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## The Use of Peat In Farm Sanitation

By WARD GILTNER

A FAVORITE subject for discussion now-a-days is the relative healthfulness of rural and urban communities. It is not the purpose of this discussion to even touch upon that matter. We assume that rural communities have their health problems and that it is the desire of the farmer folk to solve these problems. You and I believe that, no matter what the condition is now, country life can be made nearest ideal for babies, boys and girls, men and women, young and old, and that city life cannot approach very near this ideal. So we will stick by the country, study her sanitary and other problems, and derive health and happiness in even trying to solve them; for after all, the game is in the playing, not in the winning.

In his series of articles Mr. Levin has said a great deal about the importance of bacterial action in the soil in decomposing peat and other organic matter for the maintenance of soil fertility. He refers to the good bacteria or germs that are in the big majority as opposed to a very small minority of bad germs or disease producers. Many people have not yet learned this very important fact, that there are working in and on the earth's surface countless trillions of microscopic organisms or germs, most of which are beneficial and only a few of which are dangerous enemies of mankind. We must consider in this article some of the latter type and try to convince the reader that in the combat against these bad germs we can make use of peat and muck to great advantage.

One of the first things that we must recognize is that most of the disease germs leave the body of the sick individual with the discharges of the nose, throat, kidneys or bowels. These discharges are dangerous to susceptible people or animals because of the disease germs they contain and as long as they contain these germs alive. However, nearly all disease germs perish soon after they leave the body of the affected individual unless they enter the body of another susceptible individual. Another fact that must be borne in mind is that very many people and animals carry disease germs in their nose, throat, urinary organs or bowels after recovery from an infectious disease or without ever having had such disease, at least in a form sufficiently severe

We hesitated about telling you that the author of this article is Professor of Bacteriology at the Michigan Agricultural College. We thought you might conclude without reading that the article is "way over your head." But it isn't. Any person who can read English, can understand every sentence. It is very interesting, and it might save a small Doctor's bill and perhaps many, many tons of the very best fertilizer.—Eds.

to be recognizable. These individuals are called germ carriers and they may carry germs of typhoid, dysenter, tuberculosis, diphtheria, infantile paralysis, meningitis, pneumonia and many other disease germs without ever knowing it but not without being a menace to those with whom they come in contact.

It is possible in some cases, but not easy or practicable, except in isolated instances, for us to locate these germ carriers and treat them as we do the

visibly sick, therefore we must conclude that it is the duty of mankind to universally take proper care of its body wastes and of such body wastes of dependents, such as children, invalids and incompetents and animals in captivity or domestication.

This is probably the vastest undertaking ever proposed but it appears to be one worthy, if not actually, necessary. The energies now being spent in destruction of human life and the product of human effort would go a long

way toward solving the problems created by the common enemies of mankind. After we have made the world safe for democracy, even while we are doing it, let us make the world safe for humanity and for humanity's live stock possessions.

Few rural families are possessed of ideal sewage disposal systems; nearly all rural families have outdoor privies and will continue to use such means for disposing of body wastes. In view of this fact it is wise to learn how the privy may be made sanitary and how its accumulations may be turned safely to economic advantage. It is a bacteriological principle that drying destroys microbial life and also that delay or keeping disease out of susceptible bodies will eventually result in their destruction. Therefore, we should construct a privy so that the excretions shall not come in contact with the soil or be accessible to animals or to flies. Then we should add to the excretions or night soil, some cheap, readily available substance which has great drying power, or power to absorb moisture. Road dust, lime, ashes and other substances have been suggested.

Of course, chemical disinfectants have been recommended but we would not advise depending upon them, since they have a different purpose, viz., to destroy all germ life quickly, and they would be expensive and would not always be available.

On nearly every farm in Michigan there could be made available at very slight expense an ideal dessicant or drying agent. We refer to peat or muck. This material should be collected and stored under shelter in the summer time. A constant supply should be kept in a small barrel or other receptacle in the privy and should be used regularly by adding a few small shovelfuls to the excreta. A little experience with its use will soon teach one how much is necessary to maintain the excreta in a fairly dry and inoffensive condition. It is essential that the peat or muck be air-dry, and it should be rather finely pulverized.

If the excreta are deposited in a box or in a can or other tight receptacle they can be removed whenever necessary without the usual objectionable features and emptied on a compost heap, manure pile or pile of decomposing organic matter, such as Mr. Levin (Continued on page 455).

### Ready for the Spring Drive



After Conditioning the Horses Carefully, Hardening them Gradually to Heavy Work and Adjusting Every Strap to its Proper Place, this Young Farmer Finds Himself Ready for the Great Task of 1918.



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DETROIT, APRIL 6, 1918



### CURRENT COMMENT.

Right now at the beginning of the farm campaign every farmer must finally decide upon the extent of his food producing operations for the present year. The necessity for each and every farmer in this country to do his utmost to produce a maximum of food stuffs during the coming year scarcely needs to be emphasized at the present time. The great battle which is raging in France in which our American boys are fighting desperately at the present time has emphasized the need of haste in the transportation of more United States troops, and the million or more men now in training camps will be rushed to France as rapidly as possible. These men and the allied soldiers with whom they are fighting must be amply fed, and the food supplies of the civilian populations of France and England must be supplemented if the war is to be won and the success of the cause of Liberty assured. If we do not decisively win this war on the European battlefield, then we shall have no choice but to become a military nation for the defense of our own land. Every American should fully realize this fact, and do his best in his particular sphere of work to insure an early allied success.

Many of us are prone to criticize the administration for an alleged lack of efficiency in war preparations and a lack of wisdom in the administration of food control measures which we believe to be a serious handicap to producers of food stuffs in the present emergency. We should, however, at all times remember that war is a new line of activity for the present generation of Americans; that war preparations on the stupendous scale required in the present struggle are new to the world, excepting only the military central powers, and beyond our power of conception in their magnitude. The work of preparation must of necessity be conducted by men without previous experience in this particular line. These men must overcome the handicaps of inadequate transportation, shortage of skilled labor, and the German propaganda which is everywhere in evidence. Viewed from this angle, our criticism must in large measure give place to congratulation that in addition to the

considerable force already in France we have available a further army of one million men which may be quickly sent to the front, and while we are naturally disappointed that the announced schedule of preparation along other material lines has not been maintained, we may well remember that the same difficulties and delays were encountered by England in the first year of her extensive war preparations.

We must also remember that the men who are in positions of responsibility in which they are charged with the duty of speeding up these preparations are more fully advised of the urgent necessity of haste than are those of us who are engaged in our usual avocations. We should also realize that any failure of this country in speeding its resources to win the war will affect each and every one of these men as greatly as it will any one of us. With this fact in mind, we cannot but concede that with very few if any exceptions, every man of them is doing the best of which he is capable in the position which he occupies. Each and every one of us who is engaged in food production should do as much.

Constructive criticism is necessary, and helpful in the correction of errors. That errors will be made is unavoidable, but in our criticisms of others let us not make the error of failing to do our utmost in the way of food production this year, since our efforts in this direction are quite as important in the winning of the war as are the efforts being expended along the line of military and industrial preparedness.

A recent report from Federal Farm Labor Director for Michigan, A. B. Cook, with headquarters at the Agricultural College, indicates that married men with previous farm experience are available for farm work this spring in considerable numbers. The season has been especially favorable for early spring work on Michigan Farms, and farmers who have not secured their season's help must do so at once. Many reports from various localities indicate that farmers who are provided with tenant houses in which they can house a married man have very much less trouble in securing competent help than those who are not so equipped and must employ single men.

If there still remain farmers who could provide living quarters for married men, who have not secured competent help, they should lose no time in communicating with Labor Director Cook at East Lansing. Mr. Cook states that few single men are available for farm work, for the reason that so many of them have entered the service and so many have found employment in other industries which are either more profitable or more to their liking.

Another very promising source of farm help is to be found in the United States Boys' Working Reserve. A great many farmers have expressed themselves as having little faith in the value of the aid which could be given by city boys. That such aid is more valuable than is generally conceded seems, however, to be proven by the success of the plan in Indiana, where it was more thoroughly tried out last year than in any other state in the Union. As a result of last year's experience, applications have been made to the United States Boys' Working Reserve by Indiana farmers for 15,000 boys, whereas there are only 11,000 boys available with which to meet these demands.

Present indications in this state are that in the lower peninsula there will be 5,000 Michigan boys available for farm work; in the upper peninsula there will be 1,000 more, and it is expected that at least 1,000 will be available for aid in Michigan from the Chicago territory. The very large demand for the help of these boys in Indiana, where more city boys were placed on

farms last year than in any other state in the Union should be sufficient evidence to Michigan farmers of the value of such help to them. Then, too, there is the benefit which will accrue to the boys from such experience to be considered from the philanthropic standpoint.

The announcement of the purpose and plan of the United States Boys' Working Reserve will be found on another page of this issue, together with the coupon which may be utilized in making application for boy help from this source. Thousands of Michigan farmers can profitably avail themselves of this source of help, and all who should at once make application by the use of this coupon. No farmer who is otherwise equipped to produce a maximum quantity of food stuffs this season but lacks available help to accomplish this desirable result should neglect to avail himself of these sources of labor supply.

### Why Wheat Must be Saved.

The necessity for saving wheat by the people of this country in order that the maximum possible quantity may be exported to our European Allies between now and harvest time was so clearly set forth to the hotel men of the country who were assembled at Washington last week by United States Food Administrator Hoover, that in response to his request these men pledged themselves to abolish the use of wheat and wheat products in the first-class hotels and restaurants which they represented, until after our next harvest. The Food Administration has asked every well-to-do and independent person in the United States to abstain from the use of wheat in any form until after the next harvest, for the reason that the well-to-do and independent people can better make this sacrifice than can the poor among our industrial population.

The necessity for the making of this sacrifice by our people as explained by Mr. Hoover to the hotel men should engage the attention of every thoughtful and patriotic person in the country who is in a position to help in this important need of wheat saving. In addition to the fact that our available wheat supply indicates that our last year's crop was less than had been estimated, and the further fact that the Argentine supply is smaller than had been estimated and will not be available in volume until unusually late in the season, the serious and increasing lack of ships in which to transport the grain makes it necessary to utilize them to the best possible advantage, which means the shipment of wheat from the United States rather than the Argentine or other distant countries, such as Australia, where there is a surplus of wheat available.

Corn cannot be safely shipped abroad at this season of the year, on account of its tendency to heat and spoil in transit. Up to the present time the Allies have used thirty to forty per cent of corn in bread, but to tide them over their present needs until harvest time, there is absolutely no other way except to ship them sufficient wheat to eke out their minimum bread requirements.

Those who have followed the trend of recent events in France will appreciate the need of self-sacrifice on the part of our own people, in order to meet the absolute minimum requirements of the people of this stricken country in the hour of their greatest need. This is absolutely essential if the war is to be won, and each and every American citizen should cheerfully do his part by substituting other foods in order to release wheat which is absolutely essential to the maintenance of the armies and the civilian population in France.

This is a small sacrifice as compared with the sacrifice which the people of France and of our other European

Allies have made. It may be small in comparison with the sacrifice which we in this country may yet be obliged to make before the war is won and the cause of liberty assured. Without doubt, however, it is an essential sacrifice which we must cheerfully make right now to insure early or even ultimate victory.

### HAPPENINGS OF THE WEEK.

#### Wednesday, March 27.

On the western front German forces cross the old Somme battle line at many points, capturing Noyon, Roye and Lihons. On the other hand, British, French and American troops fighting shoulder to shoulder, slowly retard the heavy blows delivered by the Teutons. Opposite Toul the American artillery continues to shell towns occupied by Germans and enemy batteries. —Criticism of aeroplane, ship building and gun manufacturing program is launched in United States Senate. Opposition leaders take exception to government's attitude toward Japanese intervention in Siberia. —Massachusetts House of Representatives ratifies prohibition amendment to federal constitution by vote of 145 to 91. —Henry Adams, noted historian, dies in Washington, D. C.

#### Thursday, March 28.

British troops win lost ground and throw Germans back across Ancre river. At other points the German drive moves more slowly, while Allies are massing their reserves. Lloyd-George of Great Britain, appeals to the United States to rush men with all possible speed. —Papers published showing the German ambassador to Mexico violated the neutrality of that country by leading in campaigns to destroy shipping of Allies. —Weekly toll of British shipping consists of twenty-eight vessels, sixteen being 1,600 tons or over. —In all probability government will sanction entrance of the Pennsylvania Railroad into Detroit.

#### Friday, March 29.

Tip of German drive reaches thirty-seven miles beyond St. Quentin to Montdidier. General Haig holds the enemy on practically the entire remaining portion of the front, and before Arras the foe is forced to fall back. French also recapture three towns and put in peril the German wedge. —Fire believed to be of incendiary origin destroys army saddlers in Detroit, entailing a loss of \$500,000. —Government inspector tells men that classification in Class No. 1 does not necessarily mean immediate service. —Serious disorders occur in Quebec in connection with the enforcement of the draft law. —Kansas City is tied up by strike in fifty different industries. —Secretary of War Baker arrives in Paris on way to visit Italian war zone.

#### Saturday, March 30.

Berlin claims that 70,000 Allied soldiers and 1,100 guns have been captured. British yield ground south of the Somme but control the north end of the battle area. Announcement reaches Washington that General Foch, French chief of staff, has been placed in supreme command of all the Allied and American forces in France. —A church in Paris is hit by shell from German seventy-mile gun and seventy-five killed. —Senate passes draft extension bill which affects 700,000 youths reaching age of twenty-one since June 5, 1917. —Major General Wood passes physical test and returns to command at Camp Funston, Kas. —France calls the 1919 class to be ready to follow the colors at an early date. —Troops are called out to quiet violent opposition to draft act in Quebec.

#### Sunday, March 31.

The Germans capture five villages in the vicinity of Montdidier, giving foe better position before Amiens. French reserves on a thirty-seven mile front hold firm, repulsing enemy's powerful assaults. Drive of Germans compels destruction or abandonment of much of the food supply in Oise and Oisne regions, adding to the difficult food situation in France. —Clocks are moved ahead one hour throughout the United States, in conformity to the "Daylight Saving" law recently enacted by Congress. —Forty-one British are lost when destroyer strikes a mine.

#### Monday, April 1.

French recaptured Moreuil and Ayencourt. Germans also give way before Amiens and at Arras. Bulgarians are observed fighting with the Germans. The enemy is now endeavoring to make permanent present lines by building trenches. —France officially accepts the offer of General Pershing in placing the American army in France at the disposal of the French military authorities, and 100,000 Americans are now moving toward the scene. (Continued on page 478).



# A Few Suggestions for Busy Farmers

FOR the past four seasons I have raised corn and Ito San soy beans successively in the same field of eight acres, planting corn and beans separate in alternate rows, with hills three feet apart each way. Used about thirty-six pounds of seed beans on the eight acres, or four and a half pounds to the acre. This field has had about 3000 pounds of sixteen per cent acid phosphate during the four years, also a very light sprinkling of barnyard manure, four loads to the acre, each year, no more than the average amount applied to all fields on the farm which is a sandy loam. There was no perceptible change in the yield of corn from year to year it being as good the last years as the first.

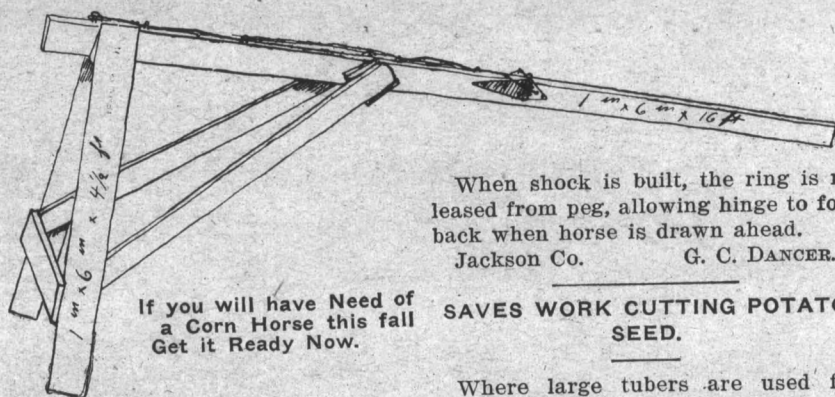
Corn was cut first, by hand, thrown

cut and buzz poles on his ranch near Dyer Lake. With the help of his wife Mr. Nichols is reported to be able to cut and buzz from twelve to fifteen cords of wood a week, besides piling the brush and the wood. The contracted price for this work is \$1.00 per cord. Missaukee Co. H. L. BARNUM.

## FOR SHOCKING CORN.

Enclosed find diagram of horse for shocking corn. It is much lighter than old style, and saves time.

This has two eight-inch hinges fastened to board five and a half feet down from front end, with baling wire fastened in middle hold of swing end of hinge, wire running on top of board through staples for guides to trip pin.



If you will have Need of a Corn Horse this fall Get it Ready Now.

When shock is built, the ring is released from peg, allowing hinge to fold back when horse is drawn ahead. Jackson Co. G. C. DANCER.

## SAVES WORK CUTTING POTATO SEED.

Where large tubers are used for seed and it is the practice to cut them in two or more pieces, the device illus-



trated here is a great time saver. The tuber is grasped in both hands as shown and pulled over a knife blade fixed firmly in a base. Wayne Co. D. K.

## ANOTHER TRIBUTE TO THE SUNFLOWER.

It cannot be otherwise than that sunflowers make excellent silage, as writers tell us in the Michigan Farmer, when the green leaves of the mature plants are so well liked by horses and cattle. We consider them a necessity and make use of every part of the plant. When the heads are well advanced towards maturity, we strip off

the lower leaves to feed and so continue up the stalks till they are all used, by this time the heads are ready to gather. The stalks are pulled. An acre of stalks makes a quantity worth considering.

Seedsmen say, plant five pounds of seed to the acre, but their stock is full of refuse. Planted in rows like corn, using one seed to the hill, every one plump and well filled, a less quantity is required. We sort our seeds and know that every kernel will grow. Though it may seem trivial to insist on one seed in a hill, it is easier to do this putting at planting time than to go through the field later and weed out the surplus plants. Only one stalk in a hill comes to perfection and that should have a single head, the branching sort is not desirable.

Besides the field crop, a good many plants can be raised in unused nooks and corners; the garden may be bordered with them and buildings not artistic screened. Every stalk will have a value.

For poultry, sunflower seeds are the best vegetable substitute for meat that we have. We give them their share of credit for our winter eggs and for their lively spirits and glossy feathers. A manifest benefit is shown in the condition of horses and cows when a small quantity of seed is given regularly with their other feed.

We planted a park full of sunflowers last spring for the hens to harvest in the fall and it paid well. Oceana Co. M. A. HOYT.

## LICE ON CATTLE.

An easy, quick and thorough way to get the lice off, or keep them off cattle is to put about equal parts of wood ashes and sulphur in a salt sack or close-woven gunny sack and hang it where cattle will run under it, and rubbing against it dust themselves. V. P. S.

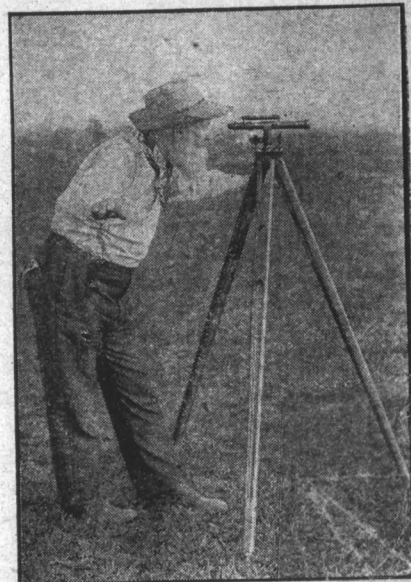
## TO DESTROY OAT SMUT CHEAPLY.

The M. A. C. advises the following method of controlling oat smut: "Only one weapon needs to be used and this is a squirt gun, loaded with concentrated formaldehyde. With it you can perform what is known as the 'concentrated formaldehyde' method of killing smut. Its main feature consists in the spraying of a solution of the forty per cent formaldehyde over the seed oats before planting. The oats are spread out on the barn floor, and the undiluted formaldehyde, just as it comes from the druggist, is sprayed over them from an ordinary pint or quart hand sprayer at the rate of about one pint of the concentrated solution to fifty bush-

els of grain. While the oats are being sprayed, they should be shoveled over and over, and if the sprayer is kept close to the grain, the odor causes no discomfort. When the sprinkling is completed, the oats can be thrown into a heap and covered for exactly four hours, and no more, with a canvas or blanket, or put directly into clean sacks and stored until ready to plant. The fumes of the formaldehyde, penetrating through the heap or sack, will kill the smut.

## USE LEVEL IN LAYING OUT THE DRAINS.

We find it best to employ a level in laying out our lines of tile drains. When the work is done by a careful



man we can go about the laying of the tile with confidence that when drains are completed water will run in the direction we planned it should. Gratiot Co. W. B.

## USING UP THE STUMPS.

In this part of the state wood is so plentiful that it seems idle to talk of cutting up stumps for fuel, but when one gets at it the task isn't so difficult as it looks. And there is no wood that can compare with pine stumps for fuel.

I spent Christmas with my father-in-law and while there I went with him to his stump pile for kindling. I was surprised at the ease with which we converted a batch of big pine stumps into the finest kind of kindling. It reminded me of the days when as a boy I used to delight in the solution of a puzzle; the hardest of those stumps had some place where a root could be sawed in two in such a manner that the rest of it could be split, and thus it went, by alternately chopping, sawing and splitting, we soon had a wagon load of wood.

These stumps had been blasted out with dynamite and they were already split in from two to four or five pieces, but occasionally we came across one that had been taken out whole; this we split by boring an auger hole into the center of it, packing in some loose dynamite, inserting cap and fuse and plugging it up solidly with damp clay and touching it off.

This article will perhaps be of little value to farmers who have plenty of wood, but there are many who have an abundance of stumps and little or no wood; and even the man who has plenty of good beech and maple wood will want kindling and to those I would say that there is nothing better to be had than pine stumps. And, too, to use a stock phrase, we are killing two birds with one stone; getting good wood and at the same time improving the farm.

G. F. DE LA MATER.

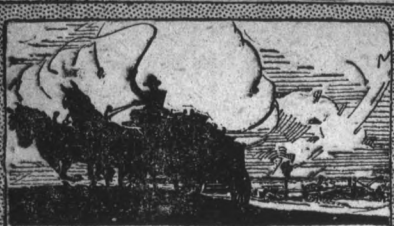
## RUNS BUZZ SAW WITH AUTO ENGINE.

The accompanying cut shows how Charles Nichols, of Lake City, Missaukee county, is utilizing an old roadster for a pole buzzing outfit. The balance wheel on the one-cylinder engine is used as a drive pulley. The saw and frame-work are loaded onto the auto when moving. In remodeling the old car the drive chains were removed, so a team is used when moving from one job to the next. Mr. Charles Wells, of Lake City, has engaged Mr. Nichols to



The Buzz Saw was Run by a Belt from the Flywheel of the Automobile.





## Save More While Grain is Worth More

**YOU** were anxious to save grain when it was cheap. Be more anxious to save it now when prices are high. The world is calling for grain. The boys in the trenches need it. Do your threshing with a

### Red River Special

It threshes clean because it beats out the grain. The Big Cylinder, the "Man Behind the Gun," the Beating Shakers, beat the grain out of the straw. Other makes wait for it to drop out. The Red River Special saves enough more of the farmers' grain and time to pay his thresh bill.

If you want a threshing machine for your own use, and possibly to help a neighbor or two, write and learn about the Red River Special Junior. A small threshing machine with big capacity. Does more work than other small threshers and saves the grain. Write for circulars.

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

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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 plow foot 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.

Its 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.**

## For Codling Moth And Scab use

### SULFOCID

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### CAL-ARSENATE

—a new combination which bids fair to replace the old Lime Sulphur-Arsenate of Lead and Bordeaux-Lead mixtures, in both orchard and garden.

It is more powerful and much less expensive. 1 gallon and 3 lbs. makes 150 gallons of spray.

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**Strong,** transplanted, frame grown cabbage, Wakefield or Copenhagen, 70c hundred prepaid. Early and late tomato and celery same price.  
**P. L. WARD, Plantsman,** Hillsdale, Mich.

**Binder Twine**—Granges, Farmers Clubs get our price. Farmer agents wanted. Write us.  
**THEO. BURT & SONS,** Melrose, Ohio

# Practical Ideas on Using Boy Help

By E. H. BROWN

**I**N some states it is against the law to employ children under fourteen years of age as farm laborers, as for instance, in the cotton fields of the south. In Michigan, however, the farmers are given a free hand in the use of their children to help in the work. Just how to handle the growing farmer boy so as to cause him to like farm life when of age, rather than seek some other vocation, is a problem which the parent does well to consider.

A case in hand is that of Amon and Lynnie Daniels, the twelve and ten-year-old sons of R. H. Daniels, of Benzle county. Mr. Daniels is one of several employees who reside with their families on the Thrushwood Farm, in summer working in the orchards, and in winter hauling logs, manure, or finding other employment. During the summer vacation the boys are encouraged to work, the money earned becoming their own, and the record achieved last year is rather interesting.

In the spring the boys, who always work together and so solve the difficulty of isolation which kills the spirit of most farm boys, take a horse and wagon and go over the various orchards, gathering all the prunings and roots. A little later they pick cherries, at the usual rate per pound. For day labor, they each receive five cents per hour.

There are so many families, each having a garden to care for, that the boys are in great demand also for hoeing and cultivating the gardens. At this work they have a game of playing horse, one pulling the wheel cultivator and the other guiding it. This reduces the amount of hoeing necessary, and they manage to keep up with the garden work, without neglecting their own individual gardens which they have always been in the habit of caring for.

As a result of their industry, the boys earned during the summer vacation last year about thirty dollars; they always put their money together and share alike in the spending of it. They used the money to buy their clothing and school books.

Boys handled in this way are likely to fall in love with farm work, because it is something to which they are attracted rather than forced. They have the satisfaction of knowing that they are filling a place that no one else can fill; that they are respected by the community of which they are a useful part; that they are learning to be independent.

Surely the father who thinks that his boy is lazy and needs to be driven like a slave is making a mistake somewhere. A boy so treated is to be respected for leaving the farm and taking up some other line of employment when of age; no one can make a success of a business which he does not love as a boy apprentice. After all, the greatest gain which Mr. Daniels can hope to achieve as a result of his tactful method of working the boys is not that they will earn money and learn to take care of their clothes and books because they are their very own clothes and books, but it is that they will have the opportunity of discovering for themselves in a most natural way whether or not they like farming as a means of self-support.

Playing Horse with a Hand Cultivator Greatly Reduced Amount of Hoeing.



Playing Horse with a Hand Cultivator Greatly Reduced Amount of Hoeing.

