, etc., Before Reaching the Farm.

was green and all that, to be sure, and age, from the city of Chicago, worked on farms located in the states that immediately surround the great metropolis of the middle west, and they also show that ninety per cent of these lads made good. The promoters of the Boys' Working Reserve of Chicago have received letters from five hundred and sixty-five farmers, who had boys on their farms last summer, and

As for the boy, he changed in two months from a spindling youth who couldn't lift half a sack of cement off the ground, to a young man who could toss around about as much as any oth-



In a Short Time these Young Men Became so Competent that Farmers Entrusted them with their Most Valuable Teams.



# The Michigan Farmer

Established 1843.

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## The Lawrence Publishing Co.

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39 to 45 Congress St. West, Detroit, Michigan  
TELEPHONE MAIN 4525.

NEW YORK OFFICE—381 Fourth Ave.

CHICAGO OFFICE—111 W. Washington Street.

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

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### TERMS OF SUBSCRIPTION:

One Year, 52 issues.....\$1.00

Two Years, 104 issues.....\$1.50

Three Years, 156 issues.....\$2.00

Five Years, 260 issues.....\$3.00

All sent postpaid.

Canadian subscription 50c a year extra for postage.

### RATES OF ADVERTISING

45 cents per line agate type measurement, or \$6.30 per inch (14 agate lines per inch) per insertion. No advt. inserted for less than \$1.35 each insertion. No objectionable advertisements inserted at any price.

Member Standard Farm Papers Association and Audit Bureau of Circulation.

Entered as second class matter at the Detroit, Michigan, post office.

DETROIT, MARCH 30, 1918



### CURRENT COMMENT.

#### The Supreme Test of Patriotism.

With the world anxiously awaiting more authentic news of the most gigantic battle in all history, which is now being waged in France against the allied defenders of human rights and national liberty by the hosts of an autocratic power seeking world domination, it is well for each of us to pause for earnest thought on our own patriotic duty in the present emergency.

So often has the patriotism of the farmers of this country been appealed to for increased food production as essential to the winning of the war, notwithstanding the increasing handicaps with which they have been confronted; in so many cases have they loyally responded without adequate financial reward for their effort and sometimes with serious loss, that in many cases they have become weary with well doing, and have harbored a most natural feeling that they were unfairly treated by the government, which is giving profitable contracts to manufacturers everywhere for the production of war necessities. This feeling is just as naturally intensified by reading the frequent reports of inefficiency in high official places and inadequacy of production in the vitally necessary departments which have been stimulated at such vast expense.

Undoubtedly there is just ground for many of the criticisms which have been made with regard to the conduct of war preparations. Unquestionably there are incompetent men in charge of many important government activities at the present time. Undeniably there are some profiteers who are taking advantage of the country's necessity, even in the present emergency. Exposures and criticisms are necessary and helpful to the end that such incompetence and dishonesty may be eliminated, but they should not be permitted to shake our faith in the government's integrity or in the patriotic work of the thousands of officials and citizens who are giving their best efforts with scant recompense to aid their country in its hour of greatest need. It is as unfortunate as it seems to be unavoidable that the incompetent or dishonest official or the profiteering

capitalist should find a place for his activities in the present crisis, but it is a matter for congratulation that they are but a small minority and will constantly grow less in number as the war work progresses. And seeming incompetence is not to be wondered at when we consider the appalling magnitude of the task to be accomplished. Indeed, when this is considered we may well marvel at the progress which has been made.

We are prone to underestimate the crisis which we are facing because of the distance of the theater of active operations. But if the hosts of autocracy are now pouring their legions across our shores, or penetrated our exposed borders; if they were training their high-powered guns of seventy-six mile range on our own capital, or practicing the frightfulness which is but another name for their vaunted "Kultur," nothing would deter any one of us from doing our best "bit" to save the day.

Calm thought and reflection will convince each of us that this is just as necessary in the present emergency. The principle of liberty is just as much at stake. The most earnest pacifist has but to consider what has happened in Russia since the signing of a separate peace to be convinced of it. It is not only wholly right and proper, for us to insist on fair consideration and a square deal for food producers in all matters of government regulation. This is our duty as well as our right. But we must at the same time measure up to the supreme test of patriotism and place the country's need before our personal interests and help in every possible way to win the war and save the world from the ambitions of autocracy, and do it now. To this end we must produce as much food as possible, buy Liberty Bonds to the limit of our ability and subscribe liberally to war relief funds, in addition to cheerfully enduring such privation as may be necessary in order to feed our armies and our allies so that this end may be accomplished.

This test may be a severe one before the end is accomplished. But the farmers of Michigan and the country will be equal to it. If all other classes of our citizens withstand it equally as well, the war will be won and the cause of liberty will prevail.

#### Save Wheat Flour.

The United States Food Administration has called public attention to the fact that if we are to furnish the Allies with the necessary proportion of wheat to maintain their war bread from now until the next harvest which is a military necessity, we must reduce our normal monthly consumption at least fifty per cent or to 21,000,000 bushels a month as against a normal consumption of 42,000,000 bushels. This amount, according to the computation of the Food Administration, leaves for home consumption approximately one and a half pounds of wheat products weekly per person.

A special appeal is made to the well-to-do in our centers of population who can make greater sacrifices in the consumption of wheat products than can the poor, also to the population of agricultural districts where other cereals are more abundant, and where the housewives are more skilled in the preparation of other cereals than is the case in the crowded centers of industrial population. General attention is called to the fact that there is now available a surplus of potatoes and of milk which, with the supply of corn and oats available will afford an excellent and nutritious diet.

In order to affect the saving of wheat voluntary assistance of the American people is asked in the observance of the following rulings:

1. Householders to use not to exceed a total of one and a half pounds per week of wheat products per person. This means not more than one and three-quarter pounds of Victory bread

containing the required percentage of substitutes and one-half pound of cooking flour, macaroni, crackers, pastry, pies, cakes wheat breakfast cereals all combined.

Public eating places and clubs have to observe two wheatless days per week Monday and Wednesday, as at present. In addition thereto, not to serve to any one guest at any one meal, an aggregate of breadstuffs, macaroni, crackers, pastry, pies, cakes, wheat breakfast cereals containing a total of more than two ounces of wheat flour. No wheat products to be served unless specially ordered. Public eating establishments not to buy more than six pounds of wheat products for each ninety meals served thus conforming with the limitations requested of the householders.

3. Retailers to sell not more than one-eighth of a barrel of flour to any town customer at any one time and not more than one-quarter of a barrel to any country customer at any one time, and in no case to sell wheat products without the sale of an equal weight of other cereals.

4. We ask the bakers and grocers to reduce the volume of Victory bread sold, by delivery of the three-quarter pound loaf where one pound was sold before, and corresponding proportions in other weights. We also ask bakers not to increase the amount of their wheat flour purchases beyond seventy per cent of the average monthly amount purchased in the four months prior to March 1.

5. Manufacturers using wheat products for non-food purposes should cease such use entirely.

6. There is no limit upon the use of other cereals, flours, and meals, corn, barley, buckwheat potato flour, etc., etc.

This voluntary cooperation by the public will be supplemented by such limitation of distribution as may be necessary until the arrival of harvest time, until which time the public is asked to bear with the hardships involved with the necessary patience. While limitation of distribution may be necessary to gain the needed cooperation in wheat saving in industrial centers, voluntary cooperation on the part of the farm families will undoubtedly be general. Such cooperation will be an important factor in meeting the present military necessity, and, while involving a commendable degree of personal sacrifice will really not entail great hardship in its accomplishment.

#### Sow Spring Grains Early.

The law of averages seems to have operated to bring an early spring following an unusually severe winter. Not in many years has the ground become settled so that it could be worked so early as is the case this spring. The unusually warm March weather following the heavy spring rains has made possible early preparation for spring grains on all well drained Michigan soil. While these specially favorable weather conditions will doubtless be interrupted, yet there is every indication that spring grains may be sown earlier this year than in ordinary seasons. Advantage should be taken of this fact wherever possible, not only because of the labor shortage, but as well because better yields are generally secured where spring grains are sown early. This is particularly true of spring wheat, of which a larger acreage will be sown in Michigan than ever before. It is also true to an almost equal degree with barley and oats of which there will be a large acreage sown this spring. With peas, early sowing is still more important. We should improve a favorable opportunity for the early sowing of the spring crops this year.

### HAPPENINGS OF THE WEEK.

#### Foreign.

The European War.—The long heralded drive of the Teutonic forces on the western front was initiated last Thursday on a line fifty miles long extending from Arras to La Fere. Germany and her allies are using over 1,000,000 men in this greatest struggle in the world's history, the immediate object of which is to break the Allied lines and open the gateway to Paris and also to the French coast towns. The British line has been forced back

as far as twelve miles at some points. Berlin reports that Peronne, Ham and Chuny have been taken, and that bitter fighting is now in progress for Bapaume. This is a portion of the territory given up by the Germans a year ago, when they retreated to the famous Hindenburg line. It is further stated from Berlin that fully 30,000 British troops have been captured and about 600 guns taken. The sacrifice of the Teutons, however, apparently has been tremendous. Their attacks were made in mass formations on a scale never before attempted. The strategy of the British defense has been to gradually retreat and at the same time pour a deadly machine and artillery fire into the advancing columns. Every imaginable device for fighting that can be of any possible advantage, is being employed. Probably the latest innovation is a German gun that is throwing shells from St. Gobain Wood near Laon to Paris, seventy miles away. The northern portion of the line attacked appears to be holding. On the twenty-fourth the Canadian troops in the vicinity of Lens carried out a gas drive that resulted in a heavy loss to the enemy. The drive was on a scale hitherto unknown. After the first four days of fighting the Allied organization is intact and seems to be gradually gaining advantage through the retreat toward their stores of supplies, while the Teutons are slowly finding it increasingly difficult to bring up men and munitions over ground that has been laid waste by shell fire. The world is anxiously waiting the outcome of the terrible struggle. It is reported from Washington that Germany undertook the drive at this time to anticipate a joint land and sea campaign by the Allies. Military authorities predict a naval battle of similar proportions to the struggle that is now going on in northern France. The expected sea struggle will in all probability occur in the North Sea. While Berlin reports are to the effect that American troops were opposing them, in this great drive, it is generally believed that the units involved were engineers and other special corps who were cooperating with the British and French in northern France.

Last week the American government seized Dutch ships interned in American ports. England did the same with Dutch vessels in English harbors. Holland has protested and now threatens to split with the Allies by reason of this seizure, which she contends to be an unfriendly act.

Japan delays the movement of troops into Siberia. Uncertainty regarding the political and military situation in Russia and the attitude of the United States, in particular, regarding the expediency of such a movement, are ascribed as the reason for this delay.

President Carranza has declined to accept, on the grounds of unconstitutionality, the recent increase in his salary granted by the legislature and incorporated in the budget for the coming fiscal year.

#### National.

Approximately 230,000 men are now engaged in shipbuilding in American yards. There are about 600 ships under course of construction.

The pooling of supplies of fuel oil to satisfy the needs of essential industries has been ordered in the new distribution regulations of the government. These orders are to be carried out where necessary, regardless of existing contracts.

It is assumed that the risk in navigating through the war zone has been greatly lessened since announcement of the treasury department at Washington that insurance on hulls and cargoes has been reduced three per cent and life insurance from fifty cents to twenty-five cents per \$100 of payroll.

The Department of Labor through the woman's committee of the Council of National Defense will inaugurate the campaign on April 6 to prevent the loss by death of at least 100,000 children in the United States. Michigan's quota of this number is 2,800, which is based on an estimated population of 298,654 children under five years of age.

Secretary Houston, of the Department of Agriculture, has issued a call to urban people to study the farm labor situation and to render such assistance as they can to farmers during the coming season. In most of our cities and towns are large numbers of persons who have had farming experience and who could render satisfactory service on farms.

Treasury officials and congressional leaders have agreed to a bill authorizing the sale of 200,000,000 silver dollars now in the treasury. Silver producers and dealers have agreed to sell the country's entire output for the next year and two years if necessary, to replace the silver taken from the treasury's monetary stock.



# Market Reports Gathered on a Scientific Basis

Every Farmer in the Great State of Michigan Should Consider Carefully the Source of His Market Information. It Should be Gathered by Men Who Have No Financial Interest In the Crops or Produce Reported Upon.

**B**UT few fully realize the comprehensive marketing service established by the United States Bureau of Markets. Since the problems of marketing have been understood as of economic value to producers, adequate and reliable market information has been held as of first importance in the solution of these problems.

The principle features of this market reporting service are as follows:

1. The daily reports show the carlot shipments of important fruits and vegetables for the entire United States; a statement of the f. o. b. prices and market conditions existing at important shipping centers; a statement of daily carlot receipts in the important consuming markets and the jobbing prices prevailing from day to day.

2. The reports are issued daily during the heavy shipping season of any one commodity, and cover all important perishable food commodities, including apples, cantaloupes, grapes, onions, peaches, white potatoes, sweet potatoes, tomatoes, watermelons, celery and also dry beans.

3. The information given as to carlot shipments and arrivals is obtained from the railroads. The price information is compiled by salaried representatives of this Bureau stationed in the principal markets and shipping areas of the country.

4. A report of the cold storage holdings of the most important food products in the entire United States is issued semi-monthly. This report shows the total holding in cold storage, the percentages of decrease or increase, and a comparison of the total figures with those of the corresponding period of the previous year.

5. Each Tuesday afternoon a "Weekly Market Review" is issued by the Bureau. This review is a summary of the daily market reports and is a brief, concise review of trade conditions and prices of the preceding week.

6. Any person wishing special telegraphic quotations from any important market on

commodities being reported upon can arrange with the nearest office of the Bureau of Markets to secure this information daily, the only cost being the expense of wiring from the government office.

7. Federal inspectors are now being located at most of the important markets of the country for the purpose of investigating and certifying to the condition as to soundness of fruits, vegetables and other food products. This makes it possible for an upstate shipper to verify the report of a commission man or dealer on the condition of a carload of potatoes, or apples or peaches. If the dealer reports that peaches are in a "rotten condition" the producer simply wires the federal inspector to investigate. This officer examines the fruit and makes out a statement which will be received in all courts as prima facie evidence of the condition of the fruit at the time of inspection. Armed with this state-

ment the producer is in a good position to compel the dealer to settle on a just basis. A list of the cities where federal inspectors are now located, or are to be located, will be found below.

## How the Information is Secured.

It would be difficult and practically impossible for a private concern or association to secure this data. But armed with the power and authority of the government the agents of the Bureau of Markets who go out to gather the news, have the obstacles well overcome—these men can demand information if it is not voluntarily given, and by reason of their governmental connections reports are made to them with more care than it usually would be to a private party.

To secure data on the situation at shipping points, the Bureau of Markets maintains field stations in principal producing sections during the busy shipping season. Daily wires are sent to Washington quoting prices at which

the bulk of the crop is moving, information as to the demand, movement and quality and condition of the crop.

While the agents located in the producing sections are forwarding their findings other men occupying permanent stations in leading jobbing centers of the country, compile daily telegrams giving quotations at which the bulk of sales are being made, the number of cars of perishables arriving, and when possible to do so, the number of cars on track, together with a statement of the market conditions prevailing.

Then the Bureau is in touch with the division superintendents of all railroads in the United States, who send daily telegrams to Washington, giving the number of cars of the various commodities which moved from their respective territory during the preceding twenty-four hours.

Thus it will be seen that the Bureau at Washington is in wire communication with the producing districts, the market centers and the transportation companies, and has exact data on prices, supplies, and demand at the point of origin and the destination of the shipments, as well as knowledge of the quantity of the various crops moving.

The foregoing information is arranged and wired daily over leased telegraph lines to the various offices throughout the country. One of these offices is located in Detroit from which office the Market Department of the Michigan Farmer secures quotations and information on the condition of trade in the many market centers of interest to its readers, and distributes this news throughout the great state of Michigan. The market page is held to the very latest minute that readers may secure the best possible use of this valuable federal service.

While the work of this Bureau of the Department of Agriculture has already become of great economic importance to the country and especially (Continued on p. 423).



The News of the Various Markets of the Country is Wired to Detroit Office of Bureau of Markets and from there Sent through the Columns of The Michigan Farmer to its Thousands of Readers. Special Free Market Service will be Provided on Request.

## How Can the Farmers Raise More Crops With Less Labor?

By COLON C. LILLIE

**A** FRIEND, after reading my article, "The Farmer Will do His Share," asked me the following question: "How can a farmer do it? He is expected to raise more crops with less labor. Are you not asking the impossible?"

I cannot tell just exactly how the farmer is going to do it, only I am satisfied that he will do it, because he has got to do it. We are going to ask in many instances almost superhuman effort on the part of our army, the boys who are going "over there" to whip the Germans. We expect them to do the job. We are not going to be satisfied unless they do—and they are going to do it. That is what they are

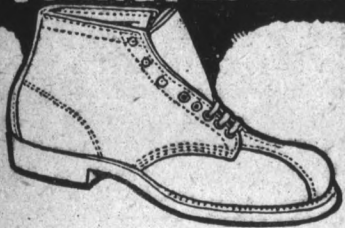
going for. America is in this struggle, not from choice, but from duty. We have gone into it after careful deliberation, believing it the only course for this nation to take and have any self-respect whatever, and we are asking our soldiers to go to France and with the assistance of the British and the French to practically annihilate Prussianism. Personally, I do not expect they are going to do the whole job this year, but next year they are going to give Prussianism a "knock-out" blow. Now, it is not asking too much of the farmers to put their shoulder to the wheel, to draw their belts one hole

tighter if necessary, and produce enough to see that these soldiers are properly fed, clothed and taken care of. Where is the labor coming from? I don't anticipate there will be as much trouble about this as many people seem to think. Some people are wringing their hands now and getting hysterical about the matter, but that is no way to do the job. Why, there are enough of us "old fellows" over fifty years of age, and above that, who have not been performing much physical labor in the last few years, taking what we consider a well-earned let-up to hard physical labor. There are

enough of us, I say, to take the place of the young men who have been taken from the farms. We can do the work and we will do it. The white collars and the boiled shirts can be laid aside for a year or two if necessary, and believe me, one of us fellows who hasn't been doing much of this physical labor lately is worth more than two or three city fellows you can get who have no farm experience, and it won't hurt a bit. We can "come back" on the farm labor proposition and it won't be asking as much of us either, as the government is asking of the boys who go to France to perhaps die in the trenches. All we have got to do is to set the



## "FARM-WEAR" SHOES FOR SPRING PLOWING



THEY are made especially for farm work—double-tanned to make the leather flexible and to protect it from the effects of uric acid. That means they look better, feel better and wear longer.

### "Farm-Wear" Shoes For Farm Wear

are made in four heights—black and chocolate—extra wide treads. Try a pair. You'll say "they are the best plow shoes I ever wore".

If your shoe merchant doesn't handle them, tear out this ad, write your name, address and size in the margin and mail to us—we'll do the rest.

NUNN & BUSH SHOE CO.  
Dept. 524 Milwaukee, Wis.



## Did You Get Our LOW PRICES ON ACID PHOSPHATE Nitrate of Soda, Fine Ground Bone?

IF NOT, write us at once, before placing your order for

### FERTILIZER

Sears, Roebuck and Co.  
Dept. 51F CHICAGO, ILL.

### MORE DOLLARS From Every Acre

Every farmer who is interested in growing bigger crops at lower cost ought to know all about the

**KRAUS PIVOT AXLE CULTIVATOR**

Helps solve labor shortage—any boy old enough to drive can work it. A touch of the foot guides shovels and wheels to right or left through crooked rows or rough hillsides; the horses do the rest.

Cultivates Closer and Better at Half the Labor Cost

Simplest in construction, least number of parts, nothing to get out of order. Outwears two or three ordinary riding cultivators. Government statistics sent to prove it. The Akron Fertilizer Distributor for commercial fertilizer, attaches to Cultivator. A big step ahead.

Write to-day for valuable free booklet.

**THE AKRON CULTIVATOR CO.**  
Dept. 62 Akron, Ohio.

### 8 HOURS WORK-4

In planting season when your time is worth money it is a big saving to be able to plow, disc, harrow and level your fields all at one time. This can be done with any plow you have, except walking, by attaching a

**KRAMER ROTARY HARROW**

and using the same power you had before. It makes a better seed bed also which means bigger crops. Write today for our new circular and prices. DEPT. 62

**Kramer Rotary Harrow Co., MORTON, ILLINOIS**

**CLOVER AND TIMOTHY 4-50**  
45 LBS. BAGS EXTRA 30C EACH 20 PER CENT CLOVER  
YOUNG-RANDOLPH SEED CO., Owosso, Mich.

alarm clock a little earlier in the morning and work a little longer at night. We can go back to first principles on the labor proposition and we can do as our forefathers did and put in a fifteen or sixteen hour day. We can do this much willingly for Democracy and the Flag. All of us can work a little harder. This will have a beneficial effect on the hired help and upon the whole family. Besides, for one or two years now it won't be asking very much of the retired farmer, or of any farmer, if he doesn't have as many vacation days as he has formerly had. Dr. Jordan, in speaking at Lansing the other day, said that the National Food Commission worked Sundays as well as week days, and they didn't think that they could do anything more righteous on Sunday than working for the good of the cause. If it is necessary, we farmers will do the same thing. If there is pressing work to be done on the farm the best way a farmer can celebrate Decoration Day or Fourth of July during this war, is to stay at home and do that work. If we will all do this there isn't any question but what the work can be done.

Neither do I believe that there is any use of bidding up to exorbitant figures for farm labor. If you can't get it for a decent figure you can't get it at all. With the prices fixed for

farm products, there is no use of the farmer attempting to bid against the munition and war supply manufacturers because they are working on a cost and profit basis, they are simply in shape to bid higher than the farmer. Let them have this labor. Those things must be done. There is no use in the farmer bidding against the automobile manufacturer, because their profits are such that they can beat the farmer out at this game, and so, instead of offering wages that we can't afford to pay, let's do the work ourselves.

We will be working for a great cause. We ought to do this work joyously. We ought to consider it a privilege to be able to do something for the benefit of humanity. Our forefathers in gaining their independence from Great Britain and establishing a government on the great principle that all men practically are created free and equal, that every man is entitled to life, liberty and the pursuit of happiness, that every man is a sovereign himself and has the privilege of doing what he chooses to do so long as he doesn't interfere with the rights of others; our forefathers, I say, when establishing this form of government, made sacrifices that we will probably not be called upon to make. Our forefathers also, in defense of these principles in our Civil War did more than we will have to do, and now when the final test comes we ought not to shirk and I don't believe we will.

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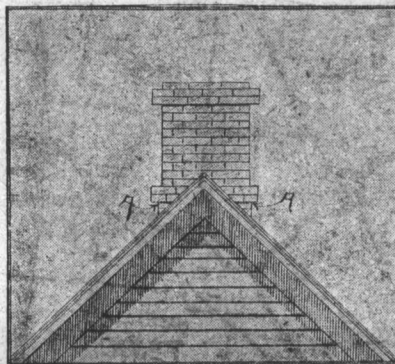
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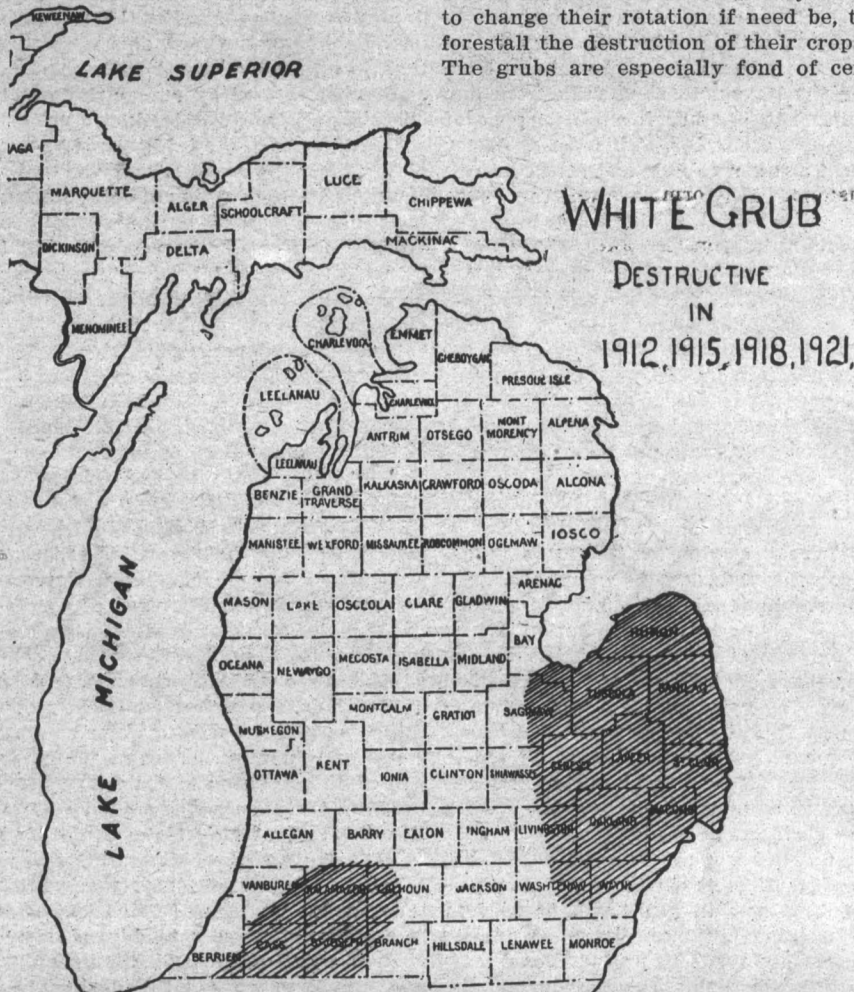
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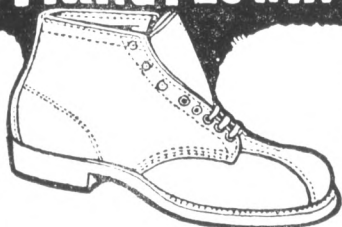
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## "Farm-Wear" Shoes For Farm Wear

are made in four heights—black and chocolate—extra wide treads. Try a pair. You'll say "they are the best plow shoes I ever wore".

If your shoe merchant doesn't handle them, tear out this ad, write your name, address and size in the margin and mail to us—we'll do the rest.

NUNN & BUSH SHOE CO.  
Dept. 524 Milwaukee, Wis.



alarm clock a little earlier in the morning and work a little longer at night. We can go back to first principles on the labor proposition and we can do as our forefathers did and put in a fifteen or sixteen hour day. We can do this much willingly for Democracy and the Flag. All of us can work a little harder. This will have a beneficial effect on the hired help and upon the whole family. Besides, for one or two years now it won't be asking very much of the retired farmer, or of any farmer, if he doesn't have as many vacation days as he has formerly had. Dr. Jordan, in speaking at Lansing the other day, said that the National Food Commission worked Sundays as well as week days, and they didn't think that they could do anything more righteous on Sunday than working for the good of the cause. If it is necessary, we farmers will do the same thing. If there is pressing work to be done on the farm the best way a farmer can celebrate Decoration Day or Fourth of July during this war, is to stay at home and do that work. If we will all do this there isn't any question but what the work can be done.

Neither do I believe that there is any use of bidding up to exorbitant figures for farm labor. If you can't get it for a decent figure you can't get it at all. With the prices fixed for

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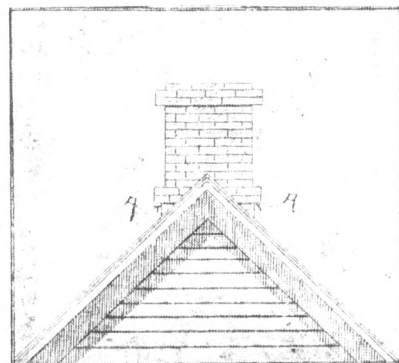
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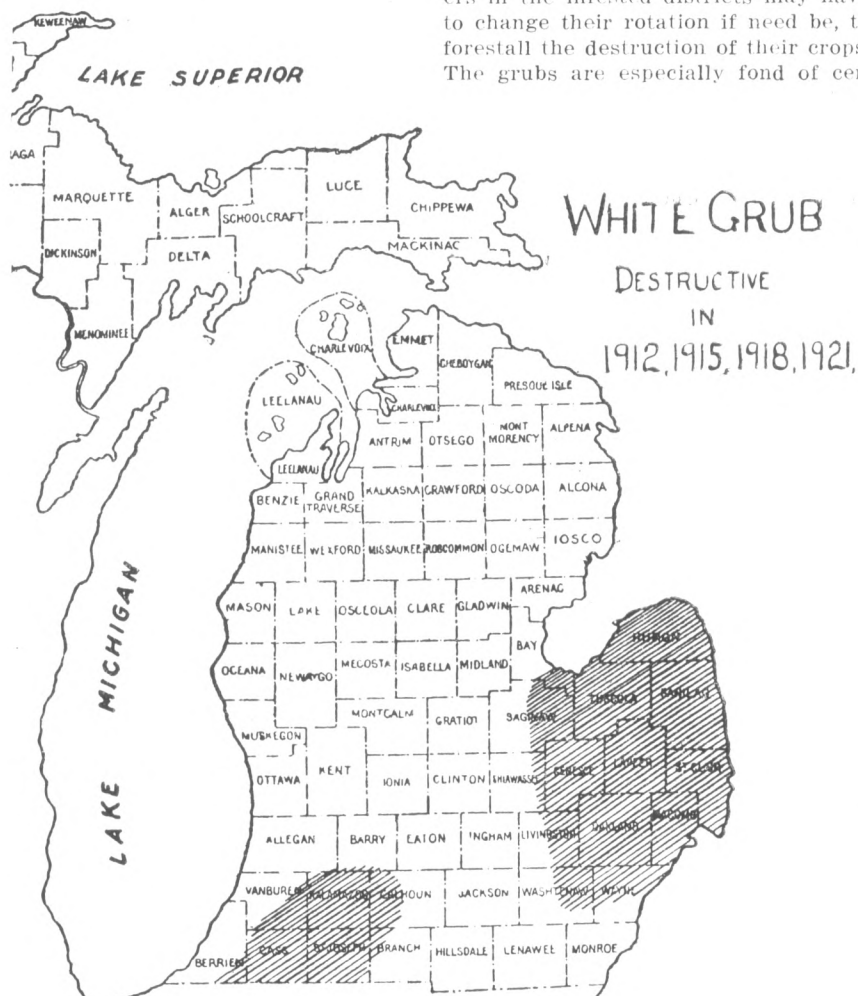
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"I would not take \$1,000 for my Caloric Pipeless Furnace if I could not get another one. My house is 24x28, 2 stories high, and it heats it all over, up stairs and down, with less coal than it would take to run a 16-inch heating stove. I am first, last and all the time a booster for the Caloric Furnace."

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Greenfield, Iowa

"I cannot praise my Caloric Pipeless Furnace enough. No money could buy it if I could not get another one like it. I have three rooms and kitchen and store room down stairs, five rooms and bath up stairs; the furnace heats it to perfection with less fuel than 3 stoves which kept only part of the house heated."

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LET me show you how to solve the drainage, irrigation and soil washing problems at low cost. I'll show you how two men can now do more ditch work than 100 men by old methods. This is the year to save labor and do this work swiftly and efficiently. I'll show you the way. Write for the new book that tells the story.

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Farm  
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I Want You  
to Know  
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Builds farm terraces which stop washing of soil on rolling and hillside land and hold the water where it should remain; reclaims abandoned washed land; throws up dikes and levees; grades roads; works in any soil, wet or dry; 2, 4 and 6 horse sizes; large size fine for tractor. Needed on every farm.

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Chance of a lifetime to make big money the next five years. Here is crop insurance at a low cost. Write and find out how to make big crops sure. New free book on drainage, irrigation and terracing. Write for this and our proposition. Address W. A. Steele, Pres.

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## Problems of Our Milk Producers

By R. C. REED

Secretary Michigan Milk Producers' Association

### MICHIGAN MILK PRODUCERS:

In these columns R. C. Reed, of Howell, your associational secretary, will give from time to time a summary of current news on the milk and dairy situation in this state, and advise you individually, and also your local association, how best to meet the various problems now confronting the producer. Watch each issue of the Michigan Farmer that you may be thoroughly and quickly informed on every step undertaken by your organization.—Eds.

MILK, the perishable product, should have certain nearby points of market. Each milk market should be distinct in itself, and should be dependent upon a definite producing territory. Attempts to secure an outside supply invariably demoralizes the market.

### Buyers' Methods of Keeping Down Prices.

The methods that have been used to cheapen milk prices and keep it below the cost of production, have been for the buyers to send milk from one market to another for the purpose of creating a surplus. This the producer must awaken to face and stand firm to prevent. For some reason, the cause of which I am not able to state at the present time, the condensaries in certain sections are piling up vast quantities of milk. Whether this is attributable to government action, or to the lack of shipping facilities, or to the termination on the part of the great condensing interests to force the price of milk down, are questions for investigation and final analysis.

Every local organization should be alive and awake at the present time. We must not allow the alertness of the great condensing interests to destroy this industry.

### An Impending Crisis to Meet.

Never since the organization of the Michigan Milk Producers' Association has there been a time when we needed more the wisdom of sound common sense, to help in the wise adjustment of means to ends, than we do today. The fate of the dairy industry in Michigan is hanging in the balance. With the curtailment of the amount of milk that is being made into the condensed product there is certain to be a corresponding surplus which will be used to destroy our city markets unless drastic efforts are made to protect these markets against this surplus during the next few weeks. We must solidify our organization to meet this impending crisis or hundreds of carloads of cows will leave our state.

While we know very little of the ins and outs of the present letting up in the manufacture of condensed milk, we do know that we must protect ourselves against the coming surplus if we succeed in stabilizing prices so that there shall be an inducement for farmers to keep their cows. With millions of people starving for nature's most perfect food on the one hand, and the big condensing plants shutting down production on the other hand, the situation is, indeed, puzzling to the best posted students of the present markets.

We are getting a great big lot of advice about the situation, and many prophecies, almost all, are to the effect that for the next few years, profits must come to the men who are willing to hold together and keep their good cows. So long as wartime feed prices continue it is going to mean that we must keep our heads and figure closely. It is no time to get rattled and all crowd to one side of the ship that is keeping us afloat. We must use reason and common sense in protecting our markets if we are to continue right along in the business.

### Must Handle Surplus Milk.

It is easy for the dairy farmer to sell his cattle and go out of the milk producing business, but it is not an easy matter for him to take up any new system of diversified agriculture by which he can make a good living and

maintain the productivity of his land. Remove the dairy cows from Michigan farms and it will mark the beginning of a decline of our agriculture. If we are to protect our homes, our farms and our investments in cattle, buildings and equipment, we must protect the dairy industry. The only logical way for us to do these things is to meet the impending crisis with a firm determination to handle this surplus of milk during the next few weeks so that it can not be used as a weapon against us to destroy our markets and bring about a general decline in prices.