## The Farmer and the Liberty Loan

**I** HAVE heard some business men say, and even some newspapers have asserted, that the farmers, generally, in the United States are not coming across and purchasing their due share of Liberty Bonds. Other newspapers have been very fair in this respect with the farmer, stating that one reason why they have not purchased as large an amount of Liberty Bonds in proportion to their real wealth as city people is because there has been no systematic campaign carried out in the country to induce farmers to make this investment. Personally, I do not know but what the farmer has oversubscribed for Liberty Bonds, but if he has not, or has not subscribed as much as his due proportion, I feel the real reason is because the subject has not been presented to him in the proper light. Because I know enough about farmers to know that the majority of them want to do, and will do, their full duty in this respect. There will be no class of people more willing than the farmers if once they realize the necessity of loaning this money to their government.

Some people seem to think that the farmer has an unusual amount of money owing to the high price of food products. These same people do not realize what the farmer is up against in the way of extra cost of production; they do not realize, especially in Michigan, that the farmer has been up against two very poor seasons just past and therefore the farmer hasn't as much surplus wealth at the present time, especially in Michigan, as some of our business men seem to think he has. Nevertheless, we have got to purchase Liberty Bonds; we have got to prosecute this war whether we have the money or not. If we haven't got it we have got to borrow it for a time, or we have got to save and get it.

The German government has said from the very beginning of the war

that the war will be won by that side which has the last billion dollars. That shows the kind of war that they calculate to wage. It is going to be a war of exhaustion. It is going to be a war that will tax the resources of every nation. The Germans feel that they are more willing to deprive themselves and live on a mere pittance if necessary in order to win this war, than the allied nations, therefore, they are going to win. Now, the farmers of America are not going to allow them to win. America is going to have the last billion dollars and will give even to the last dollar, and the farmers, when they realize that they are up against a proposition like this are going to be more than willing to loan the government money to prosecute this war. The government has just two ways of getting money. One is to tax the people and the other is to borrow the money from the people. It is realized that the people cannot stand for direct taxes sufficient to pay the entire cost of the war. Congress has imposed now about all the direct taxes that the people can afford. The balance of the money must be borrowed. It must be left for future generations to pay and the only way for the government to get the balance of this money is to issue bonds and the people must buy the bonds. The American people are abundantly able to buy these bonds if they only think so. It is estimated that the total resources of the United States are over \$250,000,000,000, while the annual income of the people of the United States is in excess of \$50,000,000,000. Government estimates go to show that we have got to furnish by direct taxes and by the purchase of bonds something over \$20,000,000,000 for the first year of the war. It is simply amazing, and yet the cost of starting and of getting ready on such an immense scale has made it absolutely necessary to furnish this money to the government

and it is simply up to the people of the United States to provide these funds. If we don't subscribe for bonds then the government will have to impose larger taxes and they will have to collect these taxes, and they will collect them. The whole power and the resources of the government is back of this taxing power, and the government can take our property if necessary to pay expenses, consequently, we want to divide these numerous expenses between direct taxes and borrowing money by the issuing of bonds, hence the only sensible thing to do is to buy all the bonds that the government offers. They should be distributed as near as possible among the people according to their wealth, and the farmer should bear his share, and I am sure he is perfectly willing.

There are many farmers in the state of Michigan that could easily buy \$5,000 worth of bonds, and there are thousands and thousands that could buy \$2,000 worth. There are tens of thousands in the state of Michigan that could buy \$1,000 worth of bonds, and there isn't a farmer in the state of Michigan but what could buy a \$100 bond and save it out of his earnings during this year if he would be a little more economical in his expenditures, and this is what is necessary for him to do. If a farmer takes it into his head to buy extra machinery and more horses, or even another forty acres of land, he always has a way of paying for it, and if he subscribes for his quota of these bonds he will pay for them. Only a small per cent has to be paid at first. The larger portion can be paid after harvest. He can own no better property than Liberty Bonds. They are absolutely safe. They bear a fair rate of interest and when you buy a Liberty Bond you have got some property; you haven't thrown your money away—you have simply loaned

(Continued on page 458).



## Farm Notes

### Fertilizing Beans.

I have fourteen acres of rolling clay soil to plant to beans this year. Would like to get advice as to fertilizer. Would you advise using fertilizer on this land, and if so, how much per acre, and what kind?

Gratiot Co.

G. O.

On all ordinary land under average conditions, I am quite positive that it pays to fertilize beans. Fertilizer hastens growth and maturity. There is the great danger with the beans in Michigan that they do not mature early enough to make them a safe crop. Fertilizer always pushes plants to maturity. Many times fertilizer doesn't seem to give such an extra growth to the bean plant but it does help develop the pods and make the beans more plump and causes them to ripen more evenly than unfertilized beans.

On all of our clay land or land with a clay subsoil, we need very little if any potash in a fertilizer. There is plenty of it in the ground. Sometimes we can get a bigger crop by using a little soluble potash because the plant will take this faster than it will the potash in the soil that is less available, but ordinarily, it wouldn't pay,

cation of acid phosphate would be the most practical. But if the land is deficient in nitrogen then use a fertilizer containing nitrogen and phosphate like a 2-12-0.

On black ground with gravelly bottom, you are liable to have a deficiency of potash. You can't always tell just by the looks of the ground. No one can tell exactly what fertilizers are needed unless he experiments. He should ask the soil what it needs and it will always answer him in unmistakable language. But experience tells us that this sort of soil is apt to be deficient in potash and so I would say—on the black soil use a fertilizer containing potash. A formula like 2-10-3 or a 1-8-3 would undoubtedly give good results.

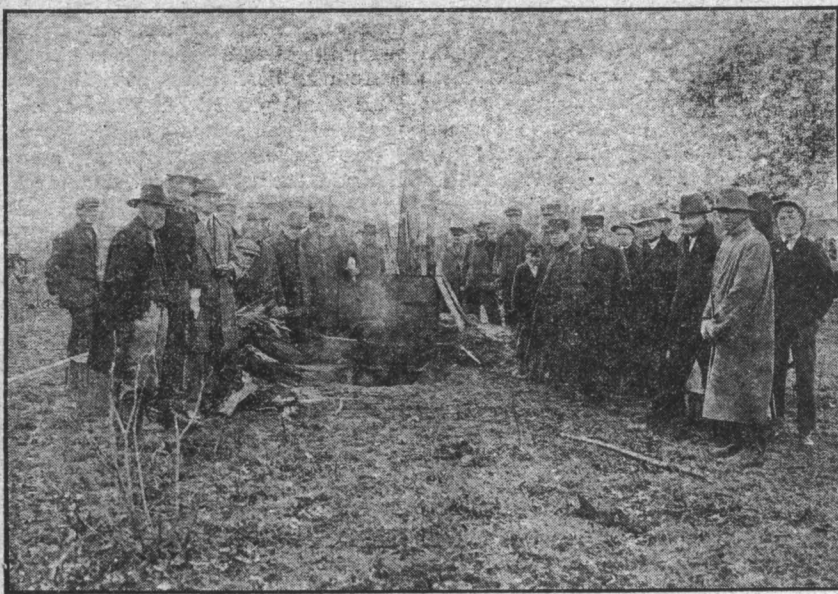
### Sowing Lime with Oats.

I have ten acres of clay loam soil that I intend to sow to oats. I have sown alfalfa on this same piece of ground two previous years to inoculate and I wish to sow alfalfa with the oats this year. Could you advise me if lime sown with the oats would injure them? Would lime help to stiffen the straw so they would not lodge? What kind and how much lime to sow? How many pounds of alfalfa is necessary?

Eaton Co.

D. H. P.

Ground limestone would in no way be injurious to oats. Limestone could



A Simple and Inexpensive Outfit for Treating Fence Posts.

especially at the present price of potash, to use potash on clay land.

Now, if your land is fairly rich in nitrogen, if you have raised clover on this ground in recent years and have a fair supply of humus in the soil, I would recommend that you use simply acid phosphate. All soils need this and acid phosphate or phosphorous is the element which hastens maturity of plants. On the other hand, if your soil is deficient in nitrogen and in vegetable matter, I would use a fertilizer containing nitrogen and phosphorous.

### Fertilizer for Sugar Beets.

We are contemplating growing a small acreage of sugar beets the coming season and as it will be our first experience along this line we would like to have your advice as to what analysis of fertilizer to use. One field is heavy ground with clay subsoil. The other is black ground with gravelly bottom.

E. H. F.

I would not think it advisable to use very much potash in a fertilizer for sugar beets on ground that has a clay subsoil as practical experiments have shown that this sort of land has a sufficient supply of that element. Some of it may not be as readily available as that which would be supplied in a fertilizer but the plants get this potash nevertheless.

Now, if this land contains plenty of organic matter, in other words, if you have grown clover on it recently, and the ground is well filled with decaying clover roots, or if you have used barn manure liberally in the last few years, you can probably grow a good crop of beets without any nitrogen in the fertilizer and I think that a liberal appli-

cation actually be mixed with the seed oats and sown and it would have no detrimental effect. This, however, would not apply to hydrated lime, which is caustic. I think you will find it best to apply the lime at the rate of one ton per acre of ground limestone before you sow the oats, and then harrow it in. I doubt if you can satisfactorily distribute the lime in any other way.

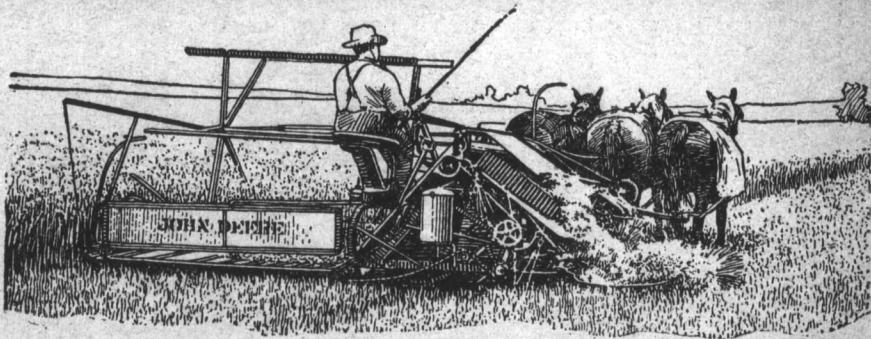
I surmise that you contemplate sowing the lime with a fertilizer attachment of the drill at the same time you seed to oats. I don't believe you will get a sufficient amount of lime on in that way. Not only that, but the lime will all be in the furrows with the oats. It would be better to have it sown and harrowed to get an even distribution throughout the soil.

I believe that ten pounds of good alfalfa seed is a sufficient amount to sow per acre. This could be sown at the same time you sow the oats, using the grass seed attachment of your drill and setting the hoes so as to scatter the seed in front of the teeth in the drill. If you let the seed run in the drill with the oats, much of it will be buried too deep for alfalfa seed.

I would want to know whether the alfalfa which you have sown on this land in previous years developed any nodules on the roots. This, of course, could be determined by making an examination. If none were developed, then it would be much safer if you inoculated your alfalfa seed. However, if nodules were developed, probably you have land sufficiently inoculated.

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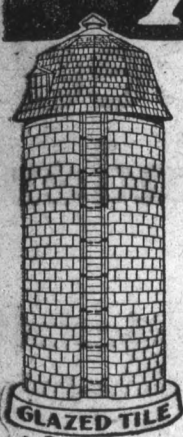
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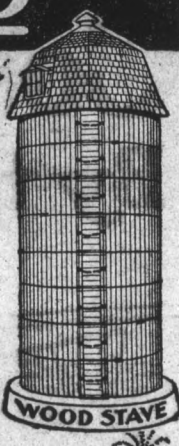
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## Glance at World Wheat Crop

THE area already sown with wheat in the United States is 105 per cent of that sown at the same period in 1916. It is ascertained also that in 1917 an increase of fifteen per cent has taken place in the wheat area for England and Wales, as compared with that in 1916, while on the other hand the Canadian area indicates a decrease of four per cent, but it is well known that the winter sown area of wheat in that country is only one-tenth of the world wheat area.

In France the plentiful snow cover which fell almost throughout the country during December has formed a protection for the young plant against severe frost, and the plant is said to be looking well. In this country, as well as in Tunis, the winter sowings of cereals are more extensive than last year's, taken as a whole. In Egypt the crop forecasts are favorable, but in Japan the weather is not propitious.

In Uruguay, the forecast of the wheat harvest is 5,000 thousands of quintals, compared with the average from 1911-12 to 1915-16 of 1,827 thousands. The outlook in the Union of South Africa is estimated at 135 per cent of the average. In New Zealand the yield is expected to be 125 per cent of that produced on the average from 1911-12 to 1915-16. But it will be best to abstain from too much generalism, for only when we have in hand the data from Argentinian and Australia can we pronounce definitely as to the aggregate harvests of the southern hemisphere.

### PEAT IN FARM SANITATION.

(Continued from first page.)

in has described. Of course, this material can be safely added to the soil either by burying or scattering on the surface, but to derive the greatest advantage it should be added to decomposing organic matter since it will contain microbes of greatest value in assisting the decomposition and in this way all danger from disease germs will be surely avoided. It is well to keep in mind that the disease germs are among the most sensitive to destructive influences and will therefore be among the first to perish, while the desirable bacteria of organic decomposition will persist and later develop in the presence of moisture. When added to such piles of manure or compost it should be spread out in a thin layer and covered with several inches of peat or other decomposing matter as indicated in the directions given in this series of articles. It can be seen quite readily that if this method of disposal of body wastes becomes a fixed practice not only would disease spread be avoided but all the labor applied freed of its objectionable features, would yield handsome returns in increased soil fertility.

To those wise and fortunate enough to be in possession of a septic tank or to those contemplating its installation we would recommend that the effluent from the second chamber of the tank be conducted to a cistern in the barnyard designed to collect drainage water from the manure and compost heaps, as well as from the barn and barnyard. Thus we would provide a valuable addition to the supply of liquid for application to our manure piles and also solve the problem of properly disposing of household wastes where there is a water carriage system.

It has been repeatedly pointed out in these discussions on the decomposition of peat and other organic matter, that we must provide a rich culture medium and incalculable numbers of suitable bacteria to carry on the decomposition. It seems to be pretty well established that animal excretions are richest in the organisms needed. Therefore, we are falling far short of our duty when we fail to make the fullest use of these excretions consistent with sanitation. It has been determined in the laboratory that human feces contain daily in the case of a healthy man an average of thirty-three million bacteria. These bacteria dried would weigh about one-fifth of an ounce and comprise about one-third of the total weight of the feces. From these figures one can gain some idea of the enormous numbers of bacteria that could be made available for inoculating composts if household wastes were utilized. Of course, in addition to what has been said concerning bacteria there is a very appreciable amount of organic matter and inorganic salts made use of in the practice of this method. It is not necessary for us to

go into the matter further relative to the details of manipulating either the dried feces or the liquid from the septic tank since Mr. Levin has given the whole subject careful consideration. It has been our purpose merely to call attention to the fact that we have here a sanitary and economic, as well as an unobjectionable method of utilizing peat and muck in the disposal of human excretions. Those who have already installed a sub-surface irrigation system in connection with the septic tank would profit by the liberal use of peat and lime on such areas.

One of the greatest sanitary applications in the use of peat and muck is found in the stables, stalls, and other enclosures for animals. Especially in this true where there is a shortage of straw or other bedding. The almost total absence of seriously objectionable features in peat, and its great absorptive power, render it a nearly ideal agent to employ in bedding animals for their comfort and cleanliness and for the purpose of absorbing and thus saving and rendering easy of manipulation the liquids of animal excreta. Not only will the most exacting demands of sanitation and of convenience be satisfied by this procedure, but great saving will be effected both in the chemical elements of the animal excretions, especially those of a liquid nature, but also in the bacterial life of these excretions which will be put to immediate services in the liberation of latent plant food in the hitherto inert and undecomposed peat. It is just as proper for us to gloat over these great store houses of energy (available for essential soil microbes in the making of plant food) as it is to glory in our great deposits of coal. We would urge every reader of the Michigan Farmer to get a copy of Bulletin 273, Michigan Agricultural Experiment Station, entitled "The Utilization of Muck Lands," by C. S. Robinson. From a chemical scientific standpoint perhaps no one is more highly qualified to discuss this subject than Dr. Robinson.

(This article was written at the request of Mr. Levin, Muck Crop Specialist of the M. A. C., and is one of the numbers in his valuable series on the utilization of Michigan Muck Lands).

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# Got More For Their Potatoes

By M. E. DUCKLES

As a result of the work of the Bureau of Markets, cooperative marketing of farm produce during the past year has greatly increased. New associations have been organized throughout the state. Many of these have been formed under what is known as Act. No. 171 of the Public Acts of Michigan for 1903. This Act provides for the incorporation of associations not for pecuniary profit.

Section 1 reads: "Any five or more persons who shall desire to associate themselves for any lawful purpose other than pecuniary profit may make, sign and acknowledge before any person authorized to take the acknowledgment of deeds in this state and record in the office of secretary of state and in the office of the clerk of the county in which the headquarters or principal business of the corpora-

tive body rests largely with the directors, who should be chosen with care and discretion and with particular regard to their integrity and business ability. Insofar as practicable they should represent the various sections of the community. Upon them rests the responsibility of handling the funds and making contracts. A growing, prosperous association would require a business manager whom the directors should select with a view to his competency. He should have a correct sense of values and a thorough understanding of shipping rules.

It is no doubt the experience of every county agent who attempts to organize farmers cooperatively to hear the opposition harp on their favorite chord, "farmers can never stick together." The song is disturbing to the weak and distrustful. They should be



The Members of this Active Cooperative Association Realized for their Potatoes a Handsome Margin Over Price Offered by Local Dealers.

tion is to be conducted, a certificate in writing in which shall be stated, (1) the name and title by which said corporation shall be known in law; (2) the purpose or purposes for which it is formed; (3) the principal office or place of business; (4) the number of trustees or directors, which shall not be less than three; and (5) the names of the trustees or directors selected for the first year of its existence."

As an example, under these provisions, the Farmers' Cooperative Association of Kingsley was organized in the latter part of February. It started out with a membership of over two hundred, officered by nine directors. Although its immediate purpose was to market the potatoes grown by the members, the articles of association which were adopted include such other purposes as the encouragement of better and more economical methods of production; better grading, packing, and advertising; the cooperative buying of supplies; the cultivating of a cooperative spirit in the community; and the performing of "any other work which may tend to the betterment of the members and the uplift of the community."

In order to finance the operations of the organization each member gave his note for twenty-five dollars made payable to the association "on or before three years after date." These notes are now being used as collateral for borrowing the funds needed to transact business. The interest on the notes, which bear seven per cent, is to be paid from percentages deducted from the sale of products. At the end of the three-year period it is provided in the by-laws that all paper shall be renewed and stand again as collateral.

The association has lost no time in getting down to business. The first shipment was a five-car lot of potatoes which returned the growers eighteen cents per hundredweight net above what the local buyers in neighboring markets were paying. The shipment represented a saving of more than five hundred dollars to the members over the indirect method of marketing heretofore in vogue.

The success of any farmers' cooper-

ation is to be conducted, a certificate in writing in which shall be stated, (1) the name and title by which said corporation shall be known in law; (2) the purpose or purposes for which it is formed; (3) the principal office or place of business; (4) the number of trustees or directors, which shall not be less than three; and (5) the names of the trustees or directors selected for the first year of its existence."

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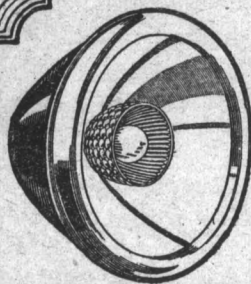
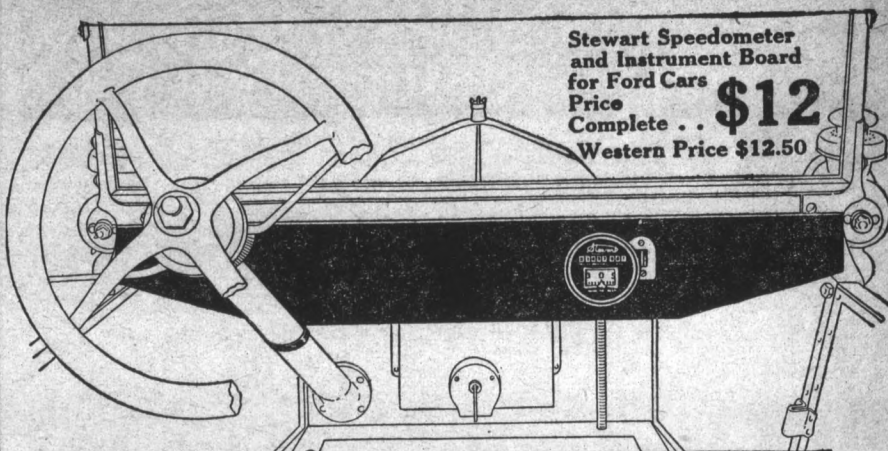
## SUCCESS WITH FLAX.

In your issue of March 23, W. J. McC. asks if flax can be sowed with oats and the best way to sow. For the past ten years we have grown flax successfully in both oats and barley. We sow the flax about three quarts to the acre with a hand-seeder after the grain is drilled in. If you put the flax in the drill with the grains it will all work out in one round. After seeding we run a light harrow over the ground.

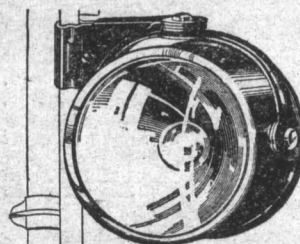
Flax will ripen earlier than oats, but flax and barley ripen about the same time. Would say last year we sowed about six quarts per acre and we had lots of trouble when we bound the grain, because of the thick stand. So will say, don't sow too much seed per acre. We got about fifteen bushels of flax seed last year from ten acres sowed.

Huron Co. THOS. RAWSON.

Dogs are domestic animals and should be kept at home. If they run at large they are a menace to sheep and also carry infection from one farm to another.



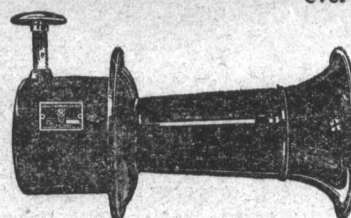
Stewart Lens \$2.00 per pair



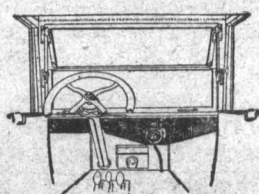
Stewart V-Ray Searchlight \$5.00



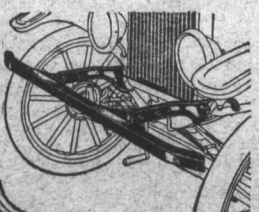
Stewart V-Ray Spark Plug \$1.00



Stewart Warning Signal Hand-operated \$3.50 (Motor-driven type \$6)



Stewart Speedometer and Instrument Board for Ford Sedan and Coupelet models Price, complete \$15.00 Western Price \$15.50



Stewart Autoguard \$7.50 for Ford cars (Western Price \$8.25) With Nickel Rail, \$8.50 (Western Price \$9.25)

Stewart Autoguard Tire-carrier for Ford Cars \$11.50 (Western Price \$12.50) With Nickel Rail, \$12.50 (Western Price \$13.50)

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The Stewart line for Ford cars is complete. Note how varied it is. Examine the illustrations on this page. Each shows an accessory you need—an accessory that will make your Ford a better car.

Take the Stewart Speedometer and Instrument Board for example. This Stewart Product is an absolute necessity on any car.

You are depriving yourself of half the pleasure of motoring if you have no Stewart Speedometer. You need it to tell you how far and how fast you drive; to avoid arrest for speeding; to check your gasoline and oil consumption and your tire mileage. You need it for following road guides. You need it wherever and whenever you drive.

The Stewart Instrument Board will "dress up" your car—adds to its appearance. Fills up that unsightly gap below the windshield. Brings the speedometer up into position where it can be easily seen. Rests tight against the steering column. Eliminates vibration from the steering wheel. Easily installed in a few minutes. No bolts, screws or brackets to fuss with. Clock, headlight switch, starter control and other accessories can be easily added. Made of wood with black satin egg-shell finish. Speedometer is mounted flush. Adds a finishing touch of elegance to the Ford car.

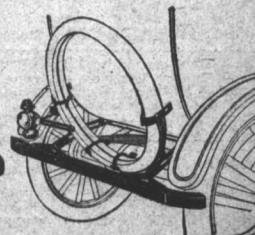
Then there are the other Stewart Accessories for your Ford. The Stewart Autoguard for the front and rear are needed for your car's protection. The Stewart V-Ray Searchlight is indispensable. Stewart Lens makes every road bright and clear as day. The Stewart Warning Signal warns and clears the way for you in any traffic. Stewart V-Ray Spark Plugs put an end to your spark plug troubles.

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CHICAGO, U. S. A.







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See 2 yr. 6 to 7 ft. xxx Apples.			
Plums, Pears	\$3.00	\$2.50	\$18.00
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4 to 5 ft.	.15	1.35	9.00

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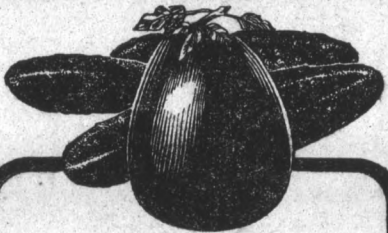
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Bags Extra 50c each.  
All shelled corn, 56 lbs. per bu., f. o. b. Ypsilanti. If, on receipt of your order, we cannot ship within the next thirty days, we will immediately advise you.

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# The Garden Seed Situation

By MYRON A. COBB

**R**AISE most of your garden seeds for next year, or pay an exorbitant price for them. You may not be able to buy them at any price. The sooner we wake up to the fact that this world war has wiped out the garden seed producing areas, the better it will be for ourselves and our country.

The great seed-producing tract of Belgium, France and part of Germany, are pitted, and furrowed by shot and trench and shell. Many of these tracts have been a part of "no man's land." The trained men and women who produced the world's supply of seeds are killed or scattered, perhaps both. The enterprising firms who financed these

are using every dollar they can get to increase their acreage. These seed firms are willing to contract for the growing of any sort of seed at a good figure, but this will not produce a third of the amount we need. It is up to every grower to put out a few or many of the roots and allow them to grow to seed. It is up to every grower to allow plant, radish or lettuce to seed. All this seed will be precious. The United States is now saying to the market gardeners, you cannot have a large amount of root crop seed unless you will agree to grow seed for your future use.

If our farmers would grow at least a few seeds for his own use, it would help. A few carrot, parship, turnip and other roots planted this spring will yield an abundance of seed for home use for next year. If one has the roots the putting out of a larger area will be financially worth while. Any seed company will be more than glad to cooperate in the growing of any area of root crops at a good financial return. Lettuce, radishes, cucumbers, etc., should go to seed and all seed should be saved. Hundreds of thousands by growing the seed they need will relieve the shortage, a way to do "one's bit." America has the burden of feeding the world and she must have seed before we can have the harvest.

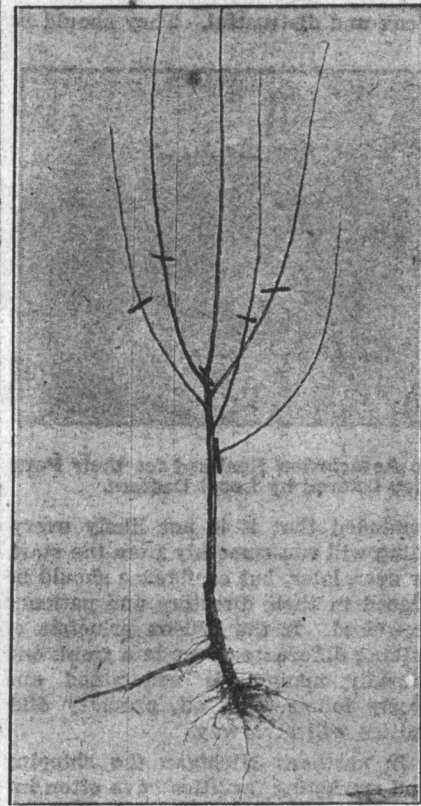
### POINTS IN STARTING A NEW STRAWBERRY BED.

Plants of the previous season's growth are best, those which have not fruited. A six-tined fork is an excellent tool to take them from the ground, the dirt being readily shaken from the roots, facilitating their preparation for handling. The roots should be straightened and the plants arranged in bundles and packed in paper-lined boxes or baskets at once, away from the air and sun. Our practice is to remove all the leaves but one or two of the youngest, and reduce the root length to three inches or thereabouts. Thus reduced in length, the roots are more readily spread and fixed in the opening made to receive them. Whether the roots are shortened or not they should be spread fan-shaped before inserting in the ground. The object of reducing leaf growth is to reduce leaf surface evaporation, thus conserving plant energy while the root system is reestablishing connection with soil life-giving forces.

It is essential that the soil be well firmed, mellowed, and compacted to receive the plants. This secures an arrangement of soil grains most favorable to plant growth. A well drained soil thus prepared is placed in a condition most favorable to soil aerations and to a maximum soil water content, both of which are essential to the highest degree of plant root activities. In this state or condition of soil, the root fibers and root hairs readily penetrate its depths and connect with soil life-giving forces.

The soil should be well firmed about the roots of newly set strawberry plants. The object is to bring the soil grains in close contact with the roots; and to prevent undue drying of the soil through excessive air circulation among surface soil grains. Nevertheless, as soon as the work of setting is complete the surface earth mulch should be restored to prevent crusting, and to check capillary movement of soil water at its under surface, which results in conserving that moist mellow condition of soil so essential to plant thrift and growth.

The best time to start a new strawberry bed is as early in the spring as the ground may be profitably and safely worked. The reason why early set-



The Pruning of a Tree Before Setting is Important. The Above Illustration Shows Ideal Pruning.

seed-producing tracts are no longer in existence. Yet, we do not realize the situation. Even our great Department of Agriculture is not aroused to the seriousness of the problem.

We are apt to think a few seed can be easily grown—somebody will produce them—little realizing that we use hundreds of thousands of pounds of carrot, parsnip and turnip seed. We do not realize that it takes two years to grow this seed, very few can afford to wait that long for financial returns after planting the crop. Many do not know that England and France early in the war bought back the seeds they had sold to us. The United States thoughtlessly allowed much of our surplus seed to go to South America.

### Cost of Seed Will Increase.

The result is evident. Beet, cabbage and turnip seed will cost approximately three times as much in 1918 as in the previous year. Even parsnip has increased from fifty cents a pound to \$2.25; radish seed from seventy-five cents to \$2.25, and Danish Ball Head cabbage from \$2.25 to \$10, and hard to get at that. Onion seed will cost double, and sweet corn at \$10 a bushel will reach a top notch record. Seed that are easily produced will be from ten to fifteen per cent higher, such as cucumber, pumpkins, lettuce, peas will be twenty-five per cent higher. Uncommon varieties are taking uncommon prices. Pepper seed is four times as high as usual, egg plant seed double and even our common enemy, the mustard seed will be doubled.

What is to be done? All seed firms



ting is best is two-fold. First, there is a maximum conservation of plant energy, vigor, and vitality, if shifted while dormant or before much growth has been made, for growth made before shifting represents so much waste of plant energy and vital forces.

Second. Weather conditions are ordinarily much more favorable in early spring than when the season is farther advanced, both because of the greater relative humidity and cooler temperature. Shifted later in the season not only is there much loss of plant energy and greater disturbance to the plant growth, but weather conditions are apt to be much less favorable. The sun is hotter and the air currents more drying. Much valuable time is lost to the plant by late setting. Early set plants will become fully established and be

tomato plants are grown. I staked and trained them to the stakes, keeping all side branches cut off except the two or three I intended to bear the fruit. This makes for better fruit and increases the crop, as well as making it some earlier. Treated in this way some years tomatoes can be had a month before the main crop is ready, a month of sales at a fancy price, when you have only to compete with the shipped fruits from the far south.

You may not be able to buy the plants at a greenhouse, but I believe they can be purchased in most places, and if not now, a little arranging with the florist ahead of time may secure them for you. As soon as the plants show a couple of leaves besides the seed leaves, they should be transplanted into two-inch pots set in a shallow



Grapes Should be Pruned Early, but Now is Better than Not at All.

sending out runners while those set later under less favorable conditions are still directing plant energy toward recuperation and readjustment to its new environments.—N. M. EDGERTON.

#### GROWING TOMATOES TO SELL

One year I obtained a dozen plants that had been grown in a greenhouse and were in four-inch pots when I received them. They were priced at thirty cents a dozen, and I thought they were pretty expensive. They were bushy plants with two main branches, and with one or two clusters of blooms on them, ready to make a good start in the garden, and I gave them a good place and good care. The variety was the Earliana, said to be a smooth, very early sort.

It was a marvel to me how those tomato plants bore, and their earliness. I had waited until it was warm to set them, and they were not checked at all. Fully three weeks before other tomatoes were bearing I gathered fruits from these vines, and I had all we cared to use from that dozen plants, and some to sell. The price was then at ten cents per pound in the store and my fruit was better than the store fruits, so I received the same price. I could have sold so many more that I resolved to buy a lot of plants next season. I was not the only one around who had planted these potted tomatoes, and all pronounced them well worth their cost.

I did plant quite a patch of these tomatoes the next year, and they did come into bearing just the same as the year before, and I sold the fruit as well, and received sixty dollars for what I sold in addition to what I used myself, and after the early fruits were gone the later were so small they did not sell well, though the crop was a failure with the ordinary tomatoes. This convinced me that it would pay to have some good large variety if I could get one that would set as well as the Earliana, which I have never been able to do. Since then I have found that even if I plant in the ordinary method it pays to plant some Earliana for if the season is a poor one when other tomatoes refuse to set, the Earliana will set anyway, even if the tomatoes do decrease in size after the first crop ripens.

These plants were too precious to be set out and allowed to go the way most

box having a half-inch of sand or soil in the bottom. Keep them watered carefully so they will not be constantly soaked, but never get so dry as to stunt them.

Kansas.

FLORA DEAN.

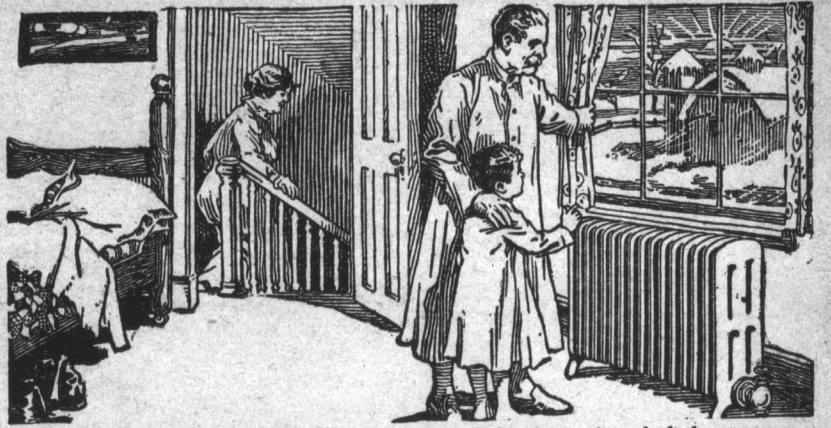
#### TO CURB INSECT LOSSES.

Farm crops in the United States are subject to millions of dollars' loss annually through the ravages of insects. Arsenical insecticides are the chief protection against the biting insects which devour the foliage of farm and garden crops. A shortage of arsenic has developed in this country. President Wilson has placed the arsenic industry of the United States under the direction of the food administration so that the distribution of the poison may be equalized.

Since arsenic is the active poison in Paris green, the potato farmer is quite dependent upon an adequate supply of arsenic compounds for combating the destructive potato bug. It is, therefore planned to bring about cooperation by the State Potato Growers' Associations and the makers of the insecticides. In this way it is hoped that stocks of insecticides for local use may be maintained. Furthermore, it is important that a sufficient supply of white arsenic be available to meet needs next year for grasshopper control. Grasshoppers were numerous in many sections last year. Dry weather, especially in winter, is favorable for grasshoppers. The grasshopper eggs remain over winter in hard ground. Moisture in the soil subjects the eggs to destructive freezing, but when winters are relatively dry comparatively larger numbers of the eggs survive. Indications are that an outbreak of grasshoppers is probable. It is therefore urgent that preparations be made in advance so that heavy losses to cereal, forage, garden, and other crops may be avoided. Arsenic is also necessary for the control of cutworms, army worms, and similar pests.

In view of the necessity for still greater production next spring and summer, no means which will lessen damage from insect pests be overlooked. It is folly to devote time, labor, and money to a crop and then permit insects to destroy it. Insect ravages can be controlled, and every precaution should be taken against preventable causes of crop loss.

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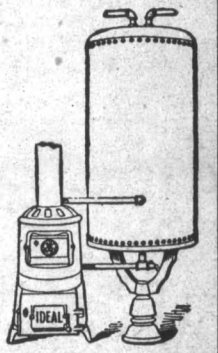
hard and soft coal, wood, lignite, slack, screenings—and are the greatest heat developers—now saving over millions of tons to their users. Most easily operated. No more work than to run one stove for one room. No coal gas or dust and the outfit of IDEAL Boiler and AMERICAN Radiators will outlast even the building itself.



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Our IDEAL Hot Water Supply Boilers will supply plenty of warm water for home and stock at small cost of few dollars for fuel for season.

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AMERICAN RADIATOR COMPANY

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Food Will Win the War Produce It!

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For 1918 it has been improved by the addition of a complete garden plan and leaflet on Seed Sowing.

It contains the following seeds, mailed to your address for \$1.00.

Bean—Stringless Green Pod	Carrot—Chantenay	Parsley—Moss Curled
Bean—Fordhook Bush Lima	Chard—Large Ribbed White	Radish—Scarlet Turnip
Bean—Brittle Wax	Lettuce—Iceberg	Salsify—Sandwich Island
Beet—Crosby's	Lettuce—Wayhead	Tomato—Chalk's Jewel
Beet—Improved Blood	Onion—White Portugal	Turnip—Purple Top Strap-Leaf
Cabbage—Allhead Early		

Burpee's Annual for 1918

The Leading American Seed Catalog 216 pages, 103 colored illustrations of Vegetables and Flowers, is mailed free upon request. Write for your copy today.

W. ATLEE BURPEE & CO., Seed Growers, Philadelphia

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Farm, Garden and Orchard Tools

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## Timely Items on Live Stock

By R. G. KIRBY

SOME of the failures with pure-bred live stock result not from inferior care of the cattle, but from poor business methods. Advertisements are not used sufficiently to build up trade and when advertising is used an insufficient effort is made to follow up inquiries and write satisfactory letters to prospective customers. With pure-bred stock it is necessary to keep the breeding records carefully and look after the pedigrees and registration papers of all the members of the herd. The breeder must be interested in his association and register his animals. Customers appreciate business-like treatment and the farmer who makes the greatest possible success with pure-bred stock is forced to keep accurate records and substitute facts for guess work.

Frequently it is said by men who

not heard that story in quite a while and believe that the organization of boys' and girls' clubs and the general tendency to interest boys in farm life is doing a good work. The daily press is filled with daily accounts of boys who have made good with their live stock, and between the lines everyone can see that it is due to the fact that honest fathers are giving the boys a chance to learn something about the farming business.

There are many old barns still rendering good service and they have to be used, but it is unfortunate that the value of sunshine as a disinfectant has not always been appreciated. It is the dairyman's best friend for keeping a stable in good condition and when the sun can shine on the gutters, the work of keeping the barn sanitary is not so difficult. In buildings used for live



The Number of Sheep in Michigan Increased Five Per Cent in 1917, or from 1,834,000 on Jan. 1, 1917, to 1,926,000 on Jan. 1, 1918.

are not farmers, "every calf should be raised to maturity before being used for meat. This would increase our meat supply and reduce the cost of meat to the consumer." They do not know that every farmer is not equipped to be in the dairy business and the beef business at the same time. It often takes all a farmer can do to get together enough feed for his dairy cattle without keeping all of the calves. Of course, it pays to save the best of the heifers. City residents generally do not know quite enough about the live stock business to make their advice practical.

It takes just one dairyman in a community to start the movement to obtain a community-owned pure-bred bull. In many sections scrub bulls are used because everyone knows that they need a good bull, but no one wants to bother his neighbor with the suggestion of starting an organization.

A dairyman owning forty cows recently said: "The milking machine has taken all of the 'sting' out of dairying on our farm. We now obtain more satisfaction in caring for the cattle and save much time." He is the type of a man who has milked cows all of his life and knows the dairy business thoroughly. He is also the kind of a man who has sometimes been discouraged with the drudgery of milking a large herd of cows. His milking machine has given him quite a little inspiration and as he says, it has helped overcome one of the unpleasant features of dairying on a large scale.

It is a long time since we heard the first story about the farmer who gave Bill a calf and then sold it and pocketed the money when the calf became a cow. In the last chapter of this story, Bill is tearfully bidding his mother good-bye at the garden gate and is headed for the "wicked city." No more farming for him if father is going to confiscate his calf business. We have

stock it pays to arrange for plenty of sunshine and it pays to study bulletins and building literature before using expensive material to experiment with home-made plans.

### THE FARMER AND THE LIBERTY LOAN.

(Continued from page 452):

it to our government in this crisis. A Liberty Bond is a good deal better security than a mortgage on your neighbor's farm, because the government's mortgage on your neighbor's farm would come before anything else and the government, when it comes down to the last analysis, has the power to enforce their claims first. If this wasn't so we would have no guarantee of either life or property.

We must all realize that we are facing a grave proposition, one, as I have said before, that may tax the very resources of this government, and when we realize this and buckle down to this problem, there will be no question about solving it. We can furnish the last billion dollars necessary to win the war and we can furnish the last five billion dollars necessary to win this war. This United States has got the wealth, the cash, and the men. We can build ships. We have got all the resources. All we have got to do is simply to realize the position before us and buckle down to it and the victory will be won.

It is only necessary to remember the following sound advice from Herbert Hoover, the national food administrator. He says:

"Go back to the simple life. Be content with simple food, simple pleasures, simple clothes. Work hard, pray hard, pay hard. Work, eat, recreate and sleep. Do it all courageously. We have a victory to win."

COLON C. LITTLE.

## THE ROSS SILO

Every buyer of a Silo, as a protection to himself, should have the ROSS Silo Catalog. Information therein is of benefit in more ways than one.

The ROSS Wood Stave "HINGED DOOR" Silo is recognized as "THE LEADER" in Wood Stave Silo construction.

Every buyer of a silo will make money if he buys at once and to be shipped at once. Don't gamble with the market.

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Box 314 Springfield, Ohio  
Special Proposition to Agents

Every buyer of a Silo should get prices on Ross Silos and GUARANTEE as to delivery. Material already in hand which assures all Ross Buyers of their orders being filled.

The ROSS "IN-DE-STRUCT-O" HINGED DOOR Metal Silo is the "TOWER" of STRENGTH and the "EXTREME" in DURABILITY. The 99% Food Value Silo.

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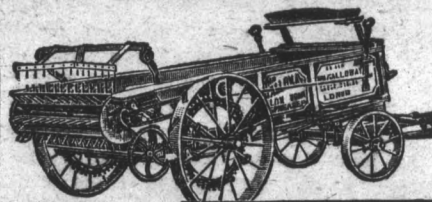
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As a Human Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price, \$1.50 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address The Lawrence-Williams Co., Cleveland, O.



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Our Ford Special, refined & prepared especially for Ford & other High Speed engines, in 30 or 50 gal. bbls., 44¢ gal. Blackstone Light Auto Oil, in 30 or 50 gal. bbls., 57¢ gal. Blackstone Med. Auto Oil, in 30 or 50 gal. bbls., 56¢ gal. Blackstone Heavy Auto Oil, in 30 or 50 gal. bbls., 54¢ gal. Our Oils are refined from the best Pennsylvania stock, are free from dirt or grit and will stand any test. Satisfaction guaranteed or money refunded. Keep a barrel on hand. Mail check with order or furnish references.

The Blackstone Oil & Paint Co., Cleveland, O.  
References: Union Commerce National Bank, etc.



## Meat Conservation

**A**MONG the notes worth remembering from the addresses at the Round-up Institute are the following: The conservation of the meat supply must include every effort to control disease. Animal diseases combat the rapid increase that would be possible in breeding farm animals. Live stock farming is a highly developed phase of agriculture and good stockmen cannot be picked at random as is the case of the unskilled farm laborer.

According to Dr. Giltner the meat inspection is of great value to farmers as it tells them where diseases are located. For example, if hog cholera appears in animals shipped from a certain community it will serve as a danger signal to the farmers in that region and they can prepare to fight hog cholera before losses become serious.

Evidence seems to prove that the farmers are responding as well as they are able to the call for increased production of live stock. The boys' and girls' clubs throughout the country have proven of great aid in stimulating the production of live stock. Undoubtedly this will be of even greater value when many of the present club members are older and able to continue the growing of live stock on a large scale on their own farms.

Sheep are the most free from disease of any animals used for food and this should induce people to eat more mutton. Dr. Giltner also states that bob veal is condemned as unfit for food because of popular prejudice and the unwillingness to eat it is largely due to custom. However, it is not economical to eat it and for that reason, of course, it should not be done.

The diseases of live stock injure the morale of the live stock men and keep them in fear of investing their money. And there is more money lost because of this fear than because of the actual loss to the stockmen because of the diseases. It follows that hog production is stimulated in a community where cholera has been eradicated. Michigan is peculiarly adapted to animal parasites, like stomach worms, because of the many low and wet pastures which have been used for many years.

This country has the most efficient system of meat inspection in the world and if any general error is made, it is in favor of the public and not the packers. The three most prolific causes of loss to live stock owners are tuberculosis, hog cholera and contagious abortion. A study of these losses will convince the reader that the best way to increase the live stock supply is to suppress these animal diseases which are cutting down the supply of available meat products.

The testing of cattle for tuberculosis should be a personal duty of every farmer owning a herd. The state-wide testing of all cattle does not seem practical but if every individual farmer will do his part with the testing, good results in control will come. There is no excuse for hog cholera now and the county agents in cooperation with the live stock sanitary commission can suppress it. It is treason in this day when the country needs the food, to lose hogs because of cholera.

### NO PROHIBITION ON SALE OF BROILERS.

Regulations of the Food Administration against the sale of live or freshly killed poultry do not apply to broilers weighing two pounds or less. The object of the regulations is to keep the laying hen on the farm and call a halt on the rapid depletion of poultry stock that is going on in this country. It is supposed that by April 30, the American hen will have done her duty as an egg producer and may then go to market.



## The Proper Seed Bed

A proper seed bed is the best paying crop insurance you can carry. It is the *only* thing that will make possible *full* nourishment to every crop you plant—and *full* nourishment means a high percentage of germination, strong, healthy growth, and a big yield.

Intensive research—foresight—experience—close study of all soil conditions in every section of the country—all these have combined to make Oliver the tractor plow that will put a proper seed bed on your farm.

Oliver Tractor Plows are furnished with combination rolling coulters and jointers, quick detachable shares, with chilled or steel bases.

2 Bottom Plow, \$175—3 Bottom Plow \$220—4 Bottom Plow \$310  
Plus Freight Charges

Oliver Chilled Plow Works, South Bend, Indiana

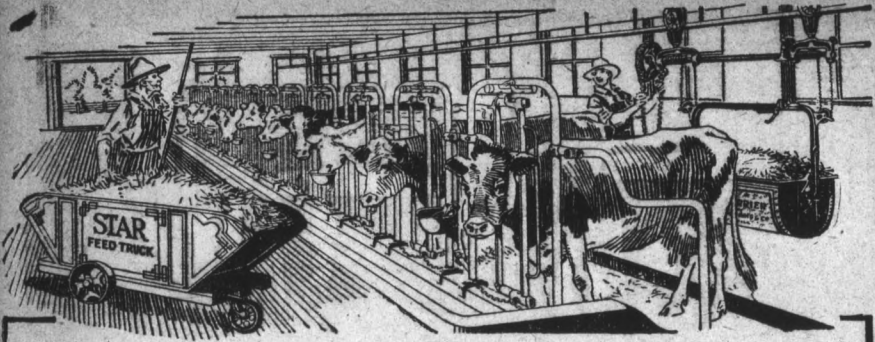
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Dedicated to the Promotion of  
Power Farming





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## Spring vs. Fall Freshened Cows

By CHAS. E. RICHARDSON

**M**ANY farmers take it for granted that to have the cows freshen in the spring, it will make a greater profit come from them than if they came in in the fall. One farmer who thought that way, told me his reason:

"The principal thing that appeals to me," he explained, "is because what I get from the cows in the summer, is practically all profit. I do not have to give them much grain. They take care of themselves excepting around milking times, when I then have to get them into the barn, and out the first thing in the morning. I figure the profit that I get in the summer is worth enough to pay for the rest of the year."

We all know that cows, naturally, are apt to do their best in the summer time. Therefore to get the greatest profit from them, in the winter, conditions should be made as near like summer as possible. In the summer they get all of the nice fresh water with no ice in it to make it too cold. How many farms are there that have

Cows that have their calves in the fall, can be taken particular care of, and can be made to do their best. To get the greatest profit from ensilage it should be given to cows that are giving their largest flow of milk. To feed valuable ensilage to cows that are only giving their half flow of milk, is a waste of good feed. Such great results are obtained when given to cows that are fresh, so fall cows bring in the greatest profits from silage.

As a rule the price of milk is more in the fall and winter, too; and to get more milk (from fresh cows) makes more profit also. Cows that are taken care of properly, will give more during their lactation period beginning in the fall, than those that come in in the spring.

And winter-kept cows will go to pasture when it is at its best, in the spring. There will be no drop-off,



A Leader of Her Kind.

facilities so that the cows can get the same in the winter? Cows enjoy the nice warm days in the summer, too. Barns therefore should be kept warm and comfortable for them in the winter time. Too cold barns require more feeding of grain, which is expensive; as much of the feed has to go to keep the cattle warm. And they do not give as much either, under such conditions. Light is another important thing to consider. Plenty of windows to let as much of the sunlight into the tie-up is important if we are trying to imitate summer. Dark, damp stables make cows uneasy and discontented, and also help to breed germs of different diseases.

When the cows are at pasture in the summer, they get juicy, green, succulent feed. Such a ration may be given in a way by means of a silo. If the silage is put in before the frosts kill it green and succulent feed is assured, for the winter time. All farmers who have fed silage can testify as to the great fondness which cows have for it. So, to get the best results from winter-kept cows, it can be seen that by making conditions as near as possible as the cows get in the summer, the greatest profits are obtained.

While it is true that the expense of grain and feed is much less for cows at pasture in the summer, perhaps I feel that on the long run, cows that freshen in the fall, pay the best. Unless the pasture is extremely good, they want them to. And also, with a long the last part of the summer it begins to get short and the grass dries up and without getting feed in the barn the cows drop off. How many farmers are there that consider it, and fail to feed their cows? And by the time the cows are taken in, in fall, they have dropped off in their milk flow and can-

which is the case with spring-freshened cows that go through the dry-pasture period.

Cows that are kept during the winter have to be fed grain. The extra amount of grain which should be given to fresh cows, is more than paid for as the extra amount of milk given is more in proportion.

Also, the work needed to take care of a certain number of cows, is nearly the same whether they give a large amount of milk or little.

Then, again, calves that are born in the fall, grow better and are larger and stronger and are ready for pasture sooner than spring-born calves. Calves raised in the summer are bothered with flies and the hot summer is bad for them and the feeding pails, etc., are easily contaminated if not washed very promptly and carefully; scours are more easily gotten therefore. Also, calves wintered in a nice warm barn do not have these risks to bother.

So it is seen that if the cows are taken care of properly, after freshening in the fall, they will return more profits in proportion for any extra care and feed given them, and by the time they are nearly ready to dry off, the dried-up pasture is not doing the harm that it would to a cow that is giving a large flow.

Of course, even under the best of conditions, farmers cannot always have their cows come in at the time that they want them to. And also, with a large herd of cows, it would not be well to have all have calves in the fall, or at the same time. But, by realizing that the fall-freshened cows bring the most profits, if taken care of as they should be, farmers can, by planning ahead, make the most money from their cows in the end.

**BAG BALM**  
MADE BY THE KOW-KURE PEOPLE

**Healthy Udder—Good Milker**

The milk flow will be easier and more generous if the udder is free from sores, cuts, chaps, bruises, cracks, bunches or inflammation. Bag Balm, the great healing ointment, is used in thousands of the best dairies for all udder troubles, cow pox, and any exterior wound or hurt. Caked Bag is quickly removed by Bag Balm; its great penetrating qualities soothe and soften the tissues and hasten normal healing. Keep Bag Balm on hand always.

Sold in big 50c packages by feed dealers and druggists. Write for free booklet, "Dairy Wrinkles."

DAIRY ASSOCIATION CO., Lyndonville, Vt.



### Lamprey's Calf Meal

Don't use whole milk at 30c to 40c a day and feed at a loss. **SELL YOUR WHOLE MILK.** Raise your Calves on Lamprey's Calf Meal, with Little or No whole milk. Will save its cost in cream the first six weeks. Simply mix with water or skimmed milk. If your dealer can't supply you, write us. Money refunded if you do not find it absolutely satisfactory.

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"An American First Concern." ST. PAUL, MINN.

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

**\$29** Buy the New Butterfly Junior No. 2. Light running, easy cleaning, close skimming, durable. Guaranteed a lifetime against demerit and workmanship. Made also in five larger sizes up to No. 8 shown here.

**30 DAYS' FREE TRIAL** Earns its own cost and more by what it saves in cream. Postal brings Free catalog folder and "direct-from-factory" offer. Buy from the manufacturer and save money.

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Built of everlasting Brazil Vitrified Fire Clay. Reinforced with steel ribs bedded in cement. You'll never have to rebuild it. Your neighbor has one. Ask him. Send for Booklet D.