The fact that the big condensary plants, throughout the country have accumulated a big surplus of canned milk and that they are beginning to cut down the output of the product should be well understood by every member of the Michigan Milk Producers' Association. It is my desire that every local officer shall make plans to explain these conditions to members and make every effort possible to hold them in line until the situation clears. It may be doing the condensary men an injustice to claim that they are holding up the situation, but it surely seems almost incredible that they should be going ahead with their work of erecting new plants and developing new territory unless they are assured of a profitable outlet for their product. Reasoning along the same lines it would seem advisable for our dairy farmers to hold on to their good cows and do everything possible to weather the coming storm and maintain prices so that they will be in a position to make fair profits from their cows.

### Tendencies that May Make Stabilizing of Dairy Business More Difficult.

In visiting many farms throughout the state of Michigan I find that there is a strong tendency to depend more upon pasture, silage and soiling crops and produce more milk during the summer months. On other farms the tendency is to sell the cows and grow up herds of young cows in hopes that by the time they reach maturity the milk situation will clear itself. I want to warn against these tendencies for I believe they are leading us in the wrong direction and that we must settle some of these vital problems of selling and distributing our milk before the dairy business of Michigan can ever be made to pay decent profits.

The producers who are planning to produce more summer milk figure that the manufacturers and feed dealers are controlling the cost of production during the winter months so that the price of winter milk is below the cost of production, which we all know the recent investigations in other states show. They reason that they can produce summer milk with less expense for purchased feeds. This is undoubtedly true but unfortunately we are facing a spring and summer surplus already and with the condensary plants backing up on handling this surplus the situation is becoming more serious every day.

### Why Support is Needed Now.

The producers who are selling their cows and growing up herds of young cows will find the situation no better in the years to come unless they stand by their guns and support your organization in its efforts to stabilize production and maintain prices through the present crisis. Michigan dairy farmers must settle these vital problems.

(Continued on page 426).

**BUY MYERS** PUMPS ALL KINDS  
HAY AND GRAIN  
UNLOADING TOOLS  
MYERS STAYON AND TUBULAR DOOR HANGERS AND TRACKS  
FROM YOUR DEALER OR IF MORE CONVENIENT  
WRITE US. ATTRACTIVE BOOKLET ON REQUEST.  
**F. E. MYERS & BRO.** 1121 ORANGE ST. ASHLAND, OHIO.





## The Farmer's Correspondence

By R. G. KIRBY

**B**USINESS houses have always been judged more or less by the appearance of their letters. Farmers formerly found little time for correspondence concerning their business and limited their writing to friendship letters. Now, it is interesting to study the farm journals and daily papers throughout their advertising sections and note how many farmers are carrying on a business that depends largely upon transactions through the mail. The number of farmers who must use business letters frequently, is rapidly increasing.

A good letter head is an excellent advertisement for a farm. This may contain the name of the farm and a list of its principal products for sale, or it may be illustrated with a clear photograph of a scene on the farm. A fruit farm should not illustrate its letters with a live stock photograph and a breeder of pure-bred stock would hardly wish to place a peach or an apple at the head of the stationery. This seems needless to mention, and yet it is surprising how many letter heads used by farmers are illustrated with photographs that really do not match up at all with the principal business of the farm.

A farmer need not know much about the printing business if he is willing to accept advice from a printer. They do know their business and are willing to advise a prospective customer concerning the best methods of illustrating and printing letter heads and envelopes to be used in the farming business. In all the writer's relations with other business men he has never found any class of men more willing to be helpful in a friendly sort of manner than the printers who were helping him to learn a few of the principal points of their business. The printer can become one of the best friends of the business farmer who must use letter heads, advertising circulars and many kinds of printed announcements. Most printers have samples of their work which are worth careful study before the order is placed.

### Writing the Letter.

A farm business letter should be clearly written to avoid misunderstandings. It must be short and to the point and yet not so short and carelessly written that essential information is neglected. A prospective buyer of live stock is often influenced by the type of a reply which comes from his inquiry. He appreciates a prompt answer and it pays to be prompt in all business deals that are carried on through the mails. A neglected letter may mean a lost sale. Many farmers who may have had poor results from advertising owe their failure to a general neglect to answer inquiries promptly and send along all information desired by the prospective customer. It is well to remember that an advertiser of a certain article is really competing for business with every other advertiser of the same product. The essential facts in two advertisements may be about the same, but the results of the advertising may be different because of the superior ability of one farmer to carry on a satisfactory correspondence.

For example, Smith and Jones both advertise pure-bred calves in the same farm journal. Then they are competing with each other to obtain the orders of any readers of that paper wishing to buy calves. It is apparent that the reader may answer more than one advertisement and then wait for the answers. Then the farmer's letter steps in as the second factor in the business transaction and if this letter makes a poor impression it may lose a sale, while if its business-like appearance appeals to the customer, an immediate transaction of business will result. If Smith can write a good letter to the buyer he will stand a better

chance of making a sale than Jones, if Jones writes carelessly and gives a wrong impression. This is apt to be true, even though the product to be sold is essentially of the same quality and value in each case.

### Filing Business Letters.

It pays to file all letters received from customers and all answers of importance. These may be valuable for future reference if any misunderstandings arise concerning a deal. The use of a typewriter and the making of a carbon copy of every important letter will prove of value to the business farmer. It is often desirable to know just exactly what you said in a letter written hastily ten weeks ago, and a carefully filed carbon copy will tell the story accurately.

### RELIABLE MARKET REPORTS.

(Continued from page 419).

to producers, (notwithstanding some of the mistakes it has made), the intelligence work is by no means the least of its constructive undertakings. Market news gathered by men who are unprejudiced, and financially disinterested, is much more reliable than information gathered and published by persons or concerns who buy and sell. Not only has the Bureau this advantage but through its organization it is now in a position to extend another valuable service to producers and co-operative organizations—the providing of federal market inspectors.

### Government Inspection of Fruits and Vegetables.

The Food Products Inspection Service is now available to shippers in the markets named below and it is expected that in the very near future the service will be established also in San Francisco, Denver, Detroit, Indianapolis, Atlanta, Birmingham, Buffalo and Omaha.

Baltimore, Md., Washington Office.  
Boston, Mass., C. E. Merrill, Inspector, 408 Fidelity Bldg., 148 State St.

Chicago, Ill., D. B. Pratt, Supervising Inspector, 604 Distributors' Bldg., 236 North Clark Street.

Cincinnati, Ohio, Howard E. Kramer, 307 Johnson Building.

Cleveland, Ohio, R. C. Butner, Inspector, 8 Exchange Bldg.

Dallas, Texas, Fort Worth Office.

Fort Worth, Texas, L. G. Schultz, Inspector, 505 Moore Bldg., Tenth and Main Streets.

Galveston, Texas, Houston Office.

Houston, Texas, Wesley V. Stephens, Inspector, 307 Southern Pacific Building.

Jacksonville, Fla., T. C. Curry, 909 Bisbee Building.

Jersey City, N. J., New York Office.

Kansas City, Mo., F. E. DeSelle, Supervising Inspector, 202 Produce Exchange Building.

Memphis, Tenn., L. J. Weishaar, Inspector, 804 Exchange Building.

Minneapolis, Minn., W. F. Selleck, Inspector, 300 Market State Bank Building.

New Orleans, La., F. H. Lister, Inspector, 314 Metropolitan Building.

New York, N. Y., E. L. Markell, Supervision Inspector, 707 Fruit Trade Bldg., 204 Franklin Street.

Oklahoma City, Ok., F. A. L. Bloom, Inspector, Bureau of Markets.

Philadelphia, Pa., R. J. Russell, Inspector, 315 Insurance Exchange Bldg., Third and Walnut Streets.

Pittsburgh, Pa., F. G. Robb, Inspector, 303 Kellerman Bldg., Eighteenth and Pennsylvania Avenues.

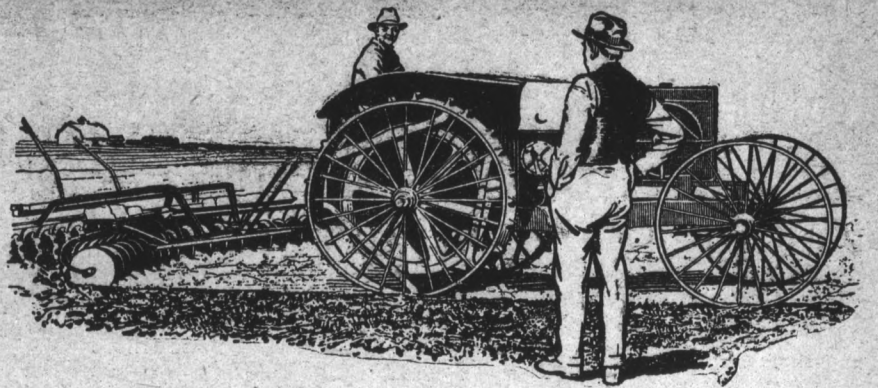
Providence, R. I., Boston, Office.

St. Louis, Mo., Fred T. Byran, Inspector, 400 Old Custom House, Third and Olive Streets.

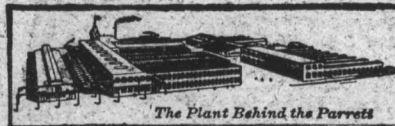
St. Paul, Minn., Minneapolis Office.

Washington, D. C., Supervision, W. M. Scott, C. T. More, Bureau of Mar-

kets



## "I Bought a Parrett Tractor Because It Has Been Tested for 5 Years"



This is what many a careful tractor buyer will tell you.

He, like you, prefers a tractor that has passed the experimental stage, that has proved its worth, that he knows can do the work well and economically.

For five years now the Parrett has served with remarkable efficiency in nearly every part of the U. S., in all kinds of soils and climates, even in such extremes as breaking the tough sods of the Northwest and working the rice swamps of the South.

This five years' experience has shown that you can depend on the steady service of the Parrett tractor, as a 3-plow, one-man, all-purposes, kerosene-burning tractor. The Parrett is self-steering in the furrow, requires no special hitch and can handle belt work equal to running a 20- to 26-inch separator with constant efficiency. It is a dependable all-around farm power unit.

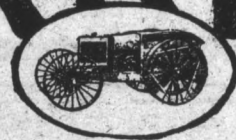
Write to nearest distributor or direct to us for catalog

**PARRETT TRACTOR COMPANY, 451 Fisher Bldg., Chicago, Ill.**

Michigan Parrett Tractor Co., Distributors, 306 Pine St. So., Lansing, Mich.

# PARRETT

12



25

## One Kernel in Each Cell as if Placed By Hand

And the desired number accumulated and dropped in each and every hill—that is the accuracy of the

**JOHN DEERE 999 Corn Planter.**

The Accurate Drop Planter

Natural Cell Fill, edge delivery seed plates are used on this planter—every kernel enters the cell in the seed plate in its natural position. The sloping hopper bottom feeds the corn to the cells whether the hopper is full or nearly empty. This is the most simple yet most accurate planting mechanism ever used on a corn planter. The dropping device will plant butt kernels without cracking the seed, or without losing its high grade of accuracy.



You control the number of kernels per hill. When the soil in the same field varies, rich, medium and poor—corn should be planted accordingly—2 kernels in poor soil, 3 in ordinary soil and 4 in rich soil. Change in drop to suit the soil can be made instantly and as frequently as desired with the John Deere 999 Planter merely by moving a foot lever. Not necessary to stop the team.

Also instant change from hilling to drilling and back to hilling—and the John Deere 999 gives nine drilling distances without changing seed plates.

### Valuable Books—FREE

"More and Better Corn"—Beautifully illustrated in four colors. Twenty-four pages of information interesting and valuable to every corn grower.

"Better Farm Implements and How to Use Them"—156 pages—tells all about a full line of labor-saving farm machinery. Worth dollars. To get these books state in which farm implements you are interested and ask for package CP-421.

**John Deere, Moline, Ill.**





## More Potatoes and Better Ones

When you spray only with poison you are not getting the return you should for your work. You need a fungicide also.

It was discovered long ago that potatoes produce more heavily when sprayed with a suitable fungicide.

The New York Experiment Station says—"It does not pay to spray for bugs alone." Their ten years' experiments with fungicides show an average yearly gain of 97 1-2 bushels of potatoes per acre. A nineteen-year test at the Vermont Station shows an average yearly gain of 109 bushels per acre.

Spray to prevent blight—it pays.

Bugs are bad, but blight is worse although the spores that cause it can be seen only under a powerful microscope.

Spray with **Pyrox** It pays

PYROX is both a poison and a fungicide. It kills the bugs and flea beetles, prevents blight, invigorates the vines, imparts a rich green color to the leaves, and gives the little potatoes a chance to become big ones.

Pyrox is a smooth, creamy paste, all ready to use by mixing with cold water. It mixes easily and saves time and labor. In a letter to a friend, the Editor of "The Fruit Belt" says: "I have made up many thousands of barrels of spray mixtures on the farm, and I can say to you I have mixed my last barrel. I now use Pyrox."

Pyrox is as good for apples, tomatoes and other fruits and vegetables as it is for potatoes.

Most good agricultural supply dealers sell Pyrox. Last year the demand for Pyrox exhausted the dealers' supplies. See your dealer at once about your supply or write for new Pyrox Crop Book. Address

## Bowker Insecticide Company

43 E Chatham St., Boston 1016 Fidelity Bldg., Baltimore

## PLANT FINN'S TREES FOR PROFIT

Mr. Planter if you are going to plant out an orchard this spring be on the safe side by planting my Guaranteed Trees. True to name, free from disease and packed so as to reach you in perfect condition.

	Each	10	100
See 2 yr. 6 to 7 ft. xxx Apples,			
Plums, Pears	\$3.00	\$2.50	\$18.00
2 Medium size 5 to 6 ft.	.35	2.00	15.00
Sweet & sour cherries 6 to 7 ft.	.35	3.00	24.00
Quinces xxx 4 to 6 ft.	.30	2.50	22.50
Medium size 3 to 4 ft.	.25	2.00	18.00
Peaches 1 yr. 5 to 6 ft.	.20	1.80	12.00
4 to 6 ft.	.15	1.35	9.00

Send for Free Price List of our leading varieties of small fruits and ornamentals.

JOHN W. FINN'S, Wholesale Nurseries  
Est. 1890 Dansville, N. Y. Box 21

## Get Cash

**For Your Empty Bags**  
Don't throw away a single bag—they're worth money to you. Prices are way up now. Cash in on all you have. But be sure you get our prices before you sell a single one. We guarantee most liberal grading. Over 20 years in business is your assurance of a square deal every time. We buy any quantity. Freight paid on all shipments to Werthan. Find out what real satisfaction is. Write quick, stating what you have. Address  
**WERTHAN BAG CO.**  
61 Dock St., St. Louis, Mo.

## GRASS SEED

**FREE SAMPLES**  
Wonderful Value  
Wholesale Prices  
Profits Divided  
with yours. Don't fail to investigate these bargains. Reel-tested Timothy \$3.25 bu., Clover \$14 to \$16, Alfalfa \$8. Alsike Clover and Timothy, Sweet Clover and other Grasses and Field Seeds at unusually low prices. All sold subject to State or Government Test under \$5 absolute money-back guarantee. We are specialists in grass and field seeds. Located so as to save you money and give quick service. Send today for our big profit-sharing, money-saving Seed Guide which explains all, free. Buy now and save money. Write  
**American Mutual Seed Co., Dept 631 Chicago, Illinois**

**You Must Spray**  
**To Make Crops Pay**  
There's a Brown's Auto-Spray that will suit you. 40 styles—hand, traction and power. All have non-clog nozzles—save endless trouble. Used by Experiment Stations, and over 450,000 farmers, gardeners, etc. Send today for catalog and Spraying Guide—both free.  
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**Onion Seed** our specialty, all kinds of tested fresh seeds. We sell by weight and pay your postage. Catalog free.  
**ALLEN'S SEED HOUSE,** Geneva, Ohio

**Frost** Proof cabbage plants, Early Jersey Wakefield, Charleston Wakefield, Succession and Flat Dutch at \$1.50 per M. by express collect; 35¢ per 100 by parcel post prepaid. C. J. & C. Whaley, Martin's Point, P. O., S. O.

## Works Like a Hoe

Covers 8 Acres A Day

It does as good work as you can do with a hoe—it cuts every weed—none can dodge it—not even Canadian Thistles—Keeps the surface in condition to readily absorb rain and produces a mulch or dirt blanket of fine soil which prevents the escape of soil moisture. One trip to the row, whether narrow or wide.



With one horse The Fowler does as much work as you can do with a two horse cultivator—and better work—because it cultivates shallow—has no prongs or teeth to destroy or disturb the crop roots. You can work right up to the plant with a Fowler. By removing plowfoot you can cultivate astride the row.

The Light Draft Fowler is a time saver and money maker. It will pay for itself many times both in the saving of labor and horses and again in increased crops.

In wet weather the Fowler can be used very soon after a rain on account of running close to the surface and it covers so much ground in one day that weeds and grass are kept under control.

It's the cultivator for corn, sugar beets and beans and truck crops planted in rows.

Write today for catalog which fully explains The Fowler—The Progressive Farmer's Cultivator, that covers 8 acres a day—it's free.  
**HARRIMAN MFG CO., Box 514 Harriman Tenn.**

## IRON AGE

Farm, Garden and Orchard Tools  
Answer the farmers' big questions.  
How can I grow crops with less expense? How can I save in planting potatoes? How make high priced seed go farthest? The  
**IRON AGE Potato Planter**  
solves the labor problem and makes the best use of high priced seed. Means \$5 to \$50 extra profit per acre. Every seed piece in its place and only one. Saves 1 to 2 bushels seed per acre. Uniform depth; even spacing. We make a full line of potato machinery. Send for booklet today.

No Misses  
No Doubles  
**Bateman Mfg Co., Box 24B, Grenloch, N. J.**

## Cranberry Bog Development

By RALPH W. PETERSON

(Continued from last week.)

THE cost of maintenance of the bog is very small as compared with the original construction cost. The weeds must be kept in check regardless of the expense involved although it should not run over \$75 an acre for the first two years and will be very small thereafter. Certain kinds of marsh grasses are almost impossible to eradicate if they are allowed to become established on a bog. Horse tail will also cause the bog owner much concern if it becomes widespread. Moss soon covers the sand if the surface is kept too moist. An iron sulphate solution of twenty per cent is helpful but the continued use of the spray is hard on the vines. A handy little tool for weeding is a weeding hook that enables one to work in among the vines. All roots should be removed in weeding if possible. Sand is also very effective in smothering out the weeds.

### Resand in Fall.

Some resanding should be done annually on a bearing bog as a protection against frost and insects, one-half inch of sand is spread in the fall or in the winter on the ice. The small application of sand also helps the new runners to take hold and become rooted.

After harvest season is over, some straggling vines will be found over the bog as a result of dense growth and the use of the cranberry scoop. The bog is gone over with a pruning knife and rake and thinned out.

The most important feature in the care of a bog is the use of the water. The water answers a triple purpose. It furnishes the vines plant food in a soluble form, it is a good insurance against frost, and it is very effective in the control of insects. In some cases the berries are picked "on the flood" and allowed to float down to the outlet where they are secured. This is a poor method of harvesting, however, as it is an endless job to dry them.

### Watering the Bog.

The water is put on the bog in the fall just before the snow flies and kept on until early in the spring. The vines become frozen in the ice and during warm days the water from the melted ice must not be allowed to accumulate under the ice and heave out the vines. Holding the water on the bog until May 25 every second year is a very effective way of killing the pupae of the fruit worm. Another reflow for two days early in June acts as a precaution against the fire worm and other pests. If frost threatens on any of the late spring nights the water must be rushed into the ditches as a precaution. Usually enough heat is radiated from the water without covering the vines. It may again be necessary to flood the crop around harvest time if there is danger of a freeze.

### Harvesting the Crop.

The harvesting season begins in September and extends into October. The berries are picked dry and by hand or by scooping. The former method is seldom used except for the first few crops. A large scoop with hollow metal teeth and back is the usual method and is much more rapid. With a good crop, ten barrels can be scooped in a day. The berries are put in bushel, slatted crates and piled in the screen house and kept well ventilated. Some time during the fall or winter, according to the market demand, the berries are run through a separator which is a combination cleaner for removing the chaff and a hopper for separating the berries into the various grades according to their resilience. The berries are well packed in eighty-five-quart barrels and placed upon the market as needed. Sixty per cent of

the cranberry crop of the United States is handled by a cooperative company known as the New England Cranberry Sales Company, with its office at Middleboro, Mass. The various states have local sales companies and are all affiliated under this one company. Gluts in the market are prevented, for the berries are packed uniformly and moved at the right time and to the right places, thus eliminating criss-cross shipping and wasteful competition. A corps of inspectors check up on the condition of the berries and are a valuable aid in marketing the crop. This marketing cooperation did away with much of the former competition that was not only wasteful but slowed up the movement and sale of the crop by withholding the information necessary for proper distribution and economical marketing. This organization has resulted in cheaper and better berries to the consumer and at the same time has secured better prices for growers.

### The Market is Good.

Cranberries always find a ready market at good prices. The price at present is from \$11 to \$16 a barrel. The average price for the past ten years would be from \$5 to \$8. Over-production need cause little concern to the grower with a bog naturally adapted for economical production. Such bogs are extremely hard to find and the land should not be left idle but should be pressed into use. The cost of development will be from \$200 to \$1000 an acre. The expense involved will in many cases prohibit the utilization of land, even naturally adapted.

The annual yield of a good bearing bog is from fifty to one hundred barrels per acre. The greatest drawback is the original expense of development but the cost of maintenance after the first two years is very light. The total productive cost of a good bog will be from \$1.50 to \$3.00 a barrel, which leaves a very satisfactory profit.

### EVERBEARING STRAWBERRIES.

At the opening of a new season we realize as never before the value of the Everbearing strawberry, for family use or commercial purposes there is nothing to compare with them, instead of one crop in two years you get three. It has been stated by some that they were a failure in a commercial way as a summer berry, i. e., fruiting a bed the second season, therefore I would like to state our experience for the season of 1917.

Our method in the past has been to renew the bed each spring, setting two by three feet and allowing all young plants to take root, pick all blossoms up to July 1 and fruit during the late summer and fall.

The past season on one acre fruited in this way the season of 1916 dug several thousand plants from between the rows, applied a half ton of 2-8-3 fertilizer, cultivated and hoed frequently until berries began to ripen.

From June 25 to July 27 the regular summer season, we picked from this acre 5,336 quarts of fancy berries which sold for \$667. On August 7 we began picking the fall crop. After the first few pickings these berries were not as nice as those grown on new set beds so it was necessary to sort them, but nevertheless we picked 18,34 quarts, which sold for \$300, making a total of \$967.

As a summer berry they are the first to bloom in the spring, if frosted will blossom again, if not frosted will ripen ahead of common kinds. Our berries were on the market one full week ahead of competitors growing the common kinds.

Charlevoix Co. W. F. TENDALL.



## TROUBLE DEPARTMENT.

How can I reclaim an old asparagus bed that has gone back into a hard sod? Would an application of salt help? When is the best time to apply it, and do you just strew it over the top of the ground? Would there be any chance of good results from using seed potatoes grown from vines that blighted badly last year?

Ottawa Co.

M. A.

It is rather hard to advise you with reference to the reclaiming of an old asparagus bed, as we cannot tell just how much the bed has deteriorated. A light application of salt will, undoubtedly, keep the grass and weeds in check, but it will not have enough effect to entirely destroy the sod. The most advisable thing to do would be to get onto the bed with a hoe when the ground is workable and clean out the sod to the best of your ability. The bed should then be kept in good tilth the rest of the season and next fall a thorough application of manure should be given.

The use of salt is not essential for good asparagus production, but it is not detrimental to the plant and is used by many asparagus growers.

We would not advise you to use for seed, potatoes that are diseased in any way or those that were blighted. It would really be a waste of time and energy.

## Hogs in Orchard.

I would like to know if there is anything I could paint on my pear and apple trees so the hogs won't eat the bark, some dope I could put on that the hogs don't like.

Berrien Co.

C. F. H.

We know of nothing which would absolutely prevent the hogs from eating the bark of the trees. You might try painting the lower parts of the trees with a thick mixture of lime-sulphur, but this in time would be washed off and lose its effect.

Several fruit growers who have allowed their hogs in the orchard have found that if there is plenty of pasture for the hogs and probably some feeding besides, they rarely bother trees.

Mr. Luther Hall, of Ionia county, one of the best orchardists of the state, plants special crops in the orchard for the hogs. He has found that by doing this and not putting too many hogs in the enclosure, he never has trouble.

## POPCORN IN THE HOME GARDEN.

Considerable interest has recently been awakened in popcorn as a farm crop, and it is undoubtedly true that it may be made an important addition to our staple food products when the public has become educated as to its merits. It is a crop that responds to intensive cultural methods, as a considerable quantity may be grown on a limited area. No special culture is needed, however, for it will grow wherever field or sweet corn will flourish. As the stalks are smaller than other varieties of corn, one or two more may be left in the hill than with toher kinds. Under good culture several ears will grow on each stalk.

Popcorn flour is being used as a considerable extent by bakers in the making of cookies and crackers, while in the home it can be used in many ways. Some home gardeners use considerable of the flour in home cooking, using a small hand grinder to grind the corn. This method will commend itself to economic housewives in these times when it is so necessary to save wheat and other food stuffs.

There are three distinct kinds of popcorn commonly grown—the White Rice, Red Beauty and Queen's Golden. Of these the first named is the most popular and is the sort that should be grown if one were making the matter a commercial venture. Any of the varieties are excellent for home use, but the White Rice is the only one that sells well in the market. Large growers plant this almost exclusively. One requirement for success is to plant popcorn a considerable distance from any other kind of corn.

New Hampshire. C. H. CHESLEY.



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*B. C. Oppenheim*

I've been in the spreader business so long that I know what I'm talking about. Take my word for it, when I signed that guarantee I knew I was taking no chances.

Here! Take your pencil and let me prove it.

Suppose, for argument's sake, that you keep but six cows, 4 horses and a few hogs or sheep. They will make—according to Cornell Experiment Station reports—approximately 120 tons of manure per year. When these reports were made the chemical value of fresh manure figured out \$3.31 per ton, and piled or stored manure at \$2.55 or less, depending on the length of time it has lain. Nobody knows what the potash and nitrate are worth now at war time prices. Anyway, fresh manure is worth at least three-fourths of a dollar more than old; and when you add the hard extra labor involved in hauling, piling and hand spreading, it's safe to make the figure *twice* that. Many other Experiment Stations and the U. S. Department of Agriculture support these figures, and some make them even higher. Now you can see from this why, on any farm of 80 acres or more, I am willing to put my reputation squarely behind the above remarkable guarantee on the

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Registered U.S. Pat. Off.

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The New Idea was the *first* spreader to embody the wide-spread idea and maintains this supremacy to this day. It operates with an everlasting chain sprocket wheel drive that minimizes breakage and saves wear. Has a tight bottom and an endless chain conveyor that brings all the load to the two beaters. Handles a load 30 inches high as readily as any other does an even box full. A convenient lever allows spreading any quantity desired—3, 6, 9, 12 or 15 loads per acre. Back of the money-making New Idea Spreader

See the machine at the New Idea dealer's. If you don't know him, we will send you his name.

B. C. OPPENHEIM, Mgr.

**NEW IDEA SPREADER CO.**

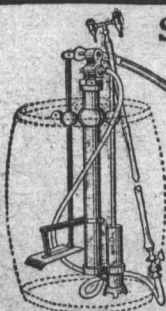
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is my guarantee that means the best in material, construction and operation. You don't gamble when you buy a New Idea because I will even make good any breakage from any cause within one year.

I want you to read our immensely interesting booklet "Helping Mother Nature" and will gladly send it on request. Also our handsome catalog. If you want to make or keep your land fertile this will pay you. Send today. Address me at Box 533



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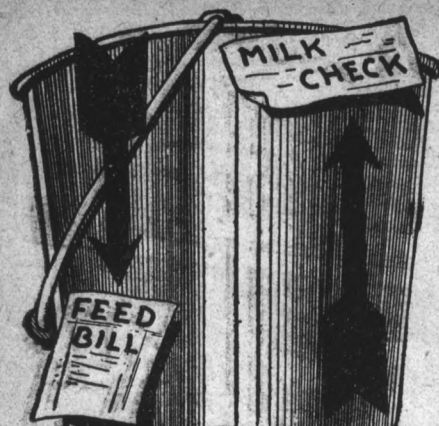
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## Dairy Problems

### Summer Pasture for Cows.

Will you kindly advise me relative to this particular crop and field: What will be the best crop to sow on five acres of sandy land for the pasture of three or four cows? Have been thinking of sowing rape, and could I seed it and stand a chance of getting a catch if sowed with the rape? It was sown last year to millet and buckwheat and seeded, but failed to get a good stand of clover.  
M. E. B.

It is not the easiest thing in the world to get a temporary summer pasture for cows. A well established grass pasture is the very best kind, but as long as you haven't got this, of course you want a temporary pasture, and this can best be provided by using a mixture of several kinds of plants. I would use oats and Canada field peas, Dwarf Essex Rape, and common red clover, or Mammoth clover. If the seasons were favorable your clover might do well enough so that you could leave it for hay the next year. In that case I would prefer the common red clover.

This land should be seeded as early as possible and you should use a liberal amount of seed. Three bushels of oats and peas are none too much. Five or six pounds of rape seed and eight or ten pounds of red clover seed would be none too much. You want to get just as thick a stand as you can. The cows will keep the oats and peas down so that they will not smother the clover. The trouble of it is that with this sort of pasture the tramping of the stock on the soft ground will destroy more of the plants than they eat, but this cannot be helped. Nothing only good, tough sod will stand the tramping of the cattle without destroying the pasture.

#### Winter Vetch as Soiling Crop.

Would be glad to have advice in regard to sowing winter vetch and spring rye this spring to plow under late in summer for fertilizer purposes. Would it be a success or is something else more successful?  
C. S.

I think probably you could get nothing that would be any better to sow with spring rye than winter vetch to be turned under as a soiling crop later in the season. The only question is, when would you want to turn this under? The spring rye will come right in the middle of the summer. If you wanted to defer this plowing under until later it might be better to use winter rye instead of spring rye.

Oats and peas sown early make a splendid crop to turn under, only they are pretty valuable if you get a good crop. These ought to be plowed under about the first of July. Possibly a still better crop would be soy beans. They, however, would not be ready to turn under before September or the last of August, but I am of the opinion that soy beans would furnish more surplus vegetable matter to be plowed under than any of the crops mentioned.

COLON C. LILLIE.

### FEEDING CORN AND SOY BEAN SILAGE.

A farmer who is planning on putting up corn and soy bean silage for the first time, this year, asked me if he would dare feed to his cattle all of the silage they could eat. Somehow he had gotten the idea that the addition of the soy beans would necessitate feeding the silage in limited quantities. We have just put into our silo the third crop of corn and soy bean silage, and except for this year the proportion of each crop has varied from about one of soy beans, to two, three and four of corn.

In this time we have fed about sixty head of cattle, giving them after the first few days of feeding all the corn and soy bean silage they could eat from two to three times a day, and there was never a sick one among them. A large proportion of the beans as well as the corn were mature, and when they were a little dry a half-inch

stream of water was run into the blower to insure their preservation. Soy beans ensiled in this way can be fed with perfect safety.

The addition of the soy beans makes the silage richer in protein than corn silage alone. Stock seem to like it as well as they do pasture crops. While it comes pretty near making a balanced ration we usually feed a little more concentrated dry feed to the cattle, such as cottonseed meal or chopped corn sprinkled over it, then the cattle are let into the barn. The hay is fed in racks on the inside of the barn.

When fed all the silage they can eat our cattle do not eat very much other roughage. The racks are kept full of clover hay which they munch at, but they do not consume very much of it. This kind of silage is splendid for the growing calves and young stuff. We have found that when feeding all the hay and silage they could eat, without any supplements, they have made gains as high as two pounds a day, and some of the credit for these gains can be given to the soy beans.

We find the silage valuable in the spring when the stock are first turned on pasture. The pastures are rather watery then, and instead of the stock clipping the pastures short in an effort to get all the feed they want they come up early in the evening to get a feed of silage. It maintains them in good flesh until the pasture secures a good growth.  
J. L. JUSTICE.

### THE SOIL BUILDER.

It should be our first ambition to win the war, but while our burning desires are leading us to make a supreme effort just now, let us remember that there may be just as loud and earnest calls for grains and meats for a few years to come; and while we work hard to do our best let us consider it our duty to so manage that the possibilities of the production of grains and meats will be as great at the end of the period of the war, be it long or short, as they are today.

Those who are soil robbers and follow the plan of special crop farming for their own selfish gains alone, have a narrow vision of life and its meaning and live in a narrow sphere. But the man who lives and strives for the best interests of humanity, whether in high life or among the teeming masses has a large and noble soul; and is capable of enjoying many benefits which flow from the fountains of love and true happiness, while he leaves influences behind which will lighten the burdens of life which would otherwise bear heavily on the deserving and innocent members of future generations.

### PROBLEMS OF OUR MILK PRODUCERS.

(Continued from page 422).

blems of selling and distributing their products before the dairy industry can be placed on a sound and permanent basis. We must meet organized buying with an efficient selling organization and we cannot do this unless our members are willing to cooperate with us in our efforts to equalize the supply of milk in the different areas so that there shall be no surplus to contend with at certain times during the year.

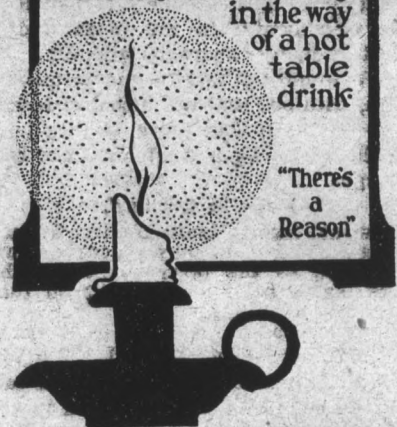
The future of our organization, as well as that of the dairy industry in Michigan, depends in a large measure upon how you support your selling agent in handling this coming surplus during the spring and summer months. Your loyal support is necessary in our efforts to protect the Detroit area, and prevent a sweeping decline in prices throughout the state. Such a decline in prices at the present time would mean the ruin of the dairy industry in Michigan. Now is the time for all loyal members to come to the aid of the Michigan Milk Producers' Association. With your help we can succeed in holding our best markets.