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**Sturges Milk Cans**  
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**Easy to Keep Clean**

MADE of highest grade steel plate—tinned and retinned after rivet holes are punched. Pure solder sweated into all inside seams, making surface smooth as glass. Sanitary to the finest degree. Guaranteed capacity—each Sturges Can is built to measure. Saves work in shipping—insures accuracy.

Sturges Cans are built with the experience of 50 years in making milk cans. Ask your dealer for them. Write for catalog No. 46.

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Established 1865  
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Would you be content with 4% interest if entitled to 5%? Then why not save that 1% of your dairy profits lost by fixed-feed separators? Get all your cream—skim clean at any speed—with a

### SHARPLES SUCTION-FEED CREAM SEPARATOR

Over a million in use—saving cream waste the world over. Write for catalog. Address Dept. 18

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## A SILO FOR TWO COWS IMPRACTICAL.

We live in the edge of the city and my two oldest boys have two cows and fourteen chickens. The feed for the cows is so expensive that we are wondering if it would be practical to construct a silo which the boys could fill from the corn which they can raise during the summer. Can we build a silo with small enough diameter so that it will be possible to feed the ensilage rapidly enough to keep it good? Would it be advisable to build it down into the ground like a well? We would prefer it that way if it is practical. How many cubic feet would be required to feed two cows nine months in the year? How much other feed and what kinds would the cows need besides the ensilage?

Grand Traverse Co. R. E. M.

It would not be practical to build a silo for only two cows. The smallest silo I ever saw was one six feet in diameter and you wanted four or five cows even for that, and I do not believe it would be practical to build a silo less than eight feet in diameter and a man ought to have seven, eight or ten head of cattle to feed it down rapidly enough to prevent the ensilage on the surface of the silo from spoiling by being in contact with the air.

In a case like this, it would be practical, however, to furnish a succulent food in the ration by growing roots of some sort. Mangel wurtzels, for instance. You can raise more tons of mangel wurtzel beets per acre than you can of any other variety, and they make a most excellent succulent food for cows and the cows will do as well on these beets as they will on corn silage. If, however, you figure the cost you will find that you can raise corn cheaper than you can beets as there is less labor. But you can get as good results with beets as with corn. My advice would be to raise corn just as though you were going to put it in a silo and use the cornstalks for roughage and the corn as a part of the concentrated ration and furnish your succulent food with roots.

Where you want to furnish corn silage as the principal basic roughage food, good sized cows will eat about a cubic foot of it per day. So it would require two cubic feet a day for your two cows. Cows should always be fed some sort of dry roughage in connection with the silage. They ought to have all the clover hay they will eat at least once a day. If you have cornstalks they work nicely for one feed of roughage. Cows to do their best should have a grain ration of about one pound of grain per day for every three or four pounds of milk the cow gives in a day and this grain ration should be selected to balance the food nutrients of the roughage.

It is not practical to build even a large silo in the ground, because it costs so much to get the ensilage out of it. It is better to build them above the ground because you can elevate the ensilage into the silo by power but you can't get it out of the ground except by hand labor.

## MEAT FROM ALASKA.

War acquaints us with strange foods. Horse meat has been sold on the open market. Whale meat is tinned on the Pacific coast. Shark is praised by many; and Alaska, rich in resources, has shipped to the United States during the past year, 38,295 pounds of reindeer meat. This is about nine times the shipments of 1916 and another year ought to show greater gains. It looks as if reindeer will be added to the list of meat animals that supply the American table.

We often do things in the same old way day after day, because we have never tried to systematize the operations. A little time spent figuring out means and methods of eliminating unnecessary labor will pay a handsome profit.



# A principle that builds quality at least possible cost

It is the principle of specialization.

We do not scatter our vast resources.

We concentrate them upon two or three definite grades at definitely known prices.

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For Spring '18 Styleplus Clothes will be made in two grades—\$21 (green label) and \$25 (red label). Look for the Styleplus Label in the coat!

Each grade the greatest possible value at the price! You know the price *before* you go into the store!

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Henry Sonneborn  
& Co., Inc.

Styleplus distributors will sell **Styleplus Clothes \$17** (black label) as long as their supplies of this grade last.

Write us (Dept. H) for free copy of "The Styleplus Book."

HENRY SONNEBORN & CO., INC. Founded 1849 Baltimore, Md.

## Styleplus Clothes

### \$21 AND \$25

TRADE MARK REGISTERED

Each grade the same price the nation over



America's only known-priced clothes

# THE Liberty Silo and McClure Milker

Two more recruits to aid in the conservation of your time and acreage. Put them to work on your farm—the sooner the better. Only a limited number can be mustered in.

## The Liberty Silo

The latest recruit from the McClure Co. A new type of silo that revolutionizes silo building—more non-conducting to heat and cold than any silo ever made. Makes and keeps silage under extreme low temperatures better than any silo known. Redwood, nature's best silo material, makes it moisture, vermin and rot proof. Extreme rigidity is shown in the fact that the Liberty needs no cables, walls are smooth and even, both inside and out—it looks fine. Send for Liberty Silo Booklet No. 270

## McClure Milker

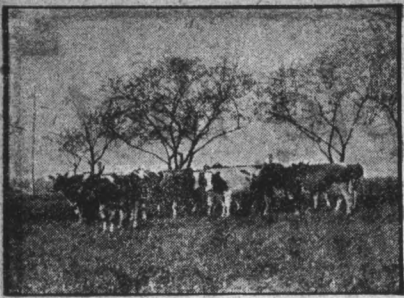
A new farm hand made and trained for immediate service, ready to go to work for you at a big saving in time and labor. Practical, easy to keep clean, costs little to operate and low in price. One man can milk as many cows as three men by hand. Contains many new and exclusive features. Improved glass valve chamber, glass teat cup, individual pump. The easiest and simplest machine to use and install on the market. Write for McClure Milker Booklet No. 370

**Saginaw Silos** The backbone of the silo army, the famous stand-by of silo users—thousands are now in service all over the country. You have your choice of either the well known Saginaw Steel Built Silo or the Saginaw Leader Silo—each a proved and satisfactory silo.

**Big demand—send in your call today** Be sure of service. Shipping and manufacturing conditions are abnormal, cars are scarce, materials are difficult to get, and there's a big demand for silos. Sufficient reasons why you should get your silo immediately. Write us today. Ask for Booklet No. 470

**THE McCLURE COMPANY, Saginaw, Mich. - Cairo, Ill.**





This Year Dairymen will Rejoice when Pastures Are Sufficient.

#### MAKING COTTAGE CHEESE.

Can you give me any advice as to how to make cottage cheese nice and light and puffed up, and what to color it with? I make cottage cheese but it gets solid and hard.

Iosco Co. Mrs. J. H. B.

I take it for granted that cottage cheese is the variety mentioned. It is a comparatively simple matter to make cottage cheese. Most farmers' wives, however, make this cheese by the rule of thumb. They let the skim-milk sour and then warm it up on the stove until there is a separation of the curd from the whey, turn off the whey and then salt it, and sometimes add a little cream, and it is ready for serving. Cottage cheese ought not to be colored like cream cheese. The whiter it is the better it looks.

This guessing at temperatures in making cottage cheese does very well for family use, but you hardly ever get the cheese so that it is twice alike in this way. This, of course, makes little difference where it is served in one's own family, but if you want to sell your cheese then the more uniform you get it the better satisfaction it gives to your customers. All there is in getting uniformity is to be sure in making the cheese that the milk always is the same degree of acidity, then when you warm it, be sure and use a standard thermometer and always warm it just the same, also have some standard way of draining off the whey. Many put the cheese in muslin-sacks and hang them up and let it drain that way. In this way you drain off the whey more uniformly. Add so much salt to each pound of curd every time, and you will turn out a product that is uniform and will give satisfaction after your customers are educated to it.

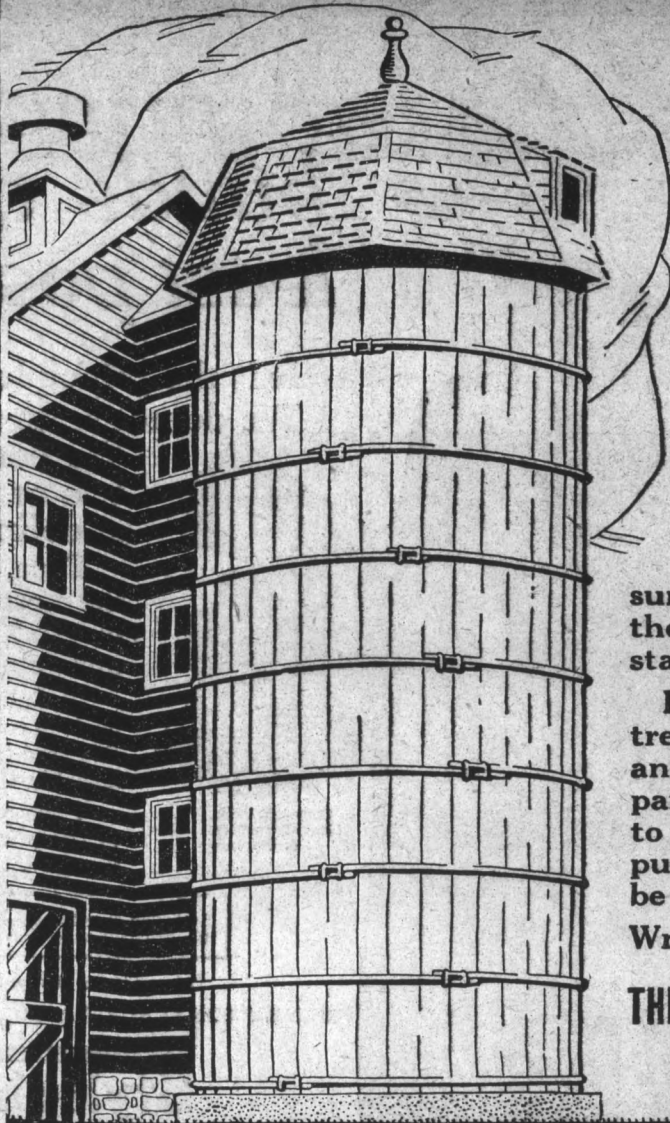
#### DAIRY SANITATION.

Infectious abortion is retarding some farmers in developing a dairy business. It causes losses in the herd increase but does not unfit the milk for human use although the germ is frequently located in the udder. It is a source of great discouragement to some cattle owners but as yet there is no way of overcoming it. The animal diseases are a warfare between the microbe and the host and they make a high degree of intelligence necessary in the successful live stock owner. If it were not for the skill which is necessary to fight diseases, almost anyone could be a live stock farmer. Stable sanitation is an important factor in the control of animal diseases.

Small Beet Sugar Industry in Canada.—Canada consumes about twenty-five times as much sugar as she produces. Last year her total sugar beet land was about 15,000 acres, which yielded 14,000 tons of sugar. Canada secures most of her sugar from about the same sources as the United States.

Good nature, happiness and laughter are as contagious as a yawn. Happiness is a state of mind, and there is nothing that contributes more largely to the general well-being of society than a man with a hearty sense of humor.—Marshall P. Wilder.

It is because they have been obliged to think for themselves and make their own theories, that persons of neglected educations are so often self-assertive, self-reliant, capable.—C. B. Wheeler.



## SILO SENSE

A good silo must be easy to build and handy to use and must preserve silage perfectly. The best silo must do more. It must require but little attention and must last indefinitely. The silo that fills the bill in every respect is

### THE CENTURY Creosoted Stave Silo

Century Silos are built for permanence. They can't decay and everything about them is made to last indefinitely.

Century Silos are thoroughly impregnated with creosote by the Pressure Process which forces the creosote into the wood and leaves the surface of the staves free from excess oil.

Besides preventing decay, the creosote treatment does away with excessive swelling and shrinking of the staves and makes painting unnecessary. It is rarely necessary to loosen or tighten the hoops. You can put up a Century Silo and forget it. It will be there ready for use when you need it.

Write today for folder. It will interest you.

### THE MICHIGAN WOOD PRESERVING COMPANY

Reed City,  
Michigan

Century Building,  
Pittsburg, Pa.

## Century Creosoted Silos

"Last till the cows come home"

## 17¢ 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 Crank; 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

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.

In Bulk or  
in 100-Lb.  
Sacks  
in Box Cars

**SOLVAY**  
PULVERIZED  
LIMESTONE

**SOLVAY PROCESS CO.**  
580 West Jefferson Ave., Detroit, Mich.

Satisfactory  
Shipments  
Guaranteed  
Fine as Flour  
94% Carbonates

## PROFITS IN HONEY



Beeswax wanted.

Sugar is scarce. Honey is in great demand. High prices prevail. Make your bees produce more than ever before. Send for our catalog for prices on Bee Hives, Section Boxes, Comb Foundation, Smokers, etc. Beginner's complete outfit furnished with or without bees.

### BERRY BASKETS

There is a scarcity of berry baskets and we advise prompt action. Let us know your exact requirements and we will quote you prices on standard quart baskets and 16-qt. crates. We can make immediate shipments at present.

**M. H. HUNT & SON,**  
Box 525, Lansing, Mich.

## BEES PAY WELL.

S. J. GRIGGS & CO., Dept. No. 29, Toledo, O.

**17.95** **American** **CREAM** **SEPARATOR**  
On trial. New, well made, easy running, easily cleaned, perfect skimming separator. Skims warm or cold milk. Different from picture which shows larger capacity machines. Our guarantee protects you. Get our plan of easy **MONTHLY PAYMENTS** and handsome free catalog. Whether dairy is large or small, write today. **Western orders from Western points.**  
**AMERICAN SEPARATOR CO.**  
Box 6061 Bainbridge, N. Y.

## Alexander Milk Pail & Stool



With Improved Hood has never been turned down by any Health Dept. in U.S. Absolutely sanitary. Strains milk in and out of pail. Keeps milk sweet three to five hours longer than other pails. Made of Heavy Charcoal Tin. Holds 4 gallons. Buy direct from manufacturer. Write for Circular.

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1600 E. 24th St., Cleveland, Ohio

## "FOR SALE"

Three Unit Hinman Milker, Box 507, Findlay, Ohio.



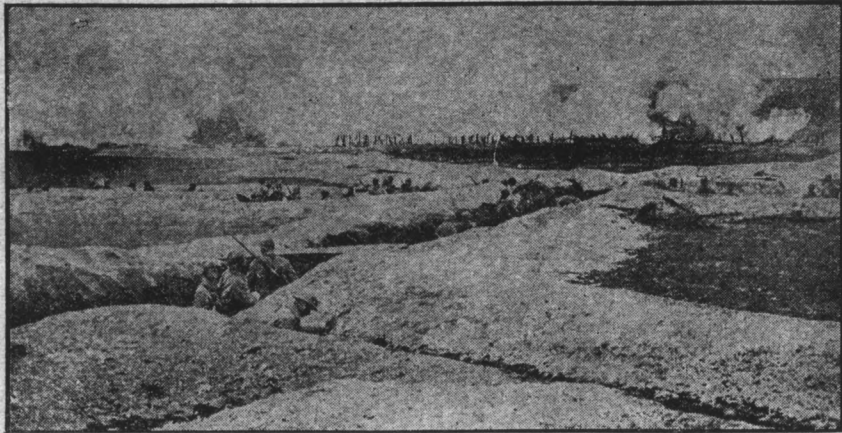
# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION

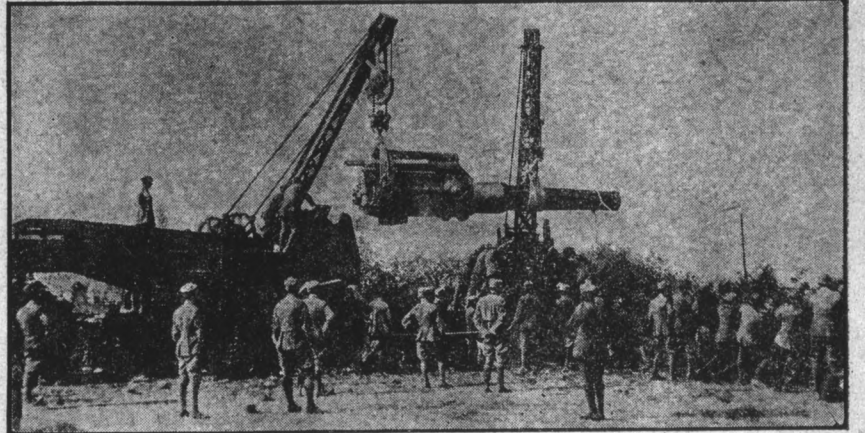
**MICHIGAN FARMER**  
AND *LIVE STOCK* JOURNAL  
PUBLISHED WEEKLY  
ESTABLISHED 1843.

The FARM BOY  
and GIRL  
SCIENTIFIC and  
MECHANICAL

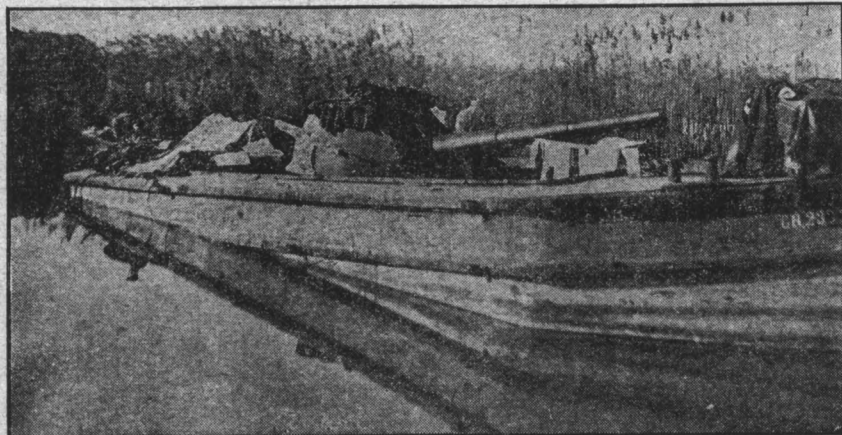
## WORLD EVENTS IN PICTURES



French Troops Advancing to a Grenade Attack Under Cover of a Heavy Barrage Fire, which can be seen Pounding the German Trenches. In Background May be seen Wire Entanglements which Mark the German Lines.



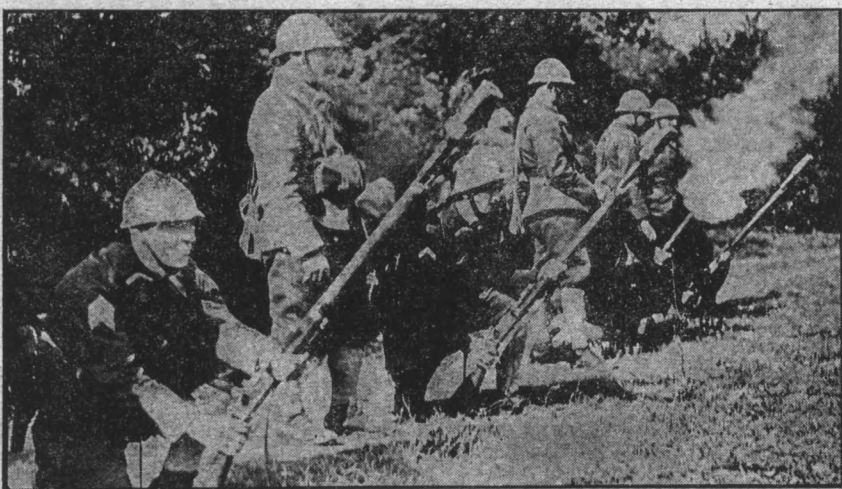
Italian Troops Moving up a Great Gun to a Position where it will be Able to Demolish Austrian Defences. The Moving of Such Heavy Artillery is More Difficult in this Region than on the Western Front.



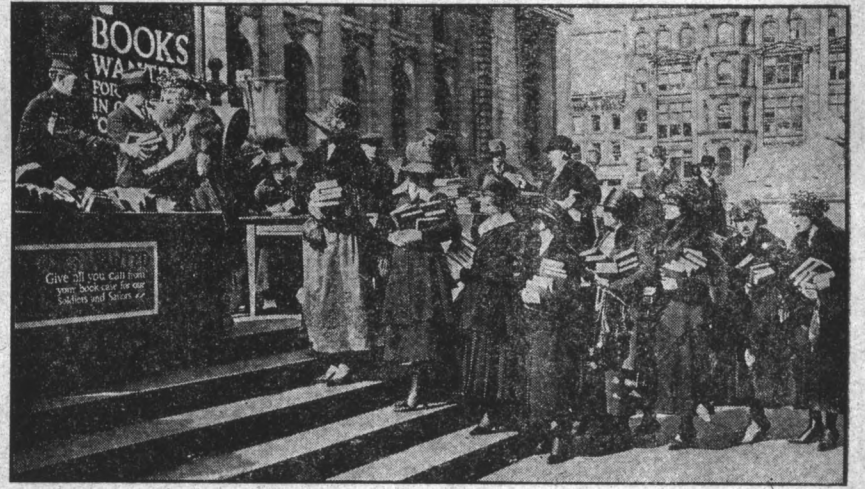
Powerful Italian Naval Gun Mounted in an Armored Turret on a Concrete Barge Anchored in the Plave River is very Successful in Driving at the Austro-German Lines.



Monster French Gun Operated from a Railroad Truck is Photographed Just at the Moment the Shell was Fired. The Men Watching have Covered their Ears to Prevent Injury from the Noise of the Explosion.



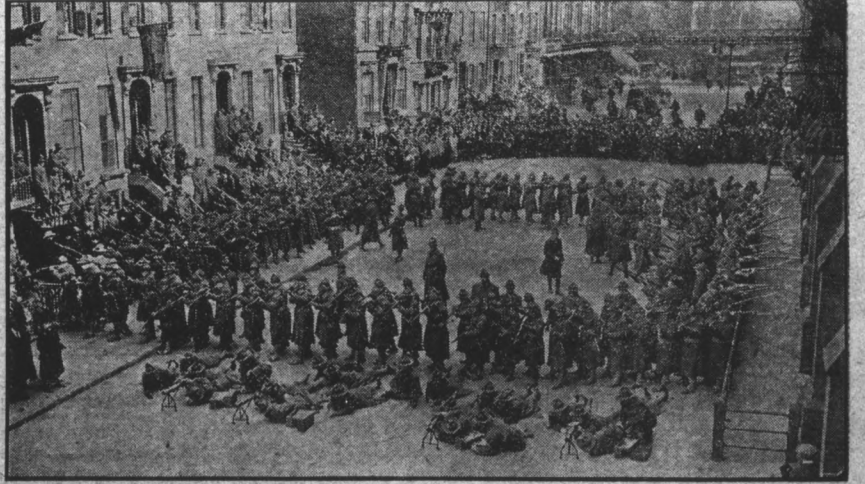
U. S. Marines Under French Instructors Behind the Battle Lines in France Acquire Skill with Rifle Grenades. This type of Weapon has been Found very Effective in Trench Warfare.



Girls Generously Contributing Books for the Training Camp Libraries and for the Boys of the Navy. In this way a very Important Need is Being Filled, as Reading Matter is Welcomed After the Day's Routine.



Many English Mansions have Been Given Over for Convalescent Homes and Hospitals for the Wounded. The Above is a Room in the Duke of Westminster's Home, Eaton Hall, Chester.



New York Regiment Especially Trained to Handle Street Riots, should such an Emergency Arise. The Hollow Square Formation with Machine Gunners Control the Street, while Troopers with Rifles Back them up.



**Dr. Lavendar:—****Meet Mr. Jones of Beacon, N. Y.**

If there is anyone who requires more hard work out of a tire than a country doctor, it's a traveling salesman.

A while ago Dr. Lavendar, of Reform, Alabama, told in these columns how an Empire reeled off 25,000 miles on his Ford. Now comes a bigger record, and again the temptation to quote is too strong to resist.

"EMPIRE RUBBER & TIRE CO.,  
Trenton, N. J.

Gentlemen: Your records will show that you recently retreaded non-skid case serial No. 370184 without charge to me. This case had a blow-out recently and I had same repaired. It is now still in use and has reached its thirty-four thousandth (34,000) mile. I am out for 50,000 miles on this tire, and when I reach it you can have the best tire that was ever made.

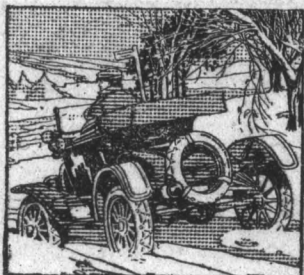
I might add that this tire came from the North Avenue Garage, this city, October 25th, 1916. Some record! I expect to be in Trenton shortly and you can give it the once-over.

H. W. JONES,  
Beacon, N. Y."

This letter is from a well-known traveling man. He pounds back and forth in his Ford six

days a week, in all kinds of going—rain or shine, boulevards or detours, mud or ice.

We appreciate that there is some danger in quoting big records, as not everyone can get a tremendous mileage like this.



Yet these big records do have their meaning when you realize that the average Empire in average running is delivering to the average owner a tremendous surplus of extra miles. Several

firms, whose salesmen use Empires on their Fords, tell us that the average mileage is well over 8000.

For thirty years the Empire Rubber & Tire Co., Trenton, N. J., have been making rubber goods of all kinds that have been famous for their long life. In Empire tires and tubes, they have raised this skill to its highest pitch.

Come to the Empire store and find out for yourself.

You may not get a record-breaking mileage on one tire, but you will get a great deal higher average on four tires than you ever thought was possible.

**The Empire Tire Dealer****Win the War By Preparing the Land Sowing the Seed and Producing Bigger Crops**

**Work in Joint Effort the Soil of the U. S. and Canada—Co-operative Farming in Man Power Necessary to Win the Battle for Liberty**

The Food Controllers of United States and Canada are asking for greater food production. Scarcely 100,000,000 bushels of wheat can be sent to the allies overseas before the crop harvest. Upon the efforts of the United States and Canada rest the burden of supply.

**Every Available Tillable Acre must Contribute; Every Available Farmer and Farm Hand must Assist.**

Western Canada has an enormous acreage to be seeded but man power is short and an appeal to the United States allies is for more men for seeding operations.

**Canada's Wheat Production last Year was 225,000,000 Bushels; the demand from Canada alone, for 1918, is 400,000,000 Bushels.**

To secure this she must have assistance. She has the land but needs the men. The Government of the United States wants every man who can effectively help to do farm work this year. It wants the land in the United States developed first of course; but it also wants to help Canada. Whenever we find a man we can spare to Canada's fields after ours are supplied, we want to direct him there. Apply to our Employment Service, and we will tell where you can best serve the combined interests.

**Western Canada's help will be required not later than May 5 th. Wages to competent help, \$50 a month and up, board and lodging.**

Those who respond to this appeal will get a warm welcome, good wages, good board, and find comfortable homes. They will get a rate of one cent a mile from Canadian boundary points to destination and return.

For particulars as to routes and places where employment may be had, apply to

**U. S. Employment Service,**  
Dept. of Labor.

Detroit, Grand Rapids, Sault Ste. Marie and Port Huron, Mich.