## Wakeful Nights

—go out of style in the family that once drank coffee but now uses

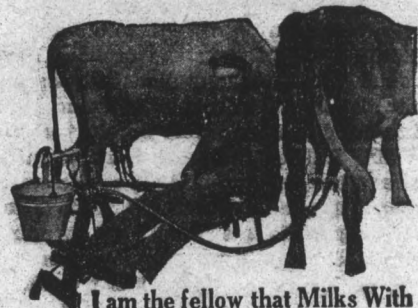
## INSTANT POSTUM

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Mention Mich. Farmer when writing adv't's  
Additional Stock Ads. on Page 239



# Michigan's First Babcock Tester

By J. H. BROWN

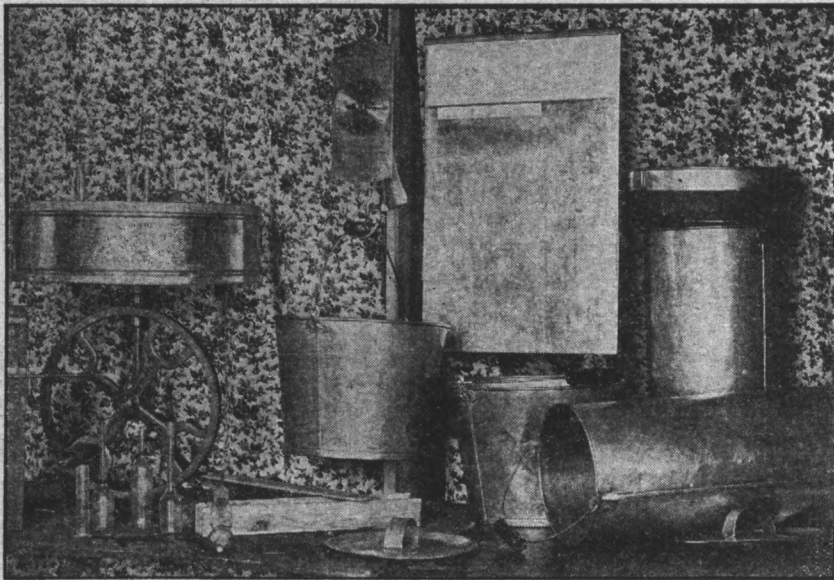
THE Babcock milk tester is such a common thing these days on nearly all the progressive dairy farms of Michigan, and yet there are plenty of dairy farmers who have no testers of their own. Some do not believe in them, or at least claim they are no good, and it is this class who keep cows and are not genuine dairy-men.

About twenty-four years ago this winter the work of the Babcock tester first became known throughout the state. Dr. Babcock, of the Wisconsin University, had invented and perfected the machine and refused to apply for a patent. We heard about it and sent for one to use in our own small herd of grade cows. Stories had been told about robber cows and that these cows were gentle and fat, and great pets in the family, and we wished to find out if such stories were true.

That winter we were engaged by the state board of agriculture and superintendent of state farmers' institutes to attend institutes in many of the counties of both peninsulas. Farm and

Dr. Kedzie was with us some of the time and he always drew a packed house. At several places the various samples of milk piled up so large that it was impossible to test them all. Usually the tests were made on the platform just before the close of the forenoon session, or the first thing in the afternoon. A crowd would gather around the platform and pack the front seats and space between. Every man, woman and child wanted to see the column of fat cooped up in the neck of the test bottles. We have before us, as we write these lines, the compasses we used that winter to measure the column of fat. They were instantly adjustable, very convenient and accurate, and were probably the first compasses used in Michigan for this purpose.

At Marquette one farmer brought in a sample of milk in a small wide-necked bottle. It looked suspicious and we decided it was skimmed from the top of a pan of milk that had set over night. We showed it to Dr. Kedzie, and he suggested that we show up the



First Babcock Tester Ever Used in this State.

dairy topics were assigned to us, but our special job was to test samples of milk, cream and skim-milk, at each institute, and explain the process and value thereof to all who might be interested.

The accompanying picture shows the first Babcock tester used in Michigan for the purpose of testing and demonstrating the new way of finding out the amount of butter-fat in any cow's milk, at the various farmers' institutes held in both peninsulas during the winter of 1893-4. The machine was more or less crude and a mean thing to carry along the road. Finally we took a trunk and "knocked down" the outfit so it would all go inside, with the exception of the gallon bottle of sulphuric acid.

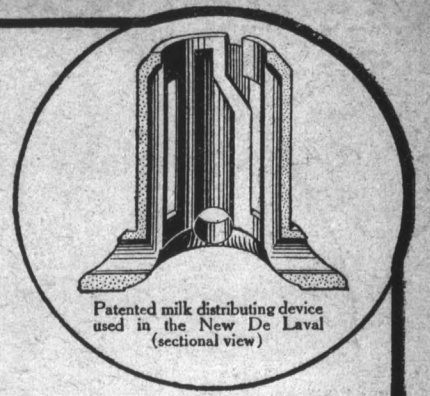
The first Babcock tester made by Dr. Babcock, and pronounced satisfactory for general use by dairy farmers, had a large pan, with cover, that held the test bottles. The frame underneath had a large wheel, as shown, and the upright shaft was turned by the friction of the outer ring of the wheel against it. Sometimes the wheel would slip, as there was no provision made for tightening the bearing. So we cut out the center bolt and put in another with washer and lock nuts. This tester, when knocked down, with the eight test bottles, pipette, etc., took about all the space in the trunk. In fact, there was no room to carry extra clothing, except overalls and a jacket. The trunk was usually checked, but sometimes it was shipped by express with Dr. Kedzie's chemical outfit.

That winter there were great crowds at some sessions of the scores of two-day farmers' institutes we attended.

farmer. When we reached this sample in the test bottle, at the close of the whirling job, the compasses showed 14.6 per cent of butter-fat. We handed this bottle to Dr. Kedzie and he "showed it up" all right. That farmer had previously bragged about what a wonderful cow he had in his barn, and we noticed that he had quite a strut in his attitude and promenade when he handed us the sample. At the close of Dr. Kedzie's "show up" it was found that the farmer had disappeared. Probably it was high time for him to hurry home and milk that "wonderful cow."

We tested numerous samples of skim-milk that winter and showed the waste of fat in the shallow open pan setting. That same winter we bought the first cream separator that, so far as we could find out, had been introduced into our section of the state. Each week we took samples of skim-milk from our cream separator and tested. These samples were compared with those handed in at the first institute sessions each week, as taken from the shallow open pan skim-milk. Many farmers' wives that winter declared the fat in their skim-milk was not wasted, for it was fed to the pigs. How many times that winter do you suppose Dr. Kedzie and others of our corps of institute speakers proved the fallacy of that argument?

The picture also includes the scales, pails, cans, milk record, etc., that we used that winter on our farm. This picture is the only one we can find, no negative being preserved, and we are keeping it for a relic. The tester was worn out in state service and was discarded the following winter for a new traveling and collapsible outfit.



Patented milk distributing device used in the New De Laval (sectional view)

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**GREATER CAPACITY:** Without increasing the size or weight of the new bowl, its capacity has been increased.

**CLOSER SKIMMING:** The improved bowl design, together with the patented milk distributor, gives greater skimming efficiency.

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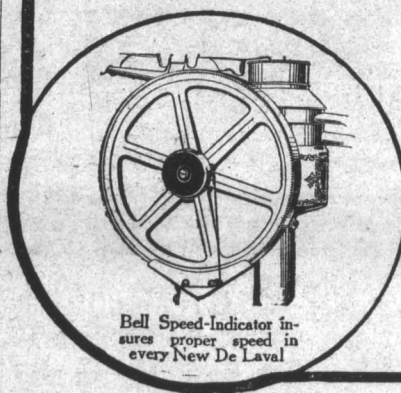
If you haven't the spare cash right now, that need not stand in the way of your getting a New De Laval at once. We have an arrangement with De Laval agents which makes it possible for any reputable farmer to secure a De Laval on the partial payment plan—a small payment at the time of purchase and the balance in several instalments—so that your De Laval will actually pay for itself while you are using it and getting the benefit from it.

Why not see the nearest De Laval agent at once? If you do not know him, write to the nearest office for new catalog or any desired information.

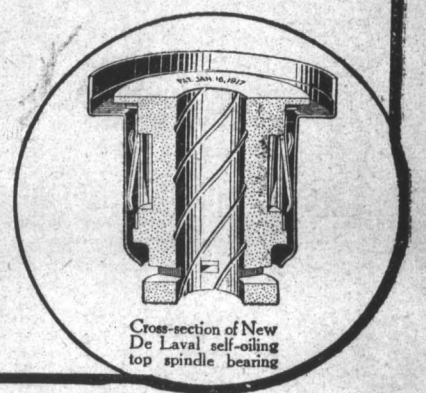
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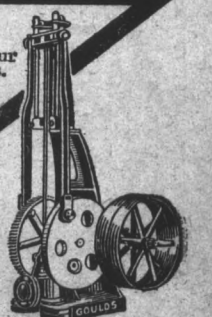
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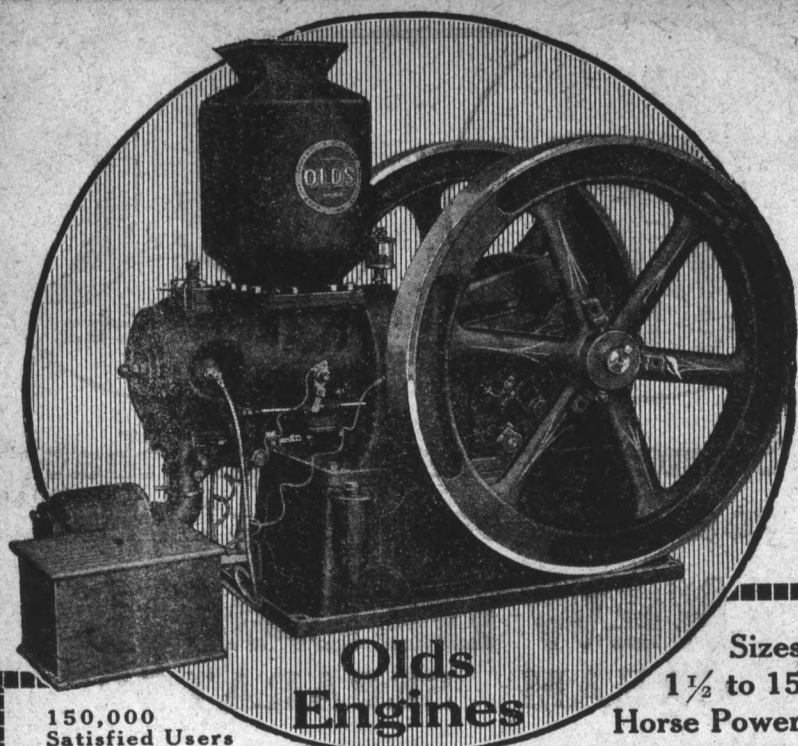
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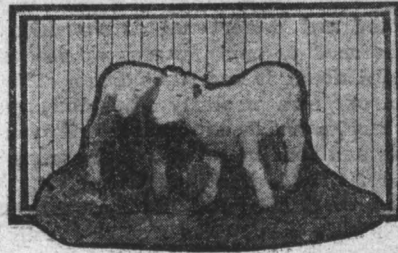
The Olds today—the product of 40 years experience—is better than ever. And our guarantee—three times as strong as heretofore—whereby you are the judge as to whether a part is defective or not, is your sure protection. Write for full particulars about this hopper cooled, frost proof engine which is equipped with the Webster Tri-Polar Oscillating Magneto, when so desired.

RELIANCE ENGINEERING COMPANY, LANSING, MICHIGAN

## Live Stock for Our Farms

By ALMOND GRIFFIN

M. R. H. H. HALLADAY of Lansing, president of the State Live Stock Sanitary Commission, an experienced sheep and cattle man, has yielded to the wishes of Governor Sleeper and the burden of purchasing western sheep, lambs and cattle for Michigan's grazing and cut-over lands rests on his shoulders. It was largely through the efforts of Secretary Carton of the public domain commission, that the state war board set apart a revolving fund of \$10,000 to encourage the live stock industry—largely sheep—in the state of Michigan. With ewes selling for around \$24 a head and lambs at seventeen and eighteen cents a pound at Chicago stockyards, it is figured that lambs are the best "buy" at the present time. Secretary Carton figures that one hundred ewes would cost \$2,400. By June 1 the clip of these ewes, estimated at 700 pounds at seventy cents a pound, would bring \$490. He figures that they would raise eighty lambs, which by October 1 would be worth \$672, so that net cost of ewes would be \$1,238. Taking one hundred lambs averaging seventy-five pounds each, it is figured they would net \$420 and the net cost of one hundred yearlings October 1 would be \$930, which would make the yearlings cost \$3.08 a head less than the ewes.



secretary and treasurer, F. W. Nichols; executive committee, these officers and Frank Eiola, Wm. Johnson and L. M. Geismar, county agriculturist. It is planned to place pure-bred sheep on Houghton county farms on shares. The stock is one-half subscribed, which warrants placing an order for the first carload of 225 sheep. The rams will be pure-bred Hampshires, twenty-five in number, and one will be placed with each group of five farmers, with rotation to insure that no flock will have the same sire more than one year. The ewes will be grades at first but it is planned to work into pure-bred Hampshires in a few years.

Upper peninsula bankers are organizing a live stock loan association, with ability to loan grazers up to \$1,500,000. It is expected that at least fifty of the western sheep men will visit Michigan this spring and the bankers aim to be in shape to offer financial help when needed.

A sheep and wool company is being formed by business men of Iron Mountain, Florence and Iron River, with over \$150,000 already subscribed in land and sheep and \$100,000 is to be raised for working capital. It is planned to establish a 10,000 acre sheep ranch in Dickinson and Florence counties, stocking same with 5,000 sheep and with an experienced western sheep man in charge.

## A LIFETIME SILO

Why not buy a silo that will last a lifetime instead of one that will have to be replaced in a few years?

Everything about a Century Silo is made to last indefinitely. They can't decay as they are thoroughly impregnated with creosote by the Pressure Process.

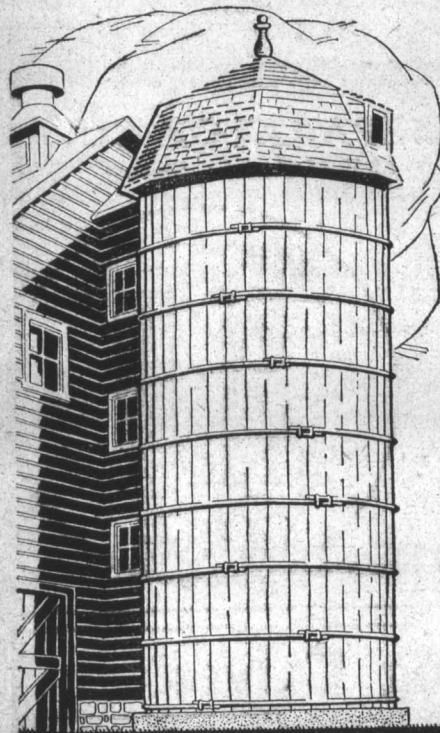
The creosote treatment makes painting unnecessary and does away with excessive swelling and shrinking of the staves.

Century Silos cost very little more than the ordinary kind. Write for folder.

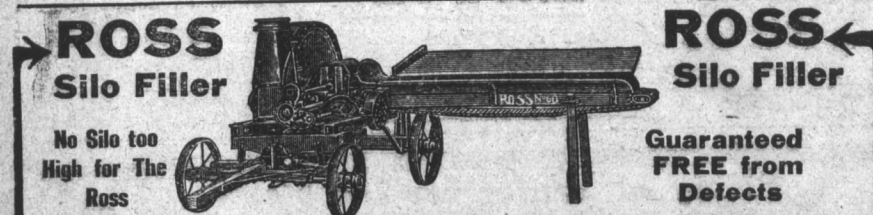
**The Michigan Wood Preserving Company**

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Michigan

Century Building,  
Pittsburg, Pa.



**Century Creosoted Silos**  
"Last till the cows come home"



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Silo Filler**

No Silo too  
High for The  
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IF EVERY purchaser of a Silo Filler based his selection on the results of a Competitive Test he would choose The Ross. We can supply the reasons. To fully appreciate the Superiority of The Ross Silo Filler, the buyer must see it in operation. Our Selling Plans Make This Possible.

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Especially designed for Gasoline or Kerosene Engines from 4 horse up to and including the largest tractor. Equally suitable for Electric or Steam Power.

Now is the time to negotiate for your Silo Filler. Terms are arranged so as to have the machine without investment prior to silo filling time. Write today for terms.

**THE E. W. ROSS CO. Box 114 Springfield, Ohio (88 Years' Experience)**  
We also manufacture Ross Wood and Metal Silos

When Writing to advertisers please state that you saw their ad. in The Michigan Farmer.

## Fitting the Horses

ON every farm where horse flesh is the motive power, there is one problem that comes once a year, namely, the preparation of the teams so that they can stand the hard work of spring and summer without a blemish resulting, such that the value of the horse is not greatly decreased and the ease of working it greatly increased. One of the first teams I ever drove had in it an ugly horse and his disposition had been thus re-arranged because somebody had sometime erred in not having him properly hardened when he started in with the spring work. This horse was a big fellow, abundantly able to work, but the moment the least break in the skin came on either one of his shoulders, the only way he could be put into the collar was to buckle it and slip it on over his head. Even at that he would do considerable jolting about when the harness was put on him and of all the unpleasant beasts to work, this horse beat everything I ever tried. He never would take hold until the other horse started the load, and all this might have been averted by a little judicious care in handling. I know this to be a fact because neighbors who knew the conditions said so.

Cattle husbandry is also being encouraged, some people believing there is more money in cattle than in sheep. For the territory around Grand Rapids the fair grounds at Comstock Park will be utilized as a distributing point. The state and the Western Michigan Development Bureau are paying the expenses of Dr. Halladay and Secretary Gibson, so that farmers are getting their stock exactly at cost.

T. F. Marston, of Bay City, secretary of the Northeastern Michigan Development Bureau, will also look after the distribution in that territory.

#### North of the Straits.

The Houghton County Live Stock Association, capital \$10,000, has been formed at Houghton, with the following officers: President, John A. Doelle; vice-president, Michael Messner, Jr.;

Then there are hundreds of horses that have shoulders that will never be fit to work until there has been an operation performed and part of the scar tissue cut away. Every time a shoulder is sore, in healing up there is bound to be some scar tissue formed and the more the shoulder is affected, the more scar tissue is formed and in the end we have a great ill-shapen portion of flesh and hide that it is practically impossible for the horse to use in hauling and a sore shoulder is pretty likely to cause one or the other; a poor hauler or a poor disposition.

This condition can, in most cases, be greatly relieved by hardening a horse into the work. Usually one of the first jobs the team is put at is that of hauling manure and if there is any heavier



job than hauling a manure spreader in the early spring, I have it yet to see. The fact that the heavy hauling lasts for only a short while does not particularly alter the question. Blisters may be put on tender hands in ten minutes while if the same work was spread over two hours it would have no effect whatever, so in hardening the horses into work it is better to give them light work for long periods rather than severe work for short periods. Light work stretched over a week or ten days will usually put the teams in good condition for their spring's work. If this does not seem to harden the muscles rapidly enough, the shoulders may be bathed every night in tan bark tea where hemlock bark may be had. Good strong table tea will also do the same thing, or an alum water solution is often of value.

The collar that fits a horse is the most imperative of all. No amount of washing or hardening will make a misfitting collar fit. The collar should be of the right size and adjusted so that the point of draft will be just a little above the shoulder point. Pads on collars usually do but little good. When a rough plow handle blisters our hands we do not usually put on canvas gloves. Rather, we get out the draw shave and some sandpaper and make the handles smoother. In this connection I have used the solid stove blacking to rub onto the wearing surfaces of the collars every morning to make them smoother.

Seldom as it is done, harnesses are made so they can be adjusted to the horse. It is easy to adjust the harness to the horse, but it is much more difficult to adjust the horse to the harness as is so often tried. There is no excuse for the top of the head becoming sore through too tight a bridle. This often leads to poll evil. Neither is there any excuse for the crupper being so tight as to cause the horse to rise up behind in righteous indignation. The hames should also be adjusted so that the part where the hauling is done should be at or a trifle above the shoulder point.

Not only does it conduce to the pleasure of driving a team to have them free from sores and blemishes, but it also keeps them more valuable in case a sale is to be made. If the harness is gone over carefully each spring to make sure that it fits the particular horse on which it will be used all summer, there is but little excuse for sore shoulders and sore necks.

Harden off the shoulders by light work for a time and if this is not sufficient, bathe them once a day with some good muscle toughener. In addition to this, careful driving and close watching will keep the team in A-1 condition, to the mutual profit of everybody concerned.

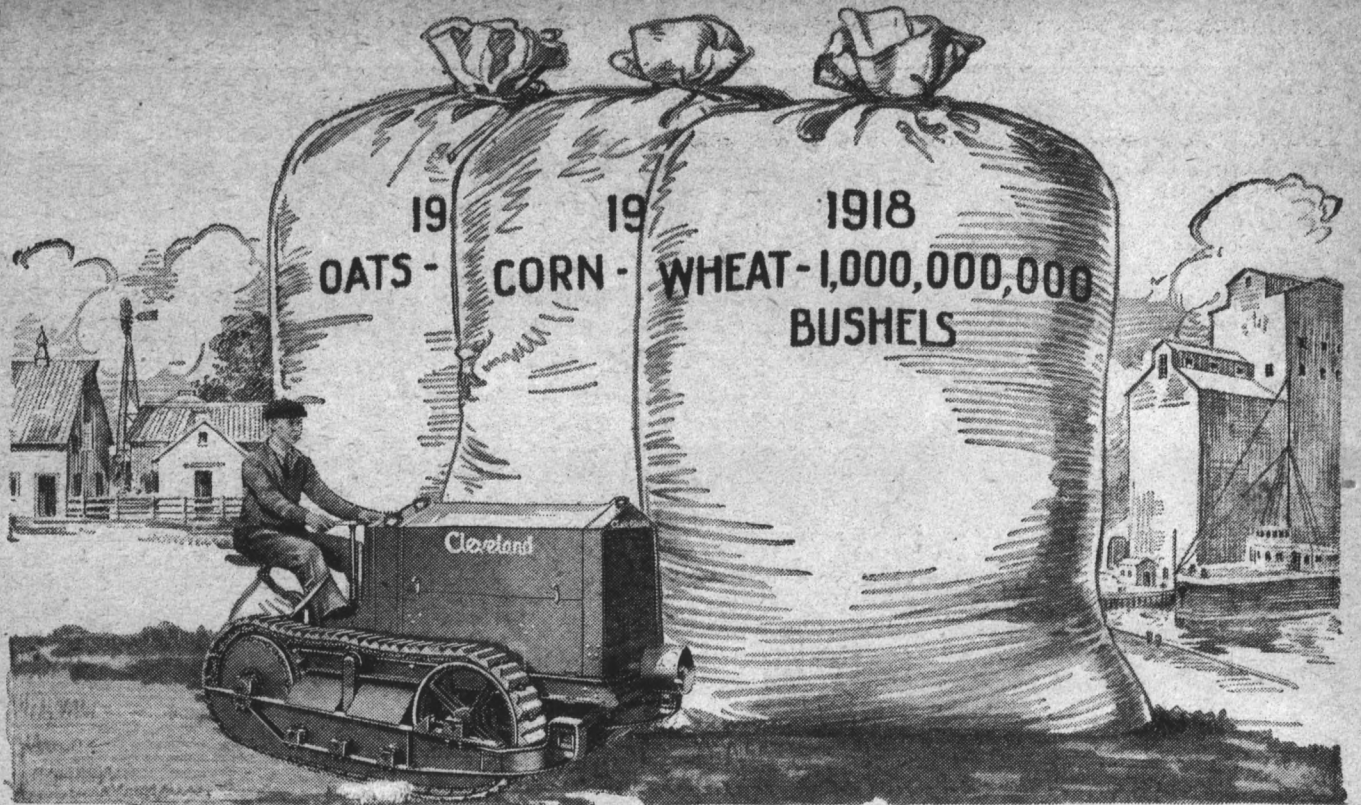
Indiana.

I. J. MATHEWS.

#### FAITH IN THE BEEF HERD.

Breeders of beef cattle have a big advantage over dairy farmers at the present time, as the big labor shortage can be taken care of only by keeping a bigger acreage in grass and hay, two crops that do not cut directly into the shortage of human food, but make it possible for the farmer to put every acre on the firing line to help win the war. With the world already over 115,000,000 head of breeding stock short since the war started, and this shortage growing every day, the producer of live stock has a sound future ahead, in spite of handicaps that at present make him wonder about the safety of staying in the producing business of some breeds.—M. A. Judy.

Russian Crop Outlook Unfavorable.—Stocks of food in the populated centers of Russia are small and the agricultural outlook for 1918 is unfavorable, according to information received by the U. S. Food Administration.



## The Task Before the Nation's Farmers

One billion bushels of wheat must be produced in this country this year.

An enormous increase in the yield of corn and oats is necessary.

Thousands of extra acres must be cultivated. Each individual farmer must produce about one-third more grain than last year.

The task before the nation's farmers is stupendous. Intensive methods of every kind must be employed. Machinery must take the place of muscle wherever possible.

In the face of this emergency the Cleveland Tractor becomes an absolute necessity. Its tremendous value to the farmer is emphasized more than ever.

The Cleveland Tractor not only conserves time and labor—it does far cheaper and better work. And by doing better work it makes possible the production of larger and better crops—enabling you to do your part for the government—and make more money for yourself.

The Cleveland Tractor shows the way. It plows  $3\frac{1}{2}$  miles an hour—8 to 10 acres a day. It travels on its own tracks like the great "tanks" of Europe. It will go practically anywhere—through ditches, gumbo, sand and gravel. It is steered by the power of its own engine—simply and easily, and will turn completely around in a twelve-foot circle.

It will not pack the soil, will not mire, will not slip or

flounder. It has 600 square inches of traction surface. The track is designed for long service. The sections are constructed to prevent filling or packing with mud, and protection is provided to prevent dirt and mud from falling into the track. The sections are joined with hardened steel pins which have their bearings in hardened steel bushings. The Cleveland weighs less than 3200 pounds. It can be housed in less space than is required for one horse.

The Cleveland develops 12 h. p. at the drawbar for hauling and gives 20 h. p. at the pulley belt—plenty for stationary work of all kinds.

But in spite of its unusual power, the Cleveland is small and can readily be used in orchards and under and among small fruit trees.

Rollin H. White, the famous motor truck engineer, designed the Cleveland Tractor. He has used only the best materials. Gears are protected by dust-proof, dirt-proof cases and are of the same high quality as those of the finest trucks.

Prepare now to produce the enormous crops which we must have—and incidentally make more money for yourself. Get ready now for the great tasks before you. Order your Cleveland Tractor now.

Write to us for complete information and the name of the nearest Cleveland dealer.

## Cleveland Tractor

THE CLEVELAND TRACTOR COMPANY, Dept. AD, Cleveland, Ohio, U. S. A.

### Cow Health is Dairy Wealth

Safeguard the health of your herd by building stables that will be clean, sweet and sanitary. Easily done if you build with Natco Hollow Tile. Germs can't hide on the smooth glazed walls. A blanket of dead air in Natco walls keeps the stable warm in winter and cool in summer—prevents dampness and mildew.

#### Natco on the Farm

means healthier stock, cleaner and better milk—bigger profits and more dairy wealth. Natco Hollow Tile has fire-proofed most of the great "skyscrapers" of our large cities. The same material will protect your stock, grain and tools from the fire peril and will lower insurance charges. Natco buildings save painting and repairs. They cost less than other forms of masonry yet add greatly to the value of your farm.

Your building supply dealer will gladly show you samples and practical building plans. He has, perhaps, just the plan for which you're looking. But write us direct today for new illustrated "Natco on the Farm" book—1918 Edition—it's free!



National Fire Proofing Company  
1118 Fulton Building  
Pittsburgh, Pa.  
51 Factories assure a wide and economical distribution.

**MINERAL HEAVE COMPOUND** In use over 50 years

**CURES HEAVES**

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NEGLECT Will Ruin Your Horse

Sold on Its Merits

SEND TODAY

AGENTS WANTED

Write for descriptive booklet

MINERAL HEAVE REMEDY CO., 463 Fourth Ave., Pittsburgh, Pa.

**\$3 Package** guaranteed to give satisfaction or money refunded

**\$1 Package** sufficient for ordinary cases.

Postpaid on receipt of price

Write for descriptive booklet

**DEATH TO HEAVES! NEWTON'S**

STANDARD REMEDY

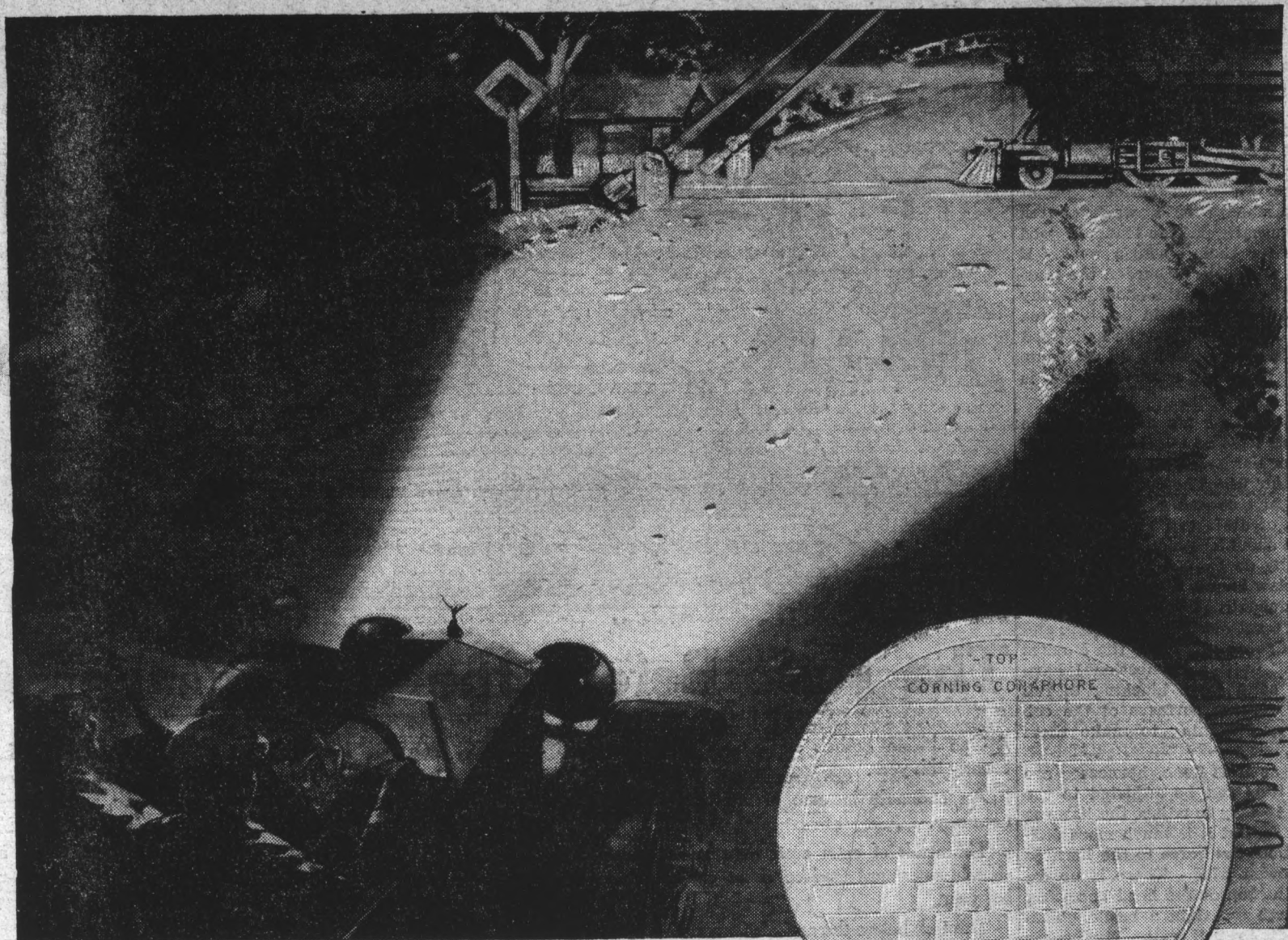
HEAVE, COUGH, DISTEMPERS AND INDIGESTION COMPOUND

Cures Heaves by correcting the cause—Indigestion. Prevents Colds, Staggers, etc. Best Conditioner and Worm Expeller. 25 years sale. Three large cans guaranteed to cure Heaves or money refunded. The 1st or 2nd can often cures. \$6.00 and \$1.10 per can at dealers or prepaid by parcel post. Booklet free.

THE NEWTON REMEDY COMPANY, Toledo, Ohio

**TIMOTHY SEED** \$4.00 per bushel. High purity and germination, first class in every way. Timothy-Alsike Mixture \$4.50 per bushel, 45 lbs. Bags extra at 25c. each. YOUNG-RANDOLPH SEED CO., Owosso, Mich.





Many railroad crossing gates are not operated after 7 P.M. This photograph shows how the 500-foot range of the Conaphore protects your safety. It also shows how the Conaphore keeps the beam within legal limits, and so makes for the safety of others.

**THE CONAPHORE**  
Smooth front surface. Easily cleaned. Does not clog with dust or mud.

Photograph by  
L. A. Miller

## Country roads demand long range *Safety demands no glare*

**N**OTICE how brightly the Conaphore beam lights up the railroad crossing and the engine in the photograph above. Then see how far beyond the crossing it illuminates the road.

The Conaphore does not diffuse and scatter the light in all directions. Neither does it dump the light directly in front of your car. Instead it shoots a long, broad beam ahead for 500 feet and more.

Notice, also, that where the Conaphore beam strikes the engine, the light is not more than 42 inches above the road. If a motorist were approaching from the other direction, the Conaphore rays could not dazzle or confuse him even to the slightest extent.

### Conaphore design patented

Conaphores give you the range you need and to which your own safety entitles you. Yet they eliminate all glare and so make for the safety of others.

The Conaphore permits the bulb to

be focused for maximum range. Its efficiency is due to scientific design.

A series of patented corrugations on the inner surface of the Conaphore bends down the beam, while cylinders in the center fan ample light sidewise.

These corrugations also limit the height of the beam to 42 inches. There is no chance of blinding the other fellow, and you are within the requirements of any state or local headlight law.

### Pierces fog and dust

The Conaphore is made of Noviol Glass patented—invented by Conaphore designers and used in no other headlight device. This unique yellow-tint glass causes the light to pierce fog and dust, without "back-glare."

Blue and violet rays present in all white light are the chief cause of "back-glare," because they are easily diffused by the fog or dust particles. Noviol Glass absorbs these blue and violet rays,

Manufactured by the World's Largest  
Makers of Technical Glass

# CONAPHORE

Range 500 feet—No Glare—Pierces Fog and Dust

but projects all the rest of the light. Thus the Conaphore eliminates "back-glare" and gives you perfect road vision even when the night is thick. The Noviol beam makes the easiest light for your eye to follow.

Conaphores are also made in clear glass, but we strongly recommend the Noviol.

### Help fight the glare evil

On dark country roads the glaring headlight danger is found at its worst. Put Conaphores on your car at once, and do your share to stamp out the glare evil. They give you the long range you want, yet take all glare out of your headlights.