**TOBACCO FOR SHEEP**

Feed tobacco with salt now and escape stomach worms later. Three parts salt and one part tobacco siftings kept before sheep will kill stomach worms, etc. Our tobacco siftings are made by granulating Kentucky tobacco in manufacturing our celebrated brand, "Old Hill Side Smoking Tobacco," insuring high nicotine content. Price \$4.00 per 100 lb., f.o.b. Louisville.

AXTON-FISHER TOBACCO CO. Inc.,

LOUISVILLE, KENTUCKY

**Inside the Lines**

By EARL DERR BIGGERS & ROBERT WELLES RITCHIE

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"Yes, it seemed so." Crandall offered the younger man his cigarette case, and, lighting a smoke himself, straddled the hearth, his eyes keenly observant of Woodhouse's face.

"Rather odd, Americans. But jolly nice." The captain laughed in reminiscence of the unspoiled Shermans.

"I thought so—I married one," Crandall retorted.

The ear of Woodhouse's mind could hear more plainly now the grinding of the cogs; the immutable power of fate lay there.

"Oh—er—so you did. Very kind she has been to me. I got very little of this sort of thing at Wady Halfa."

"By the way, Woodhouse"—Crandall blew a contemplative puff toward the ceiling—"strange Mrs. Sherman should have thought she saw you at Berlin."

"Odd mistake, to be sure," Woodhouse admitted, struggling to put ease into his voice. "The lady seemed to have a penchant, as her husband says, for finding familiar faces."

"Major Bishop!" Jaimihr Khan announced at the double doors. The major in person followed immediately. His greeting to Woodhouse was constrained.

"Woodhouse will wait for you to go down the Rock with him," Crandall explained to the newcomer. "Captain, excuse us for a minute, while we go into my room and run over a little matter of fleet supplies. Must check up with the fleet before it sails in the morning." Woodhouse bowed his acquiescence and saw the door to the general's room close behind the twain.

He was not long alone. Noiselessly the double doors opened and Jaimihr Khan entered. Woodhouse sprang to meet him where he stood poised for flight just inside the doors.

"The woman's prattle of Berlin—" the Indian whispered.

"Yes, the general's suspicions are all aroused again."

"Listen! I saw the note he sent to Bishop. The major is to be set to watch you tonight—all night. A false step and you will be under arrest." Jaimihr's thin face was twisted in wrath. "One man's life will not stand in our way now."

"No," Woodhouse affirmed.

"Success is verree near. When Bishop goes with you down the Rock—"

"Yes, yes! What?"

"The pistol screams, but the knife is dumb. Quick, Cap-tain!" With a swift movement of his hand the Indian passed a thin-bladed dirk to the white man. The latter secreted the sheathed weapon in a pocket of his dinner jacket. He nodded understanding.

"One man's life—nothing!" Jaimihr whispered.

Jaimihr faded through the double doors like a spirit in a medium's cabinet. He had seen what the captain was slower to notice. The door from Jane Gerson's room was opening. The girl stepped swiftly into the room, and was by Woodhouse's side almost before he had seen her.

"I could not—go away—without—without—"

"Miss Gerson—Jane!" He was beside her instantly. His hand sought and found one of hers and held it a willing prisoner. She was trembling, and her eyes were deep pools, ruffled by conflicting currents. Her words came breathlessly:

"I was not myself—I tried to tell myself you were deceiving me just—just as a part of this terrible mystery you are involved in. But when I heard General Crandall tell you to wait—that and what he said about the spies—I knew you were again in peril, and

"And you have come to me to tell me as goodby you believe I am honest and that you care—a little?" Woodhouse's voice trembled with yearning. "When you think me in danger, then you forget doubts and maybe—your heart—"

"Oh, I want to believe—I want to!" she whispered passionately. "Every-one here is against you. Tell me you are on the level—with me, at least."

"I am—with you."

"I—believe," she sighed, and her head fell near his shoulder—so near that with alacrity Captain Woodhouse settled it there.

"When this war is over, if I am alive," he was saying rapturously, "may I come to Amercia for you? Will you—wait?"

"Perhaps."

The door to General Crandall's room opened. They sprang apart just as Crandall and Bishop entered the library. The former was not blind to the situation; he darted a swift glance into the girl's face and read much there.

"Ready, Captain?" Bishop chirped, affecting not to notice the momentary confusion of the man and the girl.

Woodhouse gave Jane's hand a lingering clasp; mutely his eyes adjured her to remember her plighted troth. In another minute he was gone.

The general and his guest were alone. Jane Gerson was bidding him good night when he interrupted, somewhat gruffly:

"Well, young woman, have you made up your mind? Do you sail in the morning—or not?"

"I made up my mind to that long ago," she answered briskly. "Of course I sail."

"Then you're going to tell me what I want to know. Sensible girl!" He rubbed his hands in satisfaction.

"What is it you want to know, General Crandall?" This almost carelessly



A Curious Whistle.

The old saying that "you can't make a whistle out of a pig's tail," has been knocked out by a Sodas, N. Y., youth who has succeeded in making a fine specimen of a real whistle. By pains-taking effort the bone was carefully removed and the proper tail curl held by a pin. The blow end is partially closed by a small block of wood fastened by a small block of wood fastened by small brass tacks. During the searsoning period a small closely fitting wedge was inserted in the air passage so as to retain the proper shape when thoroughly dry.



"When did you meet Woodhouse before—and where?"

"How do you know I met him before?" She attempted a parry, but Crandall cut her short with a gesture of impatience:

"Please don't try that tack again. Answer those two questions, and you sail in the morning."

Jane Gerson's eyes grew hard, and in the morning.

"And if I refuse—"

"Why should you?" Crandall affected surprise not altogether unfelt.

"No matter—I do!" The challenge came crisp and sharp-cut as a new blade. Gibraltar's governor lost his temper instantly; his face purpled.

"And I know why!" he rasped. "He's got round you—made love to you—tricked you! I'd swear he was kissing you just the minute I came in here. The German cad! Good Lord, girl; can't you see how he's using you?"

"I'm afraid I can't."

Crandall advanced toward her, shaking a menacing finger at her.

"Let me tell you something, young woman; he's at the end of his rope. Done for! No use for you to stand up for him longer. He's under guard tonight, and a woman named Josepha, his accomplice—or maybe his dupe—is already under arrest, and tomorrow, when we examine her, she'll reveal his whole rotten scheme or have to stand against a wall with him. Come, now! Throw him over. Don't risk your job, as you call it, for a German spy who's tricked you—made a fool of you. Why—"

"General Crandall!" Her face was white, and her eyes glowed with anger.

"I—I beg your pardon, Miss Gerson," he mumbled. "I am exasperated. A fine girl like you—to throw away all your hopes and ambitions for a spy—and a bounder! Can't you see you're wrong?"

"General Crandall, some time—I hope it will be soon—you will apologize to me—and to Captain Woodhouse—for what you are saying to night." Her hands clenched into fists, whereon the knuckles showed white; the poise of her head, held a little forward, was all combative.

"Then you won't tell me what I want to know?" He could not but read the defiance in the girl's pose.

"I will tell you nothing but good-by."

"No, by gad—you won't! I can be stubborn, too. You shan't sail on the Saxonia in the morning. Understand?"

"Oh, shan't I? Who will dare to stop me?"

"I will, Miss Gerson. I have plenty of right—and the power, too."

"I'll ask you to tell that to my counsel—on the dock at five tomorrow morning. Until then, General Crandall, au revoir."

The door of the guest room shut with a spiteful slam upon the master of Gibraltar, leaving him to nurse a grievance on the knees of wrath.

#### CHAPTER XVII. Three-thirty A. M.

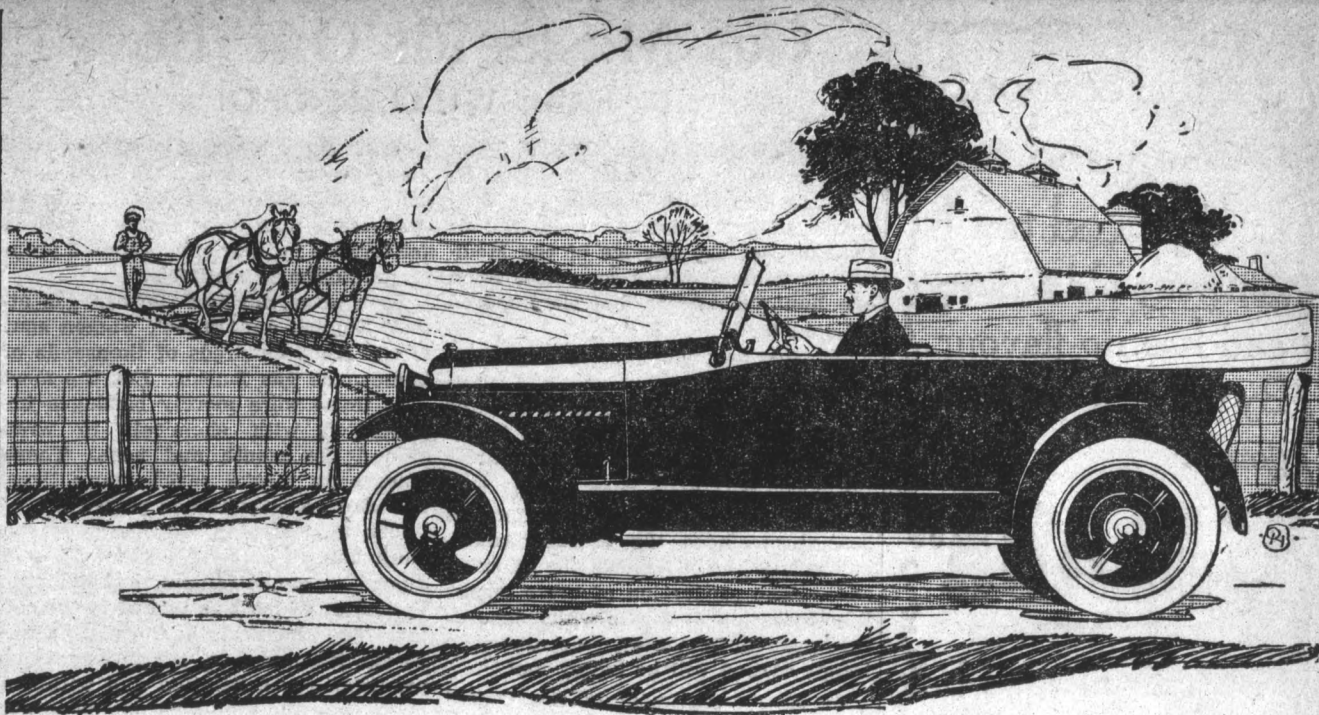
JOSEPH ALMER and Captain Woodhouse sat in the darkened and heavily blinded office-reception room of the Hotel Splendide. All the hotel had long since been put to bed, and the silence in the rambling house was audible. The hands of the Dutch clock on the wall were pointing to the hour of three-thirty.

Strain was on both the men. They spoke in monosyllables, and only occasionally. Almer's hand went out from time to time to lift a squat bottle of brandy from the table between them and pour a tiny glass brimful; he quaffed with a sucking noise. Woodhouse did not drink.

"It is three-thirty," the latter fretted, with an eye on the mottled clock dial.

"He will come," Almer assured. A long pause.

"This man Jaimihr—he is thoroughly dependable?" The man in uniform (Continued on page 467).



# PAIGE

*The Most Beautiful Car in America*

## Time Is Money

How much time do you waste in "hitching up" when you drive to town in the buggy? How long does it take you to get there—and back? What is your time actually worth in dollars and cents?

If you answer these questions correctly, you are bound to arrive at two very startling conclusions. First, you can't afford to get along without a motor car. Second, you are paying for a car now—whether you own it or not.

Time, please remember, is money. A productive hour is worth just so many bushels of wheat, so many barrels of flour, so many loaves of

bread. A wasted hour is worth precisely nothing.

Because this is true, you can't afford to use your horses for a task that the motor car will perform ten times more efficiently.

Because this is true, you can't afford to lose the profits that would pay for a car—and show a handsome surplus to boot.

You actually need a car; there can be no question about that. But you also need a good car—a reliable car—a comfortable car.

In the opinion of ourselves and more than 50,000 satisfied owners, you need just such a car as the Paige.

PAIGE-DETROIT MOTOR CAR COMPANY, 220 McKINSTRY AVENUE, DETROIT

### Easy to figure the Profits

Where in Western Canada you can buy at from \$15. to \$30. per acre good farm land that will raise 20 to 45 bushels to the acre of \$2. wheat—it's easy to figure the profits. Many Western Canadian farmers (scores of them from the U. S.) have paid for their land from a single crop.

Such an opportunity for 100% profit on labor and investment is worth investigation. Canada extends to you a hearty invitation to settle on her

#### FREE Homestead Lands of 160 Acres Each

or secure some of the low priced lands in Manitoba, Saskatchewan or Alberta. Think what you can make with wheat at \$2. a bushel and land so easy to get. Wonderful yields also of Oats, Barley and Flax. Mixed Farming and cattle raising. The climate is healthful and agreeable, railway facilities excellent, good schools and churches convenient. Write for literature and particulars as to reduced railway rates to Supt. Immigration, Ottawa, Canada, or to

**M. V. McINNES,**  
178 Jefferson Ave., Detroit, Mich.  
Canadian Government Agent.

**160 ACRE FARMS IN WESTERN CANADA FREE**

### GOOD SEED CORN & BARLEY ARE SCARCE

If not provided for Farmers should get busy and secure their Spring supply of seeds. Our Iowa Gold Mine is a fine corn and with favorable corn weather will produce a matured crop. Don't forget King's Improved Red Cob Ensilage when ordering. Both money makers for the farmer. Have limited amount Six Row White Russian Barley seed. There is not a more sure or profitable crop grown. You need some early grain to fatten the pigs, and U. S. A. needs the pork to help win the war. Address

H. C. King Seed Company, Battle Creek, Mich.

**For Sale** Inspected WORTHY OATS, cleaned and bagged. 50 bu. and over \$1.50; 10 to 50 bu. \$1.55; 1 to 10 bu. \$1.60. Sacks 55c. Prompt delivery. W. T. Bandeen, Mt. Pleasant, Mich.

**For Sale** Certified "College Success" Seed Oats. Less than 10 bu. \$1.60, 10 bu. or more \$1.55 sacks 40c extra. HUIZENGA & SHOEMAKER, Hudsonville, Mich.

**Pedigree** Seed Oats. The two wonderful yielding varieties that excel all others. For sale by, W. J. MERRIAN, Almont, Mich.

Oats White Scottish Chief 8 bu. \$10.40; Wis. Pedigree barley 8 bu. \$17.60; 1 bu. \$2.50, sacks free; 10c less bu. in your bags. Recleaned Frank Bartlett, Dryden, Mich.

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to use good tea.  
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use since it yields far  
better in the tea-pot.

Your grocer sells it.

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B 369



### What Will You Build?

You doubtless need some new farm building this season. Perhaps, it will be a dairy barn, dwelling, garage, silo, hog house, or other outbuilding. Whatever it may be, you will get some mighty helpful ideas from our new book,

#### "Natco on the Farm"

It tells you how to have buildings that are dry, clean, and sanitary—warm in winter yet cool in summer. It shows you how to save on repairs, insurance and coal bills. It illustrates scores of fire-safe farm buildings that will "stand for generations." It's true economy to build with Natco Hollow Tile—makes every building a permanent investment. Write for your copy now. Ask also for plans—free if you intend to build.

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22 Factories assure a wide and economical distribution



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REFLEX  
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feel" put you at ease on  
any job that turns up.

**SATISFACTION  
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## Gas Masks for Our Boys

By EARL WILLIAM GAGE

THE United States army is being prepared to meet the gas attacks of the Germans. This means of protection is in charge of the Gas Defense Service of the Medical Department, which comprises some one hundred officers and six hundred enlisted men.

The two principal factors in gas defense are effective masks and thorough training of soldiers in the use of masks and various methods of avoiding contact with poisonous vapors.

Experts who have been sent to this country by the Allied governments have pronounced the present American masks the most efficient in existence. The production of these masks is progressing at a rate which insures that the requirements of the American troops abroad will be amply met.

At each cantonment of the United States a gas defense school has been established and placed under the direction of a divisional gas officer, who works in conjunction with the chemical adviser, both trained in theory and practice of meeting gas offensive. Through these schools every officer and man receives instruction as to the proper means of gas defense.

The use of gas in warfare dates back to about 400 B. C. The Spartans saturated wood with pitch and sulphur and burned it under the walls of cities which they were attacking. For several centuries gas had not been used in warfare and The Hague Convention definitely ruled against it. However, on April 22, 1915, the Germans liberated great clouds of gas against Canadian troops near Ypres. Terrible destruction and demoralization resulted from the first gas attack and within a week England made plans for gas warfare against the Huns. Gas is today an everyday part of the war zone, thus bringing into employment a part of warfare which civilization put into the shade about the time civilization was given a hearing in the courts of men.

Gases may be employed in the form of clouds or in shells, bombs, and hand grenades. The first gas attacks in the present war were in clouds. Fumes were liberated from steel containers which were distributed in groups of three or four at intervals of fifty yards along the trenches opposite the line to be attacked. Tubes provided with a stopcock attachment were connected with the gas tanks and the end of the tube was passed over the parapet. When an attack was intended a signal was given and the stopcocks were opened, allowing the gas to escape in the form of liquid, which immediately vaporized.

The success of a "gas cloud," which is still used, is dependent upon atmospheric conditions. Careful planning is necessary. The fact that trenches are irregular, often with wide juts, renders it very difficult to liberate a gas cloud effectively. The gases used, being heavier than air, when released under proper atmospheric conditions, are blown or appear to roll along the ground, usually in the form of a dense greenish yellow cloud. At best the cloud method of using gas is uncertain. The Germans played a good joke upon themselves near Verdun by permitting gas to liberate, which the gentle breeze carried back into their faces, and thus, with yells of victory, the Canadians rushed and took their first three front trenches before the reserves could reach them.

By far the commoner method is the use of gas in shells, bombs, and hand grenades. Gas thus used has a distinct military advantage in that it is possible to place it where it may be needed to form a gas barrage or smoke barrage to prevent the bringing up of reinforcements or the retreat of defeated

troops. Many kinds of gases are used. Some are merely gases which temporarily affect the eyes and are more inconvenient than serious. Other gases are terrible in their effects unless proper protection is available.

Soon after the first German gas attack English and French women sent to the front hundreds of thousands of home-made gas masks. For the most part these were merely bandages impregnated with chemicals to wrap around the mouth and nose. These emergency masks saved many lives, but afforded only limited protection.

The next step in gas masks was a cloth helmet or hood which had been dipped in a neutralizing solution, the bottom of which was tucked in the collar. The chemicals in the cloth filtered the incoming air, but there was no provision for exhalation and within a short time the man was unable to get a proper amount of air to breathe.

Then followed the improvement which consisted of placing an exhaust or outlet for the exhaled air. This type of mask has been used extensively. Its disadvantages are that a man cannot hear well, the chemicals in the cloth cause him trouble, and the mask cannot long remain impermeable to the gases.

The small box respirator mask was next developed and it is the model of the mask being used at present. It is the highest development, affording ample protection. It has an impervious face piece, with glass or celluloid eye piece, held in position by rubber bands around the head. A cannister is car-

In the German mask the container for the neutralizing chemicals is screwed onto a ring in the bottom of the mask. With the German mask there is no outgoing valve for the exhaled air, both incoming and outgoing breath passing through the container.

The manufacturer of a gas mask of the American type presented a problem. No manufacturing firms had experience with an article of this nature. More than ordinary care must be taken in making parts, due to the fact that the slightest defect would render the mask useless. The wide variety of materials used in making masks made it necessary to have the parts made in separate plants and assembled at a central plant. At present some sixty manufacturing firms contribute directly to the making of the American mask.

With no actual experience to guide them, much experimental and research work was necessary before manufacturers could make masks. An extensive experimental organization was built up, with branches in several cities. More recently it was decided best that the parts be assembled in a government owned plant and the difficult sewing operations on the face piece carried on there. This plant will soon be in full operation, with some 4000 employees.

The American gas mask is as mechanically perfect as the best experts in the country have been able to produce. The vital feature of any respirator mask is the chemicals contained in the canister. These chemicals and absorbents are made from secret formulas. The face piece consists of a base of cotton fabric, carefully rubberized. These face pieces are made to fit various types of faces, a network of plas-



National Army Men Facing a Gas Attack in the Trench.

ried in a small knapsack and a flexible tube connects the box in face piece. Inside the face piece is a small wire clamp with rubber pads which fit on the nose and forces the wearer to breathe through his mouth. The end of a flexible tube has a rubber mouthpiece through which the man breathes. The incoming breath comes through the canister, which is filled with several layers of special chemicals of an absorbent nature, which neutralize and render harmless the gas-laden air. The outgoing breath passes outside the face piece through a small rubber valve.

tice bands holding the face piece over the face and in place. Only the ears are left uncovered.

The mask is carried in a knapsack at the left hip, supported by a shoulder band. When troops approach a danger zone, the straps are shortened and the knapsack shifted to rest high on the chest, ready for instant use. Thus the soldier has merely to open the knapsack, pull out the flexible hose with the face piece attached, put the rubber mouthpiece in his mouth and adjust the bands over his head. The nose clip insures that even if the fabric of the face piece should be pierced,



the soldier would still be breathing entirely through the mouth.

For each mask made there is provided at least one additional canister. These canisters are detachable from the tube. When a canister has lost its effectiveness it is detached and a new one put on.

### INSIDE THE LINES

(Continued from page 465).

put the question with petulant brusqueness.

"It is his passion—what we are to do tonight—something he has lived for—his religion. Nothing except judgment could—Hah!"

The sharp chirp of a telephone bell, a dagger of sound in the silence, broke Almer's speech. He bounded to his feet; but not so quickly as Woodhouse who was across the room in a single bound and had the receiver to his ear.

"Well, well. Yes, this is the one you name." Woodhouse turned to Almer, and his lips framed the word Jaimihr. "Yes, yes; all is well—and waiting. Bishop? He is beyond interference—coming down the Rock—I did the work silently. What's that?" Woodhouse's face was tensed in strain; his right hand went to a breast pocket and brought out a pencil. With it he began making memoranda on the face of a calendar by his side.

"Seven turns—ah, yes—four to the left—correct." His writing hand was moving swiftly. "Press, one to the right. Good! I have it, and am off at once. Good-by!"

Woodhouse finished a line of scribe on the calendar face, hung up the receiver. He carefully tore the written notes from the calendar and put them into his pocket.

"Jaimihr says he has work to do at Government House and can not come down." Woodhouse turned to Almer and explained in rapid sentences. "But he's given me the combination—to Room D—over the wire, and now I'm off at once!"

Almer was all excitement now. He hovered lovingly about Woodhouse, patting him on the shoulder, giving him his helmet—mothering him with little cooing noises.

"Speed quickly! Nineteen, Thirty-two! Up the Rock to the signal tower, Nineteen thirty-two, to do the deed that will boom around the world. The switches—one pull, my brother, and the fatherland is saved to triumph over her enemies, victorious!"

"Right, Almer!" Woodhouse was moving toward the door. "In eight minutes history will be made. The minute you hear the blast, start for Spain. I will try to escape, but I doubt—"

A knock came at the barred front door—one knock, followed by three. Both men were transfixed. Almer, first to recover his calmness, motioned Woodhouse through the door to the dining-room. When his companion had disappeared, he stepped to the door and cautiously asked: "Who knocks?"

An answer came that caused him to shoot back the bolts and thrust out his head. A message was hurriedly whispered into his ear. The Splendide's proprietor withdrew his head and slipped the bolt home again. His face was a thundercloud as he summoned Woodhouse; his breath came in wheezy gasps.

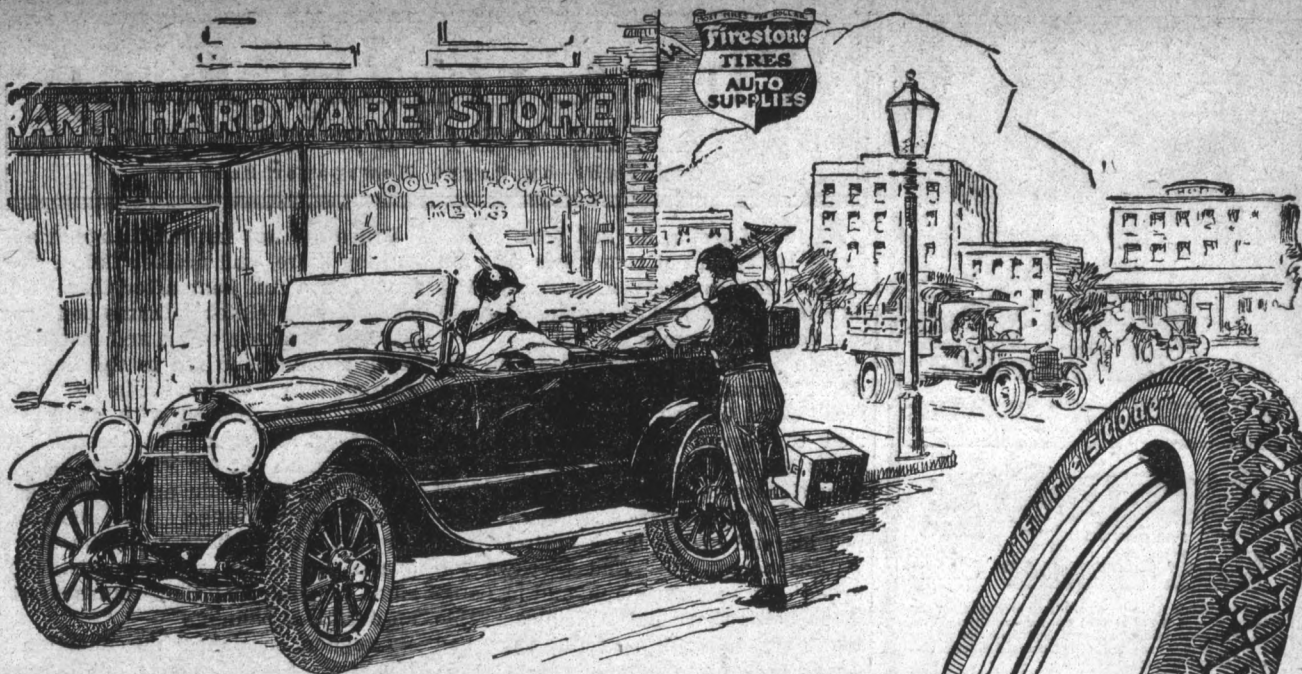
"My Arab boy comes to the door just now to tell me of Louisa's fate; she has been arrested," he said.

"Come, Almer! I am going to the signal tower—there is still time for us to strike."

Out on the Waterport Street leaped Woodhouse, and the door closed behind him.

(Continued next week).

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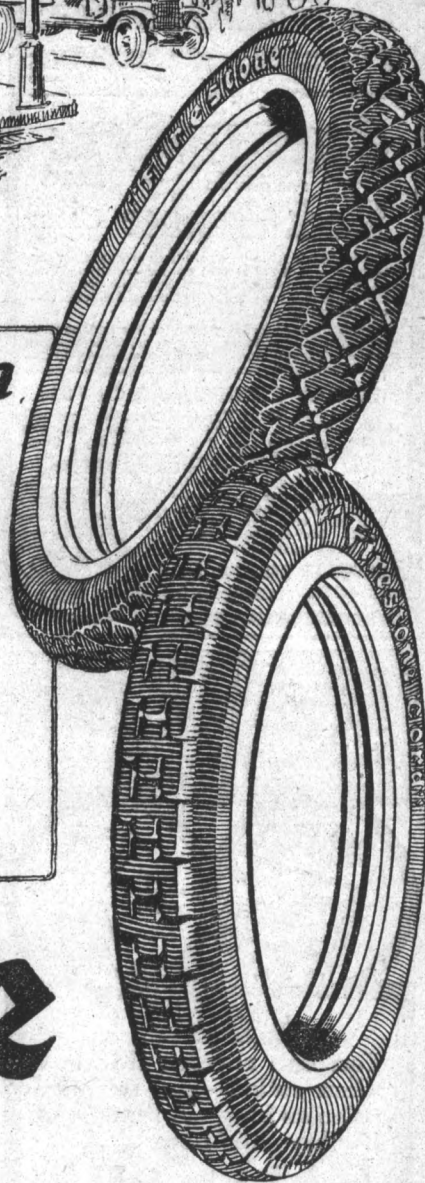
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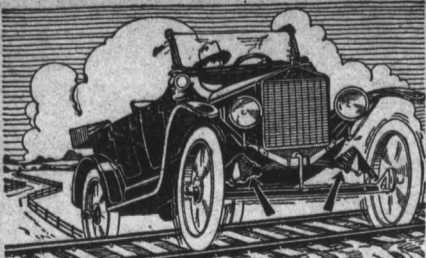
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# The Grizzly King

By JAMES OLIVER CURWOOD

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As for Muskwa, he had gone syrup mad. He could not remember that his mother had ever given him anything like it, and Thor had produced nothing better than fish.

Late in the afternoon Langdon untied Muskwa's rope and led him for a stroll down toward the creek. He carried the syrup dish and every few yards he would pause and let the cub have a taste of its contents. After half an hour of this maneuvering he dropped his end of the leash entirely, and walked campward. And Muskwa followed! It was a triumph, and in Langdon's veins there pulsed a pleasurable thrill which his life in the open had never brought to him before.

It was late when Metoosin returned, and he was quite surprised that Bruce had not shown up. Darkness came, and they built up the fire. They were finishing supper an hour later when Bruce came in carrying something swung over his shoulders. He tossed it close to where Muskwa was hidden behind his tree.

"A skin like velvet, and some meat for the dogs," he said. "I shot it with my pistol."

He sat down and began eating. After a little Muskwa cautiously approached the carcass that lay doubled up three or four feet from him. He smelled of it, and a curious thrill shot through him. Then he whimpered softly as he muzzled the soft fur, still warm with life. And for a time after that he was very still.

For the thing that Bruce had brought into camp and flung at the foot of his tree was the dead body of little Pipoonaskoos.

### CHAPTER XVI.

THAT night the big loneliness returned to Muskwa. Bruce and Metoosin were so tired after their hard climb over the range that they went to bed early, and Langdon followed them, leaving Pipoonaskoos where Bruce had first thrown him.

Scarcely a move had Muskwa made after the discovery that had set his heart beating a little faster. He did not know what death was, or what it meant, and as Pipoonaskoos was so warm and soft he was sure that he would move after a little. He had no inclination to fight him now.

Again it grew very, very still, and the stars filled the sky, and the fire burned low. But Pipoonaskoos did not move. Gently at first, Muskwa began nosing him and pulling at his silken hair, and as he did this he whimpered softly, as if saying, "I don't want to fight you any more, Pipoonaskoos! Wake up and let's be friends!"

But still Pipoonaskoos did not stir, and at last Muskwa gave up all hope of waking him. And still whimpering to his fat little enemy of the green meadow how sorry he was that he had chased him, he snuggled close up to Pipoonaskoos and in time went to sleep.

Langdon was first up in the morning, and when he came over to see how Muskwa had fared during the night he suddenly stopped, and for a full minute he stood without moving, and then a low, strange cry broke from his lips. For Muskwa and Pipoonaskoos were snuggled as closely as they could have snuggled had both been living, and in some way Muskwa had arranged it so that one of the dead cub's little paws was embracing him.

Quietly Langdon returned to where Bruce was sleeping, and in a minute or two Bruce returned with him, rubbing his eyes. And then he, too, stared, and the men looked at each other.

"Dog meat," breathed Langdon.

Bruce did not answer, Langdon said nothing more, and neither talked very much for a full hour after that. During that hour Metoosin came and dragged Pipoonaskoos away, and instead of being skinned and fed to the dogs he was put into a hole down in the creek-bottom and covered with sand and stones. That much, at least, Bruce and Langdon did for Pipoonaskoos.

This day Metoosin and Bruce again went over the range. The mountaineer had brought back with him bits of quartz in which were unmistakable signs of gold, and they returned with an outfit for panning.

Langdon continued his education of Muskwa. Several times he took the cub near the dogs and when they snarled and strained at the ends of their leashes he whipped them, until with quick understanding they gripped the fact that Muskwa, although a bear, must not be harmed.

In the afternoon of this second day he freed the cub entirely from the rope, and he had no difficulty in recapturing it when he wanted to tie it up again. The third and fourth days Bruce and the Indian explored the valley west of the range and convinced themselves finally that the "colors" they found were only a part of the odd-drifts, and would not lead to fortune.

On this fourth night, which happened to be thick with clouds, and chilly, Langdon experimented by taking Muskwa to bed with him. He expected trouble. But Muskwa was as quiet as a kitten, and once he found a proper nest for himself he scarcely made a move until morning. A part of the night Langdon slept with one of his hands resting on the cub's soft, warm body.

According to Bruce it was now time to continue the hunt for Thor, but a change for the worse in Langdon's knee broke in upon their plans. It was impossible for Langdon to walk more than a quarter of a mile at a time,

and the position he was compelled to take in the saddle caused him so much pain that to prosecute the hunt even on horseback was out of the question.

"A few more days won't hurt any," consoled Bruce. "If we give the old fellow a longer rest he may get a bit careless."

The three days that followed were not without profit and pleasure for Langdon. Muskwa was teaching him more than he had ever known about bears, and especially bear cubs, and he made notes voluminously.

The dogs were now confined to a clump of trees fully three hundred yards from the camp, and gradually the cub was given his freedom. He made no effort to run away, and he soon discovered that Bruce and Metoosin were also his friends. But Langdon was the only one he would follow.

On the morning of the eighth day after their pursuit of Thor, Bruce and Metoosin rode over into the eastward valley with the dogs. Metoosin was to have a day's start, and Bruce planned to return to camp that afternoon so that he and Langdon could begin their hunt up the valley the next day.

It was a glorious morning. A cool breeze came from the north and west, and about nine o'clock Langdon fastened Muskwa to his tree, saddled a horse, and rode down the valley. He had no intention of hunting. It was a joy merely to ride and breathe in the face of that wind and gaze upon the wonders of the mountains.

He traveled northward for three or four miles, and he came to a broad, low slope that broke through the range to the westward. A desire seized upon him to look over into the other valley, and as his knee was giving him no trouble he cut a zigzag course upward that in half an hour brought him almost to the top.

Here he came to a short, steep slide that compelled him to dismount and continue on foot. At the summit he found himself on a level sweep of meadow, shut in on each side of him by the bare rock walls of the split mountains, and a quarter of a mile ahead he could see where the meadow broke suddenly into the slope that shelved downward into the valley he was seeking.

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Halfway over this quarter of a mile of meadow there was a dip into which he could not see, and as he came to the edge of this he flung himself suddenly upon his face and for a minute or two lay as motionless as a rock. Then he slowly raised his head.

A hundred yards from him, gathered about a small water-hole in the hollow, was a herd of goats. There were thirty or more, most of them Nannies with young kids. Langdon could make out only two Billies in the lot. For half an hour he lay still and watched them. Then one of the Nannies struck out with her two kids for the side of the mountain; another followed, and seeing that the whole band was about to move, Langdon rose quickly to his feet and ran as fast as he could toward them.

For a moment Nannies, Billies, and little kids were paralyzed by his sudden appearance. They faced half about and stood as if without the power of flight until he had covered half the distance between them. Then their wits seemed to return all at once, and they broke in a wild panic for the side of the nearest mountain. Their hoofs soon began to clatter on boulder and shale, and for another half-hour Langdon heard the hollow booming of the rocks loosened by their feet high up among the crags and peaks. At the end of that time they were infinitesimal white dots on the sky-line.

He went on, and a few minutes later looked down into the other valley. Southward this valley was shut out from his vision by a huge shoulder of rock. It was not very high, and he began to climb it. He had almost reached the top when his toe caught in a piece of slate, and in falling he brought his rifle down with tremendous force on a boulder.

He was not hurt, except for a slight twinge in his lame knee. But his gun was a wreck. The stock was shattered close to the breech and a twist of his hand broke it off entirely.

As he carried two extra rifles in his outfit the mishap did not disturb Langdon as much as it might otherwise have done, and he continued to climb over the rocks until he came to what appeared to be a broad, smooth ledge leading around the sandstone spur of the mountain. A hundred feet farther on he found that the ledge ended in a perpendicular wall of rock. From this point, however, he had a splendid view of the broad sweep of country between the two ranges to the south. He sat down, pulled out his pipe, and prepared to enjoy the magnificent panorama under him while getting his wind.

Through his glasses he could see for miles, and what he looked upon was an uncharted country. Scarcely half a mile away a band of caribou was filing slowly across the bottom toward the green slopes to the west. He caught the glint of many ptarmigan wings in the sunlight below. After a time, fully two miles away, he saw sheep grazing on a thinly verdured slide.

He wondered how many valleys there were like this in the vast reaches of the Canadian mountains that stretched three hundred miles from sea to prairie and a thousand miles north and south. Hundreds, even thousands, he told himself, and each wonderful valley a world complete within itself; a world filled with its own life, its own lakes and streams and forests, its own joys and its own tragedies.

(Continued next week.)

### APRIL.

With shadowy clouds and with sunshine of gold,  
O'er velvety meadow and forest and world.  
She whispering goes, like a bride to her mate,  
Shy, lingering maiden, a-tremble, elate.  
Her garlanded tresses unbound to the breeze,  
Her maidens the forests, the plains and the seas.  
Shy April, our gifts are good wishes, we pray  
The god of the seasons, shall bless you today.

## Don't Neglect Your Garden

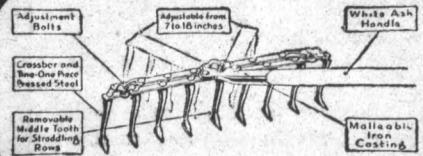
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# Our Boys and Girls

## At Work and play

### War Work for Michigan Girls

By ANNA B. COWLES

State Club Leader for Girls

THE citizens of Michigan who visited the food show conducted in connection with the Annual Farmers' Week at the Agricultural College, usually stopped at the left of the entrance to watch the work of a group of little girls. These girls were dressed as Red Cross workers. They sat about a large table and each day demonstrated to the visitors what small girls can do for the Red Cross. They were representing what hundreds of girls all over the state are now doing as their share in helping to win the war.

The Michigan girls who belong to garment-making clubs have already sent to France over six thousand Red Cross articles. This work has just begun and it is planned to make it a regular part of the work of these clubs so long as the war lasts. The patterns and instructions are furnished through the Boys' and Girls' Club Department of the Michigan Agricultural College. The Red Cross work is not to take the place of the regular club requirement of three garments but it is to supplement this work.

The following articles are being made by girls: Housewives, comfort bags, hospital bags, stretcher caps, trench candles, and joke books. Some of the clubs have also made knitted wash-cloths and afghans. The older and more experienced girls are making Belgian and French baby layettes and children's clothing. Aviator's jackets made from old kid gloves have been attempted by some of the clubs.

It is now conceded that America must put forth her full strength in order that the war may be won. This means that every American citizen must perform that task for which he or she is best fitted. These girls' sewing clubs had received a training in sewing which made it possible for them to render an immediate and very necessary service for their nation. Just

as soon as the season opens it is planned to change all garment-making clubs into gardening and canning clubs in order that we may reach our maximum in food production and conservation. Plans are already under way for conducting community canning centers in many localities.

#### What Can the Older Girls Do?

Every red-blooded American girl wants to do something which will match the service of our fathers and brothers. In some cases it is very dif-

best perform, the following list of opportunities has been compiled:

1. Red Cross. If there is a local chapter in your community, seek the advice of the officers in regard to the work most needed. If there is a garment-making club which desires to do Red Cross work, write to Girls' Club Department, East Lansing, Michigan.

2. Civilian Relief. In many of our communities the task of caring for the dependent members of soldiers' and sailors' families has already become

greer than under normal conditions. It is very difficult for charity organizations to maintain their work on an efficient basis when everyone's interest is focused on war activities. But, if we are to maintain our ideals of democracy this class must not be neglected. Offer your services to charity organizations. Your work here will be just as patriotic as that of a Red Cross nurse.

4. Food Conservation. Every county in Michigan has a food administrator. His task is to assist the federal food administration in its campaign for food economy and conservation. Most of the work done by these administrators is volunteer work. If they need assistance, offer your services.

5. Army Libraries. The American Library Association has undertaken to furnish libraries for our soldiers and sailors. The task of collecting suitable books is enormous and must all be done by volunteer workers. Consult your local librarian.

6. Registration of Women. The Women's Committee of the Council of National Defense is making a survey of the woman power of America. Every woman is to register and state the kind of service for which she is adapted. The gathering of the facts for this campaign is a gigantic one and many workers are needed. After the facts have been gathered there is still an immense amount of work to be done in tabulation, filing, etc. Consult your local registration committee.

The above list gives a partial idea of what girls may do in war time to serve their country. There certainly is no lack of opportunity and I am sure that the girls of Michigan will respond. The time has come when no patriotic American girl can be idle. Our sisters in England, France and Belgium are doing heroic things. Every sacrifice which they have made must be equalled by the womanhood of America.



Club Girls' Red Cross Demonstration During Farmers' Week at M. A. C.

It is now conceded that America must put forth her full strength in order that the war may be won. This means that every American citizen must perform that task for which he or she is best fitted. These girls' sewing clubs had received a training in sewing which made it possible for them to render an immediate and very necessary service for their nation. Just

### Boys' and Girls' Club Notes

By E. C. LINDEMANN

Seventy-eight garden supervisors and others interested in children's garden clubs, visited the Agricultural College during Farmers' Week to attend the Second Annual Gardening Conference. The chief topics discussed were office records, finances and garden reports.

Girls from the East Lansing schools gave daily demonstrations of Red Cross

work at the food show held at the College during Farmers' Week.

The Boys' and Girls' Club Department has set its goal for 50,000 club

members for the years 1918 and 1919.

It cost sixty-three cents per club member for supervision during the past year. This includes all of the

club members of the thirty-three northern and western states. The club members produced \$22.70 each in food value.

Fred Kibbie, of Coldwater, won the State Gardening Club Championship for 1917. His net profit was \$113. He bought a Liberty Bond with a portion of his income.



Eight of the Thirteen State and District Club Leaders in Michigan.



Club Leaders Attending the Annual Gardening Conference Farmers' Week.



# Mr. Farmer:--

## Do You Want One of These Young Men?

*Fill out this coupon  
and mail today*

Name: .....

County: .....

Post Office: .....

R.R. Station: .....

R.F.D. .... Phone: .....

No. in Family: .... Nationality: .....

Church Affiliation: .....

No. Acres in Farm: .....

What Kind of Farming? .....

.....

No. Workers Now Employed: .....

Do You Want U. S. Boys' Working

Reserve Helpers? .....

How Many? .....

Start What Date: .....

How Long: .....

Remarks .....

.....

.....

.....

.....

Date .....

*This space is contributed by*

**Truman H. Newberry**  
of Detroit

*to further the work of the*

**U. S. Boys Working Reserve**

FARM HELP IS SHORT and what is available is not of the most desirable kind, as every farmer knows.

"THE FARM GETS what the city leaves over." Tramps and "conscription dodgers" make up the greater part of those who apply for jobs on the farm nowadays.

NOW HERE IS A CHANCE to get a clean, intelligent, strong, willing young man who has all the qualifications excepting only a knowledge of practical farm work.

BUT THAT'S A LOT, you say. Of what use is a man who lacks practical experience?

LET US ASK YOU how much the average tramp farm hand really knows about farm work. Has he any brains to start with? Any principle? Any manhood? Any regard for the property or the interests of others or any education that would correct his natural shortcomings?

WE ASK YOU in all sincerity if a decently-raised, clean, conscientious, ambitious young man with an education is not worth a dozen such men.

CAN'T YOU TEACH HIM more in a month than the other could learn in a life time—couldn't you trust him farther?

NO!—THESE ARE NOT young aristocrats—they are the finest types of average American boys. Ninety per cent of them are sons of men and women who were reared on farms.

ATHLETES—OF COURSE—they have taken up foot ball, base ball, basket ball and all kinds of athletics to develop their bodies and you'll find that, man for man, they are stronger—can go farther and last longer—than country-reared boys of the same ages.

YES SIR—just put them to the test.

DON'T LAUGH just because the city boy seems soft the first few days—his muscles are unaccustomed to just that kind of work.

YOU TRY HIS KIND of muscular exercise and see how long you'll last. It's only a case of adjusting the muscles to the pitch-fork instead of the basket ball—the legs to slowly following a plow instead of outrunning the other fellow after the ball.

OH YES, WE KNOW these facts are just the opposite of those you have thought the truth about the city boy—but try him and see.

THESE BOYS ARE ANXIOUS to get farm experience—they realize it will mean a lot to them later on.

THEY WANT TO DO THEIR PART to help win the war—by helping to produce food stuffs to feed our nation and our allies.

AGED 16 to 21 they are under conscription age, yet had they been reared on farms would long since have been doing the heaviest farm work.

ALERT MINDS move their hands faster. Educated minds learn faster.

JUST YOU SHOW THEM HOW and you'll find them apt pupils.

THAT'S YOUR PART—teaching them how to do the practical work.

ONE FARMER SAYS, "I found I could soon teach one of these young men to do those jobs which required not so much experience, but just as much time, and left my time free for the work that required most experience."

THE GREAT THING about these young men is that they possess principle—honesty—decency. You can do a whole lot with a man if you have those qualities to start with.

YOU NEED THOSE MEN—one or more of them.

YOU SHOULD WORK every acre of your farm this year—the world needs your stuff and will pay you well for it.

SO START EARLY—get your application in and get one or more men in time to train them before the spring rush starts.

MANY OF THEM will be ready to start May first—some are ready now—and they will remain with you until October first if you need them that long.

FULL INFORMATION for the asking.

FILL OUT THE COUPON at the side and mail to your county director or to C. A. Parcels, Federal State Director, 922 Ford Bldg., Detroit.

THE DEMAND for these young men is bound to greatly exceed the supply—they will be picked help for picked farmers.

BETTER WRITE TODAY for there will not be enough to go 'round.

**U. S. Boys' Working Reserve**

Michigan Division





### "The Peace Offering"

"I know what will change mother's mind"

—nothing has solved household problems like Calumet Baking Powder. It has brought happiness into millions of homes—made expert cooks of millions of housewives who never had much bake day "luck." Its unequalled leavening and raising powers mean big, tempting bakings. The never-varying quality of its wonderful ingredients means the same good results every bake day. Calumet saves you money because it smoderate in price, goes farthest, eliminates failures and waste. It's pure in the can—pure in the baking—and the favorite in millions of homes.

Received Highest Awards  
New Cook Book Free—See Slip in Pound Can.



## Vaseline Carbollated

PETROLEUM JELLY

A convenient, safe antiseptic for home use in dressing cuts and sores. REFUSE SUBSTITUTES

Illustrated booklet free on request.

CHESEBROUGH MFG. CO.

(CONSOLIDATED)

27 State Street—New York City

## Start a CANNING Business at Home

Help win the war. Produce, conserve and sell more food. Can fruits and vegetables with a

**ROYAL**  
STEAM PROCESS  
CANNER

pays for itself every day. Prices to fit the purse. Sizes to suit the needs of Family, Gardener, Orchardist, Farmer

Ask your dealer or write  
ROYAL SUPPLY COMPANY  
226 West Fourth St.  
Cincinnati, Ohio

# Woman and Her Needs

## At Home, and Elsewhere

### A Little More Real Life Please

I HAVE just been skimming through one of those so-called "human interest" stories in a daily paper. With all due respect to the dailies, which fill a big space in life, I must say I foam at the mouth every time I read one of those things and consider that the all-wise editor thinks it is the only sort of thing that can interest a woman. It wouldn't make me so mad if they'd put it on the sport page, or even on the editorial page, but to stick that stuff on the page labeled "Of Interest to Women," just naturally riles me all up.

You know the sort I mean, where the childless wife, or maybe the bride, is living in a tiny apartment in New York, with a fascinating husband who is always having affairs with other women. She spends her time dissecting all the morbid emotions to which women are heir, and hiring private detectives to trail friend husband. Then when she gets proofs of his infidelity she decides she couldn't live without him anyway, so she burns the documents and weeps on hubby's shoulder, while he just winks at the fireplace and proceeds to more deviltry.

It wouldn't be so bad if level-headed women were the only ones to see the stuff. But the pathos of it is, that a lot of empty-headed brides read it and immediately begin to see themselves in the heroine. After a month of brooding they drive their perfectly innocent and well-meaning husbands to drink or a double life, by accusing the poor chaps of things they couldn't put over, even if they had brains enough to think up in the first place.

Why do the editors do it, especially today when there is so much that is real to write about? Why aren't the troubles and trials of the thousands of women who are trying to adjust their lives to vastly changed conditions of as much importance as the troubles of silly heroines who exist only in some writer's imagination? Of course, the life of a middle-aged woman with three or four children and a respectable husband, promises nothing exciting or risque. But if there is anything more exciting in this year of our Lord, 1918, than giving six people a balanced ration on the average income, I've yet to be shown what it is. "Going over the top" is perhaps more hair-raising, but not a bit more nerve-racking.

Why couldn't we have a few stories, say, of a modern bride going out on foot with a market basket on her arm searching the stalls for bargains in rutabagas and soup bones, instead of seeing her dressed like the lilies, strolling through fashion shops and running up bills which she knows friend husband can't pay? If we could have a long run of this sort of literature and the butterflies would copy it as religiously as they do the fashion sheets, the high cost of living would adjust itself without government regulation. For my part, I never could see why a good up-to-date cook-book wasn't better reading than fashion hints and the "eternal triangle." Why isn't a colored illustration of a daintily appointed table or a tempting salad as taking, as one of the freak pictures which adorn the pages of so many papers intended exclusively for women?

If women could become interested in this sort of thing instead of in picking their husbands to pieces we'd have fewer divorces and more happy homes.

It's high time women set about the task of curing themselves of self-pity, and one good help would be a different class of reading. We've had so much of that sort of thing that a host of women have gotten to think they must have endless credit at the stores and a constant stream of excitement and entertainment, or else they are abused. The war has cured many of them, but there's still plenty of missionary work to do. The beauty of manual labor and of thought for others—that is what we need preached at us. More housework and oxygen and less introspection and suspicion, let's have stories with this theme in our dailies.

DEBORAH.

### For the Spring Wardrobe



At the left is a dress with simple lines throughout. The short panner in front and back and the embroidered piece of material turned up over the hem constitute the only trimmings. The hat is of a harmonizing shade of georgette crepe faced with fine straw braid, with simple arrangement of flowers at the front.

At the right is an attractive dress of silk and wool jersey in two shades of blue. These colors also match up correctly with the blue satin hat faced with material the same shade as the upper part of the gown.

These charming dresses are in harmony with the accepted policy of designers to conserve materials. Dresses measuring two yards at the hem are taking the place of the full skirts of last season.

### IN THE SEWING ROOM.

BY GRACIA SHULL.

It isn't a "really" truly sewing-room, but that is what we call our large, sunny living-room, when the girls and I bring out our thimbles and work baskets and I dust and oil the sewing machine, unfold the legs of the cutting-table, get out my tape measure, basting thread, pins, etc., and in other ways proceed to "get busy." With the hum of the machine, the song of the canary,

the crackling of the fire on the open hearth, the bright sunshine filtering through the sheer, snow white curtains, and the scent of red and white geraniums, blossoming on the window sill, and my two bright haired lassies industriously plying their needles and chatting like magpies, I defy anyone to present a handsomer or more perfect picture of a spring day in the farm home. It is on just such a day that I love to delve in the old chests and trunks, and even the rag bag, and bring to light cast-off clothing which I desire to make over or utilize in some way. From old white waists with pretty fronts of tucks, or lace, or embroidery I make dainty corset covers for myself and my girls, guimpes for the little girl's wash dresses, pretty "tea aprons," baby caps, breakfast caps, etc. A little ribbon, a few yards of beading and a bit of lace edging will cost only a few cents, and, used to trim these old-fashioned waists, help to keep myself and little ones supplied with dainty lingerie at small cost.

Old nightgown skirts of my own, I utilize in making "nighties" for the little folks by applying a new muslin yoke and sleeves with a bit of inexpensive trimming. Quite often I make these yokes of bleached flour bags, thus making the completed garment cost about one cent, for the thread, as we usually have buttons and scraps of lace edging, etc., lying about unused.

I also use the bottoms of wornout nightgowns for bags to hang over my best dresses to keep out the light and dust. From the men's old light, soft shirts I am able to make dainty waists, with V or Dutch necks and short sleeves for myself and girls. Also from these old shirts I make aprons for my littlest girl, and "Buster Brown" suits for the little man of the family. The men's old overalls are ripped and pressed and made over into rompers for the small boys. Old coats, overcoats and trousers are darned, cleaned and pressed and worked over into jackets and skirts for my girls, and whole new suits for my boys. Only the seams, rows of wornout buttonholes, and the thin places of a garment goes to waste at our house and they are not really wasted as we "chuck" them in the rag bag and sell them to the traveling junk dealer at a quarter of a cent per pound.

I also use good dyes a great deal, and with a package of dye, a spool of silk, a roll of binding braid and a few good buttons I am able to evolve a handsome garment or suit from the old cast-offs and am several dollars richer thereby. In my early days of wifehood I learned to appreciate the "little things" and am trying to instill in the minds of my boys and girls the value of true economy. And, whether sewing carpet rags, piecing quilts or stitching real lace on a crepe-de-chine gown, I want my girls to practice neatness and exactness, and to feel that all work is "worth while."