Easy to install. Sizes made to fit all cars. If your dealer has not yet received his supply, write us and we will see that you are promptly supplied.

Retail Price List (per pair)	Noviol Glass	Clear Glass
5 to 6 1/2 inches inclusive.....	\$2.40	\$1.60
7 to 8 1/2 inches inclusive.....	3.50	2.50
8 1/2 to 10 inches inclusive.....	4.50	3.00
10 1/2 to 11 1/2 inches inclusive....	6.00	4.00

Prices 25 cents more per pair west of Rocky Mountains  
Sizes vary by steps of 1/4 inch above 6 1/2 inch size

CONAPHORE SALES DIVISION  
EDWARD A. CASSIDY Co., Mgrs.  
505 Foster Building - New York City  
**CORNING GLASS WORKS**



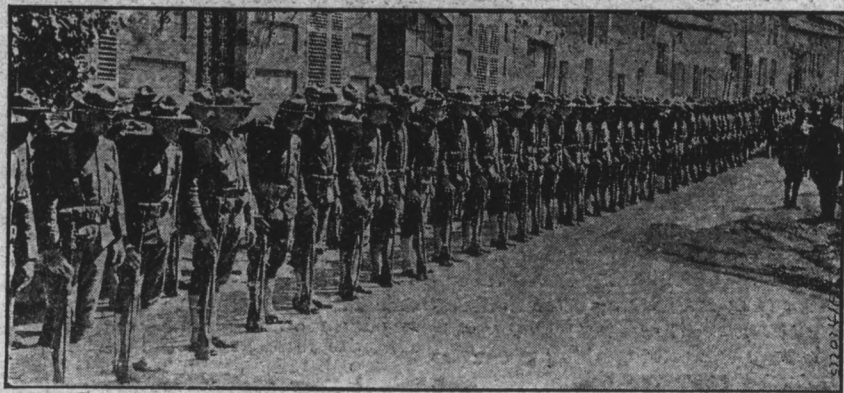
# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION

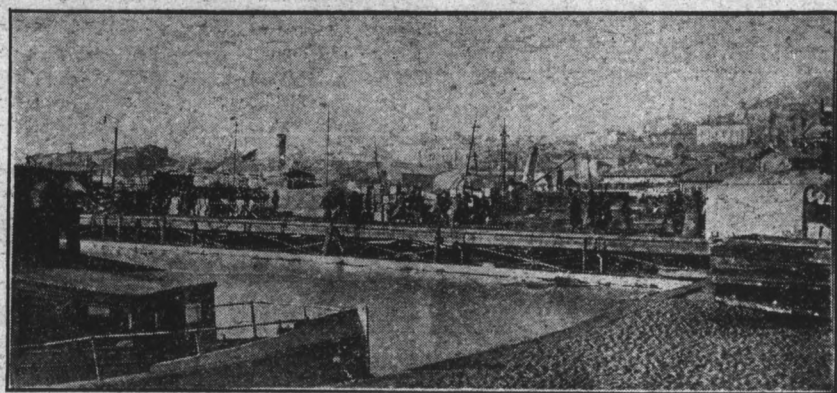
**MICHIGAN FARMER**  
AND *LIVE STOCK* JOURNAL  
PUBLISHED WEEKLY. ESTABLISHED 1843.

The FARM BOY  
and GIRL  
SCIENTIFIC and  
MECHANICAL

## WORLD EVENTS IN PICTURES



American Marines Lined up for Inspection "Somewhere in France." They are Part of the American Expeditionary Forces, and these Soldiers of the Sea are Fit to Win in the great Struggle for Democracy.



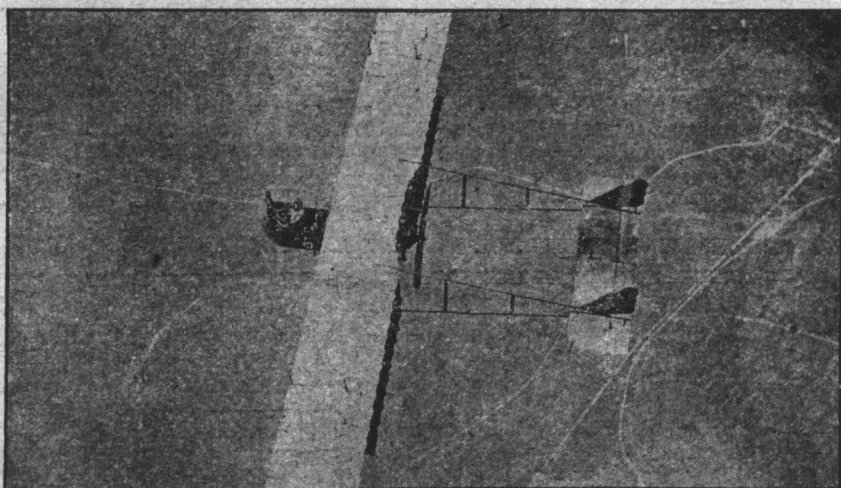
Vladivostok, Important Russian Seaport on the Pacific Ocean, which Played an Important Role in the Russo-Japanese War, now Becomes of International Importance through Possible Japanese Invasion of Siberia.



The Officers of a British Balloon Section are Running their Own Poultry Farm Near the Firing Line, where these Turkeys were Hatched and Are Being Raised to Increase the Food Supply.



The Sammies' Meal Time "Over There." A Constant Procession of Ships is Carrying Across Great Quantities of Food, which Uncle Sam Realizes is so Important to Our Men, who Never Have to go Hungry.



French Airman Flying Toward Enemy Territory, About 9,000 Feet Above the Battle Lines, on Dangerous Mission. The Enemy will Try to Prevent Him from Bringing the Information he Seeks Back to the French Lines.



This Huge British Tank Has Plowed its Way through the German First Line Defenses and Onward to the Second Line, with the Germans Retreating Rapidly Before it.



"Farm and Fight" is the Slogan of these British Soldiers, Many of Whom Have Seen Service in France. Schools have Been Opened up to Give Instruction in Agriculture, Including Operation of Labor-saving Machinery.



Odessa, which for Ages has been the Gateway to Russia's Great Wheat Lands, has Recently Fallen into the Hands of the Germans who, Despite the Signing of Peace Terms, Continue to Invade Russian Territory.



# 7 A DAY BUYS & THE NEW DAIRY QUEEN

**\$39** Buys the Dairy Queen, 350 lb. capacity, skims 175 quarts per hour. Monthly Payment Price \$41; Terms \$5 DOWN, \$5 MONTHLY. You can now get any size DAIRY QUEEN direct from the factory on easy payment terms so it will pay for itself as you use it. 350, 500, 650 and 900 lb. Capacities. **COSTS LESS THAN 17 CENTS PER DAY**

CAPACITY lbs. per hour	350	500	650	900
CASH PRICE	\$39	\$44	\$49	\$53
MONTHLY Payment Price	\$41	\$46	\$51	\$55
MONTHS TO PAY	8	9	10	11
DAYS TO PAY	246	276	306	330

**GUARANTEED FOREVER AGAINST DEFECTS**

New Enclosed All-Gear Drive, NO CHAIN; Close-Skimming Disc Bowl; Splash-Oiling System; Low-Down Tank; High Frank; Lightest Running, Easiest Cleaning. The RIGHT separator at the right PRICE—SOLD DIRECT TO YOU.

**60 DAYS' TRIAL—SATISFACTION GUARANTEED**

You have 60 days to try the DAIRY QUEEN, against any separator. If desired, to prove how easily it will earn its own cost and more before you pay, to prove it is the lightest running, closest skimming, easiest to clean separator made. If not satisfactory, you can return it at our expense and we will refund your money and pay all freight charges. **BUY DIRECT, SAVE \$30 TO \$50.** Write for Our Free Catalog and Easy Payment Terms—TODAY.

**DAIRY CREAM SEPARATOR CO.**  
1811 Washington Street LEBANON, INDIANA



100,000 SOLD

**PRICES WILL BE MATERIALLY ADVANCED ON APRIL 15TH, BUT IF YOUR INQUIRY WITH THIS AD CUT OUT, REACHES US BY MAY 1ST, YOU CAN GET A DAIRY QUEEN AT PRESENT PRICES.**



**USE NATCO DRAIN TILE**

Farm drainage demands durable tile. Our drain tile are made of best Ohio clay, thoroughly hard burned—everlasting. Don't have to dig 'em up to be replaced every few years. Write for prices. Sold in carload lots. Also manufacturers of the famous NATCO IMPERISHABLE SILO, Natco Building Tile and Natco Sewer Pipe.

National Fire Proofing Company - 1115 Fulton Building, Pittsburgh, Pa.

## BEANS

(PROLIFIC) Seed, State Tested. BIG YIELDERS

Yield 60% more than Pea or Navy on any soil. Sample and price on request.

A. A. Lambertson, Cedar Springs, Mich.

Genuine Northern Mich. (Lake Superior) grown "Irish Cobbler" Seed Potatoes

All seed potatoes we offer are grown by ourselves on our own farms and will guarantee every bushel. They are grown on rich new soil in the bracing (Lake Superior) climate of Northern Michigan and are unmatched for vitality, size, beauty of form, color and large yield. Guaranteed hand selected stock at \$1.75 a bushel. Save money. Buy direct from growers. Try us. **LEVEQUE'S FARM.** Lake Linden, Houghton County, Mich.

## Tested Seed Corn

of all kinds, American grown Alfalfa, Red Clover, Alsike, Timothy, Barley, Marquid, Spring Wheat, Alberta Cluster Oats, in bushels or car loads. Send list of your needs for special prices. **EBELING'S SEED STORE & WAREHOUSE,** Syracuse, N. Y., Established 50 yrs.

**TIMOTHY SEED** \$4.00 per bushel. High purity and germination. First class in every way. Timothy-Alsike Mixture \$4.50 per bushel, 45 lbs. Bags extra at 25c. each. **YOUNG-RANDOLPH SEED CO.,** Owosso, Mich.

## SEED BEANS

Choice Medium Pea. Beans that have been run thru fanning mill and pick three pounds per hundred. Put up dry and have no excess moisture. \$9.00 per bushel, bags extra. **JAS. R. CAMPBELL,** R. 10, St. Johns, Mich.

## CORN

Salvage and Feeding \$1.25 \$1.50  
Send for Samples

**Carpenter Grain Company,** Battle Creek, Michigan.

**Seed Potatoes.** Rural Russet, or Late Potoskey. These potatoes awarded first prize and Sweepstakes ribbon at Potato Show last fall, judged by expert potato man from M. A. C. Orders filled at \$2.00 per bu. F. O. B. Cheboygan, sacks included. **DALY & McCALLUM,** Seedmen, Riggsville, Mich.

## Early Seed Potatoes

Irish Cobbler, great yielder of round white potatoes will stand close planting \$2.00 per bu. **JAS. H. BILLINGS,** Hart, Mich.

**For Sale** Wisconsin Pedigree Barley @ \$5.00 per hundred. Worthy oats \$1.50 per bu. Both re-cleaned and graded. f. o. b. Caro. Bags extra. **ROBT. P. REAVEY & SON,** Caro, Mich.

## SEED BEANS

Dry hand picked, navy beans, free from disease at \$11 per bu. F. O. B. John Vance, Hersey, Osceola Co., Mich.

**For Sale CHOICE SEED CORN.** 500 bushel 100 day Yellow Dent, 400 bushel White Cap Yellow. Order early. **Woodfield Farms,** Wycombe, Bucks Co., Pa.

**Beardless BARLEY**—Pure, cleaned for seed \$2.50 per bushel, new grain bags included. **H. L. OOLE,** Palmyra, Mich.

**FOR SALE** Inspected College Success Oats fine quality. **JOHN NICOLSON,** Marlette, Mich.

Potatoes Bovee, Carman, Cobbler, Giant, Green Mt., Hebron Longfellow, No-blight, Northern, Ohio, Queen, Rose Raleigh, Six-Weeks, Wonder, others. C. W. FORD, Fishers, N. Y.

**BEANS:** Seed beans for sale. Beans tested 100% free of disease; 97% germination and hand picked. **FRANK J. ANNIS,** Eaton Rapids, Mich.

**For Sale** Tested Seed Corn, Pumpkin Seed, and Cow Peas. State varieties preferred. Give second choice. **GUENTHER HARDWARE COMPANY, Inc.,** Owensboro, Kentucky

**SEED CORN** Early Improved Leaming. Write for prices. **THEO. BURT & SONS,** Melrose, Ohio.

## DePUY'S SEEDS

ARE FIRST AID TO GOOD CROPS And Prices Reasonable. OVER 400%

Increase in sales in two years, is proof that our VALUES ARE APPRECIATED.

A post card will bring our 1918 SEED BOOK.

Don't buy SEED CORN, OATS, BARLEY, BEANS or PEAS, CLOVER, GRASS or other FARM and GARDEN SEEDS, 'till you have seen it.

**THE C. E. DePUY CO.,** Pontiac, Mich.



**Inspected Pedigreed Oats and Barley**

College Wonder, College Success, Alexander and Worthy are the pure bred oat varieties available. These were developed at the Michigan Agricultural College and so are especially adapted to Michigan conditions. Pure, clean seed for sale by the members of the Michigan Crop Improvement Association whose seed in field and bin met the Inspected seed requirements of the Association. If you are interested in these or if you buy Inspected seed and would like your crop Inspected, ask for these requirements, when you write for list of growers of Pedigreed grain. For this list or any other literature of the Association write the Secretary **J. W. NICOLSON,** East Lansing, Michigan.

## CONTRACT GROWN SEED CORN

We have final reports from our growers and are prepared to offer Seed Corn grown by experienced men. These growers make a business of growing corn for seed and had the facilities for drying and preparing the corn for seed. Our Seed Corn has just been tested and all will germinate 70% or better.

We have handled and put out this same Seed Corn for years and it is no experiment with us this season, we have always found it the most reliable to be obtained.

White Cap Yellow Dent	\$8	Improved Leaming	\$8
Pride of the North	\$8	Smut Nose Flint	\$8
Wisconsin No. 12	\$8	Longfellow Flint	\$8
King of the Earliest	\$8	Red Cob Ensilage	\$4
Reid's Yellow	\$8	Leaming Podder	\$4

Bags Extra 50c each. All shelled corn, 56 lbs. per bu., f. o. b. Ypsilanti. If, on receipt of your order, we cannot ship within the next thirty days, we will immediately advise you.

**MARTIN DAWSON COMPANY,** Ypsilanti, Mich.

United States Food Administration License Number G-35744

## Salvage of Sunken Merchant Ships

There are now lying at the bottom of the sea, with their valuable cargoes, a great number of merchant ships, torpedoed by German submarines. Must they lie there forever or can they be refloated, as Germany is reported to have refloated and taken into Antwerp the North German Lloyd liner "Gneisenau," which was sunk at the beginning of the war in the Scheldt? There appears to be very little doubt that many of the ships can be floated and that a considerable quantity of cargo can be salvages. The North Sea is sufficiently shallow for diving for cargoes, but there are a good many ships sunk in comparatively shallow water, which could be raised now if there were the men and the plant to do it.

There are few, if any salvage divers left. What salvage labor and machinery there was available in the British Isles has been requisitioned by the British Admiralty, and the same holds good in other countries as well. These men and plants are doing considerable valuable work in helping the naval authorities than in looking after the commercial possibilities of salvage. In this as in other matters, nothing can be done until after the end of the war. Then there will be possibilities for salvage work on a considerable scale, both in the North Sea, and parts of the English Channel and other parts where the water is fairly shallow. As to the question of deterioration, the fact is that neither ships nor cargoes, except perishable materials and food stuffs, deteriorate very much in water. The chief damage that a ship suffers is when she is only half-submerged and the engines are left to dry in the wind. Usually, when a vessel that has been wrecked is being refloated, a barrel of oil is poured on the surface of the water in order to leave a deposit over the machinery. Repairs are quickly effected, and sections torn by rock or torpedo present no great difficulties in the work of salvage, for they can be completely repaired. Valuable as are the ships themselves that now lie at the bottom of the sea, the cargoes of cotton, rubber, wool, cotton goods, machinery, and other materials are more valuable still. The legal rights of salvage are those between the persons who are prepared to salvage and the owners or underwriters of the vessels. A salvage company, for example, knowing that a vessel with a cargo of wool or cotton, has been sunk at a certain spot, will notify the underwriters that

they are prepared to save the cargo, and perhaps the ship, and they offer to do it. The question of the three-mile limit is not likely to arise.

It depends on terms of peace whether it will be possible for German companies to offer to save the British ships they have sunk, and upon the feeling of British underwriters in the matter of whether they could consider them. There is no reason to suppose that Germany would be better equipped for the work than those of firms in other countries, but some of the German companies have more steamers but a much less amount of machinery.

There are few, if any, salvage divers Holland, Sweden and Denmark, and doubtless they, too, will want a share of the valuable cargoes now strewn over "Davy Jones' locker."

## WHILE BILLY GOES "OVER THE TOP."

BY DORA H. STOCKMAN.

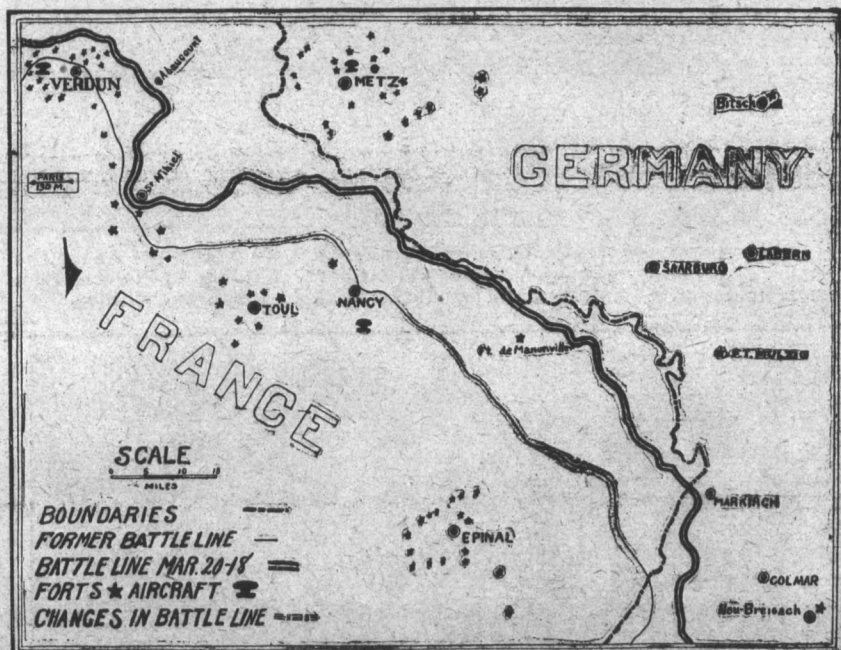
Our Billy has left the old homestead  
Let his job and ambitions drop  
And the farm grows the bread  
That the lad may be fed  
While Billy goes "Over the Top."

The plow idly stands in the furrow,  
The team waits their master's hand,  
They are nickered softly for dinner  
At the end of the next headland—  
But Billy has dropped the ribbons  
And shouldered a rifle, instead,  
For the war must be won  
And our farmer lad,  
Has a patriot's heart and head.

With trembling, work-worn fingers  
Father grasps the handles again,  
Going up and down the long furrows  
To plow for the corn and grain;—  
For Billy has dropped the ribbons  
And shouldered a rifle, instead,  
And father, back home  
Is planting the fields  
That the boy in the trench may be fed.

And the farm girls with red summer roses  
A-bloom in their cheeks, like June,  
In their jeans, are turning the hay-cocks  
And whistling a martial tune;—  
For Billy has dropped the pitchfork  
And shouldered a rifle, instead,  
For the war must be won  
And the girls back home  
Are growing their soldier's bread.

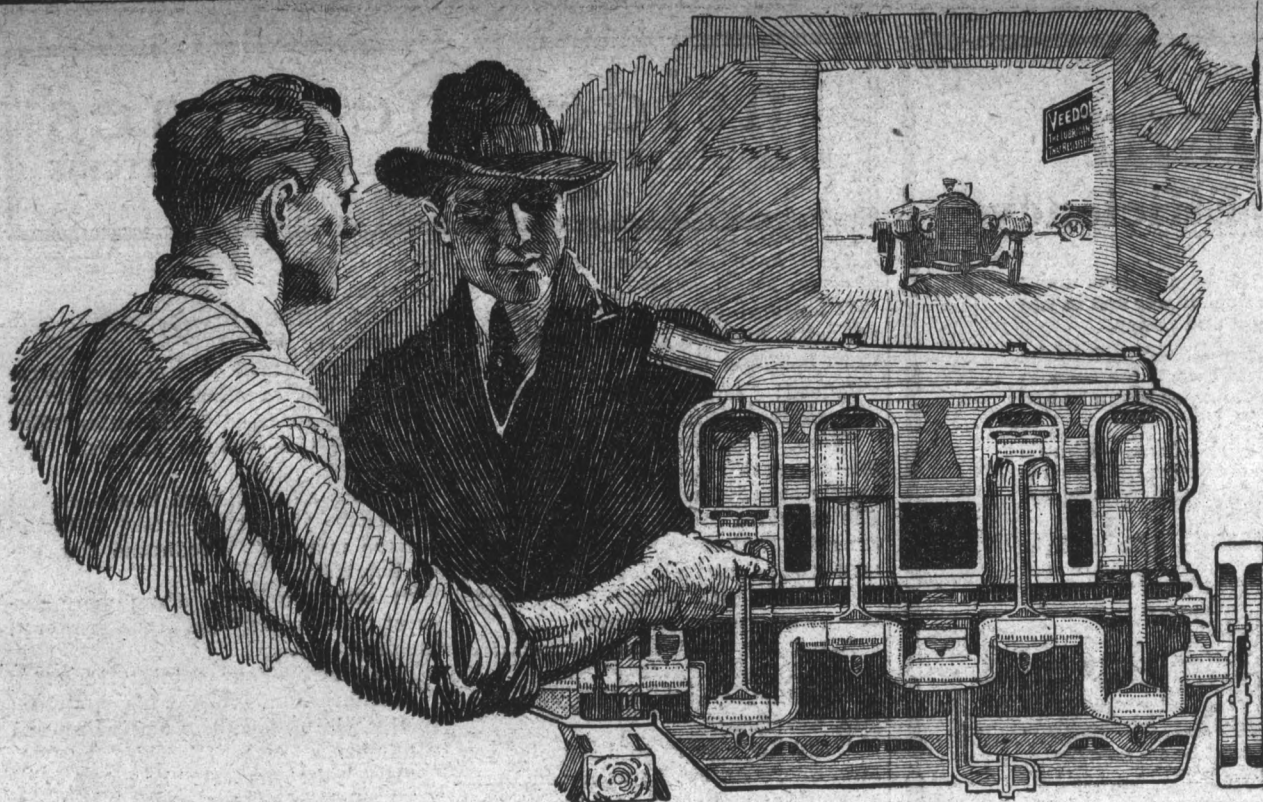
And Mother is knitting and singing  
A song that is half a prayer,  
She has taken a leaf from the table,  
Put away the empty chair;—  
For Billy has left the fireside  
To follow Old Glory, instead,  
And the loyal folks  
On the farm back home  
Are growing the "Victory" bread.



American Front, Verdun to Colmar.

The much heralded German drive is now taking place along the British front, lying northwest of Verdun. It is the evident intention of the Germans to break through the Allied lines with Paris as an objective. The American sector has not yet been actively engaged in the gigantic battle; however, it is reported that American reinforcements are aiding the French and British lines. It is apparently the intention of the Allies to allow the enemy to exhaust themselves before launching a return offensive. When this time comes watch our boys and follow their advance, which will be shown on this map from week to week.





### 19 places where sediment damages your engine

1. Cylinder walls
2. Pistons
3. Piston rings
4. Wristpins
5. Wristpin bearings
6. Crankshaft main bearings
7. Crankshaft
8. Connecting-rod bearings
9. Connecting-rods
10. Valves
11. Valve seats
12. Valve cams
13. Camshaft bearings
14. Camshaft
15. Timing gears
16. Ignition driveshaft bearings
17. Generator shaft bearings
18. Oil circulating pump
19. Spark plugs

# 19 places where sediment damages your engine

**W**HEN your engine losses power, knocks, bucks, and overheats, nine times out of ten it is sediment in the oil that is to blame.

Just look at the long list of vital parts that will quickly show serious wear when sediment is present in any considerable amount.

Ordinary oil cannot resist the intense heat of the engine—200° to 1000°F. It breaks down quickly. The resulting sediment crowds out the oil with true lubricating qualities from points where it is needed most. Moving metal surfaces, which should always be separated by a protecting film of lubricant, are thus thrown into direct contact.

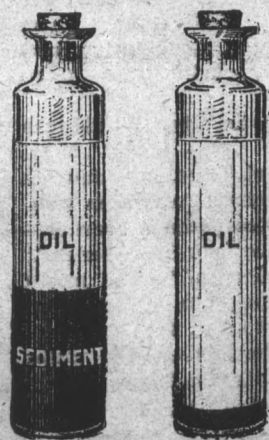
### Why sediment causes wear

A strong magnifying glass reveals millions of microscopic teeth covering the apparently smooth surface of a bearing or other working part.

When the cushioning oil film between these surfaces is destroyed or excluded by sediment these tiny metal teeth grind together, thus causing friction and wear.

When this happens in any important part of an engine, costly **replacements** soon become necessary. Damage due to sediment in ordinary oil **can never be repaired.**

That is why you cannot afford to buy



Ordinary oil after use  
Showing sediment formed after 500 miles of running

Veedol after use

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"In the past, too little attention has been paid to lubrication. Oil needs to be chosen for an engine almost more carefully than food for a child."



P. M. Heldt, recognized authority on internal combustion engines, and author of "The Gasoline Automobile," declares:

"The proper selection of oil for the lubrication of an automobile engine is a very important matter. The grade of lubricant used affects not only the efficiency of the engine but also its life."



Chas. A. Duryea, consulting engineer and a pioneer in automobile construction states:

"Buying inferior oil is the poorest economy a motorist can practice. Inferior oils must be used in greater quantities and, even then, they increase friction, loss of power, fuel consumption, heat and repair bills. Good oil costs a little more per gallon, but far less per mile."



ordinary oil at any price. The cost of using it is appalling, because of its injurious effects on your engine.

### How the problem was solved

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How Veedol reduces sediment 86% is made plain by the two bottles, showing the famous Sediment Test, at the left of the page.

When figured by miles of service, and not by cost per gallon, Veedol proves much more economical than ordinary oils.

The average motor oil acts like water in a kettle. When water is subjected to intense heat it evaporates as steam. Under the terrific heat of the engine ordinary oil evaporates very rapidly through the oilfiller in the form of vapor.

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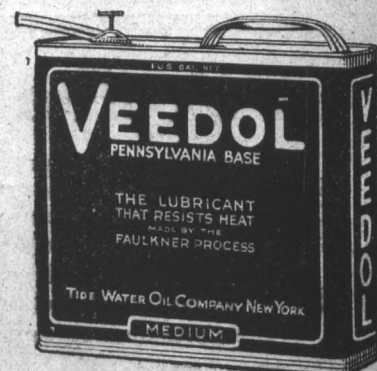
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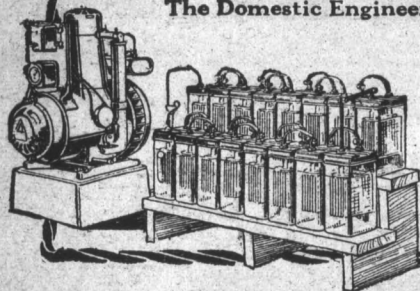
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## Inside the Lines

By EARL DERR BIGGERS & ROBERT WELLES RITCHIE

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"You have seen me before, Mrs. Sherman?"

"I am sure of it," the lady announced, with decision. The other diners were listening now.

Indeed! And where?" Woodhouse was smiling polite attention.

"Why, at the Winter Garden, in Berlin—a month ago!" Mrs. Sherman was hugely satisfied with her identification. She appealed to her husband for confirmation. "Remember, father, that gentleman I mistook for Albert Downs, back home, that night we saw that—er—wicked performance?"

"Can't say I do," Sherman answered tolerantly.

"Woodhouse, still smiling, addressed Mrs. Sherman:

"Frightfully sorry to disappoint you, Mrs. Sherman, but I was not in Berlin a month ago. I came here from Egypt, where I had been for several years." Woodhouse heard Jane at his elbow catch her breath.

"See, mother, there you go on your old hobby of recognizin' folks," Sherman chided. Then, to the others: "Why, she's seen all Kewanee since she came here to Europe. Even got a glimpse of the Methodist minister at Monte Carlo."

"I have never been in Berlin in my life, Mrs. Sherman," Woodhouse was adding. "So, of course—"

"Well, I suppose I am wrong," the lady admitted. "But still I could almost swear to it."

The governor, who had kept a cold eye on his subordinate during this colloquy, now caught Woodhouse's glance. The captain smiled frankly.

"Another such unexpected identification, General, and you'll have me in the cells as a spy, I dare say," he remarked.

"Quite likely," Crandall answered shortly, and took up his fork again. A maid stepped to Lady Crandall's chair at this juncture and whispered something. The latter spoke to Woodhouse:

"You're wanted on the telephone in the library, Captain. Very important, so the importunate person at the other end of the wire informs the maid."

Woodhouse looked his confusion.

"Probably that silly ass at the quay who lost a bag of mine when I landed," he apologized as he rose. "If you'll pardon me—"

Woodhouse passed up the stairs and into the library. He was surprised to find Jaimihr Khan standing by the telephone, his hand just in the act of setting the received back on the hook. The Indian stepped swiftly to the double doors and shut them behind the captain.

"A thousand pardons, Cap-tain"—he spoke hurriedly—"the cap-tain will stand near the telephone. They may come from the dining-room at any minute now."

"What is all this?" Woodhouse began. "I was called on the telephone."

"A call I had inspired, Cap-tain. It was necessary to see you—at once and alone."

"Tactless! With the general suspecting me—you heard what that woman from America said at the table—she has eyes in her head!"

"I think he still trusts you, Cap-tain," the Indian replied. "And tonight we must act. The fleet sails at noon tomorrow."

"We?" Woodhouse was on his guard at once. "What do you mean by 'we'?"

Jaimihr Khan smiled at the evasion. "Yesterday in this room, Cap-tain, I burned a roll of plans—"

"Which I had good reason to wish saved," Woodhouse caught him up.

"No matter; I burned them—at a

moment when you were—in peril, my Cap-tain."

"Burned them, yes—perhaps to trap me further."

The Indian made a gesture of impatience. "Oh, excellent discretion!" he cried in suppressed exasperation. "But we waste time that is precious. Tonight—"

"Before another word is spoken, let me have your card—your Wilhelmstrasse number," Woodhouse demanded hurriedly.

"I carry no card. I am more discreet than—some," the other answered insinuatingly.

"No card? Your number, then?"

Jaimihr Khan brought his lips close to the white man's ear and whispered a number.

"Is not that correct?" he asked.

Woodhouse nodded curtly.

"And now that we are properly introduced," Jaimihr began, with a sardonic smile, "may I venture a criticism? Your pardon, Cap-tain; but our critics, they help us to perfection. Since when have men who come from the Wilhelmstrasse allowed themselves to make love in drawing-rooms?"

"You mean—"

"You and the young woman from America—when I found you together here yesterday—"

"That is my affair," was Woodhouse's hot response.

"The affair on which we work—this night—that is my affair, be verree sure of that!" There was something of menace in the Indian's tone.

Woodhouse bowed to his demand for an explanation. "That young woman, as it happens, must be kept on our side. She saw me in France, when Captain Woodhouse was supposed to be in Egypt."

"Ah, so?" Jaimihr inclined his head with a slight gesture craving pardon.

"For that reason you make a conquest. I did not understand."

"No matter. The fleet sails at noon."

"And our moment is here—tonight," Jaimihr whispered in exultation. "Not until today did they admit you to the tower, Cap-tain. How is it there?"

"A simple matter—with the combination to the door of Room D."

With a single stride the Indian was over before the door of the wall safe. He pointed.

"The combination of the inner door—it is in a special compartment of that safe, protected by many wires. Before dawn I cut the wires—and come to you with the combination."

"At whatever hour is best for you," Woodhouse put in eagerly.

"Let us say three-thirty," Jaimihr answered. "You will be waiting for me at the Hotel Splendide with—our friends there. I shall come to you there, give you the combination, and you shall go through the lines to the signal tower."

"There must be no slip," Woodhouse sternly warned.

"Not on my part, Cap-tain—count on that. For five years I have been waiting—waiting. Five years a servant—yes, my General; no, my General; very good, my General." The man's voice vibrated with hate. "Tomorrow, near dawn—the English fleet shattered and ablaze in the harbor—the water red, like blood, with the flames. Then, by the breath of Allah, my service ends."

Voices sounded in the hallway outside the double doors. Jaimihr Khan, a finger to his lips, nodded as he whispered: "Three-thirty, at the Splendide." He faded like a white wraith through the door to General Crandall's room as the double doors opened and



the masculine faction of the dinner party entered. Woodhouse rose from a stooping position at the telephone and faced them. To the general, whose sharp scrutiny stabbed like thin knives he made plausible explanation. The beggar who lost his bag wanted a complete identification of it—had run it down at Algeciras.

"I understand," Crandall grunted.

When the cigars were lit, General Crandall excused himself for a minute, sat at his desk, and hurriedly scratched a note. Summoning Jaimihr, he ordered that the note be despatched by orderly direct to Major Bishop and given to no other hands. Woodhouse, who overheard his superior officer's command, was filled with vague apprehension. What Mrs. Sherman had said at table—this hurried note to Bishop; there was but one interpretation to give to the affair—Crandall's suspicions were all alive again. Yet at three-thirty—at the Hotel Splendide—

But when Crandall came back to join the circle of smokers, he was all geniality. The women came in by way of Jane Gerson's room; they had been taking a farewell peek at her dazzling stock of gowns, they said, before they were packed for the steamer.

"There was one or two I just had to see again," Mrs. Sherman explained for the benefit of all, "before I said good-bye to them. One of them, by Madam Paquin, father, I'm going to copy when we get home. I'll be the first to introduce a Paquin into little Kewanee."

"Well, don't get into trouble with the minister, mother," Henry J. warned. "Some of the French gowns I've seen on this trip certainly would stir things up in Kewanee."

Jaimihr served the coffee. Woodhouse tried to maneuver Jane into a tete-a-tete in an angle of the massive fireplace, but she outgeneraled him, and the observant Mrs. Sherman cornered him inexorably.

"Tell me, Captain Woodhouse," she began, in her friendly tones, "you said a while ago the general might mistake you for a spy. Don't you have a great deal of trouble with spies in your army in war time? Everybody took us for spies in Germany, and in France they thought poor Henry was carrying bombs to blow up the Eiffel Tower."

"Perhaps I can answer that question better than Captain Woodhouse," the general put in, rising and striding over to where Mrs. Sherman kept the captain prisoner. "Captain Woodhouse, you see, would not be so likely to come in touch with those troublesome persons as one in command of a post, like myself." The most delicate irony barred this speech, lost to all but the one for whom it was meant.

"Oh, I know I'm going to hear something very exciting," Mrs. Sherman chortled. "Kitty, you'd better hush up Willy Kimball for a while and come over here. You can improve your mind better listening to the general."

Crandall soon was the center of a group. He began, with sober directness.

"Well, in the matter of spies in war time, Mrs. Sherman, one is struck by the fact of their resemblance to the plague—you never can tell when they are going to get you or whence they came. Now here on the Rock I have reason to believe we have one or more spies busy this minute."

Jane Gerson, sitting where the light smote her face, drew back into the shadow with a swift movement of protectiveness. Woodhouse, who balanced a dainty Satsuma coffee cup on his knee, kept his eyes on his superior's face with a mildly interested air.

"In fact," Crandall continued evenly, "I shouldn't be surprised if one, possibly two spies—should be arrested before the night is over. And the point about this that will interest you ladies is that one of these—the one whose order for arrest I have already given is

a woman—a very clever and pretty woman, I may add, to make the story more interesting."

"And the other, whose arrest may follow, is an accomplice of hers, I take it, General!" Woodhouse put the question with easy indifference. He was stirring his coffee abstractedly.

"Not only the accomplice, but the brains for both, Captain. A deucedly clever person, I'm frank to admit."

"Oh, people! Come and see the flagship, signaling to the rest of the fleet with its funny green and red lights!" It was Jane who had suddenly risen and stood by the curtains screening the balcony windows. "They look like little flowers opening and shutting."

The girl's diversion was sufficient to take interest momentarily from General Crandall's revelation. When all had clustered around the windows, conversation skipped to the fleet, its power, and the men who were ready to do battle behind its hundreds of guns. Mrs. Sherman was disappointed that the ships did not send up rockets. She had read somewhere that ships sent up rockets, and she didn't see why these should prove the exception. Interruption came from Jaimihr Khan, who bore a message for Consul Reynolds. The fussy little man ripped open the envelope with an air of importance.

"Ah, folks, listen! Here we have the latest wireless from the Saxonia. Will anchor about two—sail six. Have all passengers aboard by five-thirty." Excited gurgles from the refugees. "That means," Reynolds wound up, with a flourish, "everybody at the docks by five o'clock. Be there myself, to see you off. Must go now—lot of fuss and feathers getting everybody fixed." He paused before Jane.

"You're going home at last, young lady," he chirped.

"That depends entirely upon Miss Gerson herself." It was the general who spoke quietly but emphatically.

Reynolds looked at him, surprised.

"Why, I understood it was all arranged—"

"I repeat, it depends entirely on Miss Gerson."

Woodhouse caught the look of fear in Jane's eyes, and, as they fell for the instant on his, something else—appeal. He turned his head quickly. Lady Crandall saved the situation.

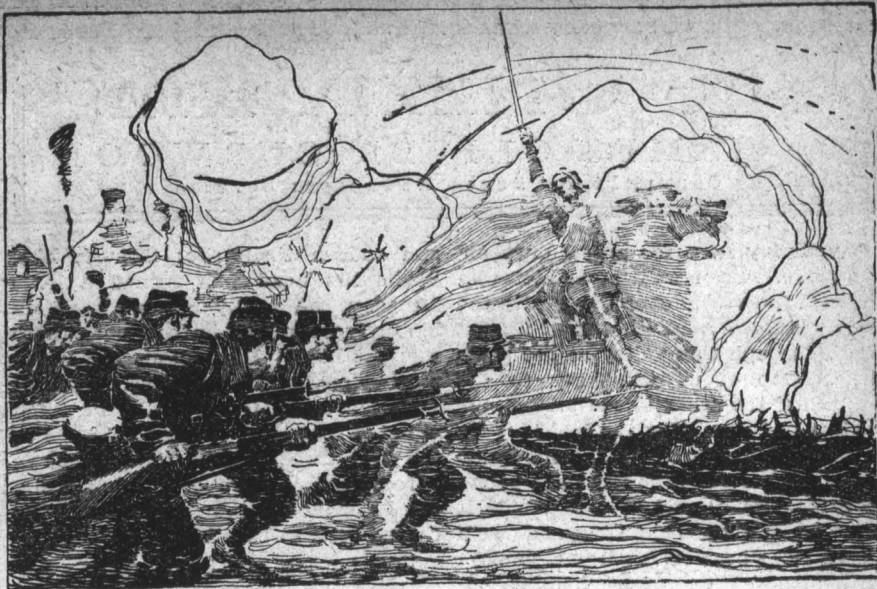
"Oh, that's some more of George's eternal red tape. I'll snip it when the time comes."

The consul's departure was the signal for the others. They all crowded around Lady Crandall and her husband with voluble praise for the American dinner and thanks for the courtesy they had found on the Rock. Woodhouse, after a last despairing effort to have a word of farewell with Jane, which she denied, turned to make his adieu to his host and hostess.

"No hurry, Captain," Crandall caught him up. "Expect Major Bishop in every minute—small matter of official detail. You and he can go down the Rock together when he leaves."

Woodhouse's mind leaped to the meaning behind his superior's careless words. The hastily despatched note—that was to summon Bishop to Government House; Crandall's speech about the two spies and the arrest of one of them—Louisa, he meant—and now this summary order that he wait the arrival of Bishop—would the second arrest be here in this room? The man who carried a number from the Wilhelmstrasse felt the walls of the library slowly closing in to crush him; he could almost hear the whisper and mutter of the inexorable machine moving them closer—closer. He alone with the man whose word could send bullets into his heart!

"A very pleasant dinner—Lady Crandall's," Woodhouse began, eager to lighten the tenseness of the situation. (Continued next week.)



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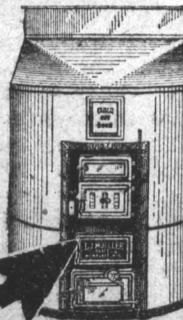
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# The Grizzly King

By JAMES OLIVER CURWOOD

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"We'll lay here for a few days an' not move. Then we'll start Metoosin through the valley over there with the dogs, if there's any left, and we'll start south through this valley at the same time. One of us will keep to the slopes an' the other to the bottom, an' we'll travel slow. Get the idee?"

"That grizzly won't leave his country, an' Metoosin is pretty near bound to drive him around to us. We'll let him do the open hunting and we'll skulk. The bear can't get past us both without giving one of us shooting."

"It sounds good," agreed Langdon. "And I've got a lame knee that I'm not unwilling to nurse for a few days."

Scarcely were the words out of Langdon's mouth when a sudden rattle of hobble-chains and the startled snort of a grazing horse out in the meadow brought them both to their feet.

"Utum!" whispered Metoosin, his dark face aglow in the firelight.

"You're right—the dogs," said Bruce and he whistled softly.

They heard a movement in the brush near them, and a moment later two of the dogs came into the firelight. They slunk in, half on their bellies, and as they prostrated themselves at the hunters' feet a third and fourth joined them.

They were not like the pack that had gone out that morning. There were deep hollows in their sides; their wiry crests were flat; they were hard run, and they knew that they were beaten. Their aggressiveness was all gone, and they had the appearance of whipped curs.

A fifth came in out of the night. He was limping, and dragging a torn foreleg. The head and throat of one of the others was red with blood. They all lay flat on their bellies, as if expecting condemnation.

"We have failed," their attitude said; "we are beaten, and this is all of us that are left."

Mute Bruce and Langdon stared at them. They listened—waited. No other came. And then they looked at each other.

"Two more of them gone," said Langdon.

Bruce turned to a pile of panniers and canvases and pulled out the dog-leashes. Up in his tree Muskwa was all atremble. Within a few yards of him he saw again the white-fanged horde that had chased Thor and had driven him into the rock-crevice. Of the men he was no longer greatly afraid. They had attempted him no harm, and he had ceased to quake and snarl when one of them passed near. But the dogs were monsters. They had given battle to Thor. They must have beaten him, for Thor had run away.

The tree to which Muskwa was fastened was not much more than a sapling, and he lay in the saddle of a crotch five feet from the ground when Metoosin led one of the dogs past him. The Airedale saw him and made a sudden spring that tore the leash from the Indian's hand. His leap carried him almost up to Muskwa. He was about to make another spring when Langdon rushed forward with a fierce cry, caught the dog by his collar, and with the end of the leash gave him a sound beating. Then he led him away.

This act puzzled Muskwa more than ever. The man had saved him. He had beaten the monster with the red mouth and the white fangs, and all of those monsters were now being taken away at the end of ropes.

When Langdon returned he stopped close to Muskwa's tree and talked to him. Muskwa allowed Langdon's hand to approach within six inches of him, and did not snap at it. Then a strange

and sudden thrill shot through him. While his head was turned a little Langdon had boldly put his hand on his furry back. And in that touch there was not hurt! His mother had never put her paw on him as gently as that!

Half a dozen times in the next ten minutes Langdon touched him. For the first three or four times Muskwa bared his two rows of shining teeth, but he made no sound. Gradually he ceased even to bare his teeth.

Langdon left him then, and in a few moments he returned with a chunk of raw caribou meat. He held this close to Muskwa's nose. Muskwa could smell it, but he backed away from it, and at last Langdon placed it beside the basin at the foot of the tree and returned to where Bruce was smoking.

"Inside of two days he'll be eating out of my hand," he said.

It was not long before the camp became very quiet. Langdon, Bruce, and the Indian rolled themselves in their blankets and were soon asleep. The fire burned lower and lower. Soon there was only a single smouldering log. An owl hooted a little deeper in the timber. The drone of the valley and the mountains filled the peaceful night. The stars grew brighter. Far away Muskwa heard the rumbling of a boulder rolling down the side of a mountain.

There was nothing to fear now. Everything was still and asleep but himself, and very cautiously he began to back down the tree. He reached the foot of it, loosed his hold, and half fell into the basin of condensed milk, a part of it slopping up over his face. Involuntarily he shot out his tongue and licked his chops, and the sweet, sticky stuff that it gathered filled him with a sudden and entirely unexpected pleasure. For a quarter of an hour he licked himself. And then, as if the secret of this delightful ambrosia had just dawned upon him, his bright little eyes fixed themselves covetously upon the tin basin. He approached it with commendable strategy and caution, circling first on one side of it and then on the other, every muscle in his body prepared for a quick spring backward if it should make a jump for him. At last his nose touched the thick, luscious feast in the basin, and he did not raise his head until the last drop of it was gone.

## Builders of Long Ago

Scattered all over the Yucatan peninsula are monuments to a civilization that flourished thousands of years ago. Just how many thousands nobody knows, and scientists differ very materially in their ideas on the subject. The prevailing belief, however, is that this civilization was in full swing as late as the beginning of the Christian era. Other scientists assert that the ruins antedate those of Egypt.

Yucatan may well be called "the American Egypt." The ruins of one hundred and seventy-two cities, big and little, have been discovered, and not a quarter of the territory has been explored, that is, carefully explored—for the tropical verdure makes the finding of them very difficult. One might pass within a hundred feet of a wonderful old temple or pyramid a hundred times and not discover it, so effectively does the jungle screen these crumbling monuments of the distant past and shield them from the prying eyes of this inquisitive and presumptuous age. The walls of the uncovered buildings prove to be enormously thick and the rooms rather small, even in the houses

The condensed milk was the one biggest factor in the civilizing of Muskwa. It was the missing link that connected certain things in his lively little mind. He knew that the same hand that had touched him so gently had also placed this strange and wonderful feast at the foot of his tree, and that same hand had also offered him meat. He did not eat the meat, but he licked the interior of the basin until it shone like a mirror in the starlight.

In spite of the milk, he was still filled with a desire to escape, though his efforts were not as frantic and unreasoning as they had been. Experience had taught him that it was futile to jump and tug at the end of his leash, and now he fell to chewing at the rope. Had he gnawed in one place he would probably have won freedom before morning, but when his paws became tired he rested, and when he resumed his work it was usually at a fresh place in the rope. By midnight his gums were sore, and he gave up his exertions entirely.

Humped close to the tree, ready to climb up it at the first sign of danger, the cub waited for morning. Not a wink did he sleep. Even though he was less afraid than he had been, he was terribly lonesome. He missed Thor, and he whimpered so softly that the men a few yards away could not have heard him had they been awake. If Pipoonaskoos had come into the camp then he would have welcomed him joyfully.

Morning came, and Metoosin was the first out of his blankets. He built a fire, and this roused Bruce and Langdon. The latter, after he had dressed himself, paid a visit to Muskwa, and when he found the basin licked clean he showed his pleasure by calling the others' attention to what had happened.

Muskwa had climbed to his crotch in the tree, and again he tolerated the stroking touch of Langdon's hand. Then Langdon brought forth another can from a cowhide pannier and opened it directly under Muskwa, so that he could see the creamy white fluid as it was turned into the basin. He held the basin up to Muskwa, so close that the milk touched the cub's nose, and for the life of him Muskwa could not keep his tongue in his mouth. Inside of five minutes he was eating from the basin in Langdon's hand! But when Bruce came up to watch the proceedings the cub bared all his teeth and snarled.

"Bears make better pets than dogs," affirmed Bruce a little later, when they were eating breakfast. "He'll be following you around like a puppy in a few days, Jimmy."

"I'm getting fond of the little cuss already," replied Langdon. "What was that you were telling me about Jameson's bears, Bruce?"

"Jameson lived up in the Kootenay country," said Bruce. "Reg'lar hermit, I guess you'd call him. Came out of the mountains only twice a year to get grub. He made pets of grizzlies. For years he had one as big as this fellow we're chasing. He got 'im when a cub, an' when I saw him he weighed a thousand pounds an' followed Jameson wherever he went like a dog. Even went on his hunts with him, an' they slept beside the same campfire. Jameson loved bears, an' he'd never kill one."

After a moment Langdon said:

"And I'm beginning to love them, Bruce. I don't know just why, but there's something about bears that makes you love them. I'm not going to shoot many more—perhaps none after we get this dog-killer we're after. I almost believe he will be my last bear." Suddenly he clenched his hands, and added angrily: "And to think there isn't a province in the Dominion or a state south of the Border that has a 'closed season' for bear! It's an outrage, Bruce. They're classed with vermin, and can be exterminated at all seasons. They can even be dug out of their dens with their young—and—so help me Heaven!—I've helped to dig them out! We're beasts, Bruce. Sometimes I almost think it's a crime for a man to carry a gun. And yet—I go on killing."

"It's in our blood," laughed Bruce, unmoved. "Did you ever know a man, Jimmy, that didn't like to see things die? Wouldn't every mother's soul of 'em go to a hanging if they had the chance? Won't they crowd like buzzards round a dead horse to get a look at a man crushed to a pulp under a rock or a locomotive engine? Why, Jimmie, if there weren't no law to be afraid of, we humans'd be killing one another for the fun of it! We would. It's born in us to want to kill."

"And we take it all out on brute creation," mused Langdon. "After all, we can't have much sympathy for ourselves if a generation or two of us are killed in war, can we? Mebbe you're right, Bruce. Inasmuch as we can't kill our neighbors legally whenever we have the inclination, it's possible the Chief Arbitrator of things sends us a war now and then to relieve us temporarily of our blood-thirstiness. Hello, what in thunder is the cub up to now?"

Muskwa had fallen the wrong way out of his crotch and was dangling like the victim at the end of a hangman's rope. Langdon ran to him, caught him boldly in his bare hands, lifted him up over the limb and placed him on the ground. Muskwa did not snap at him or even growl.

Bruce and Metoosin were away from camp all that day, spying over the range to the westward, and Langdon was left to doctor a knee which he had battered against a rock the previous day. He spent most of his time in company with Muskwa. He opened a can of their griddle-cake syrup and by noon he had the cub following him about the tree and straining to reach the dish which he held temptingly just out of reach. Then he would sit down, and Muskwa would climb half over his lap to reach the syrup.

At his present age Muskwa's affection and confidence were easily won. A baby black bear is very much like a human baby: he likes milk, he loves sweet things, and he wants to cuddle up close to any living thing that is good to him. He is the most lovable creature on four legs—round and soft and fluffy, and so funny that he is sure to keep everyone about him in good humor. More than once that day Langdon laughed until the tears came, and especially when Muskwa made determined efforts to climb up his leg to reach the dish of syrup.

(Continued next week.)



# Michigan Farmers— Attention!

**Y**OUR Country called your fathers, the world calls you!

The pages of American history are illumined by the heroic sacrifices of the American farmer.

You have always responded in a magnificent manner in peace times and in war times.

The preservation of the Union was made possible by the tremendously energetic response of your forefathers to the call of Abraham Lincoln in '61.

Your ancestors blazed the trail through the wilderness and steadily advanced civilization from the Atlantic to the Pacific.

"Pioneers" they called them!

They endured hardships and privations, transformed the wilderness into fields of productivity.

They laid the foundation upon which is built America's greatness, her riches and resources. They knew not the taint of disloyalty nor traitorism; they wholeheartedly and unselfishly answered their country's call. They enriched us all by their progressiveness.

Heroes they were! Super-men!

God Bless Them! They did their work nobly and well. Their contribution to mankind has probably not been appreciated enough.

Their heritage is yours and we believe you are worthy of it.

Their responsibilities have been transferred to your shoulders, and, thank God, you are strong enough to bear them.

Your Country called your fathers; the world calls you!

No call was ever more urgent nor any cause more worthy of your heartiest response.

Heartrending pleadings of starving mothers and the pitiable cries of famished babies of ravaged Belgium and desecrated France are heard clear across the Atlantic.

The cry for bread is on the lips of downtrodden Poland and half-starved Finland.

Thousands have died and thousands more will perish in Serbia, Armenia, and even Russia for want of bread.

Men! do you realize what it means to die for want of—bread?

Can you imagine how it feels to slowly starve to death; to have your bones almost force their way through your skin; to become so weak that you can neither lift a finger nor speak?

Can you comprehend a mother's grief because of

her inability to secure nourishment for her starving children, whose pleadings are ever in her ears, whose emaciated faces are robbing her of reason?

The World's cry is for bread and it is up to the American farmer to provide the wheat.

It is a tremendous task but you have never failed to live up to your responsibilities and you are not going to fall down now in this emergency.

You must not; you shall not fall!

Hundreds of thousands, yes, even millions of American soldiers' lives in France, many of them your own boys, will be more endangered by lack of proper food than by German bullets, unless a greater production of wheat is obtained immediately.

Stocks of wheat in this country are the lowest proportionately they have ever been.

A crop failure in America this year, or an under-production, will bring the people of the United States face to face with starvation within eighteen months.

America must have more wheat and to have it you must produce it.

This is your task in helping win the War. It is your obligation to America, your duty to mankind.

## Every Additional Bushel of Wheat You Can Harvest This Summer Means One More Life Saved

**E**VERY bushel of wheat wasted or fed to stock means one more life lost.

That is why your country's call is so urgent and why your responsibilities are so tremendous.

You did the best you could last fall but the season was against you. More wheat would have been sown had the weather been more favorable. You are to be congratulated upon having accomplished as much as you did under the circumstances.

But not enough wheat was sown in Michigan last fall and we must have immediate relief.

The only immediate remedy is to sow spring wheat, consequently spring wheat must be sown wherever conditions will permit it.

Possibly you have some bean ground or corn ground where you would have sown wheat last fall but could not. Sow it to spring wheat now.

Besides there are in Michigan approximately one hundred and fifty thousand farms where not enough wheat is produced to provide the farmer's bread. If five acres of spring wheat can be sown on these farms this spring, with an average yield, more than ten million bushels of additional wheat would be produced.

Of course, it is not to be expected that this additional amount of wheat will be raised in Michigan this spring on the spring seeding, but if five million bushels additional are raised a great deal will have been accomplished, for this wheat will be available this fall, while next fall's seeding would not be until nearly a year later. A delay might cause a catastrophe.

You are guaranteed a price on the basis of \$2.20 per bushel. The amount of wheat produced will not affect this price. You are certain to get around this figure on this crop whether the War ends or not.

## Suggestions from Experienced Michigan Growers

**D**O not wait for spring plowing. Disc the ground well. Set the disc so as not to leave any ridges. Sow broadcast one and a half to two bushels of spring wheat to the acre, depending upon its germinating test. Then drag well. Cover with a top-dressing of about four loads of barnyard manure to the acre.

Early sowing is essential. The best time is when the frost has gone out of the ground to the extent of about three or four inches. Some soils are harder to handle than others, so necessarily some variation must prevail.

Spring wheat is being successfully grown in sections of Monroe, Alpena, Shiawassee, Charlevoix and Emmett counties. In fact, a Kent county farmer produced a splendid crop of spring wheat last year, securing a yield of twenty-one bushels to the acre of excellent quality.

Marquis and Blue Ribbon varieties of spring wheat are recommended for Michigan. Suggest you place your order immediately through your local mill or dealer.

Choice Marquis spring wheat can be obtained from the following:

Lewellyn Bean Company, Grand Rapids, Mich.  
Hannah & Lay Company, Traverse City, Mich.  
Argo Milling Company, Charlevoix, Mich.  
Hankey Milling Company, Petoskey, Mich.  
Ithaca Farmers' Elevator Company, Ithaca, Mich.  
Michigan Bean Company, Vestaburg, Mich.  
R. J. Tower Milling Company, Greenville, Mich.  
Albert Dickinson Company, Chicago, Illinois.

Choice No. 1 Northern spring wheat can be obtained from the following:

Valley City Milling Company, Grand Rapids, Mich.  
Voigt Milling Company, Grand Rapids, Mich.  
Watson-Higgins Milling Company, Grand Rapids, Mich.  
Christian Breisch, Lansing, Mich.

Michigan Farmers! conditions are extremely serious. It is up to you to see that Michigan comes across with her proportionate increase in production of wheat this year.

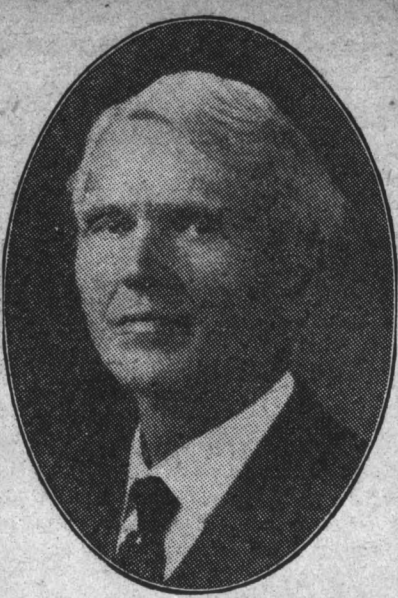
This is a tremendous task but you are equal to it.

In times past America has been fortunate in having the American farmer to depend upon. Today the World is favored by having such a substantial backing.

The American Farmer will make good in this crisis as he has in every other.

**Men! For Humanity's Sake, for Your Country's Sake, for Our Soldier's Sake, for Your Own Sake, Sow Every Available Acre of Wheat You Possibly Can This Spring.**





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You can get ready at the Ferris Institute. The Spring Term Begins March 25. The First Summer term Begins May 20. The Second Summer term Begins July 1. No entrance examinations. Everybody is welcome. Self-boarding cuts down expenses one-half.

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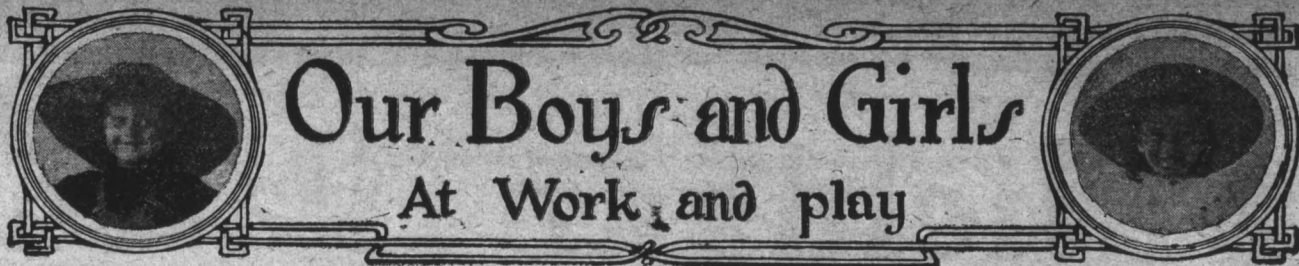
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### HIGH SCHOOL AGRICULTURAL CLASS SELECT SEEDS.

Dear Sirs:—Our high school agriculture class, of which I am a member, has been receiving without cost, your excellent paper, the Michigan Farmer, and we wish to thank you for same. From it we have gained much information of value and feel that all agriculture classes should correlate it with the regular course. Our class has tried to keep in line with all food conservation projects. Last fall we selected and stored one hundred and ten bushels of seed corn direct from the field. Just now we are testing seed corn for the farmers in this locality and find a great deal that will not grow. We are arranging to treat a large quantity of oats for smut. Perhaps later we shall do some practical work with potatoes.

Your paper has encouraged the foregoing and again we thank you.

Yours very truly,

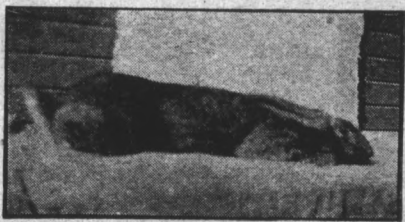
J. C. SIEFERS.

### RAISING AND FEEDING RABBITS.

DEAR EDITOR:

In reply to your letter asking me to write you another story about chickens. I will say that we haven't any more chickens, only about twenty-five. The raising of chickens is very profitable, but when feed is so high priced it takes all the profit out of it.

The raising of rabbits is also profitable. Rabbits do not eat very much and they are now selling for meat at



thirty and forty cents per pound. Rabbits are also bred for show purposes.

Steel Gray Flemish Giants are the kind of rabbits we raise. They are a kind of dark gray or a steel gray. They weigh from six to eighteen pounds. They are good rabbits for showing and eating purposes.

If they are bred for show purposes they should be bred accordingly. If not, it doesn't make so much difference what the variety is. It is best not to breed relatives because the baby rabbits will not be strong or healthy.

The feeding of rabbits is an easy part. They should not be fed on a regular diet. Carrots or green stuff is all right twice a day, and oats once a day is good. The little rabbits do not

need to have anything fed to them because the mother will attend to that. Water should be given to them at least once a day.

The pens for rabbits are very simple. A pen two by three feet does very well for two rabbits. The ground is very good for them if they can burrow, but a clean floor with plenty of straw is better.

I am working on a story of a dog. If you want me to I will send it later.

Yours respectfully,

C. R. COLVIN.

### MICHIGAN BOY WINS IN NORTH CENTRAL STATES.

Realizing the importance of pointing out forcibly, especially to the younger generation, the necessity of clearing every farm of its waste places and unproductive areas, the Du Pont Co., of Wilmington, Del., announced a boys' reclamation contest early in 1917. The conditions of the contest were very liberal—simply that the boy was to take an acre of waste land, one containing stumps, boulders, swamps, gullies, wet places, or other obstructions; clear it, and grow a crop on it. No restrictions were placed on the methods used to clear the land. The boy could use any means he chose, but he must supervise or do the major portion of the work himself.

The United States was divided into six territories, and cash prizes of \$50, \$30 and \$20 were offered in each territory as first, second and third prizes to the boys who showed the best results commensurate with the cost in clearing their acre. In addition to these a number of farm newspapers cooperated in this contest by offering various prizes to the boys in their respective sections doing the best work.

Hundreds of boys from all sections of the country entered this contest, and went to work with a will to earn the coveted prizes. It was not long before acres, once in stumps, boulders or swamps, were cleared and growing crops, taking the place of a waste expanse.

This contest closed December 1, and at that time the boys forwarded a full report of their activities in reclaiming their acre. This report was verified by the county agricultural agent or by two neighboring farmers, not relatives of the boy. An impartial agricultural committee closely studied the results achieved, and awarded the prizes accordingly.

We give below the result of the contest in the north central group of states, Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, North Dakota, South Dakota and Wisconsin, in



C. R. Colvin and His Steel Gray Flemish Giants.

which a Michigan boy wins first prize.

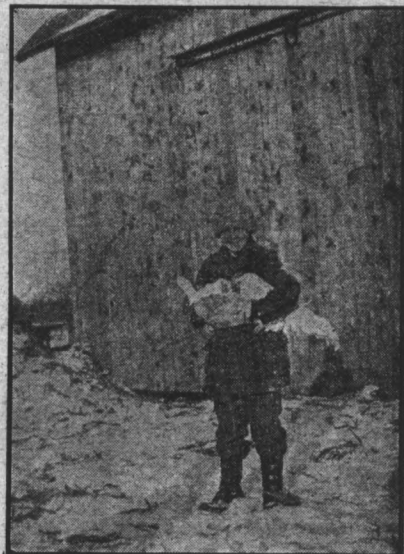
First Prize.—Walter G. Sparling, R. F. D. No. 1, Smiths Creek, Michigan. Cleared his land of stumps and gullies, blasted out the stumps, then planted potatoes and turnips, growing forty-three bushels of potatoes, and thirty bushels of turnips despite the dry season. He now has his land planted in rye.

Second Prize.—Herman H. Hunte, R. F. D. No. 1, Hartland, Minnesota. Mr. Hunte removed the brush and stumps from his land, then planted onions, he produced 247 bushels, net proceeds of which amounted to \$110.81. After which he plowed his land for the coming year.

Third Prize.—Arthur William Holmen, R. F. D. No. 2, Cameron, Wisconsin. He cleared land which had never been broken, of stones and stumps, and raised seventy bushels of potatoes and made a net profit of \$63.50. One-third of his crop was killed by frost.

### HOW I RAISED MY CHICKENS.

Mr. Burgess, of the M. A. C., came out to one of our school houses and I went to the meeting and got a setting of eggs. I got White Leghorns and set them under a Barred Rock hen. She



hatched eight of them, one died and two of them came up missing, so I only had five left, these were two pullets and three cockerels. We had some chicken coops so I didn't have to build any.

This is my first experience with chickens. I fed them chicken feed, wheat and corn meal.

Sometimes I would have to take my pail and go chicken hunting. My chickens would get up on the grain stacks all through harvesting and get to scratching. There was no occasion for them to do it for they had plenty to eat.

I was very glad when a letter came from the college saying that I got second prize, glad I raised chickens.

Enclosed find picture.

I remain,

DONALD BAKER.

The books which help you most are those which make you think the most. The hardest way of learning is by easy reading; but a good book, that comes from a great thinker, it is as a ship of thought, deep freighted with truth and with beauty.—Theodore Parker.

Uncle Sam is in a race against Germany for ships and food—are you with him?



## How the World's Business Is Transacted - By COMFORT A. TYLER

WHEN you go in the bank to open your commercial or checking account, the banker may ask of you, "what kind of an account do you wish to open and how much of a balance do you expect to carry?" Now this is a perfectly legitimate question to ask, albeit you, in your inexperience may be inclined to "bristle up" a little and think, if you don't say, "well, what business is it of his?" If I keep enough in the bank to take care of what checks I write, what is it to him how much balance I am to carry.

Now, stop and think a minute, ladies; it is all the difference in the world to him, it is the difference between profit and loss perhaps. If a merchant knows exactly what he must sell his good for, and exactly what it costs him to do business, it is a matter of a good deal of importance to know just what his goods are to cost him, is it not? This is the problem of your banker. He is entitled to a just profit for his labor and for making it possible for you to do your business in so safe and convenient a manner, and the only way in the world the banker can make money in the banking business is to sell his money for a little more than he buys it for. He may add a trifle to his profit by selling a little change occasionally, by selling some American Bankers' Association checks or in making collections for his city correspondent bank, but all of this will not go very far toward paying the boy who sweeps the floor and washes the windows.

The banker's source of revenue comes from loaning a percentage as large as the law provides, of his aggregate balances to other customers who may require it in their business, thus keeping the largest possible amount of capital ever working, working, working. Now this being true, when he opens an account with you it is his first business to learn as nearly as may be about what he may depend upon by way of daily balances from you.

Remember, that when you start an account, which the banker is always glad to have you do, that it is not a one-sided arrangement, that the favor is not all on your side, but that the banker is serving you while you are serving him. I know of no more reciprocal business in legitimate channels of trade than that of the banker and his customer. He gives you safety, service, and all the benefits of his financial experience—always at your service—he keeps your idle money working for you and the community at large and he keeps the idle money of others also working to help you when you most need it and must be tided over some critical place.

Now, I want you to feel, boys and girls, that while the banker wants and will solicit your business that you also have an obligation to perform and that obligation is to always keep a reasonable balance in your checking account. The banker pays insurance on the safe-keeping of your money. He provides safe quarters for it in so far as the ingenuity of man has as yet been able to foil the efforts of marauders. He provides a neat little pass book to keep your deposit entries in—he has to pay for this little book, it is not given to him, although he gives it to you, he does the work of handling, he takes the risks, he provides you with a check book neatly printed and numbered with a stub to keep your records on—he has to pay for this book also; did you think someone gave them to him as he does to you? Well, you are mistaken if you do, for he has to buy them, he pays the printer for the very

little deposit slips that you sometimes use carelessly for all sorts of purposes other than listing your deposits—they cost him good money. If your remittances come to him by mail, he acknowledges it by mail—somebody pays the postage, who, do you? Oh, no, he pays it and also many other things that has never occurred to you.

Now, I am not telling you all of this, boys and girls, to curry sympathy for the banker. I am doing it for your own well-being, for your own good, for I know that our boys and girls do not wish and will not wilfully do business in an unbusiness-like manner, and I wanted you to appreciate that there were always two sides to every question and usually one side is the right side and the other the wrong side. With our folks it is only to know which is the right side, to fully appreciate their obligations to the men who are really serving them and the community at large, to realize that this service is as much due from them to the banker as from the banker to them, and that will be the end of the story, for it will be done.

It is well to learn from your banker how much of a line of credit he would feel warranted in extending you. That is how much he would lend you in case of need and on what kind of security or collateral as it is often called. You may never require it and again you may some day suddenly be confronted with a business deal that is a good one but to be available, requires immediate money. If you have before hand made all of these arrangements as against a time of need, then you will know exactly what you are warranted in doing.

You might, on very urgent need, even go so far as to issue your check for an amount in excess of your balance, but if you do so, get busy at once and notify your banker, by telephone or wire, or by getting to him before the check can possibly do so, and giving the note and such collateral as may have been agreed upon to protect your account. Don't do this ever unless you have made previous arrangements for credit when needed.

### ANIMAL BLIND MAN'S BUFF.

Ten to thirty or more players. Parlor, gymnasium or playground.

One player is blindfolded and stands in the center of a circle with a wand, stick or cane in his hand. The other players dance around with him in a circle until he taps three times on the floor with his cane, when they must stand still. The blind man thereupon points his cane at some player, who must take the opposite end of the cane in his hand. The blind man then commands him to make a noise like some animal, such as a cat, dog, cow, sheep, lion, donkey, duck, parrot. From this the blind man tries to guess the name of the player. If the guess be correct, they change places. If wrong, the game is repeated with the same blind man.