### HOME QUERIES.

Household Editor.—Mrs. G. G. C. inquired for a good recipe for canning elderberries for pie. I have one which we like very much, and will be glad to share it with others. Nine pounds of elderberries; three pounds of brown sugar, one pint of vinegar, one teaspoon each of cloves, cinnamon and allspice tied into a cheesecloth bag. Do not add water. Simmer slowly, then can.—Mrs. E. B. S.



# The Only Possible Result

By HILDA RICHMOND

VERY few housekeepers get along without hired help regularly or irregularly in busy times, in emergencies and when sickness and death invade the home. Kindly neighbors do what they can for a day or two but most of us are so situated time and again that some sort of help must be obtained to ease the burdens. Even those fortunate ladies who always have "steady help," and they are few and far between, have to hire occasionally.

I remember one bright and particular star who shone down upon our tangled domestic affairs like a full moon in one emergency. That girl transformed the disorderly house in short order and did not make any commotion doing it. She seemed to have the happy faculty of tearing out without seeming to do so, and the first thing we knew everything was running smoothly and happily. Moreover, she was giving us three good meals a day while digging at the accumulated dirt and doing it all cheerfully and well. It is hardly necessary to record that her own home shines with cleanliness and that she and her husband are prosperous.

But from that glowing account we fell into the dark ages, so to speak, in the next emergency. The good natured, slatternly girl quickly "did" everything asked of her, but such a do! The clothes were dipped in water and hung on the line; the entire contents of the cupboards were taken down to put clean papers on the shelves, though she had been told time and again to take one shelf at a time; the dusting was done with a slam bang that threatened destruction to everything within reach, and all the housework was slighted and hurried out of the way as quickly as possible. When I saw her own home I pitied the young farmer who had married her. Everything was in a huddle and nothing in place. Her cooking was done as she did everything else and the table was untidy and unattractive. That man couldn't succeed short of a miracle, for indigestion was on his track from the very start of his married life.

Of course, there are men who succeed in spite of all drawbacks, but they are the exceptions to the general rule. A man needs a neat, trim house presided over by a neat, clean woman. And he also needs clean clothes to wear and good meals three times a day. A very capable young farmer who went from one place to another as a tenant and never succeeded was a mystery to some of the neighbors, but not to those who knew his wife and the inside workings of his household. When a meal was ended his slatternly wife would proceed to throw all the remains of food to the chickens, no matter how much or how little there was. Her widowed daughter worked for us after the young farmer had grown gray moving from place to place, and at the close of the first meal, meat, potatoes, vegetables and all went to the chickens. When I inquired why she had done so the woman said she had been brought up that way. She absolutely exercised no judgment in the amount to cook and had no compunction in throwing the remains out. "The chickens have to eat something," she explained when I asked her to save the food from the next meal. Now, is it any wonder that man was never able to buy a place of his own?

To be sure, there are emergencies when meals are poor and the house gets dirty and sickness makes it necessary to hurry over the patching and kindred tasks, but in every well ordered household emergencies do not paralyze the faculties and the system as they do in slatternly homes. It makes all the difference in the world who is the housekeeper, even in sickness and

emergencies and the neat, capable woman quickly rallies from every household disaster.

It is useless to tell a young man in love to beware what kind of a housekeeper he is about to get, but the ones not in love may listen to a word of caution. The time to investigate such things is before any attention is paid to the girl at all. With the exchange of work common in every country neighborhood and the gossip floating about it isn't hard to find out what kind of housekeepers girls are. "Like mother like daughter" often holds good and young men wishing to succeed should shun poor housekeepers as they would the plague. The mistake of marrying a poor housekeeper can rarely be made right, so prevention is worth a hundred times as much as cure.

## HOT POT OF MUTTON AND BARLEY.

One pound of mutton, one-half cup of pearly barley, one tablespoon of salt, four potatoes, three onions, celery tops or other seasoning herbs. Cut the mutton in small pieces and brown with the onion in fat cut from meat. This will help make the meat tender and improves the flavor. Pour this into a covered saucepan. Add two quarts of water and the barley. Simmer for one and a half hours. Then add the potatoes cut in quarters, onions, herbs and seasoning, and cook for one-half hour longer. This recipe serves five people. —U. S. Food Leaflet.

Household Editor.—Can some reader of the Michigan Farmer give a recipe for making soda crackers? Also, can beef that has been frozen be canned to keep as good as though it had not been frozen?—Inquirer.

I have no recipe for soda crackers. Know no reason why the meat would not keep. It is impossible to answer queries in next issue.

## MICHIGAN FARMER PATTERNS.

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



No. 2366—Girls' dress. Cut in four sizes, 6, 8, 10 and 12 years. Size 10 requires 4 1/2 yards of 36-inch material. Price 10 cents.

No. 2379—Girls' dress. Cut in five sizes, 6, 8, 10, 12 and 14 years. Size 10 requires 4 3/4 yards of 36-inch material. Price 10 cents.



No. 2295—Boys' suit. Cut in four sizes, 6, 8, 10 and 12 years. Size 10 requires 3 1/2 yards of 44-inch material. Price, 10 cents.

No. 2323—Girls' dress.—Cut in four sizes, 8, 10, 12 and 14 years. Size 10 requires 3 3/4 yards of 44-inch material. Price, 10 cents.

## Cleanses Kitchen Sinks and Drains

Disease germs flourish in the waste matter of sinks and drain pipes, often working their way into the water supply, the milk and food. Every sink, closet and drain pipe should be flushed frequently with a soapy solution containing plenty of



## MULE TEAM BORAX

It cuts away the grime and grease and leaves the pipes clean and clear. Kitchen and pantry shelves—wherever food is kept or prepared—should be cleansed frequently with Borax. Nothing else will do it so easily.

Send for "Magic Crystal" Booklet. It describes 100 household uses for 20 Mule Team Borax.

PACIFIC COAST BORAX CO., New York—Chicago



## Farms and Farm Lands For Sale

## WANTED GOOD FARMERS

South Baldwin County, Alabama, offers the best opportunity for developing good farms from low priced raw lands, with good markets, plentiful rain fall, climate unexcelled, a visit here will convince you this is the place you are looking for. Some partially improved farms, large or small tracts for either farming or stock raising. One especial bargain in 1,800 acres for stock farm. Fruit, early truck, poultry and stock are all revenue producers here.

## W. A. STODDARD

Robertsdale, Baldwin County, Ala.

## Strout's New Spring Farm Catalogue

Describes hundreds money-making equipped farms, doz. states. On page 9 is 60 acres main State road, mile to village and creamery, near lake, 6 room house and barn. Owner wanting larger farm makes low price \$1200 part down. If taken soon horse, 3 cows, hens, cream separator etc., etc. included. Read on page 7 about 150 acres, good 8 room house, convenient barn, poultry house, 5 cows, pr. horses, hens, tools, wagons, machinery, maple sugar evaporator and outfit complete. \$2750 takes everything. \$1000 down and easy terms. A village dairy farm, page 13 has 166 acres, 9-room slate roof house, big barn. Including 17 cows, 12 young cattle, for all \$5200. Easy terms. On page 32 is 200 acres stock, corn and grain farm on Macedam road, 1/2 mile to village high school. 150 acres rich Cecil loam tillage, 10 room brick house, basement barn 70x90, tenant house and out buildings. 30 acres wheat, 40 acres new clover. Pr. horses. 15 cows included by aged owner for \$12,500 1/2 cash. Write now for your free copy this big money-saving catalogue and easily find the farm you want. E. A. STROUT FARM AGENCY, Dept. 101, 150 Nassau St., New York, N. Y.

## Do You Want a Farm

where largest profits are made? The South's great variety of crops and wonderful productive climate make it the most profitable farm section of America. It is the place for the lowest cost meat production and dairy farming. It grows the largest variety of forage crops. Good lands, in good localities, as low as \$15 to \$25 an acre. Let us show you locations that will give the highest profits. DEVELOPMENT SERVICE, Room 78, Southern Railway System, Washington, D. C.

## A RARE BARGAIN

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.

Bank Farm. 50 acres near Beaverton, Mich. 730 River acres improved. New four room house, barn 36x40, flowing well. A beautiful farm home, send for full description. Price only \$2,500. Will include span of horses, cow and farm implements for a quick sale. Other small farms. U. G. REYNOLDS, Real Estate Ex., Gladwin, Mich.

## We Have For Sale

A fine farm of 530 acres, 2 miles from town. Improvements in every way up to date. Basement-barns, silos, stone house, orchards and sugar bush. McCLURE STEVENS LAND CO., Gladwin, Mich.

FOR Sale 80 acre farm good clay loam 1 1/2 miles from Onaway 50 acres, good house and Barn and water. Owner sick and must sell; good bargain. E. B. SMITH, Onaway, Mich.

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



## IRONCLAD KHAKI (Twill Cloth)

Uncle Sam's Boys and Girls both wear garments of IRONCLAD KHAKI the patriotic economy cloth. It's fast sulphur dyed—can't fade and wears like leather. Be sure the Ironclad "army" label is sewed in every khaki workshirt, pants and overalls you buy. Garments sold by dealers—everywhere. Write for free samples of Ironclad Khaki Cloth and Miss Ironclad Khaki Cloth to FRANKLIN MANUFACTURING CO. Mfrs. of Cloth Only. 123 Market Place, Baltimore, Md.

## THE BLISSFIELD CUSTOM MADE FUR COATS, ROBES AND LADIES' FURS

Have a Reputation behind every Garment made for Service and Satisfaction. Hides are cheap at the present time and now is your chance to have a Fine Fur Coat or Robe made from your own Hide. We make beautiful Ladies' Furs from Muskrat, Raccoon, Skunk, etc. Our new Custom Style Book and Calendar is ready to mail, giving prices and styles for the Season 1918. It is free for the asking.

W. G. WHITE COMPANY, INC. BLISSFIELD, MICHIGAN Successors to The Blissfield Robe & Tanning Co.

## FARM WHERE WINTER IS ALMOST WINTERLESS

In the "Land of Perpetual Harvests", where sunshine, good soil and satisfying crop returns make life worth living. Land is cheap, PLUS a climate that doubles its productiveness in the NATION'S GARDEN SPOT

Virginia, the Carolinas, Georgia, Alabama & Florida Write for information now to

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ATLANTIC COAST LINE RAILROAD The Standard Railroad of the South.



## 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.

## Crown Fowls

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.

**Barred Rocks**—EGGS FROM STRAIN with records to 290 eggs a year: \$2 per 15. Delivered by parcel post, prepaid. Circular free. FRED ASTLING, Constantine, Mich.

**Barron English** 240 egg strain White Leghorns, heavy winter layers, large size birds. Hatching eggs \$6 per 100. Chicks \$13 per 100. Guarantee satisfaction. Devries Leghorn Farms and Hatchery, Box A, Zeeland, Mich.

**Barred** Plymouth Rock eggs for hatching from full blood stock prize-winning strain \$1.50 per 13. J. A. BARNUM, Union City, Mich.

**BARRON** Strain S. C. White Leghorns Bred to Lay long bodied vigorous stock. Eggs and Chicks, prices right. Bruce W. Brown, R. 3, Mayville, Mich.

**Baby** Chicks Young's Strain S. C. White Leghorns free range stock, safe arrival guarantee, catalogue free. Knolls Hatchery, R. 3, Holland, Mich.

**BABY** Chicks. Bred-to-lay S. C. White Leghorns. At last year's price, \$12 per 100. No catalog or circular. Order direct from this ad. Cash in full with order. Hatch every Tuesday, beginning April 2. Sunnybrook Poultry Farms. C. G. Burroughs, Prop., Hillsdale, Mich.

**Buff** Leghorns, cockerels, and eggs, also a choice pen of Rhode Island Reds and eggs. Dr. William A. Smith, Petersburg, Mich.

**Buff** Orpingtons—Seventeen years. Best exhibition egg producing strain. Eggs or Baby Chicks. Circular free. WILL SCHADT, Goshen, Indiana.

**BRED-TO-LAY** S. C. W. Leghorns and Barred Rocks. Eggs, \$1.25 for 15, \$2 for 26, \$3.50 for 50. ALPINE POULTRY FARM, R. 2, Grand Rapids, Mich.

**Chicks**, for spring delivery, free booklet. FREEPORT HATCHERY, Box 12, Freeport, Mich.

**Cockerels**—From Chicago Coliseum winning stock. \$3 & up. "Ringlet" & Buff Rocks, both combs Red, 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 108 \$7.50. Crescent Egg Company, Allegan, Mich.

**Chicks and eggs**, standard bred stock, Leghorns, Minorcas, Spanish, Rocks, Reds, Orpingtons, Wyandottes, Campines, Houans, Polish, Scotch Greys. Tyrone Poultry Farm, Fenton, Mich.

## DAY-OLD CHICKS

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 catalogue free. GOSHEN POULTRY FARMS. R-19 Goshen, Indiana

## DAY OLD CHICKS

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. Hubers Reliable Hatchery, 333 W. Fremont St., Fostoria, O.

**EGGS** for hatching from free range farm flock of pure bred Dunston's Strain White Wyandottes bred pure 15 yrs. \$7.50 per hundred. VANO FARM, R. 1, Box 124, Hartford, Mich.



## Ferris White Leghorns

A real heavy laying strain, trapped 17 years, records from 200 to 264 eggs. Get our special summer prices on yearling hens, breeding males, eggs for hatching, 8-week-old pullets and day old chicks. We ship C. O. D. and guarantee results. Catalog gives prices; describes stock; tells all about our farm and methods; results you can get by breeding this strain. Send for your copy now—it is free. GEORGE D. FERRIS 924 Union, Grand Rapids, Mich.

**Chicks that Live \$13 per 100** S. C. W. Leghorns MY SPECIALTY Send for catalog. SNOWFLAKE POULTRY FARM, R. 1, Grand Rapids, Mich.

**Fowlers Buff Rocks** Booking orders now at a \$2 for 15; \$4 for 30; \$5.50 for 50; \$8.00 for 100. R. B. FOWLER, Hartford, Mich.

**FOR** Sale thoroughbred Barred Rock eggs for hatching, 200 egg strain trap nested stock. \$1.50 per 15. H. B. PROCTOR, Grand Haven, Mich.

## IMPROVE YOUR POULTRY

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 APPELDORN, R. 7, Holland, Mich.

## Hooverizing the Poultry Diet

By EARL W. GAGE

WE have been forced to follow the Hoover plan in the poultry pen. Excessive costs for food stuffs used in the poultry pen have meant that something must be substituted as an egg mash and laying scratch food. Long ago the Canadian food controller prohibited the use of wheat for any purpose save as a human food, and it is just a question of time when this will be the case in the United States. The wise poultry-keeper will prepare for the change now, so that by making experiments with various foods, he will be in a position to mix a judicious and economical food when the time comes.

## Wheat By-products.

Commercial mixtures have been made up of wheat screenings for some time because the government will not permit millers to use first or second-class wheat in poultry foods. I believe that poultrymen who have had practical experience in feeding hens will agree with me that the mixture without wheat will not greatly endanger the profit side of the ledger. For several months it has ravaged my profit ledger because of the excessive

equal parts, by volume of wheat bran and wheat middlings was kept before the hens. Each morning and evening a crumble mash of wheat middlings and water was fed in sufficient quantity to thoroughly satisfy the fowls. The table scraps of the family and the egg shells were also fed. No whole grain of any kind was used, owing to the difficulty in securing it. These hens layed far higher percentage for the flock than the same number of fowls did on the pre-war ration. Canadian poultry-keepers have evolved new rations for their flocks which have meant that egg production is more profitable, and that they will not easily slide back into the former expensive rations.

## A Balanced Ration.

The Holmhurst Farm method of feeding gives good results because the food is balanced. In one hundred pounds of the mash there are the following constituents: Protein, seventeen per cent, (the important element in food that furnishes the hen albumen to make the whites of eggs); starch, sixty-three per cent; fat, 4.7 per cent. Any ration that contains fifteen per

using. Then you know the fowls are receiving a balanced ration, and one that will make eggs and not fat, or one that will grow healthy, vigorous chicks and not runts.

Ground oats, corn meal and wheat shorts are three foods fowls and chicks are fond of and will prosper on when fed. Wheat bran mixed with some of the meal is well liked. Beef scraps, cowpeas or velvet bean meals and fish meal are preferred by all ages of poultry.

## Make Changes Gradually.

It should not be overlooked in making any changes in the rations of the flock, such as from whole grain to the mash ration, that it should be done gradually. At first add ten per cent of the new mash to the old and feed this mixture for a few days; then add twenty-five per cent of the new mash, and continue to feed several days; then mix the new and old mashes in equal parts, and finally have the mash seventy-five per cent of the old before it is used alone. This will insure the internal organs not becoming deranged, and maintain the hen's appetite, for nothing will spoil the appetite like a change of rations too quickly, which means stopping the egg yield, a partial or complete molting of feathers.

## A PROFITABLE COMBINATION.

A young fellow came to a New England town, off the railroad and over one hundred miles from Boston, to recover his health. Taking up poultry-keeping he evolved a management system which put most emphasis on the production and sale of day-old chicks to district farmers and the purchase of extensive pullets and old fowl, the latter being sold at a reasonable profit to Massachusetts markets. The young fellow did so well, was able to tell his story so succinctly, that he became a popular speaker at farmers' institutes, and recently he was appointed a deputy commissioner of agriculture for his state.

The combination on which this young fellow rode to success has proved a money-maker in a number of other instances. The farmer keeps poultry the year-round, but not a large flock usually. His products are not principally eggs, but day-old chicks and live and dressed poultry.

## A Two-profit Business.

As it worked out with the young man first mentioned, he really sold twice at a profit hundreds of birds. The first time it was a chick. For day-olds he had a scale of prices which in ordinary years ranged from fifteen cents each early in the season—he started his incubators in January—to eight cents each in early summer. He sold these chicks by the thousands to farmers and village people in his territory. In the fall a very considerable percentage he bought back, making a second good profit as he sold them to Boston. His capital was nimble and he made quick profits. Money in hatching eggs was turned over once a month. Money in live poultry was often turned over in less than a fortnight.

In summer this man did a big retail trade in dressed poultry with lake cottagers.

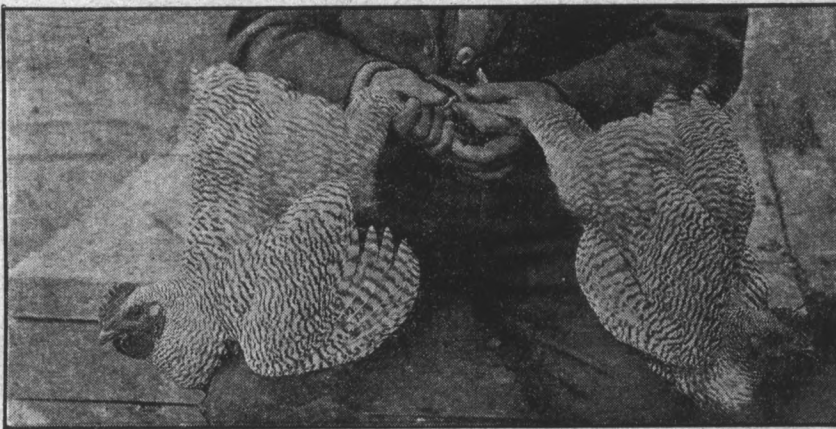
There are thousands of localities where the same sort of a business can be established. It is a winner for the man with push and ability.

New Hamp.

J. T. BARRETT.

## RAISE MORE TURKEYS.

In the present campaign of the United States Department of Agriculture to increase the production of poultry upon the farm, the turkey raiser is particularly well able to respond. The turkey is a farm bird, first and last, and is especially suited to the grain and stock farms where there is ample ranging ground abounding in such turkey food as grasshoppers and other insects, weed seeds, waste grain, such as



The Pride of the Flock.

price I have been forced to pay for it—not less than \$3.60.

Clean wheat screenings costs much less and is a very good substitute, yet it is preferable to feed the bran and middlings or low-grade flour of good wheat in the mash, and to substitute other sound grain for wheat in the scratching food. The popular system of feeding hens "to make them lay" is to keep a dry mixture of ground grains and animal food before them, and each morning and evening to feed a mixture of whole or coarsely cracked grain in a deep litter—I have the litter of wheat straw about a foot in depth; this insures proper exercise the first thing in the morning, and the song of the pullets soon results in eggs. Under this system, the composition of the dry, ground-grain mixture, known as the egg mash, is exceedingly important. Anything to make them work is the slogan, as regards scratching grain. I have used, even when feed was normal in price and abundant in quantity, finely ground oats, which were the size of small seeds, because it was conducive to work and exercise, and was very economical. This is a good war-time suggestion. A pint of finely ground oats scattered over a foot of straw will keep a large flock busy for several hours, while they get the substance of their laying food in the mash. This mash furnishes the egg food, while the scratching mixture of fine and coarse grains gives the hen's internal organs natural grinding to do and keeps the muscles of her body in a healthy condition.

## A Canadian Method.

One easy way to feed hens and pullets to make eggs was practiced last winter by the Holmhurst Poultry Farm in Canada. Two wheat products, bran and middlings, were all the one hundred hens received. A dry mash of

cent protein will produce a good egg yield. It is, therefore, easy to understand why this perfectly simple ration, with two per cent excess protein, gave such good results.

## A Mashless Ration.

There are some poultrymen in the United States who are experiencing equally as good results on whole grain, using no mash. While this system is opposite to the successful Canadian feeding system, yet it gets as good results, producing a similarly high egg yield. The whole grain ration fed with great success on one farm in simply equal parts by weight of corn, oats and cowpeas. The analysis shows protein, 15.5 per cent; starch, sixty-seven per cent; fat, 3.6 per cent. The hens received liberal feeds of this mixture daily scattered over their litter. Ground oyster shells are supplied in addition.

Generally speaking, it will be best for the farmer to use the mash method, because it is easier to mix at home, and the ingredients are easier to secure. Such a mixture would be as follows: Corn meal, 250 pounds; ground oats, 200 pounds; wheat middlings, 200 pounds; wheat bran, 200 pounds; high-grade meat scraps, 100 pounds; alfalfa meal, fifty pounds; fine table salt, five pounds. This will make a total of 1,005 pounds, so that it may be divided by five or ten, according to the size of the flock.

The mash above mentioned contains a percentage of 18.4 protein, and is an excellent laying mash and will be found suitable for developing chicks. This mixture, which has been proven satisfactory, and is economical, shows how easy it is to mix a home-made mash, which supplies the pullet with the elements so necessary to conduct profitable egg production. It pays to mix poultry foods according to the chemical composition of the foods you are



is left in the fields after harvest, and nuts, of such varieties as beechnuts, chestnuts, pecans, pine nuts and acorns. On such a farm, the present prices of grain affect the turkey raiser but little, for with the exception of what is used at fattening time, the feed consumed is largely of such a kind as would otherwise be wasted.

With but little additional outlay to the farmer, many more turkeys could and should be raised. The small number of turkeys per farm in the United States is surprising. According to the census of 1910, which is the latest census that has been taken, only 13.7 per cent of the total number of farms reported any turkeys at all and on these farms reporting turkeys, an average of but slightly over four breeding turkeys was found per farm. There are some farms which, by the nature of the crops grown on them, or because of unfavorable surroundings, are not adapted

to turkey raising, but most farms are adapted to turkey raising and could easily handle a breeding flock of from ten to fifteen hen turkeys and a tom, raising from seventy-five to one hundred and fifty turkeys each year at a good profit.

Good prices were paid to the turkey raiser during the past marketing season. On December 15, 1917, the average price per pound live weight, paid to the farmer was 30.5 cents in New York state; 23.7 cents in Illinois; 25.0 cents in Georgia; 19.3 cents in Texas, and 27.1 cents in California. The average price throughout the United States was 23 cents.

Farmers' Bulletin No. 791, "Turkey Raising," describes the most successful methods of breeding, feeding, and management. This bulletin may be obtained free upon application to the United States Department of Agriculture, Washington, D. C.



Utility Pure-breds Make Poultry Keeping Profitable.

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#### POULTRY QUERY DEPARTMENT.

##### The Amount of Feed.

How much feed does a laying hen require per day? In our issue of January 19 someone gave directions for making a mash and feeding at the rate of two ounces per day to each hen. Also two ounces of grain, making four ounces in all. Will the amount be sufficient for one day? I have a flock of fifty, with two male birds. I feed them per day: Ten quarts of oats, four quarts of wheat, two quarts of barley, all the boiled potatoes they will eat, about three quarts of scrapings, and chop. Am I feeding too much or not enough? They are hardly paying for their feed.

Sanilac Co.

E. K.

It is really very difficult to tell just how much to feed hens, as it depends upon whether they are out of doors or cooped up, and also upon the amount of exercise they get. A very safe rule to follow, and one which is followed by practically all of the successful poultrymen, is to feed enough scratch feed in deep litter to keep the chickens quite busy during the morning. At noon, if one is accustomed to feeding a wet mash, no more should be given than what would be cleaned up in a half hour. Besides a hopper with a dry mash of equal parts of bran, corn and oats to which has been added about ten per cent of beef scraps should be made available to them. The main object in feeding chickens is to keep them anxious enough for food during the day that they will labor to get it, but still to have so fed them

sible, feed them some skim-milk and green foods, such as cabbage or sprouted oats.

Also, it is preferable to give the hens commercial beef scraps rather than scraps from the table or from the butcher, as butcher's scraps are often too fat for best results.

#### EGG-EATING HABIT.

I notice in the issue of March 16 that Mr. R. C. has trouble with hens eating their eggs.

This, I believe, will help the trouble. Blow the contents from several egg shells and fill them with plaster Paris, or pulp plaster. Fill a dozen or two—they will set hard in a few hours. Put these in the nests and around on the floor. If they know the guilty ones, filing the beak is good, but the axe is better, but if they will use plenty of the pulp plaster eggs their troubles will end.

I have had no trouble this winter but had several years ago, and I cured them, and I use some of the pulp plaster eggs all the time.

Clare Co.

J. N.

#### BREED FROM THE BEST HENS.

No flock of hens is so good but that there are certain individuals which are far superior to certain others. Neither is there a flock of hens that is so small but that it will pay to select a few of the best for breeders. Only a small breeding flock is necessary on many farms, since fifteen hens will lay during the breeding season of two and a half months from 400 to 500 eggs. If each year the best are selected as breeders, remarkable progress can be made in just a few seasons, toward producing a strain of vigorous, large-bodied, late-moulting, high-producing hens. It also means keeping fewer male birds, which at four to five cents a bird per week for feed is a considerable saving.

Grain for chickens should be clean and free from mold. Moldy grain will often cause death or result in any one of several diseases common to the digestive tract. Birds affected become weak and inactive and often manifest an intense thirst. Such an individual may be given a teaspoonful of Epsom salts and if recovery is not rapid it should be killed.

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Double Fibre Board Case, Copper Tank, Nursery Self Regulated, With \$5.25 Hot Water 140-Chick Brooder—both only \$12.95.