The players should try to disguise their natural tones as much as possible when imitating the animals, and much sport may be had through the imitation. Players may also disguise their height, to deceive the blind man, by bending their knees to seem shorter, or rising on their toes to seem taller.

Where there are thirty or more players, two blind men should be placed in the center.

There is much sport in this game for either children or adults or both together. The author has known it to be the occasion for great merriment under all three circumstances.



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# Woman and Her Needs

## At Home and Elsewhere



### Compensations

IT must be terribly depressing to reach middle life and never to have done any of the things you planned to do when you started out fresh—why, just yesterday, wasn't it? I imagine it gives one a terrible sinking sensation to awake with a start on some birthday with the thought,

"Why, here I'm half through, and I haven't yet even got nicely started on the work I meant to do."

Yet I believe that's the experience of all but a very small per cent of folks, basing my belief on actual conversations with men and women who have passed the half-way post. For no matter what our friends may think of our success, we measure it ourselves by the things we meant to do. And who of us, even the one who seems most trifling, but started out with the highest ambitions? To me it is one of the best attributes of human nature, that we keep right on smilingly and hopefully, even after we know of a surety that our chances for realizing our fondest ambitions have vanished.

I am continually stumbling upon these little human life tragedies. There's one woman, in particular, that I would have sworn never had an idea

in her life bigger than seeing a movie, or a desire that couldn't be satisfied with a box of chocolates or a pair of silk hose. Yet she had. I found that out when she showed me her greatest treasure one day, an old violin, of unquestioned worth, on which she plays a few simple melodies. All her life she has wanted to study violin. Her father might have paid for lessons, but he didn't believe in "no such tomfoolery for girls." In fact, he didn't believe much in girls, anyway, and when she was thirteen he decided she was old enough to earn her own living. She married at twenty, a man who, while he'd like to give her her chance, has never been able. There are two children who take all the money which might have gone for music. So the violin has stood unused until this winter when her boy began to study. Now she is watching to see if her ambition will be realized in him. For herself, it is simply a dream, a thing she planned to do, back there in youth, but now has given up forever.

She has taken it in good part, as one of the things that had to be, and must

not be allowed to spoil her life. But there are others who take their disappointments differently. Women, and men, too, who rail at the arbiter of destinies, and will not be content to give up and accept what life offers instead of what they crave. They are the one who try to force sons and daughters into careers against their nature, because that is the thing the father or the mother wanted to do. Happy indeed is the parent, whose child follows out the thwarted desire of the older life. But wise is the parent who, if the child's nature points otherwise, lets the younger life develop true to form.

It's a sad thing to reach middle life with unrealized ambitions. But after all, middle age has its compensations. If you have lost your enthusiasms and illusions, at least you have learned your limitations, which is a consummation devoutly to be desired. Doubtless the things you wanted to do, you couldn't have done anyway, even if fate had vouchsafed you a chance to try. Just because you have a sweet parlor voice, is no reason to think you

might have become a prima donna if you'd had the money to cultivate your voice. And when you get to be forty and your voice breaks, you begin to see that. You may be able to write a good paper for the club, too, but that's no reason to think you might become a second George Eliot if someone else would wash the dishes and do the cooking and leave you free to write.

I've always had a feeling that very, very few of us miss our real "chance" in life. That what we consider our vocation is usually only a dream, and that we are actually engaged in doing is the thing for which we are best fitted, or at least the thing which is most needed by the world. We may feel that we should be writing learned magazine articles, or thrilling audiences with our voice, or taking the part of great tragedy queens, or heading important committees, but if we are, instead, in the kitchen or bringing up children, that is because the world needs more cooks and mothers and fewer public characters.

Middle life usually brings us this clearer vision. So if our physical eyes fail us the thing is balanced by our brighter spiritual sight.

DEBORAH.

## Uncle Sam's Message to America's Housewives

THE best thing we can offer to the public to help the country save the wheat is potatoes," so runs an advertisement of a New Orleans dealer. It is a good "ad" and interprets today's needs.

Potatoes are universally liked. There is still a large supply on hand that must be used or go to waste. Now is the time to use them while the ban on meat is lifted for awhile. Back up savory stews with ample servings of potatoes and cut down on bread.

"Join the Wheat Savers' League." Potatoes are an acceptable substitute for bread. A pound of baked potatoes is equal in nutritive value to seven ounces of bread. Use the perishable potato as a wheat and as a bread substitute.

Serve potatoes boiled in jacket, creamed, hash-browned, and don't forget the baked potato.

Potatoes are a splendid food, excellent for your body, and delicious when well cooked. They are good fuel. They furnish starch which burns in your muscles to let you work, much as the gasoline burns in an automobile engine to make the car go. One medium-sized potato gives you as much starch as two slices of bread. When you have potatoes for a meal you need less bread. Potatoes can save wheat. They give you salts like other vegetables. You need the salts to build and renew all the parts of your body and to keep it in order.

#### Potatoes at their Best.

An old king is said to have tested each cook before hiring him by asking him to boil a potato. Even the best potato can be spoiled by a poor cook. To boil them so that they will be "fit for a king" drop the unpeeled potatoes into boiling salted water and cook for twenty to thirty minutes. Drain the water off at once. If they are cooked too long or allowed to stand in the water they get soggy.

If you peel the potatoes before cooking them you will waste time and po-

tatoes both. You may throw away a sixth or even a quarter of the good part of the potato with the skins. Also, if the potatoes aren't covered up by the skins while cooking, some of the valuable material will soak out into the water. Even very small potatoes can be economically used, if they are boiled in their skins. For best mashed potatoes, peel the boiled potatoes, mash and beat until very light, adding salt, butter and hot milk, a half-cup of milk to six potatoes. If dinner is not ready

to serve, pile lightly in a pan and set in the oven to brown.

#### Potato Chowder.

6 potatoes.  
Slice of salt pork  
1 onion  
1 pint of milk  
1 tablespoon flour  
1 tablespoon drippings  
1 teaspoon chopped parsley  
1 teaspoon salt  
½ teaspoon pepper.

Cut potatoes into dice and pork into



In responding to this message, Michigan women will promote a more liberal use of one of the state's most important crops.

small pieces; fry the pork and onion in a pan until brown, put potatoes, onions and meat into a pot, add a pint of water with seasonings; simmer half an hour; make a white sauce of the milk, flour and drippings; add to the cooked potatoes. Let all boil for a few minutes and serve hot.

#### Potato Pancakes—No. 1.

6 raw potatoes (large) grated  
1½ teaspoons of salt  
1 tablespoon milk  
1 egg beaten  
3 tablespoons flour

Mix the above ingredients, beat thoroughly and cook on a hot greased griddle.

#### Potato Pancakes—No. 2.

1 cup mashed potatoes  
½ teaspoon salt  
1 egg, beaten  
1 tablespoon flour  
¼ cup of milk

Mix the above ingredients in order given, beat thoroughly and bake on a hot greased griddle.

#### Potato Muffins.

4 tablespoons fat  
2 tablespoons sugar  
1 egg  
1 cup mashed potatoes  
2 cups flour  
3 teaspoons baking powder  
½ teaspoon salt  
1 cup milk

Cream the fat and sugar; add the egg, well beaten, then the potato and mix thoroughly; sift flour, baking powder, and salt; add milk and flour alternately; bake in greased muffin tins for twenty-five to thirty minutes.

#### Potato Biscuit—No. 1.

1 cup mashed potato  
1 cup flour  
4 teaspoons baking powder  
1 teaspoon salt  
2 tablespoons fat  
½ cup water or milk (about).

Sift together flour, baking powder and salt; work in the fat with fork or knife; add potato and mix thoroughly; then add enough liquid to make a soft



dough; roll the dough lightly to about a half-inch in thickness; cut in biscuits and bake twelve to fifteen minutes in hot oven.

#### Potato Biscuit—No. 2.

Boil and mash six or eight potatoes; while warm lay on a floured pastry-board and run the rolling pin over and over until they are free from lumps; turn into a bowl, wet with a cup of sweet milk and add a teaspoon of melted fat; when well mixed work in half a cup of salted flour, or just enough to make a soft dough; return to board, roll out quickly and lightly into a thin sheet, and cut into round cakes; bake in a quick oven; butter as soon as they are done, laying one on top of the other in a pile. Eat before they fall.

The excellence of potato biscuit depends very greatly upon the softness of the dough, light handling, and quick baking. If properly made, they will be found extremely nice.

#### Shepherd's Pie.

Grease a baking dish, cover the bottom with mashed potatoes. Add a layer of cooked minced meat or fish seasoned well and mixed with meat stock or gravy. Cover with mashed potatoes. Bake long enough to heat through, twenty or thirty minutes.

#### Scalloped Potatoes and Cheese.

Arrange a layer of sliced raw or boiled potatoes in greased baking dish and sprinkle with grated cheese and a little flour. Repeat until dish is nearly full. Pour milk over the whole, about one-half cup to every three potatoes. Skim-milk is good. Bake in a moderate oven until done. The length of time required depends upon whether the potatoes are raw or boiled, and whether the baking dish is deep or shallow. Boiled potatoes baked in a shallow dish will take only twenty minutes. Raw potatoes in a deep dish may take as much as an hour and a half.

Potatoes, left over or fresh, may be combined with cheese or nuts, or meat or other material often to make the main dish of a meal.

#### Potato Sausages.

- 1 cup mashed potato
- 1 cup ground nuts, fish or meat
- 1 egg, well beaten
- 1½ teaspoons salt
- ½ teaspoon pepper
- Bacon or other fat

Mix the mashed potato and seasonings with the ground nuts, fish or meat. Add the beaten egg. Form into little cakes or sausages, roll in flour and place in a greased pan with a small piece of fat or salt pork on each sausage. Bake in a fairly hot oven until brown.

#### Potato Cornmeal Muffins.

- 2 tablespoons fat
- 1 tablespoon sugar
- 1 egg, well beaten
- 1 cup milk
- 1 cup mashed potatoes
- 1 cup corn meal
- 4 teaspoons baking powder
- 1 teaspoon salt

Mix in order given. Bake forty minutes in hot oven. This makes twelve muffins. They are delicious.

#### Potato Souffle.

- 4 cups hot mashed potato
- 1 tablespoon melted fat
- 2 tablespoons milk
- 1 teaspoon salt
- ½ teaspoon pepper
- Yolks of two eggs

Whites of two eggs beaten stiff. Mix all but the whites of the eggs in the order given; beat thoroughly, fold in the stiffly beaten whites; pile in a baking dish and cook until the mixture puffs and is brown on the top.

#### Surprise Balls.

Form mashed potatoes into balls and with a teaspoon make a depression in the top of each; mix one cup of grated cheese with salt, celery salt, and butter or fat, and put one teaspoon in the hollow of each potato ball; mold the ball so the stuffing is

concealed and brown in the oven or frying pan.

#### Colcannon.

Mix one cup of mashed potatoes and one cup of chopped greens to a smooth paste; add a tablespoon of fat, salt and paprika to taste; place in baking pan, cover with mashed potato, brown in the oven and serve very hot.

#### White Potato Custards.

- 2 cups rice baked potato
- 4 eggs, beaten slightly
- 1 cup sugar
- ½ cup fat
- ¼ cup thin cream or top milk
- Juice and rind of one lemon

Mix in the order given; beat hard for five minutes; pour into a baking dish. Bake in hot oven twenty or thirty minutes, or until custard is set.

#### Potato in Cake.

In the usual cake recipe, substitute one cup of mashed potatoes for one-half cup of milk and one-half cup of flour; mash the potatoes and beat up with milk until very light. Potato cake does not dry out so quickly as all-flour cake.

#### Potato in Bread.

Potatoes are good in breads. Get Farmers' Bulletin No. 807, "Bread and Bread Making in the Home," from the Department of Agriculture, Washington, D. C., to learn how to make potato yeast bread.

Corned beef is an excellent meat which can be used to take the place of the high-priced pork meats during the war. It can be used by the farmers to sustain them while at hard labor in the open air while engaged in raising the different kinds of produce which will be needed by the allied nations which are fighting for democracy.

If you run your household on three pounds of sugar a month per person, when fall comes the grocer won't have to hang up the sign, "No Sugar."

## MICH. 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.



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100 acres of the best farm land and buildings in Huron County, situated on the stone road one mile South and one mile West of Pigeon, Huron County, Michigan. Terms to furnish all stock and implements. Will be let on 3 to 5 year contract. This is a great opportunity for the right man considering the present high market for all farm produce. Telephone or write us for particulars. The Wallace Stone Company, Bay Port, Michigan

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Must sell. Eighty Acre Farm—good buildings, good soil, 28 acres first class apple orchard, nice vineyard, fifty acres, cleared, balance pasture, easily cleared, nicely located. Immediate possession. Easy terms. Fine chance for a nice home and a money maker. Address Grand Rapids Trust Co., Liquidating Trustees, Of the A. E. Cartier Sons Co., Ludington, Mich.

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## POULTRY

## HOMESTEAD FARMS

A Federation of Interests

A Word to the Farmer Poultry-men and Women of Michigan.

In almost every issue of the Farmer you will find something new in this space, and we ask you, therefore, please to glance each week at what we have to say. Homestead Farms is working out a practical federation of the business and social interests of the poultry farmers of Bloomingdale and vicinity, and which is to be a benefit also to the farmers of the state.

## Pure Breed Practical Poultry

In Pure Breed Practical Poultry we have: Barred, White and Buff Plymouth Rocks; R. C. Rhode Island Reds; White Wyandottes; S. C. Black Minorcas; S. C. and R. C. White Leghorns; S. C. Brown and Buff Leghorns; S. C. Anconas.

## Day-Old Chicks

Day-Old Chicks from any of these breeds can be furnished, providing three weeks' time is given for hatching. We can furnish almost an unlimited number of Barred Rocks, Rhode Island Reds, and White Leghorns. Do you want vigorous, naturally healthy free farm-range poultry stock? We invite correspondence with poultry farmers who are looking for stock that will give eggs plentifully next winter.

## Eggs for Hatching

Eggs from our Pure Breed Practical Poultry for setting, or in quantities for incubators, with fertility guaranteed. We can furnish any number of Barred Rock, Rhode Island Reds, and White Leghorn eggs.

## Eggs for Broilers

Plymouth Rock eggs in any quantity can be furnished for hatching Broiler chicks. On these we make a special price and a special guarantee.

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We have yet for sale: 3 Barred Plymouth Rock cockerels; 15 Single Comb Rhode Island Red Pullets with one cockerel; 5 R. C. Rhode Island Red Pullets; 6 Barred Rock Pullets or Hens with Cockerels; 1 Gray Toulouse Gander.

If you are a poultry-farmer that wants practical farm poultry stock, will you please write to us for our circular which briefly describes the poultry we offer you.

We have already come into a fine correspondence with the poultry farmers of Michigan, but we want to hear from you; we want to place some of our Pure Breed Practical Poultry on your farm.

HOMESTEAD FARMS, Bloomingdale, Mich.

**Baby Chicks** from Standard Bred S. C. White and Brown Leghorns. Good laying stock. \$13 per 100. Safe arrival guaranteed. Catalogue free. Book your order now for spring delivery. Wolverine Hatchery, Box 202, Zeeland, Mich.

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**Cockerels**—From Chicago Coliseum winning stock. \$3 & up "Ringlet" & Buff Rocks, both combs Reds, Spanish Orpingtons, Wyandottes, Tyrone Poultry Farm, Fenton, Mich.

**Choice Chicks** April and May heavy breeds and Leghorns \$2 for \$9. Eggs per setting \$1.50; per 100 \$7.50. Allegan, Mich.

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of quality guaranteed to 1,500 miles. Eggs for Hatching at low prices. Bar. Rocks, S. C. W. Leghorns, S. C. and R. C. Reds, W. Wyandottes, Buff and W. Orpingtons. Chicklet catalog free. GOSHEN POULTRY FARMS, R-19 Goshen, Indiana

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Young's Heavy Laying Strain S. C. White Leghorns \$8.00 per 50, \$15.00 a hundred. Safe delivery guaranteed. Immediate shipments. Order now or write. ROY L. DRUKER, 711 Delaware St., Grand Rapids.

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250,000 for 1918. \$10 per 100 and up. Purebred. Hatched right. Strong guarantee. 10 leading varieties. Hatching eggs. Big brooder offer. Western Branch, Augusta, Kansas. Free catalog. Stamps appreciated. Rubens Reliance Hatchery, 333 W. Fremont St., Fortoria, O.

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John's Big beautiful hen hatched Barred Rocks good 12 layers males & females \$3 to \$5 each. Breeding pens \$12. Sold on approval circulars photos. John Northon, Clare, Mich.

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My Young's strain bred-to-lay S. C. White Leghorns are great money makers. 100,000 baby chicks for 1918 delivery at \$13 and up per 100. Satisfaction guaranteed. Write for free catalogue. W. VAN-APPLEDOORN, R. 7, Holland, Mich.

## Raising Rabbits for Profit

By G. A. BALDEN

HERE has never been a time in this nation's history, when there was greater need for the producer to bend every energy to the production of food stuffs. It is not necessary to point out the rapidly increasing cost of the different food stuffs.

Millions of us are complaining, perhaps, about the high price of meats, and prospects of not having it at all, sooner or later, because the cattle and hog industry has decreased alarmingly. A total decrease of 115,005,000 in the world's meat producing animals is shown in comparison of the present with pre-war conditions, in a statement issued by the United States government. This is a great figure and un-



A Pedigree Flemish Giant Doe.

less something is done towards producing more meat, the world may soon be facing a general meat famine.

## For Quick Meat Production.

One of the duties of the American people is to produce as never before, the meats that can be raised quickly. That is why the food administration is calling upon the farmer to raise more hogs, and that is why the domesticated rabbit industry is so vitally important at this time.

The domesticated rabbit heretofore has been too much overlooked as a commercial article of food. As with many other industries, it required war conditions to bring it to the front. It is my belief that the domesticated rabbit is the most economical meat producing animal in the world. Rabbits can be produced cheaper, pound for pound, than any other meat producing animal in the world.

Practical experience has demonstrated that the rabbit meat can be produced in unlimited quantities at a cost of about six cents a pound and by using the lawn clippings and other vegetation that would otherwise be wasted, the cost can be made even lower. Rabbits require a smaller amount of space per animal, and the capital required to establish one in a paying rabbit business is considerable less than that required in any other meat producing business. The supply can be greatly increased within a few months without requiring space that may be needed for the production of crops.

## Food Value High.

Now, as to food value, rabbit meat yields eighty-three per cent of digestible nutriment, which is more than any other meat yields. Pork is the highest in nutriment of the meats sold at the butcher shops. It yields seventy-five per cent of nutriment, mutton sixty-five per cent, beef fifty-five per cent, and chicken only fifty per cent. The rabbit is the ideal meat producing animal, and when the public shall have become more familiar with it, our supply of meat will be increased. Let us interest ourselves in this important matter and get our friends interested in it. Make a start and raise enough rabbits to first supply your own table,

and if you handle rabbits rightly it will not be long until you will have meat to sell. You will find an open market for all you can produce at good prices.

My own choice of the many different breeds of rabbits is the Flemish Giant, closely followed by the American Checkered Giants. These are the largest and heaviest in the whole rabbit family. Color of the Flemish Giant is black, white, grey, in different shades, and a fawn color grey similar to color of the common wild cottontail. The steel colors take the lead at present. The main commercial breeds are the Flemish Giants, Checkered Giants, Belgium Hares and New Zealand Reds.

## As a Fur Animal.

That the culture of the different varieties of rabbits is profitable, not only for the quantity of the cleanest, sweetest and most wholesome meat they provide, but for the skins as well, has been proven by many of the 30,000 persons engaged in the raising of these animals.

Few people really know the prominent part the rabbit plays in the commercial world. Furs are fashionable, and the supply of the expensive "real stuff" is getting so scarce that furriers have to look for substitutes, and the most useful and important has been found in the rabbit skin.

France was the first country to use these skins, factories having been built where the rabbit skins are transformed into fine imitations of expensive furs. Hundreds of thousands of rabbit skins enter these factories and leave as "Cony Seal," which is the name they are known by in the market. There are also beaver, ermine, sable, (in different colors and variety), mole, black fox, red fox, chinchilla, and numerous other imitations and fancy furs, "but all rabbits." Rabbit skins yield large profits over there. Most of them are collected by rag and junk men, sent to the factories where they are cured, dressed, dyed and clipped and then imported to this country, where they are

made up into furs of all descriptions and prices. France has a national industry in rabbit skins.

## Rabbits Are Profitable.

A lady from the west, a Mrs. Sherman, tans and makes up the skins from her own rabbits. She wears a hat and muff from rabbit skins and has had her two-year-old son a coat made of the fur of the Himalayan rabbits and both look as well dressed as though they wore the most expensive of furs. This lady said in an interview on the subject: "Does it pay to raise rabbits? I don't know of anything else that gives the same return for the outlay. There is no question about the business being a profitable one. I have been breeding the Belgian Hare for several years and they have paid me a very large percentage on the



A Checkered Giant Buck.

money invested. I admit that there are many who have lost money in breeding them, and there will be many more. Yet you will find it just the same in every kind of business, but the rabbit game in the right hands will be a success.

This brings us to the conclusion that the requirements needful to establish one in the rabbit industry is simply love for the work, and business management.

## Poultry Hints from the Round-Up

THE address by Professor Phillips at the Farmers' Round-up Institute contained many practical points which may be of interest to poultry breeders not present at the meetings. Among the points of value are the following: False economy in the feeding of the flock is not patriotism and the hens should obtain enough of a balanced ration to enable them to produce the eggs to pay for their feed and a profit.

Early hatched pullets are necessary for the production of winter eggs. Such breeds as the Rocks should be hatched in March and April. The Leghorns may be brought to maturity for winter egg production if they are hatched in April or May.

## For Economical Breeding.

The use of the brooder stove is recommended for the economical growing of chicks. In one experiment 114 out of 119 chicks placed under a coal-burning brooder stove were raised to maturity. The scarcity of hard coal has placed many poultrymen in doubt as to their supply of coal for spring chick brooding but it is reported that the fuel administration will make every effort to supply poultrymen with fuel enough for their work in producing poultry meat.

It pays better to save the chicks that do hatch than to increase the hatching. Equipment is necessary for the production of poultry and a lack of equipment or an attempt to do without it always means a severe handicap.

The hopper feeding pays and causes the chicks to grow normally into large vigorous birds. Like the boy in the

candy store the chick will not stuff continually just because the abundantly filled hopper is present. They will eat what they need for growth and then enjoy searching on the range for the remainder of their feed. On one farm a farmer adopted the hopper feeding method for his hogs and gave them a hopper filled with shelled corn and tankage. The hens were on free range and soon found the hog hopper and enjoyed square meals. They soon laid as never before and produce enough additional eggs to much more than pay for the amount of feed taken from the hog feeder.

## False Economy.

One instance was related of a young poultryman who was taken ill and had to turn his feeding work over to another farmer without experience. The new man thought he would save feed in the care of the flock and did save feed to the value of \$150. During that time the owner lost \$500 worth of eggs according to his estimate, based on the results that he had made with the same sized flocks during other years when they were given plenty of a balanced ration to keep up egg production.

in summer. According to Prof. Phillips, summer. According to Prof. Phillips, \$5.00 invested in a good quality of meat scrap will bring back from \$20 to \$30 worth of eggs. Beef scrap, sour skim-milk, or tankage are necessary to growth in poultry and also in egg production.

The time to sell surplus hens is the first time that they are found to be "no good." The early moulting hen is apt



to be the poor layer and she should be culled out. However, the late moulting hens are often sold on farms because of their poor looks and this is a serious error. The early moulters, over-fat hens and runty specimens should be culled out in August in order to save feed and enable the remainder of the flock to make better average records.

Ingham Co.

R. G. KIRBY.

## OATS FOR POULTRY.

On account of the high price of grain, oats will probably fill a larger part than ever in the ration of the farm flock. Oats that are boiled or soaked over night make a fine feed for hens. The oats soften and swell and are much relished by the birds. Clipped oats are used to advantage in feeding young birds. The clipped oats are run through machines to remove the sharp tips and part of the hull.

Young chicks will do very well the first week on dry rolled oats scattered in the litter about every two hours. The sprouted oats furnish an abundance of appetizing green feed at a minimum expense. In using ground oats in the mash for laying hens it is not necessary to sift out the hulls. Oats can be fed dry to laying hens without much danger, although some have the impression that the sharp tips will cause serious injury to the birds. We have never noticed any injury due to feeding oats but undoubtedly they have a greater feeding value if they are soaked for several hours or broiled before feeding.

## POULTRY QUERY DEPARTMENT.

## Coal Ashes.

Are coal ashes hurtful to the hens? Some poultry journals claim they are. My hens like to eat the small pieces of slate in them and then wallow in the fine dust. Do you think wallowing in the dust would cause them to have scaly legs? W. F.

Coal ashes have not generally been found detrimental. We have, however, received reports from some who found their chickens looking for the small pieces of coal, and when it was available to them, egg production was limited.

Coal ashes will not be harmful to chickens to dust in, provided they have a chance to get out where there is moisture.

The scaly leg develops when chickens constantly run in alkali soils.

We are sure that in moderation the use of coal ashes for dusting and scratching purposes will be all right.

## Tuberculosis.

Last spring I had considerable trouble with my poultry. The flock as a whole looked good and laid good, but every little while a hen would dump, and although she ate well, kept getting lighter and weaker and at last would die. The droppings were rather loose and streaked with white, green and reddish brown. I set eggs from this flock and they hatched fine, but the chicks died in bunches from one to a dozen, without any apparent cause. They looked well and were hearty eaters, but every time I went to the coop would find three or four dead. I fed fine chick feed for about two weeks and then coarse chick feed and wheat. I gave my flock a good poultry tonic and disinfected the hen house every week. I see indications of the disease this winter and one hen died in the same way last week. What is the trouble? Is there any connection between that and losing the little chicks? Would you advise setting eggs from the flock another year? L. F. W.

Judging from the symptoms you give I greatly fear that you have tuberculosis in your flock, as primary symptoms of this disease are a great appetite and loss of weight. General weakness, ruffling of the feathers, paleness of the comb, and in a great many cases diarrhoea, are also telltale symptoms.

A post-mortem examination will enable you to tell whether the trouble is tuberculosis or not, more definitely. The liver of a fowl affected with tuberculosis is usually covered with small

white nodules which are filled with a cheese-like substance. Very often the other organs of the body have these nodules also.

This disease is quite a contagious one, and is one which cannot under our present knowledge, be cured. After the disease reaches the stage where it can be diagnosed, the most practical way to eliminate it is to destroy the entire flock, thoroughly disinfect the coops and grounds and start again with healthy stock. With a new flock care should be taken to provide the hens with sanitary surroundings and plenty of ventilation without draught. They should be properly fed to keep up their vigor, and what is termed "good care" should be given the flock.

In disposing of the flock, the bodies must either be burned or buried so deep that animals cannot dig them up. Before carrying out these drastic measures, make sure that the birds have this disease. If you do not feel confident of diagnosing this yourself, you had better call a veterinarian.

## BEES WORTHY OF MUCH CARE.

Every colony of bees that survives the winter should be managed so that it will produce as much honey as possible during the coming summer. Since the sugar supply is limited on account of the demand abroad there is no danger of over-production of honey for some time to come. Prices offered for extracted honey today are three times what they were a little more than a year ago. Bees are worth giving the best of care, and colonies now in inadequate hives should be transferred to modern ones at fruit-blossoming time, be given plenty of room for brood rearing, and be provided with a storage of honey. Bees are the only agents capable of recovering the tons and tons of nectar that will be available from all sorts of flowers during the growing season. Without bees all this is wasted.

## SURPLUS BREEDERS AND THE BACKYARD FLOCK.

Poultry production must be pushed vigorously. "One Hundred Hens on Every Farm," is the popular timely slogan and fits in aptly with the restrictions of the Food Administration on the marketing of hens, effective until April 30. This regulation caught some poultry raisers with a surplus of breeding hens, although there is no surplus in the country at large, for the shortage of feeds and the high price of poultry has tempted breeders and the ers of small flocks to sell their hens.

Even those inconvenienced by the restriction on the sale of hens can easily see the point of the regulation. If the hens are killed off the hundred-hen movement has little chance, nor will there be hens enough to supply the backyard flock for the man with the bit of land who is trying to make his own stronghold hunger proof. The present situation offers an opportunity to live-wire poultry men to start a piece of community work that will connect the surplus of breeding hens to the hundred-hen movement and the backyard flock. Community organization and the gospel of "feed yourself" will dispose of surplus hens and convert possible roosters into food producers for the winter of 1918-1919.

Agents of the United States Department of Agriculture report that between January 1, 1918, and February 11, forty carloads, each of about 4,000 hens and pullets, were shipped from the state of Texas alone.

This means that 160,000 birds that were laying, or about ready to lay, were prevented from turning into eggs the food they had consumed without return during the winter. Had these birds been kept until April 30, as urged by the Department of Agriculture and as required by the Food Administration for those remaining on the farms on February 11, it would have meant at an estimate an addition of 400,000 dozen eggs to the food supply of the nation, with little added expense for food, and would merely have postponed use of the birds themselves as food until after May.

## Automobile Accident Adjusted Out of Court

The boy driving the automobile of H. B. Burdick, of Saginaw, accidentally ran into and injured Frederick Brush, a boy of about five years of age, causing death. Mr. Burdick was insured in the Citizens' Mutual Automobile Insurance Company, of Howell, who took charge of the matter which resulted in a settlement satisfactory to all parties, upon March 20, 1918.

Mr. Burdick says: "I am more than pleased with the way that my case has been handled. It is a great relief to know that a matter of that kind can be turned over to experienced men for settlement. Mr. Robb took charge of the case immediately after the accident—witnesses were interviewed and statements taken. Mr. and Mrs. Brush were treated with courtesy and when the proper time came a settlement was made satisfactory to all. Many people have asked me what I think of automobile insurance and I tell them that I would not be without it, as no one can tell when an accident will occur, or when they will have a fire or a theft claim, and I know from my experience the past few weeks that no company could give better service than the company at Howell. The company is certainly in good financial condition and the injured parties know that they can get a fair settlement when they make reasonable claims, and the officers have had enough experience to know what to do under certain conditions. No automobile owner should be without a policy in this large Mutual Company, as the rate is very low and the service good."

## PROFITS IN HONEY



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Incubator is covered with galvanized iron, triple walls, copper tanks, nursery, egg tester. Set up ready to run. Brooder is roomy and well made. Order direct from this advertisement—money back if not satisfied or send for free catalog.



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POULTRY SUPPLIES and equipment. Everything you need from legbands to buildings. 40 page free catalog quotes lowest prices on hundreds of articles. GEORGE B. FERRIS, 634 Shirley Street, Grand Rapids, Mich.

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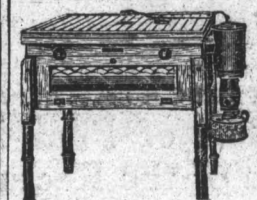
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Pine Crest White Orpingtons, hens and pullets \$3.00 each, eggs special price \$5 per 15, utility \$12 per 100. MRS. WILLIS HOUGH, Royal Oak, Mich.

RHODE ISLAND REDS and Plymouth Rocks Males R. 5 to 12 lbs., according to age \$5 to \$8; P. R. hens weight 8 to 10 lbs., eggs 15 for \$1.50; 100, \$10; Mammoth Bronze Tom Turkeys 8 to 35 lbs., according to age \$6 to \$25, 10 eggs \$4. J. Morris & J. Barsan, Vassar, Mich.

R. I. REDS, both combs. Chicks & eggs. Most popular strain in Michigan. Write for catalog. INTERLAKES FARM, Box 39, Lawrence, Mich.

R. I. Reds and R. I. Whites. Both combs. Eggs for sale, also a few good cockerels. Good stock, prices reasonable. O. E. Hawley, R. 3, Ludington, Mich.

S. C. Brown Leghorns, Heavy layers. Eggs 15-\$1.35, 30-\$2.50, 45-\$3.50, 100-\$7, prepaid by mail. FLOYD ROBERTSON, R. 1, Lexington, Indiana

SILVER Golden and White Wyandottes. A few good Golden and White cockerels, to spare at \$3. Eggs 15, \$2.50, 30, \$5.00. C. W. Browning, R. 2, Portland, Mich.

Single Comb Black Minorca cockerels, sired by R. W. MILLS, 10 lb. cock bird. A few more P. C. fall pigs. Saline, Mich.

S. C. White Leghorn hens, pullets, day old chicks, S. C. eggs (Fertile strain) good free range stock prices reasonable. Herbert Hammond, Williamston, Mich.

WHITE Wyandottes. I have a fine lot of April and May hatching cockerels for \$3.00 and \$5.00 each. DAVID RAY, 709 Norris St., Ypsilanti, Michigan.

White Wyandotte cockerels, good size, color. \$3.50; 3 for \$10. Reg. Swedish Select Oats-free from smut \$1.00 per bu. in 10 bu. lots released and bags free. VAN O. FARM, R. 1, Box 124, Hartford, Mich.

White Wyandottes Chicks and eggs from a winter laying strain. Write for circular. INTERLAKES FARM, Lawrence, Mich.

White China Goose eggs 25 cents each. R. O. Duck \$1.50 for 11. Best of stock. Mrs. CLAUDIA BETTS, Hillsdale, Mich.

WHITE Holland Turkeys a limited number for sale. Silver Spangled Hamburg cockerels Hamburg are the greatest layers on earth, get acquainted with this wonderful breed. Riverview Farm, Vassar, Mich.

M. B. Turkeys, Toulouse Geese and S. C. W. Leghorn cockerels. Also Berkshire, both sex. Stamps appreciated. Chase Stock Farm, R. 1, Mariette, Mich.

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## POULTRY

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A Federation of Interests

A Word to the Farmer Poultry-men and Women of Michigan.

In almost every issue of the Farmer you will find something new in this space, and we ask you, therefore, please to glance each week at what we have to say. Homestead Farms is working out a practical federation of the business and social interests of the poultry farmers of Bloomingdale and vicinity, and which is to be a benefit also to the farmers of the state.

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In Pure Breed Practical Poultry we have: Barred, White and Buff Plymouth Rocks; R. C. Rhode Island Reds; White Wyandottes; S. C. Black Minorcas; S. C. and R. C. White Leghorns; S. C. Brown and Buff Leghorns; S. C. Anconas.

## Day-Old Chicks

Day-Old Chicks from any of these breeds can be furnished, providing three weeks' time is given for hatching. We can furnish almost an unlimited number of Barred Rocks, Rhode Island Reds, and White Leghorns. Do you want vigorous, naturally healthy free farm-range poultry stock? We invite correspondence with poultry farmers who are looking for stock that will give eggs plentifully next winter.

## Eggs for Hatching

Eggs from our Pure Breed Practical Poultry for setting, or in quantities for incubators, with fertility guaranteed. We can furnish any number of Barred Rock, Rhode Island Red, and White Leghorn eggs.

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Plymouth Rock eggs in any quantity can be furnished for hatching Broiler chicks. On these we make a special price and a special guarantee.

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We have yet for sale: 3 Barred Plymouth Rock cockerels; 15 Single Comb Rhode Island Red Pullets with one cockerel; 6 R. C. Rhode Island Red Pullets; 6 Barred Rock Pullets or Hens with Cockerels; 1 Gray Toulouse Gander.

If you are a poultry-farmer that wants practical farm poultry stock, will you please write to us for our circular which briefly describes the poultry we offer you.

We have already come into a fine correspondence with the poultry farmers of Michigan, but we want to hear from you, we want to place some of our Pure Breed Practical Poultry on your farm.

HOMESTEAD FARMS, Bloomingdale, Mich.

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## DAY-OLD-CHICKS

Young's Heavy Laying Strain S. C. White Leghorns \$3.00 per 50, \$15.00 a hundred. Safe delivery guaranteed. Immediate shipments. Order now or write. ROY L. DRUCKER, 711 Delaware St., Grand Rapids.

## DAY OLD CHICKS

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**Laybill** S. C. W. Leghorns Large, great layers. Pure white. Bargains in choice breeding hens now. Everfresh Egg Farm, Ionia, Mich.

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John's Big beautiful hen hatched Barred Rock good layers males & females \$3 to \$6 each. Breeding pens \$12. Sold on approval circulars photos, John Northon, Clare, Mich.

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My Young's strain bred-to-lay S. C. White Leghorns are great money makers. 100,000 baby chicks for 1918 delivery at \$13 and up per 100. Satisfaction guaranteed. Write for free catalogue. W. VAN-APLEDORN, R. 7, Holland, Mich.

## Raising Rabbits for Profit

By G. A. BALDEN

THERE has never been a time in this nation's history, when there was greater need for the producer to bend every energy to the production of food stuffs. It is not necessary to point out the rapidly increasing cost of the different food stuffs.

Millions of us are complaining, perhaps, about the high price of meats, and prospects of not having it at all, sooner or later, because the cattle and hog industry has decreased alarmingly. A total decrease of 115,005,000 in the world's meat producing animals is shown in comparison of the present with pre-war conditions, in a statement issued by the United States government. This is a great figure and un-



A Pedigree Flemish Giant Doe.

less something is done towards producing more meat, the world may soon be facing a general meat famine.

## For Quick Meat Production.

One of the duties of the American people is to produce as never before, the meats that can be raised quickly. That is why the food administration is calling upon the farmer to raise more hogs, and that is why the domesticated rabbit industry is so vitally important at this time.

The domesticated rabbit heretofore has been too much overlooked as a commercial article of food. As with many other industries, it required war conditions to bring it to the front. It is my belief that the domesticated rabbit is the most economical meat producing animal in the world. Rabbits can be produced cheaper, pound for pound, than any other meat producing animal in the world.

Practical experience has demonstrated that the rabbit meat can be produced in unlimited quantities at a cost of about six cents a pound and by using the lawn clippings and other vegetation that would otherwise be wasted, the cost can be made even lower. Rabbits require a smaller amount of space per animal, and the capital required to establish one in a paying rabbit business is considerable less than that required in any other meat producing business. The supply can be greatly increased within a few months without requiring space that may be needed for the production of crops.

## Food Value High.

Now, as to food value, rabbit meat yields eighty-three per cent of digestible nutriment, which is more than any other meat yields. Pork is the highest in nutriment of the meats sold at the butcher shops. It yields seventy-five per cent of nutriment, mutton sixty-five per cent, beef fifty-five per cent, and chicken only fifty per cent. The rabbit is the ideal meat producing animal, and when the public shall have become more familiar with it, our supply of meat will be increased. Let us interest ourselves in this important matter and get our friends interested in it. Make a start and raise enough rabbits to first supply your own table,

and if you handle rabbits rightly it will not be long until you will have meat to sell. You will find an open market for all you can produce at good prices.

My own choice of the many different breeds of rabbits is the Flemish Giant, closely followed by the American Checkered Giants. These are the largest and heaviest in the whole rabbit family. Color of the Flemish Giant is black, white, grey, in different shades, and a fawn color grey similar to color of the common wild cottontail. The steel colors take the lead at present. The main commercial breeds are the Flemish Giants, Checkered Giants, Belgium Hares and New Zealand Reds.

## As a Fur Animal.

That the culture of the different varieties of rabbits is profitable, not only for the quantity of the cleanest, sweetest and most wholesome meat they provide, but for the skins as well, has been proven by many of the 30,000 persons engaged in the raising of these animals.

Few people really know the prominent part the rabbit plays in the commercial world. Furs are fashionable, and the supply of the expensive "real stuff" is getting so scarce that furriers have to look for substitutes, and the most useful and important has been found in the rabbit skin.

France was the first country to use these skins, factories having been built where the rabbit skins are transformed into fine imitations of expensive furs. Hundreds of thousands of rabbit skins enter these factories and leave as "Cony Seal," which is the name they are known by in the market. There are also beaver, ermine, sable, (in different colors and variety), mole, black fox, red fox, chinchilla, and numerous other imitations and fancy furs, "but all rabbits." Rabbit skins yield large profits over there. Most of them are collected by rag and junk men, sent to the factories where they are cured, dressed, dyed and clipped and then imported to this country, where they are

made up into furs of all descriptions and prices. France has a national industry in rabbit skins.

## Rabbits Are Profitable.

A lady from the west, a Mrs. Sherman, tans and makes up the skins from her own rabbits. She wears a hat and muff from rabbit skins and has had her two-year-old son a coat made of the fur of the Himalayan rabbits and both look as well dressed as though they wore the most expensive of furs. This lady said in an interview on the subject: "Does it pay to raise rabbits? I don't know of anything else that gives the same return for the outlay. There is no question about the business being a profitable one. I have been breeding the Belgian Hare for several years and they have paid me a very large percentage on the



A Checkered Giant Buck.

money invested. I admit that there are many who have lost money in breeding them, and there will be many more. Yet you will find it just the same in every kind of business, but the rabbit game in the right hands will be a success.

This brings us to the conclusion that the requirements needful to establish one in the rabbit industry is simply love for the work, and business management.

## Poultry Hints from the Round-Up

THE address by Professor Phillips at the Farmers' Round-up Institute contained many practical points which may be of interest to poultry breeders not present at the meetings. Among the points of value are the following: False economy in the feeding of the flock is not patriotism and the hens should obtain enough of a balanced ration to enable them to produce the eggs to pay for their feed and a profit.

Early hatched pullets are necessary for the production of winter eggs. Such breeds as the Rocks should be hatched in March and April. The Leghorns may be brought to maturity for winter egg production if they are hatched in April or May.

## For Economical Breeding.

The use of the brooder stove is recommended for the economical growing of chicks. In one experiment 114 out of 119 chicks placed under a coal-burning brooder stove were raised to maturity. The scarcity of hard coal has placed many poultrymen in doubt as to their supply of coal for spring chick brooding but it is reported that the fuel administration will make every effort to supply poultrymen with fuel enough for their work in producing poultry meat.

It pays better to save the chicks that do hatch than to increase the hatching. Equipment is necessary for the production of poultry and a lack of equipment or an attempt to do without it always means a severe handicap.

The hopper feeding pays and causes the chicks to grow normally into large vigorous birds. Like the boy in the

candy store the chick will not stuff continually just because the abundantly filled hopper is present. They will eat what they need for growth and then enjoy searching on the range for the remainder of their feed. On one farm a farmer adopted the hopper feeding method for his hogs and gave them a hopper filled with shelled corn and tankage. The hens were on free range and soon found the hog hopper and enjoyed square meals. They soon laid as never before and produce enough additional eggs to much more than pay for the amount of feed taken from the hog feeder.

## False Economy.

One instance was related of a young poultryman who was taken ill and had to turn his feeding work over to another farmer without experience. The new man thought he would save feed in the care of the flock and did save feed to the value of \$150. During that time the owner lost \$500 worth of eggs according to his estimate, based on the results that he had made with the same sized flocks during other years when they were given plenty of a balanced ration to keep up egg production.

in summer. According to Prof. Phillips, summer. According to Prof. Phillips, \$5.00 invested in a good quality of meat scrap will bring back from \$20 to \$30 worth of eggs. Beef scrap, sour skim-milk, or tankage are necessary to growth in poultry and also in egg production.

The time to sell surplus hens is the first time that they are found to be "no good." The early moulting hen is apt



to be the poor layer and she should be culled out. However, the late moulting hens are often sold on farms because of their poor looks and this is a serious error. The early moulters, over-fat hens and runty specimens should be culled out in August in order to save feed and enable the remainder of the flock to make better average records.

Ingham Co. R. G. KIRBY.

#### OATS FOR POULTRY.

On account of the high price of grain, oats will probably fill a larger part than ever in the ration of the farm flock. Oats that are boiled or soaked over night make a fine feed for hens. The oats soften and swell and are much relished by the birds. Clipped oats are used to advantage in feeding young birds. The clipped oats are run through machines to remove the sharp tips and part of the hull.

Young chicks will do very well the first week on dry rolled oats scattered in the litter about every two hours. The sprouted oats furnish an abundance of appetizing green feed at a minimum expense. In using ground oats in the mash for laying hens it is not necessary to sift out the hulls. Oats can be fed dry to laying hens without much danger, although some have the impression that the sharp tips will cause serious injury to the birds. We have never noticed any injury due to feeding oats but undoubtedly they have a greater feeding value if they are soaked for several hours or broiled before feeding.

#### POULTRY QUERY DEPARTMENT.

##### Coal Ashes.

Are coal ashes hurtful to the hens? Some poultry journals claim they are. My hens like to eat the small pieces of slate in them and then wallow in the fine dust. Do you think wallowing in the dust would cause them to have scaly legs? W. F.

Coal ashes have not generally been found detrimental. We have, however, received reports from some who found their chickens looking for the small pieces of coal, and when it was available to them, egg production was limited.

Coal ashes will not be harmful to chickens to dust in, provided they have a chance to get out where there is moisture.

The scaly leg develops when chickens constantly run in alkali soils.

We are sure that in moderation the use of coal ashes for dusting and scratching purposes will be all right.

##### Tuberculosis.

Last spring I had considerable trouble with my poultry. The flock as a whole looked good and laid good, but every little while a hen would dump, and although she ate well, kept getting lighter and weaker and at last would die. The droppings were rather loose and streaked with white, green and reddish brown. I set eggs from this flock and they hatched fine, but the chicks died in bunches from one to a dozen, without any apparent cause. They looked well and were hearty eaters, but every time I went to the coop would find three or four dead. I fed fine chick feed for about two weeks and then coarse chick feed and wheat. I gave my flock a good poultry tonic and disinfected the hen house every week. I see indications of the disease this winter and one hen died in the same way last week. What is the trouble? Is there any connection between that and losing the little chicks? Would you advise setting eggs from the flock another year? L. F. W.

Judging from the symptoms you give I greatly fear that you have tuberculosis in your flock, as primary symptoms of this disease are a great appetite and loss of weight. General weakness, ruffling of the feathers, paleness of the comb, and in a great many cases diarrhoea, are also telltale symptoms.

A post-mortem examination will enable you to tell whether the trouble is tuberculosis or not, more definitely. The liver of a fowl affected with tuberculosis is usually covered with small

white nodules which are filled with a cheese-like substance. Very often the other organs of the body have these nodules also.

This disease is quite a contagious one, and is one which cannot under our present knowledge, be cured. After the disease reaches the stage where it can be diagnosed, the most practical way to eliminate it is to destroy the entire flock, thoroughly disinfect the coops and grounds and start again with healthy stock. With a new flock care should be taken to provide the hens with sanitary surroundings and plenty of ventilation without draught. They should be properly fed to keep up their vigor, and what is termed "good care" should be given the flock.

In disposing of the flock, the bodies must either be burned or buried so deep that animals cannot dig them up. Before carrying out these drastic measures, make sure that the birds have this disease. If you do not feel confident of diagnosing this yourself, you had better call a veterinarian.

#### BEES WORTHY OF MUCH CARE.

Every colony of bees that survives the winter should be managed so that it will produce as much honey as possible during the coming summer. Since the sugar supply is limited on account of the demand abroad there is no danger of over-production of honey for some time to come. Prices offered for extracted honey today are three times what they were a little more than a year ago. Bees are worth giving the best of care, and colonies now in inadequate hives should be transferred to modern ones at fruit-blossoming time, be given plenty of room for brood rearing, and be provided with a storage of honey. Bees are the only agents capable of recovering the tons, and tons of nectar that will be available from all sorts of flowers during the growing season. Without bees all this is wasted.

#### SURPLUS BREEDERS AND THE BACKYARD FLOCK.

Poultry production must be pushed vigorously. "One Hundred Hens on Every Farm," is the popular timely slogan and fits in aptly with the restrictions of the Food Administration on the marketing of hens, effective until April 30. This regulation caught some poultry raisers with a surplus of breeding hens, although there is no surplus in the country at large, for the shortage of feeds and the high price of poultry has tempted breeders and the ers of small flocks to sell their hens.

Even those inconvenienced by the restriction on the sale of hens can easily see the point of the regulation. If the hens are killed off the hundred-hen movement has little chance, nor will there be hens enough to supply the backyard flock for the man with the bit of land who is trying to make his own stronghold hunger proof. The present situation offers an opportunity to live-wire poultry men to start a piece of community work that will connect the surplus of breeding hens to the hundred-hen movement and the backyard flock. Community organization and the gospel of "feed yourself" will dispose of surplus hens and convert possible roosters into food producers for the winter of 1918-1919.

Agents of the United States Department of Agriculture report that between January 1, 1918, and February 11, forty carloads, each of about 4,000 hens and pullets, were shipped from the state of Texas alone.

This means that 160,000 birds that were laying, or about ready to lay, were prevented from turning into eggs the food they had consumed without return during the winter. Had these birds been kept until April 30, as urged by the Department of Agriculture and as required by the Food Administration for those remaining on the farms on February 11, it would have meant at an estimate an addition of 400,000 dozen eggs to the food supply of the nation, with little added expense for food, and would merely have postponed use of the birds themselves as food until after May.

## Automobile Accident Adjusted Out of Court

The boy driving the automobile of H. B. Burdick, of Saginaw, accidentally ran into and injured Frederick Brush, a boy of about five years of age, causing death. Mr. Burdick was insured in the Citizens' Mutual Automobile Insurance Company, of Howell, who took charge of the matter which resulted in a settlement satisfactory to all parties, upon March 20, 1918.

Mr. Burdick says: "I am more than pleased with the way that my case has been handled. It is a great relief to know that a matter of that kind can be turned over to experienced men for settlement. Mr. Robb took charge of the case immediately after the accident—witnesses were interviewed and statements taken. Mr. and Mrs. Brush were treated with courtesy and when the proper time came a settlement was made satisfactory to all. Many people have asked me what I think of automobile insurance and I tell them that I would not be without it, as no one can tell when an accident will occur, or when they will have a fire or a theft claim, and I know from my experience the past few weeks that no company could give better service than the company at Howell. The company is certainly in good financial condition and the injured parties know that they can get a fair settlement when they make reasonable claims, and the officers have had enough experience to know what to do under certain conditions. No automobile owner should be without a policy in this large Mutual Company, as the rate is very low and the service good."

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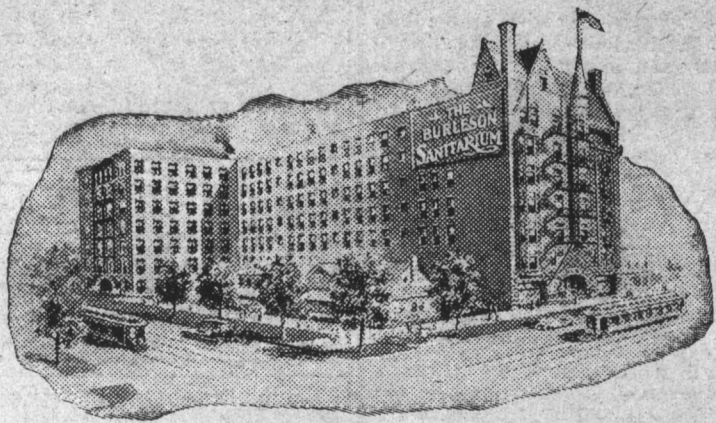
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### BUSINESS POSSIBILITIES OF THE FARMERS' CLUB.

As a social and educational factor in the community the average Farmers' Club has been a decided success. From this standpoint alone the organization has been well worth while to every community where it has been developed. But the Farmers' Club has business possibilities which in most communities where Clubs have been organized have been entirely neglected. Let us cite one example to illustrate the business benefit which might easily accrue to the farmers in any Club community through the initiative of the organization.

Cooperative enterprises have had a rapid development in Michigan in recent years. These enterprises have developed along many lines, but have met with almost universal success along one line in particular which might be easily promoted in any community through the medium of the Farmers' Club.

The cooperative live stock shipping associations organized in Michigan for the purpose of marketing the live stock of their members have been universally successful. They have saved for their members many thousands of dollars which would otherwise have been absorbed by the middlemen in this line of trade—the drovers who add nothing to the value of the stock and perform no service which could not be as well performed by any man in the community delegated to act for the members of a cooperative organization, or for that matter, of a Farmers' Club, where the membership is not too scattered.

This form of cooperative enterprise is especially adapted to promotion by such an organization as the local Farmers' Club, for the reason that it requires neither capital nor equipment for successful operation. All that is required is the appointment of a trustworthy person to direct the enterprise and under the favorable condition of practically universal telephone service which exists in the average club community, the direction of the enterprise will take very little of his time. A small percentage on the business done will supply the funds to amply remunerate him for his services.

The benefits which will accrue to the members will many times outweigh the effort required to inaugurate such an enterprise in any Club community. Some readers may say that they do not make a specialty of live stock, that their sales of stock are comparatively small and that for this reason they are not especially interested in this proposition. But this class of farmers are just the ones who will be most benefited by such a business activity. The commercial feeder of live stock is able to sell his product to far better advantage than is the farmer with whom live stock is but a small side line, because he has more of it and is better acquainted with market values.

Why not use your Farmers' Club as the nucleus of a cooperative live stock shipping association in your community? Why not take advantage of this business opportunity which the organization offers for the taking? Think it over and talk it over at your next meeting. Get together on this business proposition and make it go. It will pay as big dividends in cash as the other activities of the Club have paid in pleasure or satisfaction.

## Grange.

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

### STATE GRANGE OFFICERS.

Master—John C. Ketcham, Hastings.  
Overseer—C. H. Bramble, Tecumseh.  
Lecturer—Dora H. Stockman, Lansing.  
Secretary—Jennie Buell, Ann Arbor.  
Treasurer—Frank Coward, Bronson.

### COUNTRY LIFE—ITS PAST, PRESENT AND FUTURE.

(Paper read by Mrs. J. C. Salsgiver at the Kent County Grange).

Years ago we never heard of a Grange. Our pioneer parents in those days had not time to think about such things, but they laid the foundation and blazed the way for all that our country can boast of today. They felled the trees, hewed them out and built their log cabins and the old-fashioned fireplace with the kettle hanging over it suspended by pot hook and crane and the old-fashioned johnny-cake baked on a board are pictures that my memory will ever retain. The lights were tallow candles and some didn't even have them. What a difference now. The men did their mowing, reaping and raking and threshing by hand. But today we have the binder, steam thrasher, side delivery rake, hay loaders and tedders, tractors, but the pioneer wives could ride to meeting in lumber wagons drawn by ox teams—they did not have electric cars and automobiles.

A writer draws this picture of the city of the future: "It may not be a horseless city, but the great business of the warehouses, merchants, manufacturers and wholesalers will be transacted on electric trucks, and most of the pleasure vehicles will be driven by electricity; the work will be done by electricity; we will be kept warm in winter and cool in summer by electricity and nearly everything in this life of work and pleasure will be owing in a measure to electricity."

Let us look into the farm home as it is today, buildings lighted by electricity, and washing machines, churns, separators run by the same. We have electric fans, furnaces instead of three or four stoves, hot and cold water, and this beats the old oaken bucket. A great many farmers have modern homes so that the country fellow can have just the same as his city cousins.

And the men are beginning to learn: That any work that needs doing is a woman's work.

When the men are late coming home from market she does the chores.

When they are busy with the hay, she milks the cows.

When an extra hand is needed in the harvest she helps in the field.

When the men are in the trenches she makes the shells, runs the trolleys, handles the baggage and drives the taxis.

The establishment of the first rural free delivery route in the United States is credited to Michigan. Two routes were laid out from the village of Climax, in Kalamazoo county, and the first trips made in December of 1897. Commemorating the twentieth year of this service an appropriate monument was unveiled at the main corners of Climax on July 26. The National and State Governments were represented upon the program as were various civic and fraternal organizations. In acknowledgement of the prominent part played by the Grange in securing this wonderful branch of government service, the State Grange was invited to place a tablet on one face of the monument, and the Grange was given a prominent part in all the exercises of the day.—J. C. Ketcham.



## Veterinary.

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

**Leucorrhoea—Barren Cows.**—I have two cows that are troubled with the "whites" and pass thick white mucus from vagina. I also have two more cows that fail to come in heat. Each of them have raised two calves. A. R. G., Grand Rapids, Mich.—Dissolve 1 dr. permanganate of potash in two quarts of boiled water and flush vagina of each cow once daily, using either fountain syringe or half-inch rubber tubing and tin funnel. Give each cow 1 dr. of ground nux vomica, 1 dr. of ground capsicum and 2 drs. of ginger in feed three times a day. A competent Vet. who examines your cows can ascertain cause of barrenness and perhaps remedy this trouble.

**Dehorning Cow.**—I have a new milch cow eleven years old which I would like to dehorn. Would it be very risky to perform this operation, now during cold weather? The stall where she is kept is warm. Mrs. G. W. S., East Jordan, Mich.—Dehorning can be safely done during cold weather; however, spring and fall is the best season to do this work. I know of no reason why you should postpone operating on your cow, but if weather be cold, stable her for a few days after it is done and cover the wounds with boric acid and oakum until healed.

**Eversion of Vagina.**—I have a cow coming four years due to freshen next May. Some time ago she began to show some protrusion of vagina, which formerly went back to place as soon as she got on foot. Now it is quite large and unless I have help I cannot put it in place. What can be done to remedy this ailment? G. B. S., Bellaire, Mich.—This cow should be placed in stall with forefeet several inches lower than hind feet, the protruding parts kept clean, and apply one part of bichloride of mercury and 1000 parts water three times daily, or dissolve 1/4 lb. powdered alum in one gallon of water and apply three times a day. If you can return parts, stitch upper part of vulva to hold them in place, two stitches will be plenty, but your silk or linen should be coarse, or use several strands in order that it will not cut through tissues. Remember and dip the silk or linen in tincture of iodine before it is used.

**Costiveness.**—I have a cow due to come fresh in two weeks, that is bloated and her bowels are bound up. Have given her salts and linseed oil but her bowels are dry. T. Z., Peacock, Mich.—Pour plenty of warm soap and water into rectum three or four times a day; this is best done with a fountain syringe, or half-inch rubber tube and tin funnel. Also keep on giving raw linseed oil.

**Bruised Neck.**—I have a mare with stiff neck; it seems to come on following pulling heavy loads. She has a swelling about three inches from top of neck, and in front of where collar rests, this swelling extends forward some six inches. Whatever it is the bunch is painful, but this is the third time her neck swelled at this point. She has a good appetite. E. J., Delton, Mich.—Doubtless the collar bruises the muscles of neck. Apply equal parts of tincture iodine and camphorated oil to bunch daily, if it softens, which it perhaps will do, open it and allow pus to escape; then swab out abscess with tincture iodine once a day. The collar is perhaps either too large or too narrow.

**Mammitis—Dairy Question.**—I have a cow five years old that came fresh two weeks ago; one quarter of bag is caked. What shall I apply? Will you also tell me if a deep milking heifer should be milked a few days before she comes fresh? Mrs. E. B., Boyne City, Mich.—Apply one part of fluid extract of phytolacca and six parts of petrolatum twice a day, also give her 1/2 oz. fluid extract phytolacca at dose in feed or in one pint of water as a drench twice daily. If the heifer or cow is distressed, milk some of the milk out of udder to relieve her.

**Blind Quarter.**—I have a cow that freshened last December and about four weeks ago she commenced to give bloody milk from one quarter of bag, then stinky milk, and then I couldn't get any milk for a few days. I called our local Vet. who prescribed equal parts of lard, turpentine and kerosene which I applied thoroughly twice a day. She now gives less than one-third as much milk from this quarter as from the other three. Can this quarter be restored to normal? J. C. C., Whittemore Lake, Mich.—Gentle manipulation of the quarter will perhaps have a good effect, but you will do well if you save it from becoming blind and functionless.

## LOOK! A Dispersion Sale LOOK!

OF  
18--Pure Bred Holstein-Friesians--18  
TUESDAY, APRIL 2, 1918

at my farm on Mill Road Stop, on Orchard Lake Division out of Grand River Avenue, 1 1/2 miles south of Grand River Avenue, six miles from Detroit. This herd has all been reared from two or three grand cows, that I purchased as the foundation for the herd. I have bred these cows with their progeny to high record bulls, and regret that the failure of the water supply on my farm, necessitates the sale of this splendid herd of Holsteins.

The only cow that you can afford to keep in these times is the good cow, and the Holstein is the best milk and butter producer in the world.

A son of the great sire, Tidy Abbekerk Prince will be sold, also a son of the great young sire, King Ona, whose dam is a 30-lb. cow, that made over 1300 lbs. of butter in one year. Hopwell Queen, one of the foundation cows, is from a 20.9-lb. cow and sired by a son of the great DeKol 2d's Butter Boy 3rd. There are also two daughters of Sir Lieuwkje Korndyke Kate De Kol, who is full brother to a 36-lb. cow and from a 30-lb. ten year old, also 3 daughters of Maplecrest Korndyke Hengerveld, whose 30-lb. dam is from a 30-lb. daughter of a 30-cow. Also 5 head of High Grade Holsteins. Parties wishing time should not fail to bring Bank References. Write for Catalog at once.

**ELMER E. SMITH - Redford, Michigan.**

### CATTLE

## PUBLIC SALE of Registered Stock

To settle the estate of M. A. Bray, we will sell at Public Auction on Wednesday, April 3, at 10 o'clock A. M. all of our registered Percheron Horses, Shorthorn Cattle, Shropshire Sheep and Duroc Jersey Hogs, together with farm tools, etc.

**M. A. BRAY ESTATE,**  
Okemos, Mich.

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

### Pure Bred HOLSTEINS

yield most milk and most butterfat at the lowest cost. You can make more money with this profitable breed. Repeated tests have proven that purebred Holsteins yield.

**The Greatest Net Profits**

Thousands of others are making money despite high feed costs with the "Big Black-and-Whites." Why don't you?

Write for free information



No obligation—we have nothing we want to sell you.  
The Holstein-Friesian Association of America, Box 164, Brattleboro, Vt.

### Holstein-Friesian Cattle

A. R. O. herd, tuberculosis tested annually. A few choice bull calves for sale. O. L. BRODY, Owner, Port Huron, Mich. Chas. Peters, Herdsman, Three Rivers, Mich.

**3--HOLSTEIN BULLS--3**  
Ready for service at Long Beach Farm, Augusta, Mich.

**OAK Leaf Farm.** Herd sire Lenawee Pontiac Calamity King offer Registered Holstein bull calves from A. R. O. cows and the above sire whose dam holds the milk and butter record in the state of Ind. 7 days milk 795.3, butter 32.51—35 days milk 2782.3, butter 32.75. E. H. GEARHART & SON, R. 4, Marcellus, Mich.

### The Traverse Herd Great Values In Bulls

from A. R. O. Cows with records up to 30 lbs. Let us know your wants. We will send extended pedigrees and prices.

**TRAVERSE CITY STATE HOSPITAL,**  
Traverse City, Michigan.

**Holstein bull,** nearly ready for service, large straight deep-bodied, handsomely marked 3/4 white. His six nearest dams have A. R. O. records that average butter 74 days 24.13 milk 594 lbs. W. B. Reader, Howell, Mich.

### The Pontiac Herd "Where the Champions come from"

Offer Bull Calves sired by sons of Pontiac Korndyke, Hengerveld DeKol, Pontiac Dutchland, or Admiral Walker Pietertje.

Do you want a Pontiac in your herd?  
**Pontiac State Hospital,** Pontiac, Mich.

**HOLSTEINS** of quality. Bull calves from dams with records high as 31 lbs. in 7 days. Also cattle puppies. E. A. HARDY, Rochester, Mich.

**\$225 takes** your choice of heifers of a 30 lb bull due in May to a 23 lb son of Johanna Kora. D. K. Terms if wanted. M. L. McLAULIN, Redford, Michigan.

**HOLSTEIN** bull calves, eligible to registration, without papers, \$25 at 10 days of age, registered, \$50 to \$75. Dewey C. Pierson, Hadley, Mich.

**Registered** Holstein bull calf, born Sept. 1917, dam daughter of 24 lb. cow, write for pedigree and price. F. O. B. your station. E. E. STURGIS, R. 3, St. Johns, Mich.

**Holstein** calves, 25 heifers, & 2 bulls 15-16ths pure, 5 weeks old, beautifully marked, \$25 each, crated for shipment anywhere. Buy only the best. EDGEWOOD FARMS, Whitewater, Wis.

**Parkside Holstein** bulls, 8 and 16 mo. Both sired by noted bull, 37 relatives are 30 lb. cows. Priced to sell. J. E. TIRRELL & SON, Charlotte, Mich.

## HEREFORDS

10 bull calves for sale, Perfection Fairfax and Prince Donald breeding.

**ALLEN BROS.,**  
PAW PAW, MICH.

**Herefords** Bob Fairfax 494027 at head of herd. Stock for sale. Both sexes either polled or horned. EARL C. McCARTY, Sec'y Mich. H. B. Ass'n. Bad Axe, Mich.

**HEREFORDS** Two yearling bulls, registered, well developed, ready for service, prize winning ancestry. E. J. Taylor, Fremont, Mich.

**BROOKWATER FARM**  
2 Bulls  
Ready for Service  
Sired by better bred bulls and out of high testing dams.  
**The Producing Kind**  
with Jersey type and capacity. Prices reasonable. Also a few bred gilts (Durocs) and boars.  
**Brookwater Farm,**  
J. Bruce Henderson, Mgr.  
Ann Arbor, Mich.  
R. 7

**REGISTER OF MERIT JERSEYS**

**Jersey Bulls for Sale** from high-producing dams, with testing Assoc. records, also on semi-official test. C. B. Wehner, R. 6, Allegan, Mich.

**ONE** 11 mo. old solid colored gr. son of Royal Majesty whose dam as a 3 yr. produced 406.24 lbs. of butter 1 yr. First check \$90.00 gets him, registered, transferred and delivered any point in Mich. FRED BRENNAN Sec., Capac, Mich.

**Choice Bulls** ready for service. Also heifers of Royal Majesty. Come and see them or write for particulars. **THE WILDWOOD HERD,** Alvin Balden, Capac, Mich., Phone 143-5.

**MAPLE** Lane R. of M. Jersey Herd has for sale R. of M. cows, daughters of R. of M. cows, bull calves, heifer calves and bulls. All from 500 & 600 lb. dams. IRVIN FOX, Allegan, Mich.

**JERSEY** bull and bull calves for sale from R. of M. cows, also heifers and cows of all ages. C. B. WEHNER, R. 6, Allegan, Mich.

**FOR SALE** Registered Jersey bull calves. SMITH and PARKER, R. 4, Howell, Mich.

**Lillie** Farmstead Jersey Cattle. Several heifers bred to freshen next fall. Also a few heifer and bull calves of choice breeding. Colon C. Lillie, Coopersville, Mich.

**For Sale** A fine, dark, solid color Jersey bull 16 mos. old. Double grandson of Royal Majesty and out of R. of M. cow. C. & O. DEAKE, Ypsilanti, Mich.

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

### BIDWELL SHORTHORNS

For Beef and Milk.

Registered bulls, cows and heifers—Good Scotch and Scotch-Topped for sale. In prime condition. Modern sanitary equipment. Farm 10 minutes from N. Y. O. depot. 1 hour from Toledo, Ohio. Automobile meets all trains. Write

**BIDWELL STOCK FARM,**  
Box B, Tecumseh, Mich.

**Shorthorns**—Dairy or beef bred. Breeding stock all ages for sale at farmers' prices. C. W. Orum, Secy. Cent. Mich. Shorthorn Breeders' Ass'n., McBride, Mich.

### Richland Farm

Shorthorns.

**IMP. Lorne** in Service. Grand Champion Bull of Mich. Special offer on 14 head of Shorthorns. Cows with calves at foot, heifers two years old and heifers one year old. Also a number of bull calves. We invite correspondence and inspection.

O. H. PRESCOTT & SONS,  
Farms at Prescott, Mich. Office at Tawas, City, Mich.

### Francisco Farm Shorthorns

We maintain one of Michigan's good herds of Scotch and Scotch Topped cattle. They are well bred, properly handled and price reasonable. Come and see; we like to show them. F. P. POPE, Mt. Pleasant, Mich.

### Fair Lawns Shorthorns

Yearling bulls by Canada's best sires: Missie Augusta 665778 and Imp. Newton Frier 528120. LAURENCE P. OTTO, Charlotte, Mich.

**Bates Short horns** the original milk strain young bulls 8 mos. old for sale. Price \$150 to \$200. J. B. HUMMEL, Mason, Mich.

**Shorthorns**—Two bulls, 15 and 16 mo. By a grandson of Cyrus Clay. COLLAR BROS., R. 2, Conklin, Mich.

**SHORTHORNS.** Butterfly Sultan, half brother to International St. Champion, in service. For good bulls, cows, and heifers. W. B. McQuillan, Howell, Mich.

**Shorthorns** Maxwellton Monarch 2nd, 387322 half brother to 5 Grand Champions in service. JOHN SCHMIDT, R. 5, Reed City, Mich.

**Shorthorns**—Four fine young bulls ready for service. Grandsons of Imp. Villager. Also bred heifer & cows heavy milking strain. Farmers prices. Free Catalogue. HOBRIETON FARMS, Hart, Mich.

**SON** of Harthorth Welfare heads our herd of milk-ling Shorthorns comprising Chiffley of Gray bred cows, young bulls ready for sale and service, write us Liddel Bros., R. 2, Clinton, Mich., Macon Phone.

**Grand Traverse Shorthorn Asso.** Reg. stock for sale. M. E. DUCKLES, Sec., Traverse City, Mich.

**1867-1918** Maple Ridge Herd of Shorthorns Yearling heifers and bull calves for sale. J. E. TANSWELL, Mason, Mich.

**Shorthorns** Four very desirable heifers 17 to 21 months old, and bull 8 mo. All roans. Price \$1000. S. E. BOOTH, Morrice, Mich.

**Purebred** Shorthorn bull calves one to six months, price \$50 to \$55. Aloha, Mich. W. F. BARR,

**For Sale** Reg. Shorthorn bull 6 mos. old Red, Rich bred one, \$200. J. M. HICKS & SONS, R. 2, Williamston, Mich.

**SHORTHORN:** 1 bull 6 months old, 1 heifer 14 mos. Sold Registered in buyer's name, \$100 if taken soon. H. W. MANN, Dansville, Mich.

**SHORTHORNS**—20 bulls 2 to 18 mos., mostly from Dorthy's Sultan 463045, a grandson of Whitehall Sultan, also a few cows. C. Carlson, LeRoy, Mich.

**Scotch Shorthorns** for sale, 5 bulls ready for service. John Lessiter's Sons, Orion, Mich., R. F. D.

**Polled Durham Cattle** 9 yearling bulls for sale. J. A. DeGARMO, Muir, Mich.

### Cattle For Sale

2 Loads feeders and two loads yearling steers. Also 2 can show you any number 1, 2 and 3 year old from 600 to 1200 lbs. Isaac Shantum, Fairfield, Iowa, R-8

### HOGS.

## GREY TOWER FARM

Now offers for sale a few choice Holstein bull calves, from high testing dams, with good A. R. O. records, at farmers' prices, write us about them and our

## Durocs & Berkshires

M. D. KITCHEN Mgr., Grass Lake, Mich.

**DUROCS** Orion Chief Perfection No. 68945, and Jennings Pilot Wonder No. 73373. Two outstanding boars of big type and excellent quality. All selected large type smooth sows, Thrifty, smooth, large boned spring gilts from these herd boars and choice sows at very reasonable prices. The Jennings Farms, Bailey, Mich.

**Dobson's Durocs** surplus stock all sold. Nothing doing till spring. ORLO L. DOBSON, Quincy, Mich.

## DUROCS

You want more size, feeding qualities. Fall boars ready for service. A few sows bred for June farrowing. NEWTON BARNHART, St. Johns, Mich.

**Duroc Jerseys**—boars of the large heavy boned type, Prize winning stock, prices reasonable, type and breeding considered, also gilts bred to Junior Champion boar for spring farrow. F. J. Drott, R. 1, Monroe, Mich.

### DUROC JERSEYS

E. D. HEYDENBERG, Wayland, Mich.

**Choice Duroc Jersey Gilts** For Sale. CAREY U. EDMONDS, Hastings, Mich.

**Duroc** fall boars sired by Orimson Critic T., Satisfaction and Brookwater Principal, priced right. Bred sows all sold. M. C. TAYLOR, Milan, Mich.

**Durocs** Can spare two or three bred daughters of Joe Orion 2nd and the \$5000 boar. A. FLEMING, Lake, Mich.

**Duroc Jerseys** Why don't you order a pig and raise an extra good boar or gilts for yourself. E. E. OALKINS, Ann Arbor, Mich.

**DUROCS** service boars, bred sows, fall pigs. Express paid. J. H. BANGHART, E. Lansing, Mich.

**Duroc Jerseys:** Sept. boar pigs for sale at farmers' prices. J. D. CRANE & SON, Plainwell, Mich.

**Chester** Gilts bred for March farrow early fall pigs both sexes from best blood lines. F. W. ALEXANDER, Vassar, Mich.

**Raise Chester Whites**  
Like This  
the original big producers

I HAVE started thousands of breeders on the road to success. I can help you. I want to place one hog from my great herd in every community where I am not already represented by these fine early developers—ready for market at six months old. Write for my plan—More Money from Hogs. G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

### Big Type O. I. C's.

Stock of all ages for sale. We showed at four state fairs and won more champions and Grand Champions than all the other breeders together double, we were Premier Breeder and Exhibitor at every fair we showed. We Bred the best. We sell the best. We Guarantee them to be the best. Write your wants. Get our Catalogue. We ship on approval. CRANDELL and SON, Cass City, Mich.

Additional Stock Ads. on Page 447



# Markets.

## GRAINS AND SEEDS

March 26, 1918.

**WHEAT.**—We can add nothing to what has already been said about this market in past issues. There are fewer bushels of wheat at primary markets and in farmers' hands than there has been for decades past at this season of the year. We shall have to make use of a larger quantity of substitutes in order to supply the American people and meet our obligations in Europe. A year ago the local market was paying \$2.04 per bushel for No. 2 red wheat. Present prices are:

No. 2 red.....	\$2.17
No. 2 white.....	2.15
No. 2 mixed.....	2.15

**CORN.**—Our reports show that corn continues to arrive at the big markets in large quantities. Last week the visible supply showed an increase of 3,329,000 bushels. The country now has a visible supply that is nearly 4,000,000 bushels greater than the quantity in sight one year ago. Price changes are not consistent throughout the country. As for example, our reports from Chicago show a decline of ten cents on Monday, whereas Detroit values were steady to ten cents higher. Good corn everywhere is in excellent demand. The poorer grades often have a limited call. Our files show that the trade was paying \$1.21½ per bushel for No. 3 corn a year ago. Present Detroit prices for cash corn are:

No. 3 corn.....	\$1.70
No. 3 yellow.....	1.80
No. 4 yellow.....	1.70
No. 5 yellow.....	1.40
No. 6 yellow.....	1.30
No. 4 white.....	1.75

The latest wire from Chicago shows that no No. 2 and No. 3 yellow corn is being sold, while No. 4 brought \$1.55@1.62, and May futures \$1.25½.

**OATS.**—While news from various parts of the country tells of fairly liberal stocks of this grain at primary markets and country elevators, the demand does not remain long satisfied at any time, even though heavy selling is frequently reported. Domestic consumers are using more oats than ever, while foreigners are obliged to take the grain as rapidly as it is possible to ship it to Europe. War news had some effect on the trading here this week. We can see no reason why the prices should not be maintained somewhere near the present range of values, for a short time at least. Our records show that standard oats were quoted at 69c per bushel here one year ago. Detroit quotations for cash oats are:

Standard.....	\$ .97½
No. 3 white.....	.97
No. 4 white.....	.96

**RYE.**—We note that buyers are again seeking supplies of this grain, which fact with limited supplies, caused values to advance over quotations of a week ago. Present Detroit price for cash No. 2 is \$2.80 per bushel. Chicago's price for same grade \$2.91.

**BEANS.**—Reports to us show that the authorities are ready to issue permits freely to canning companies for the canning of all wet beans that can be secured. This should open the way to the bean jobbers of this state to establish a satisfactory market for the large quantities of beans which have been frosted but which are suited for human consumption. Unless this is done, farmers will be obliged to use these beans for stock feed. The jobbers can save the day if they will. At Detroit the latest quotation for cash beans is \$12.25 per cwt. Our Chicago report shows a tendency toward easiness on that market, with offerings in fair supply. Michigan, hand-picked pea beans are quoted there at \$13@13.25 for fancy, red kidneys \$14.50@15, do. fair to choice \$12@13 per cwt. At Greenville farmers are receiving \$10.75 per cwt.

**PEAS.**—Our Chicago letter indicates a rather dull market for this product, with field peas quoted at \$7.50 per cwt.

**SEEDS.**—This market is stronger and higher with prices as follows:

Prime red clover.....\$20.50

March red clover.....20.00

Alsike clover.....15.25

Timothy seed.....3.80

## FLOUR AND FEEDS

**FLOUR.**—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 pounds as follows: Straight winter \$11. spring patent \$11.30; rye flour \$14 per bbl.

**FEEDS.**—A wire from the Food Administration is to the effect that machinery is now set up for the vigorous enforcement of the regulations on sell-

ing price of wheat mill feeds, and that the food administrator at Lansing will receive complaints and promptly investigate all cases of exorbitant prices. This announcement further states that a new schedule of margins has been established which should bring all feed to the consumer at a maximum of \$4.50 over the mill price for the feed, which in the case of bran has already been established at 38 per cent of the cost of one ton of clean wheat at the mill, with differentials for the grades of wheat mill feeds. On this basis where wheat costs the miller \$2.10 per bushel the carload price at the mill for bran would be \$26.60 per ton, or \$27.10 in less than carload lots. The maximum for bran according to the above announcement should therefore be at \$31.10 per ton in carload lots, or \$31.60 in less than carload lots, and for middlings \$9 more per ton than for bran. Where higher prices than this are asked, the case should at once be reported to the Food Administrator at Lansing, with all details for investigation. Since the supply of bran is very low, dealers are selling in small lots, usually 100 pounds, in order to give each customer a portion of the supply.

**Other Feed Prices.**—In 100-pound sacks jobbing lots: Cracked corn \$76; coarse corn meal \$75; chopped feed \$56 per ton.

**HAY.**—Demand is well sustained. Prices in carlots at Detroit are:

No. 1 timothy.....	\$25.50@27
Standard timothy ..	25.50@26
Light mixed .....	25.50@26
No. 2 timothy.....	24.50@25
No. 1 clover.....	\$24.50@25

**Pittsburgh.**—Demand is less urgent, according to our correspondent, buyers holding off anticipating a lower market. Arrivals more plentiful; market dull and lower.

No. 1 timothy....	\$31.00@31.50
No. 2 timothy....	29.00@30.00
No. 1 light mixed	29.50@30.50
No. 1 clover mixed	30.50@31.50
No. 1 clover.....	30.50@31.50

**STRAW.**—In carlots on track at Detroit: Wheat and oat straw \$11.50@12; rye straw \$12.50@13.

## FRUITS—VEGETABLES

(Quotations furnished by the U. S. Department of Agriculture, Bureau of Markets, Detroit Office).

**POTATOES.**—The movement of potatoes continues to be heavy, with the majority of the markets in the central states easy to weaker. The very latest wires indicate the condition of the market and prices paid per cwt. to jobbers for U. S. Grade No. 1, at the places named as follows:

	Price.
Detroit (steady) .....	\$1.45@1.50
Cleveland (slow) .....	1.50
New Orleans (steady) .....	1.60@1.75
Birmingham (fair) .....	1.75
Atlanta (weak) .....	1.75@1.85
Memphis (steady) .....	1.25@1.75
Cincinnati (fair) .....	1.50@1.60
Pittsburgh (fair) .....	1.35@1.45
Columbus (weaker) .....	1.55
Washington (weak) .....	1.75@1.90
Indianapolis (weaker) .....	1.25@1.35
Chicago (weak) .....	.75@ .80

Around Greenville the farmers are receiving 90@95c per cwt. In Wisconsin 50@60c; in New York state \$1.10. From these wires it is readily apparent to our readers that the market situation in the potato deal is anything but satisfactory to the producer.

**APPLES.**—The movement of apples, according to the last wires from the various northern markets, is only moderate with prices about steady with previous weeks. Baldwins sold in Detroit on Tuesday at \$5 per bbl, while the same variety from this state brought \$5.50 in Chicago. There are comparatively few stores of apples in this state remaining in possession of growers.

## DAIRY PRODUCTS

**BUTTER.**—Recent declines resulted in greater interest from buyers, and the market is firmer. Fresh creamery firsts are quoted at 39½¢; fresh creamery extras 40½¢.

**Chicago.**—Trade in all grades fairly good. Creamery extras at 41c; extra firsts 40@40½¢; packing stock 30@31c per pound.

**CHEESE.**—Michigan flats 24@24½¢; New York flats 25c; brick 28c; long horns 28½¢; Michigan daisies 26c; Wisconsin daisies 26½¢; domestic Swiss 36@42c for prime to fancy; limburger 30½@31c per pound.

**DRESSED CALVES.**—Fancy at 22@23c; choice 21c; common 20c.

**DRESSED HOGS.**—Best 20@21c per pound.

## POULTRY PRODUCTS

**POULTRY.**—(Live).—Market firm and offerings not large. Food Administration has ordered that poultry

dealers shall not purchase, ship, sell or negotiate the sale of any live or freshly killed hens or pullets between February 11 and April 30 of this year. The object is to save all egg-laying chickens during the egg season for laying purposes. Old roosters 24c per lb; ducks 34@35c; fat geese 34@35c; turkeys 34@35c.

**Chicago.**—(Live).—Buyers are anxious to obtain poultry and all available supplies are quickly disposed of. Fowls 22@31c; ducks 31c; geese 31c; turkeys good 31c.

**EGGS.**—Market is well supplied and prices are lower. Fresh firsts 36c.

**Chicago.**—Receipts are liberal and offerings not so well taken up as formerly. Fresh Michigan firsts 34½@34¾¢; ordinary firsts 33@34c; miscellaneous lots, cases included 33@34c per dozen.

## WOOL

Our reports from seaboard markets show that the wool situation continues to occupy the same strong position it has held for a long time back. A slightly easier feeling has been caused however, by the promise of a shipment of 10,000,000 pounds from Australia. On the other hand, we have heard from producing states in this country, and growers predict that the yield will be light this year, due to the feed situation the past winter. This shortage is likely to more than overcome the increase from the larger flocks now owned by American farmers. Seaboard prices for fleeces ranged from 55@85c last week.

## GRAND RAPIDS

The egg market opened Easter week with prices at 35@36c. The potato market continues very slow and unsatisfactory, with prices for U. S. grade No. 1 at country loading points for the bulk round white types at 75@85c. Cabbage is selling around \$3 per cwt. The mills are quoting grains as follows: Wheat \$2.09; rye \$2.40; barley \$1.50; corn \$1.80; oats 98c.

## LIVE STOCK

### BUFFALO.

March 25, 1918.

**Cattle.**—Receipts 100 cars; market steady; best shipping steers \$13@14; fair to good \$12.50@12.75; plain and coarse \$11.75@12.25; native yearlings \$12.50@13; best handy steers \$11@11.50; fair to good kind \$10@11; handy steers and heifers, mixed \$10.50@11; light butcher steers \$10@10.50; western heifers \$10.50@11.25; state heifers \$8.50@9.50; best fat cows \$10@11; butcher cows \$7.50@8.50; cutters \$6.50@7; canners \$5@6; fancy bulls \$10.50@11; butcher bulls \$8.50@9.50; common bulls \$7@7.50; best feeders 900 to 1000 lbs, \$9@10; medium feeders \$8.50@9; light common \$7.75@8.50; stockers \$8@9; best milkers and springers \$10@15; mediums \$75@100; common \$50@60.

**Hogs.**—Receipts 40 cars; steady; heavy \$18.40@18.60; yorkers \$18.85@19; pigs \$18.25@18.50.

**Sheep and Lambs.**—Receipts 25 cars; strong; top lambs \$19.25; yearlings \$17; wethers \$14@15; ewes \$13.50@14.

**Calves.**—Receipts 3000; market is \$1.50 lower; tops \$19.50; fair to good \$16@18; fed calves \$7@9.

### CHICAGO.

March 25, 1918.

Our special representative at the Chicago Stock Yards reports:

### Cattle.

#### Receipts.

Monday this week.....25,000  
Last week, total.....82,160  
Preceding week, total.....35,935

Trade opened this week with estimated receipts of 25,000 head. Butcher stock and choice steers are called steady, but the general steer market looks from 10@15c lower. Steers of a choice to extra kind carrying much weight are bringing \$13.50@14.50, with pretty good lots taken at \$13 and upward, while medium grade steers sell at \$12.60 and over and down to \$9@10.50 for some inferior light weight steers. Of late the greater part of the steers have sold at \$12@13.50, with the better class of yearlings taken at \$12.50@13.75. Within a week butcher stock has declined about 40c and canners and cutters declined 25@40c. Butcher cows are selling at \$7.70@12.25, two carloads of heavy weights from Nebraska selling recently at the top figure, but not many cows offered go over \$11. Heifers are in good demand at \$8.25@12.25 for most lots, while cutters sell at \$7.25@7.65, canners at \$7@7.20 and bulls at \$7.25@11. Calves sold last week at the highest prices on record, the top being at \$17.65, but they are off now, light veal-

ers selling at \$15@16, and sales down to \$7.25@13 for heavy ones. A few days ago prime feeders, heavy weight, sold up to \$12.35, the best price of the year, but the present range for stockers and feeders is about \$8.40@11.75.

### Hogs.

#### Receipts.

Monday, this week.....76,000  
Last week, total.....243,767  
Same week 1917, total.....109,399

Prime hogs soared last week to \$18.15, but at the opening this week a break of 15@20c occurred, with sales at \$16.10@17.75, the top being paid for light hogs, while the best heavy hogs brought about 35c below the top. The pigs brought mostly \$14@16.50, with feeder lots quotable as high as \$16.75. Hogs marketed are averaging about 240 pounds.

### Sheep.

#### Receipts.

Monday, this week.....19,000  
Last week, total.....54,861  
Previous week, total.....73,240

Market started this week with a firm tone; the packers getting about half of the supply. Woolled flocks sell as follows: Lambs \$14@18.75; breeding ewe lambs \$17.50@18.25; feeding lambs \$16.50@17.35; yearlings \$14.25@16.75; wethers \$13.25@15.25; ewes \$9@15; bucks \$10.50@12.

### Horses.

The market is unchanged, with light receipts and a limited demand, some mules and cavalry horses selling for war purposes. Prices are unchanged, with inferior horses offered at \$60@100 and sales of the better class at \$150@265.

## LIVE STOCK NEWS.

E. P. Hall, of Mechanicsburg, Ill., the widely known veteran stock feeder and exhibitor of champion fat bees in the International Live Stock Exposition in Chicago every year, says that he has now in his feed lots 165 head of the fanciest doddie babies he has ever owned. They are from Illinois and Iowa herds, and from this choice collection will come the Hall contribution to the 1918 International.

An experienced trader points out that it is good business policy to purchase springy cows of a beef breed, such cows selling at the present time for \$1 per 100 pounds below what they would cost otherwise, the reason for this being their condition. The trader also points out that where such cows are purchased by farmers, the calves can be vealed at around \$15, while the farmers can fatten the cows on cheap feeds and obtain fair profits.

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## THIS IS THE LAST EDITION.

The first edition is sent to those who have not expressed a desire for the latest markets. The late market edition will be sent on request at any time.

## DETROIT LIVE STOCK MARKET.

## Thursday's Market.

March 27, 1918.

## Cattle.

Receipts 2088. Bulls 50c and other grades 15@30c lower than last week.

Best heavy steers \$11.50@12; best handy weight butcher steers \$10.50@11; mixed steers and heifers \$9.50@10.50; handy light butchers \$8.50@9.25; light butchers \$8@8.50; best cows \$9@10; butcher cows \$7.50@8.25; cutters \$7@7.25; canners \$6.50; best heavy bulls \$8.50@9.50; bologna bulls \$8@8.25; stock bulls \$7@7.50; feeders \$9@10; stockers \$7@9; milkers and springers \$6@90.

Bishop, B. H. sold Newton P. Co. 3 cows av 917 at \$7.25, 2 do av 900 at \$7, 2 do av 1085 at \$8.25, 7 butchers av 671 at \$9, 4 do av 845 at \$9, 12 do av 550 at \$8.50, 11 steers av 1174 at \$11.50, 1 do wgh 1300 at \$12, 3 do av 1043 at \$10.50, 7 do av 1000 at \$11, 3 do av 1050 at \$10.75, 25 do av 861 at \$10; 5 cows av 888 at \$9.60, 1 do wgh 790 at \$7.50, 3 do av 743 at \$7, 9 do av 960 at \$7, 2 do av 1010 at \$8.50, 1 bull wgh 1200 at \$9, 1 steer wgh 1120 at \$10; to Sullivan P. Co. 2 cows av 1145 at \$8.75, 3 do av 933 at \$8.50, 2 do av 1000 at \$3.75, 4 do av 1017 at \$8.75, 11 do av 832 at \$9, 1 steer wgh 1100 at \$11.50, 11 butchers av 762 at \$8.50, 5 cows av 960 at \$7.25, 1 do wgh 1200 at \$3.50, 3 steers av 733 at \$10.75, to Bresnahan 14 cutters av 850 at \$6.85; to Hyman 7 steers av 740 at \$9.50, 2 bulls av 1156 at \$9; to Ratner 14 steers av 983 at \$10.75, 1 bull wgh 2160 at \$11.50; to Newton P. Co. 2 heifers av 935 at \$10, 7 canners av 731 at \$6.75; to Hammond, S. & Co. 20 steers av 1002 at \$11.25, 14 do av 1028 at \$11.50; to Thompson 19 do av 803 at \$10.25; to Kamman B. Co. 14 do av 996 at \$11.25; to Rattkowsky 8 do av 970 at \$10.50.

## Veal Calves.

Receipts 1140. Market steady to 25c higher than last week. Best \$17; others \$8@15.

Sahdel, S. B. & G. sold Rattkowsky 43 av 140 at \$17.60, 3 av 170 at \$19, 10 av 116 at \$17, 2 av 120 at \$17, 2 av 135 at \$19, 4 av 155 at \$19; to Burnstein 20 av 135 at \$15, 4 av 140 at \$18; to Shipiro 8 av 140 at \$17, 8 av 125 at \$15, 12 av 160 at \$18.50; to Goose 11 av 150 at \$17.50; to Parker, W. & Co. 2 av 195 at \$13.50, 4 av 130 at \$17.50, 2 av 140 at \$18, 16 av 150 at \$17.25, 3 av 155 at \$16, 7 av 135 at \$17, 3 av 140 at \$12, 3 av 130 at \$15, 9 av 170 at \$17.50, 2 av 120 at \$11, 4 av 140 at \$17.50; to Nagle P. Co. 6 av 125 at \$17.50, 2 av 130 at \$17; to Burnstine 4 av 150 at \$17.50, 7 av 130 at \$14, 2 av 130 at \$10.

McMullen, K. & J. sold Thompson 2 av 170 at \$17, 3 av 150 at \$17; to Durnstine 10 av 145 at \$17.50, 8 av 140 at \$17.50, 5 av 160 at \$17.50, 8 av 150 at \$17, 4 av 145 at \$17.25, 2 av 155 at \$17.50, 8 av 140 at \$17.50.

McMullen, K. & J. sold Costello 1 cow wgh 720 at \$8.25; to Bray 1 cutter wgh 730 at \$6.50; to Hammond, S. & Co. 1 cutter wgh 940 at \$7.50.

## Sheep and Lambs.

Receipts 1012. Market steady to 50c higher than last week. Best lambs clip lambs \$14.50@15.25; fair to good \$13.50@14.75; fair lambs \$17@18; light to common lambs \$15@16.75; sheep \$10@12.50; culs and common \$6@8.50.

Erwin, S. & J. sold Parker, W. & Co. 55 clip lambs av 95 at \$13, 135 wool lambs av 83 at \$17.75; to Wilson & Co. 237 clip lambs av 70 at \$15.25, 15 do av 55 at \$14.

Bishop, B. & H. sold Parker, W. & Co. 57 lambs av 75 at \$13.50; to Mich. B. Co. 81 do av 72 at \$17.75, 44 do av 100 at \$18; to Sullivan P. Co. 40 clip lambs av 80 at \$14.50, 13 do av 75 at \$14.50; to Hammond, S. & Co. 19 do av 39 at \$17.25; to Mich. B. Co. 70 do av 75 at \$18.25, 63 do av 75 at \$18.25.

Sahdel, S. B. & G. sold Nagle P. Co. 34 lambs av 83 at \$17.25.

## Hogs.

Receipts 4710. Market dull on pigs and 40c lower at \$16.50@17.25; mixed grades strong at \$17.60@17.75.

## DO YOU WANT HELP ON YOUR FARM?

Hon. A. B. Cook, Federal Farm Labor Director for Michigan, informs us that he has a number of good men experienced in dairy farming or general farming who would be glad to accept positions on Michigan farms. If in need of help write Mr. Cook at the Agricultural College, East Lansing, without delay, giving him some idea of the kind of man you desire.

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Do this first. Don't think of  
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It's the sensation of all separators. San-  
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The features of the Galloway Sanitary Separator  
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Four big sizes at four low prices. Every  
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Galloway also makes Engines, Spreaders,  
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applied with a trowel over your old roof, costs  
less than prepared roofing and lasts longer.  
LIQUID ROOF CEMENT applied with a brush  
will lengthen the life of your old roof. Order a  
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I have a competent and reliable manager and now  
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to feed my herd of pure bred Durocs. Prefer an ex-  
perienced man but if not experienced must like the work and  
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HERBERT W. MUMFORD,  
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## Have You Any Beans?

WE ARE BUYERS, for cash, of red kidney, brown  
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bright, clean stock. Also wax and green-podded  
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Production well started, general qual-  
ity, fine. For a few months it will be  
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## O. I. C. &amp; Chester White Swine.

Strictly Big Type with quality. Bred sows & gilts are  
all sold, two boars fit for service good ones. Also have  
a few fall pigs left, either sex. I will ship C. O. D.  
NEWMAN'S STOCK FARM, R. 1, Marlette, Mich.

BRED GILTS and  
SERVICEABLE BOARS  
J. CARL JEWETT, Mason, Mich.

O. I. C.'s 2 choice May boars & Sept. & Oct. pigs sired  
by First Premium boar Mich. State Fair 1917.  
Olover Leaf Stock Farm, R. 1, Monroe, Mich.

O. I. C.'s big type, one yearling sow and gilts to far-  
row in Apr. and May, Aug. and Sept. boar  
G. P. ANDREWS, Dansville, Michigan.

O. I. C.'s all sold except some fall gilts. Order  
your spring pigs now.  
C. J. THOMPSON, Rockford, Mich.

O. I. C.'s. Last spring gilts bred for next spring far-  
row also last fall pigs either sex and not skin.  
Good growthy stock 1/2 mile west of Depot, Citizens  
phone 124. Otto B. Schulze Nashville, Mich.

O. I. C. Gilts weighing about 180 lbs. bred for April far-  
row for sale. Satisfaction guaranteed. Maple  
Grove Farm, Lakeview, Mich., Roseman Bros., Props.

O. I. C. For sale fall gilts and a few gilts  
bred for June farrow.  
F. C. BURGESS, Mason, Mich. R. F. D.

Large Type P. C. no public sale this year; 50 sows and  
gilts all queens of the breed go at private treaty.  
W. J. HAGELSHAW, — Augusta, Mich.

Big Type P. C. Big boned fellows from Iowa's greatest  
E. J. MATHEWSON, — Burr Oak, Mich.

Big Type P. C. bred for March & April farrow sired  
by Peter's Jumbo & Grand Superba and 2 or 3 year-  
ling sows at bargain prices. C. E. Garsant, Eaton Rapids, Mich.

## Large Type P. C.

Bred gilts and boars all sold nothing to offer at present.  
W. E. LIVINGSTON, Parma, Mich.

LEONARD'S Bred sows all sold, fall pigs, orders book-  
ed for spring pigs at weaning time. Shipped C. O. D.  
E. R. LEONARD, — St. Louis, Mich.

P. C. Sows For Sale. Bred for April farrow.  
Prices reasonable.  
A. A. WOOD & SON, — Saline, Mich.

Large Type P. C. fall gilts, sire 800 lb. yearling to be  
bred to 1000 lb. 2 year old for July & Aug. 2 extra good  
fall boars. WM. J. CLARKE, R. 7, Mason, Mich.

Big Type Poland Chinas: Sows bred for April and  
L. W. BARNES & SON, — May farrow and fall pigs.  
Byron, Mich.

BIG TYPE POLAND CHINAS: Booking orders for  
G. W. HOLTON, R. 11, — Kalamazoo, Mich.

Large Strain P. C. A few gilts left bred for June far-  
row and 2 nice boars ready for service at farmers  
prices. H. O. SWARTZ, — Shoolcraft, Mich.

## Large Yorkshire Gilts

Red Poll Cattle. — E. S. CARR, Homer, Mich.

Yorkshire Gilts: Bred for spring farrowing. Bacon  
is high in price. Yorkshires make  
bacon; buy Yorkshires. Waterman  
& Waterman, Packard Road, Ann Arbor, Mich.

Hampshire boars at a bargain, bred gilts  
now ready to ship.  
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Belgian and Percheron Stallions for sale that  
will pass the Michigan Stallion Inspection.  
Have a few mares of both breeds. Shorthorn Cat-  
tle, we offer a choice lot of bulls and females.  
Write us.

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Mares and Stallions priced to sell. Inspection invited.  
L. C. HUNT, — EATON RAPIDS, MICH.

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The entire herd of the late A. A. Palmer  
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cheron mares \$200 to \$400 except two;  
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For sale or Exchange, for cattle, Registered Hol-  
stein preferred, three Regis-  
tered Percheron mares, coming 4-6-7 years old, weigh-  
ing from 1200 to 1800 lbs. In foal to Imported Percheron  
weighing 2160. These mares are good workers, kind and  
gentle, come look over.  
J. C. BUTLER, — Portland, Michigan.

FOR Sale Splendid pair of registered Percheron mares  
color dark gray five & eight years old weight 3200 lb.  
\$500 takes them until Apr. 10 phone or write.  
ARTHUR H. ROHLFS, — Akron, Mich.

Percherons, Holsteins, Angus, Shropshires, Durocs  
DORE D. BUELL, — Lima, Michigan.

For Sale: Three Percheron Stallions and three Per-  
cheron mares at farmers' prices.  
E. J. ALDRICH, — Tekonsha, Mich. Bell Phone.

Percheron Stallions and mares of reasonable  
prices; inspection invited.  
F. L. KING & SON, — Charlotte, Mich.

FOR SALE Registered Percheron Stallion  
seven years old  
OREA JACOBS, — Gregory, Mich.

For Sale Registered Percheron Stud eight years  
old, cheap if sold at once.  
ALBERT SCHAFER, — R. 1, Wyandotte, Mich.

Two Large young Jennets cheap, and some  
Shetland Ponies and several good  
fox hounds. W. E. LECKY, — Holmesville, Ohio

FOR SALE Belgian Stallion as good as  
the best, NEREUS QUIG-  
LEY, 311 South Dought St., — Jackson, Mich.

## SHEEP

## KOPE-KON FARMS.

Coldwater, Mich.

## Hampshires &amp; Shropshires.

It's a wise man who orders his ram for August  
delivery now.

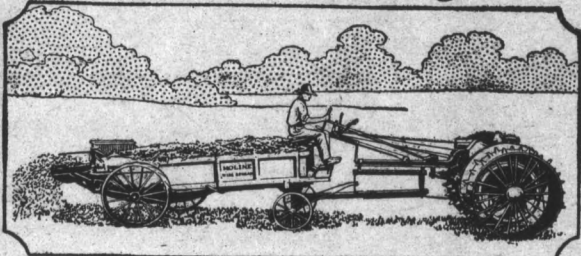
About July 1 we will offer for sale choice  
Shropshire Rams.  
ARMSTRONG BROS., R. 3, — Fowlerville, Mich.



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*Threshing Beans in Wyoming*



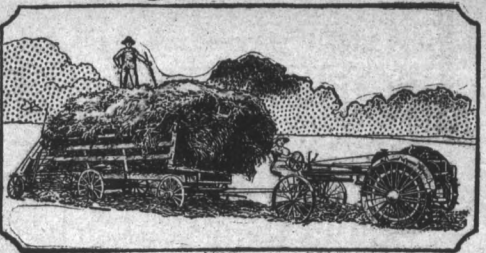
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*Cultivating Corn in Iowa*



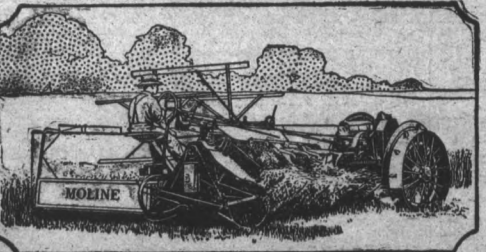
*Mowing in California*



*Loading Hay in Wisconsin*



*Digging Potatoes in Florida*



*Harvesting in Oklahoma*



## MOLINE UNIVERSAL TRACTOR

*"It Solves the Farm Help Problem"*

**Y**OU can make more money with the Moline-Universal than with any other tractor because it can be kept at productive work more days a year—no matter how large or small your farm or what crops you grow. This is because the Moline-Universal is built to fit the farm and every operation on the farm. It is not limited to a few operations, nor to certain classes of work. The Moline-Universal will do anything any other tractor will do and in addition an infinite variety of work impossible for any other tractor. With the Moline-Universal *one man* can plow, harrow, plant, cultivate, mow, harvest and handle all the belt jobs on any average farm. You can find work for it every day in the year.

By equipping it with a rear carrying truck, the Moline-Universal is converted into a four-wheel unit, to which any implement on the farm may be attached in the ordinary way.

Every day owners are doing seemingly impossible things with the Moline-Universal and adapting it to special work. You can do the same. If for no other reason than the fact that the Moline-Universal will do more and better work and can be kept busier on any farm than any other tractor, it is your "best buy."

### A Real One-Man Outfit

But the greatest advantage of the Moline-Universal is that *one man* controls both tractor and implement in all operations. You sit on the seat of the implement, where you must sit in order to do good work, and control the entire outfit. This means that you can farm more land than was ever before possible, with either horses or tractor. If there ever was

a time when it was necessary to increase a man's individual efforts, that time is now.

E. B. Jacobs of Carthage, Mo., says: "My son with the Moline-Universal Tractor has performed the work of six horses and two men in the same length of time."

Harry Cook of Davenport, Iowa, a Moline-Universal owner, says: "I was able to do all my work alone, even harvesting, something I never did before."

### Astonishing Pulling Power

The wonderful versatility and one-man control of the Moline-Universal are due to its two-wheel construction. It attaches direct to the implement and forms one compact unit. Its astonishing pulling power is the result of placing all the weight on the two big drive wheels—all of it goes into the pull. There is no dead weight to carry around. That's why the Moline-Universal, weighing only 2850 pounds, can pull as much as tractors weighing from 1500 to 2000 pounds more; does not pack the soil and requires the least amount of fuel for operation; turns in a 16-ft. circle and backs as readily as it goes forward.

And remember when you buy a Moline-Universal you have a tractor that is the crowning achievement in a half century of manufacturing experience, built by a company of unquestioned integrity who have a world wide reputation as makers of the very highest grade of farm implements. With such backing as your guarantee of service, the Moline-Universal is ready to solve your farm help problem as it has done for thousands of farmers in all parts of the world.

### Your Tractor is Ready

Act now—let the Moline-Universal help you this spring. Write for name of your nearest Moline dealer and free booklet "Tractor Farming" showing actual photographs of the Moline-Universal doing all sorts of farm work, also letters from owners.

#### The Moline Line Includes:

Corn Planters, Cotton Planters, Cultivators, Corn Binders, Grain Binders, Grain Drills, Harrows, Hay Loaders, Hay Rakes, Lime Sowers, Listers, Manure Spreaders, Mowers, Plows, (chilled and steel), Reapers, Scales, Seeders, Stalk Cutters, Tractors, Farm Trucks, Wagons and Stephens Salient Six Automobiles.

Address Department 42

**MOLINE PLOW COMPANY, Moline, Ill.**