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**Tells why chicks die**

E. J. Reefer, the poultry expert, 239 Reefer Bldg., Kansas City, Mo., is giving away free a valuable book entitled, "White Diarrhoea and How to Cure it." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises \$3 per cent. of every hatch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books. Advertisement

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John's Big beautiful hen hatched Barred Rock good. Layers 30 eggs \$3, 150 \$8, hatch guaranteed. Prepaid by mail. Photos circulars. John Northing, Clare, Mich.

**LAYBILT** S. O. W. Leghorns large, great layers, pure white, Selected Hatching Eggs, Strong Day-Old Chicks. Everfresh Egg Farm, Ionia, Mich.

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**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 a 10lb cock bird. A few more P. C. fall pigs. R. W. MILLS, Saline, Mich.

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

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**Percheron** Stallions and mares of reasonable prices; inspection invited. F. L. KING & SON, Charlotte, Mich.

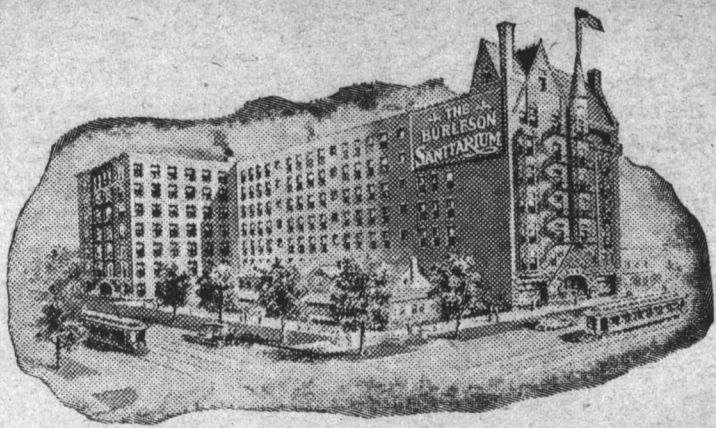
**For Sale** 1 registered 4 year old Clydesdale mare also a 3 yr. old Reg. Clydesdale Stallion. D. T. KNIGHT, R. 1, Marlette, Mich.

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**Additional Stock Ads. on Pages 476, 477, 478**



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American Guernsey Cattle Club  
Box 1 Peterboro, N. H.

**Cloverly Angus** Good quality bulls of serviceable age and younger. Inspection invited. Geo. Hathaway and Son, Ovid, Mich.

### Registered Guernseys

A fine 3 year old heifer and her heifer calf—right in every way \$350. F. O. B. your town. J. M. WILLIAMS, North Adams Mich.

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

**Guernseys** For Sale, animals of both sexes from A. R. cows, Prices reasonable. Geo. N. Crawford, Holton, Mich.

**Guernseys** 45 Registered head, all th. tested. Nora's May King, son of Imp. May Rose King, heads our herd, 19 of his half sisters sold averaging \$1850 each. His bull calves are booked ahead at reasonable prices. Avondale Stock Farm, Wayne, Mich.

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

**For Sale** Registered Guernsey bull calves May Rose breeding. JOHN EBELS, R. 2, Holland, Mich.

**For Sale** Guernsey bull calves from advanced registered dams ranging in age from 3 to 8 months. L. J. BYERS, Coldwater, Mich.

**For Guernsey** bulls of the best blood lines. Write WALLACE BROS., Bay Shore, Mich.

## CLUNY STOCK FARM

**100--REGISTERED HOLSTEINS--100**  
When you need a herd sire remember that we have one of the best herds in Michigan, kept under strict sanitary conditions. Every individual over 6 mos. old regularly tuberculin tested. We have size, quality, and production records backed by the best strains of breeding. Write us your wants.

R. BRUCE McPHERSON, Howell, Mich.

**A Good Note** accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach of all. Write, GEO. D. OLARKE, Vassar, Mich.

**Parham's** Pedigree Stock Farm offers Reg. Holstein cattle, Chester White Swine, extra bargains in calves and fall pigs. Bulls half price. R. B. PARHAM, Bronson, Mich.

## A Few Fine Bulls For Sale

Bigelows Holstein Farms, Breedsville, Mich.

## I Always Have Holsteins To Sell

If wanting Registered cattle write me your wants before placing your order elsewhere.

L. E. CONNELL, Fayette, Ohio

**OAK Leaf Farm.** Herd sire Lenawee Pontiac Galamity 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 82.51—315 days milk 23782.3, butter 926.775. E. H. GEARHART & SON, R. 4, Marcellus, Mich.

**3--HOLSTEIN BULLS--3**  
Ready for service at Long Beach Farm, Augusta, Mich.

## Grange.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

### INCREASING GRANGE MEMBERSHIP.

State Master Ketcham has a splendid vision of the power of the Grange which might result from increased membership to a degree that is entirely possible if each local Grange would but do its part. It is our purpose at this time to try to create new interest in this scheme and in some degree to point the way to its consummation. It must be admitted that the Grange needs a revival. In some counties it is very strong, in others it is fairly so with exceptionally weak organizations and a few dead ones, while there are whole counties where the organization is inactive and its purposes and possibilities are well nigh forgotten. There are abundant causes for these conditions, causes which affect rural activities of practically every nature. The Grange is no worse off than the country church. Every farm organization of whatever sort or for whatever purpose it may presume to exist is limited in the performance of its work because farmers are busier than ever before, because the young people have gone to town and the average age of those who remain in the country is increasing and because labor conditions are rapidly growing worse and there seems no way in sight by which to improve them.

Looking at the subject from another angle, it would seem that the need of organization was never so great before. The task before the Granges of Michigan was never so important, nor the possibilities of its accomplishment so splendid as they are right now, if we could but see and appreciate it. In spite of all the obstacles in our way we people in the country are getting closer together. The writer was in a cooperative store recently that has distributed \$55,000 worth of goods during the past year at a cost of eight per cent. Other cooperative enterprises in the state have done business in even larger amounts and with equal efficiency. These things would have been impossible just a few years ago. They are possible today, not alone because of the enthusiasm for organization and business cooperation, but because the business insight and ability of the average man in the country is increasing. Men and women on the land are stronger today in intellectual power and far more capable of doing things that are worth while, than they were in the yesterday. While this fact cannot be attributed to any one cause, still it has come about very largely because farmers and their families in most of the counties of the state have been meeting twice each month in their local Granges and discussing in turn most of the questions that touch their lives in a practical way.

In the past a large percentage of cooperative efforts were failures because people did not cooperate. They failed to cooperate because their minds had not met in a common purpose. Minds could not meet without intelligent discussion. Discussion was impossible without an opportunity and this the Grange furnished in an ample and helpful way.

I cannot understand how any intelligent farmer can stay outside of the Grange. In every rural community we need just such an organization. A mere club without responsibility to any larger unit will not answer the purpose.

(To be continued.)

Conservation, concentration and consecration—for the sake of those at the front.

## Farmers' Clubs

### CLUB DISCUSSIONS.

The Starville Farmers' Club held one of the best meetings in its history, at the home of Mr. and Mrs. E. B. Hill, in Cottrellville township, St. Clair county. By noon about forty guests had assembled, many coming several miles in spite of the extremely muddy roads. The typical war dinner served at noon showed that the people were strictly observing the food conservation program, and the spirit in which this was done seemed to add to the joy of the occasion. County Agent Brody discussed the war situation in its relation to agriculture, emphasizing particularly the enormous need of going to still greater lengths in saving wheat so that at least 75,000,000 bushels more might be furnished our allies out of last year's crop. He also took up the matter of a yearly program for the community, and outlined the methods with a view to making county agent work more effective and in accordance with a plan adopted by leaders of the community. Rev. John Lewin, of Marine City, followed with a very able address on current topics, and urged the people to brace themselves for the extreme test which everyone must experience in connection with the war. He also complimented the Club on the action it had taken to improve conditions in that part of the county and develop a richer and fuller rural life. The many excellent features of this meeting, especially the splendid numbers furnished by local people, made it one of the most profitable sessions of the winter, and the plans outlined for further work will exert a very helpful influence for years to come.

The Union Farmers' Club held its March meeting at the spacious home of Albert Cammis in Mussey township. In spite of bad roads about seventy farmers gathered for social and educational purposes. Before dinner was served the members joined in singing a number of familiar songs. Shortly after noon they adjourned to the basement where long tables were loaded with all things intended to please the eye and tickle the palate. The dining-room and tables were tastefully decorated with red and white in honor of the Red Cross, as the proceeds from this dinner is to be given over to that organization. Each one responded generously, and a total of \$15.40 will be given to the Red Cross. After dinner the program was opened by singing "America," followed by an invocation by Rev. Fisher. After the reading of the minutes of the last meeting by the secretary, Mrs. Bade, the Club listened to an interesting talk on "Training the Child for Democracy," by Mrs. C. L. Brody. Owing to the lateness of the hour a number of musical selections, both vocal and instrumental, were omitted until the next Club meeting. County Agriculturist Brody met with the Club, and having just attended the conferences held at Lansing where he came into contact with people close to the heart of affairs at Washington, he was able to present some interesting and startling facts regarding various phases of the war situation. He discussed the question of the price fixing of such articles as wheat, meat, and sugar, and told of the terrible outrages perpetrated by the Germans, the truth of which we cannot doubt. He said in part: "I have never been able to believe that the farmer is a slacker. If he has seemed to be indifferent in the matter of producing crops, it is because he does not know the conditions as they exist. Since December, England and France have not had more than three days' rations of food at any one time." At the close of his talk one farmer arose and said: "I am sure none of us realized that conditions were so terrible. I have been thinking of plowing up my wheat field—the crop looks poor, and wheat as the price stands now is not a paying investment, and I do not see how some of these things can be just, but if my country and our allies need wheat that badly, I shall certainly raise every kernel possible." A number of lively remarks followed. At the request of the Club, the chairman appointed a committee to draft resolutions to the effect that they were thoroughly convinced that a great majority of farmers throughout the country do not understand the urgent need of raising wheat, and that the Food Administration should do all in its power to get this information before the farmers as well as to adjust the price of wheat in relation to other grains as far as possible. Club was extended an invitation to meet in April at the home of Mr. and Mrs. Albert Cade.



## Veterinary.

CONDUCTED BY W. C. FAIR, V. S.

**Peculiar Habit.**—I have a cow that has a bad habit of forcing her head through wire fence, and as I do not care to beef her, would like to know how I can prevent her becoming tangled in fence. She has been dehorned. F. T., Vermontville, Mich.—I know of no mechanical appliance that will prevent her putting her head through wire fence which has large openings. Why not let her run in lot that is properly fenced. She should run in good pasture.

**Cow Leaks Milk.**—I have a valuable cow that freshened January 5 that leaks milk badly, unless she is milked three times a day. Could you give me a harmless remedy for this ailment? F. E. M., Waltz, Mich.—The most humane treatment is to milk her three times a day until her milk flow lessens, then perhaps twice daily will be often enough. By making her wear teat plugs between milkings this will prevent the milk leaking, but there is great danger of udder infection, which might ruin her. Better milk her as often as necessary, for it pays to do it.

**Barren Fed Sow.**—Have fed my sow corn all winter, but she has not yet come in heat. I am anxious to breed her. W. N. W., Roscommon, Mich.—Give her 10 drops of fluid extract of nux vomica and 20 drops of fluid extract capsicum at a dose in feed three times a day.


**Injured Teat.**—Have a cow that got one teat stepped on by another cow, since then have had to use a milking tube when I milk her. She must suffer some pain, for she has poor appetite. The bag is not now much swollen. What can I give her to build her up again? N. G., Odessa, Mich.—Apply one part fluid extract of belladonna and four parts of camphorated oil to teat twice a day. Feed her plenty of grain and she will soon build up. If her appetite requires stimulating, give her 1 oz. of tincture gentian, also 1 oz. of tincture cinchona at a dose in one pint of water as a drench three times a day.

**Pica.**—Will you tell me why my cattle are all so fond of chewing wood? Have dissolved lime in their drinking water but this fails to help them. F. T., Clare, Mich.—The cause of pica is not known. In some outbreaks I have known it to be caused by feeding spoiled forage. Treatment is as follows: If taken early and before pronounced symptoms of emaciation has set in, a change of feed is about all that is necessary. Plenty of fresh air and feeding a balanced ration will generally help such cattle as yours. Give each cow three tablespoonfuls of powdered wood charcoal and 1 oz. of ground gentian at a dose in each feed.

**Abscess.**—Several of my cattle are troubled with boils on jaw. These bunches fill with matter and a sort of core seems to slough out when bunch is opened. Do you consider their milk fit for food? W. C. H., Turner, Mich.—I do not consider their milk fit for domestic use. Paint bunches with tincture iodine and occasionally swab out the inner wall of abscess with the same. Give each full grown animal 1 dr. of potassium iodide and 2 drs. of Fowler's solution of arsenic at a dose in feed or drinking water three times a day until they get well.

**Loss of Appetite.**—My cow freshened four weeks ago; thrived and milked well for one week, then she appeared to lose her appetite, shrink in milk yield, bowels became constipated and finally she refused to eat nearly every kind of food offered her. D. T. T., Salem, Mich.—Give your cow one pound of epsom salts, ½ oz. tincture ginger in three pints of tepid water as a drench if you believe it necessary to open her bowels. Flush out rectum with two gallons of tepid soap and water every day until her bowels move fairly free. Give her 1 dr. of fluid extract of nux vomica, 1 oz. tincture of gentian and 1 oz. of tincture cinchona at a dose in one quart of water as a drench three times a day. Feed her whatever kind of food she craves. She should have some walking exercise two or three times a day.

**Forage Poisoning.**—Last week I lost two calves which did not appear to show any symptoms of disease or pain, but gradually grew weak and became paralytic and finally died. What could have been done for them? Mrs. M. R., Twining, Mich.—You do not give sufficient history and symptoms of their ailment for me to arrive at a very correct diagnosis; however, I am inclined to believe that they died the result of forage poisoning or from the effects of bad water, or lack of care. When writing again please state age of animal and how they have been fed.



### Dr. LeGear's Stock Powders

**Are your stock in prime condition?**

Spring work is on! Thousands of farmers have proved that stock do better and pay better when given Dr. LeGear's Stock Powders. A splendid spring tonic for all animals—expelling the worms, purifying the blood, regulating the bowels and toning up the whole digestive system.

All breeding animals should get this tonic. It gives them the extra vitality needed to stand the heavy drain on their systems and increases the milk flow—the result is stronger, bigger colts, calves, pigs and lambs. My own prescription from 26 years' veterinary experience. Try it at my risk.

**Dr. LeGear's Poultry Powder** strengthens fertility, enlarges the hatch and saves the chicks from disease. Results guaranteed. 40,000 dealers sell my Remedies. Get them from your dealer. Also ask him or write me for my 112-page Stock and Poultry Book free.

Dr. L. D. LeGear Medicine Co., 712 Howard St., St. Louis, Mo.

**My positive guarantee**  
See your dealer today. Get a package of any of my Remedies. Test them thoroughly. If you're not satisfied, I have authorized my dealer to refund your money.

Dr. L. D. LeGear, V.S.

### CATTLE

## "Top-Notch" HOLSTEINS

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

McPherson Farms Co., Howell, Mich.

### One Pure Bred HOLSTEIN Equals 3 Ordinary Cows

Why feed three cows when you need feed only one? Look at these figures.

All Holstein Tested semi-officially average **7000** All Cows in the U. S. average **1823**

quarts of milk and 504 lbs. of fat a year. 166 lbs. of fat a year. Purebred Holstein cows have given as high as 15,000 quarts of milk and 1,500 pounds of butter in a year.

You can make more money with Purebred Holsteins. Write for free information. The Holstein-Friesian Association of America, Box 164, Brattleboro, Vt.

## PUBLIC AUCTION Saturday, April 13

At Mapledale Stock Farm, EDWARDSBURG, MICH.

### 30 D. S. Polled Durhams 12 Bulls, 18 Females

Write for Catalogue

Elmer Westfall, Edwardsburg, Mich.

## The Traverse Herd Great Values in Bulls

from A. R. O. Cows with records up to 80 lbs. Let us know your wants. We will send extended pedigrees and prices.

TRAVERSE CITY STATE HOSPITAL, Traverse City, Michigan.

## Stonyhurst Stock Farm

Bull born April 10th 1917. Dam a 13 lb. Junior 2 yr. dam of Mapcrest Korndyke. Hengerveld whose dam and granddam both have yearly records of over 130 lbs. butter. Sire is King One whose dam has yearly record of 1345 lbs. and her dam a yearly record at 12 years of over 1100 lbs. Bull is ¾ white and as straight as a string. Priced cheap for immediate sale. Other good ones from \$75 up.

F. A. BARNETT & SONS, Rochester, Mich.

Holstein bull, nearly ready for service, large straight deep-bodied, handsomely marked ¾ white. His six nearest dams have A. R. O. records that average butter 7 days 24.13 milk 534 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 Pieterje.

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 collier 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 Korn, 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 15-18ths 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 lbs. cows. Priced to sell.

J. E. TIBBELL & SON, Charlotte, Mich.

## HEREFORDS

10 bull calves for sale, Perfection Fairfax and Prince Donald breeding.

ALLEN BROS., PAW PAW, MICH.

Herefords Bob Fairfax 49427 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.

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 2 yr. produced 48.24 lbs. of butter 1 yr. First check \$30.00 gets him, registered, transferred and delivered any point in Mich.

FRED BRENNAN Sec., Capac, Mich.

Choice Bulls ready for service. Also heifers for sale. Strong in the blood 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.



**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

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.

**Little Farmstead Jersey Cattle.** Several heifers bred like freshen next fall. Also a few heifer and bull calves of choice breeding. Colon C. Little, 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. KNAFF, Howell, Michigan.

## BIDWELL SHORTHORNS

Registered bulls, cows and heifers—Good Scotch and Scotch-Topped for sale. In prime condition. Modern sanitary equipment. Farm 10 minutes from N. Y. C. depot, 1 hour from Toledo, Ohio. Automobile meets all trains. Write

**BIDWELL STOCK FARM,** Box B, Tecumseh, Mich.

**Shorthorns**—Dairy or beef bred. Breeding stock all ages for sale at farmers prices. C. W. Oram, Secy. Cent. Mich. Shorthorn Breeders' Assn., 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.

C. 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.  
P. P. POPE, Mt. Pleasant, Mich.

## Fair Lawns Shorthorns

Yearling bulls by Canada's best sires: Missie Augusta 635778 and Imp. Newton Frier 523120.  
LAURENCE P. OTTO, Charlotte, Mich.

**Shorthorns.** Registered heifers & cows heavy yearling bulls in calf to Master Sultan; few young or females; farmers prices; milking strain.  
HARRINGTON FARMS, Hart, Mich.

**Bates Shorthorns** 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 Sr. Champion, in service. For good bulls, cows, and heifers. W. B. McQuillan, Howell, Mich.

**Shorthorns** Maxwilton Monarch 2nd. 387322 half brother to 5 Grand Champions in service. JOHN SCHMIDT, R. 5, Reed City, Mich.

**SON of Harthorth Welfare** heads our herd of milk-Sing Shorthorns comprising Chiffley of Clay bred cows, young bulls ready for sale and service. Write us Liddel Bros., R. 2, Clinton, Mich., Macon Phone.

**Grand Traverse Shorthorn Assn.** 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 \$100. S. E. BOOTH, Morris, Mich.

**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, Danville, Mich.

**SHORTHORNS**—20 bulls 2 to 18 mos., mostly from Dorothy's Sultan 463045, a grandson of Whitehall Sultan, also a few cows. C. Carlson, LeRoy, Mich.

**Shorthorn registered bulls** Roan 6 mo. old \$75. One pure white 4 mo. old \$75. One Roan 22 mo. old \$200. W. W. SARGENT & SON, R. 3, Linden, Mich.

**Scotch Shorthorns** for sale, 5 bulls ready for service. John Lessiter's Sons, Orion, Mich., R. F. D.

**Red Polls** One yearling bull. Also bull calves by Lincoln Lad 2nd. For prices and description, write Wells Parish & Sons, R. 3, West Olive, Mich.

**Reg.** Red Polled calves of box sex for sale. For description and prices, write WILL COTTLE, R. 1, West Branch, Mich.

**Polled Durham Cattle** 9 yearling bulls for sale. J. A. DeGarmo, Muir, Mich.

**Red Polled Cattle** best of breeding, Yorkshire pigs. E. S. Carr, Homer, Mich.

**Cattle For Sale** Loads feeders and two loads yearling steers. Also can show you any number 1, 2 and 3 yearling steers 600 to 1200 lbs. Isaac Shanstam, Fairfield, Iowa, R-8

**HOGS.** Durocs Orion Chief Perfection No. 68945, and Jennings Pilot Wonder No. 7373. Two outstanding hogs 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.

Additional Stock Ads. on Page 479



# Markets.

## GRAINS AND SEEDS

April 2, 1918.

**WHEAT.**—Our field reports show that recent rains did much toward improving a poor stand. Farmers are not delivering much grain at present because they can work in the fields. Flour is in active demand, and millers are crying for supplies to keep up the flour output. One year ago No. 2 red wheat sold on the local market at \$2.09 per bushel. Present prices are:

No. 2 red.....\$2.17  
No. 2 white.....2.15  
No. 2 mixed.....2.15

**CORN.**—Our latest reports from Chicago and elsewhere show that warm weather is rendering large quantities of corn unfit for either human or animal food. The demand has declined, except for the better grades. Representatives of the Allied nations were not active buyers at the opening this week. Our Michigan farmers who buy feed feel more hopeful, as the indications are they will be able to put their stock on pasture at an earlier date than usual. One year ago the price paid on the local market for No. 3 corn was \$1.29 per bushel. Present prices at Detroit for cash corn are:

No. 3 corn.....\$1.65  
No. 3 yellow.....1.75  
No. 4 yellow.....1.55  
No. 5 yellow.....1.35  
No. 6 yellow.....1.25

The latest quotations by wire from Chicago are No. 2 yellow \$1.75@1.80; No. 3 yellow \$1.50@1.60; No. 4 yellow \$1.40@1.50

**OATS.**—Advices from different markets agree that the slump in oat values the past week was due to the sudden cutting off of foreign demand, on account of inability to secure ships. New crop is now coming up nicely in the Ohio valley, and seeding is progressing rapidly farther to the north, even in Michigan. Standard oats a year ago sold at 71c per bushel. Present Detroit prices for cash oats are:

Standard.....94½  
No. 3 white.....94  
No. 4 white.....93

**RYE.**—Our reports indicate a light supply of this grain. Values have advanced the past week. Present prices for cash No. 2 are:

Detroit.....\$2.85  
Chicago.....2.87

**BEANS.**—We note in the local market—and our informants tell us the same of other markets—that an easy feeling is prevailing in the bean trade, due to a slow demand. Cash beans are quoted at Detroit at \$11.75 per cwt. At Chicago \$13@13.25 for Michigan hand-picked fancy stock; fancy red kidneys \$14; fair to choice \$11@12. New York market is also easy. The basis for buying at Greenville our correspondent reports, is \$10.

**SEEDS.**—This trade is quiet and a little lower, with prices as follows:

Prime red clover.....\$20.00  
Alsike.....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.....\$11.00  
Spring patent.....11.30  
Rye flour.....14.00

**FEEDS.**—A wire from the Food Administration would indicate that the maximum price for bran should be \$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.

**Other Feed Prices.**—In 100-pound sacks jobbing lots:

Cracked corn.....\$76.00  
Coarse corn meal.....75.00  
Chopped Feed.....56.00

**HAY.**—Hay receipts are increasing. Prices in carlots at Detroit are:

No. 1 timothy.....\$25.50@26  
Standard timothy.....24.50@25  
Light mixed.....24.50@25  
No. 2 timothy.....23.50@24  
No. 1 clover.....22.50@23

Pittsburgh.—Our correspondent advises us that all grades of hay are coming forward freely; market lower. The better grades are holding up well while low-grade stock is hard to place.

No. 1 timothy...\$30.00@30.50  
No. 2 timothy...27.00@28.00  
No. 3 timothy...23.00@25.00  
No. 1 light mxd...27.50@28.50  
No. 1 clover mxd...28.00@29.00

## DAIRY PRODUCTS

**BUTTER.**—There is active trading at higher prices.

Fresh creamery firsts.....40  
Fresh creamery extras.....41½  
Chicago.—Business shows improvement at better prices.

Creamery extras.....41½  
Extra firsts.....40½@41  
Packing stock.....30@31

**CHEESE.**—Michigan flats 24@24½c; brick 28c; Michigan daisies 26c; domestic Swiss 36@42c; limburger 30½@32c per pound.

**DRESSED CALVES.**—Fancy at 21@22c; choice 20c; common 19c.

**DRESSED HOGS.**—Best 20@21c per pound.

## POULTRY PRODUCTS

**POULTRY.**—(Live).—Demand is improved and trading continues firm.

Spring chickens.....34@35  
Old roosters.....24  
Ducks.....34@35  
Fat geese.....34@35  
Turkeys.....34@35

Chicago.—(Live).—Receipts are light and buyers are anxious for supplies.

Fowls.....23@31  
Ducks.....31  
Geese.....31

**EGGS.**—Expected receipts have not shown up and prices are maintained. Fresh firsts 35@35½c.

Chicago.—Buyers now favor northern stock. Demand is growing with prices steady.

Fresh Mich. firsts...34¼@34½  
Ordinary firsts...33¾@33½  
Misc., (cases inc.)...33¾@33½

## FRUITS—VEGETABLES

(Quotations furnished by the U. S. Department of Agriculture, Bureau of Markets, Detroit, Office).

**POTATOES.**—The latest telegraphic communications show the potato markets within reach of Michigan producers to be in only a fair condition. The crop is not moving as it should, because it is difficult to secure cars in many instances. There were 35 cars on track at Detroit Tuesday morning. The following tabulation shows the condition of trade and the prices paid by jobbers for round whites, U. S. grade No. 1 at the various markets mentioned:

Detroit (weaker)...\$1.25@1.30  
Cleveland (steady)...1.40  
Buffalo (weaker)...1.65  
Pittsburgh (steady)...1.40@1.50  
Wash'n (weaker)...1.65@1.75  
New York (fair)...1.50@1.75  
Indianapolis (fair)...1.35@1.40  
Cincinnati (fair)...1.45  
Chicago (fair)...1.00@1.10

Our Greenville correspondent reports that 75@80c is being paid farmers per cwt. from wagons. In Wisconsin the growers are getting 60@75c, in New York state \$1.10@1.25, and in Maine \$1.21 per cwt.

**ONIONS.**—Market is slow. Michigan stock sold in 100-lb. sacks at Detroit Tuesday at \$1. Prices at other points are:

Cleveland......75  
Buffalo.....75@1.00  
New York.....75

## WOOL

Our communications show increased demand from wool users and a stronger tone to the trade. Prices have stiffened somewhat, with seaboard quotations for fleeces last week ranging from 58@85c per pound. More interest is being taken in producing sections. Farmers are looking for high prices this year, and should get them.

## DETROIT CITY MARKET

Our representative found a fair amount of business on the market on Tuesday morning. A few potatoes sold at 85c per bushel; apples ranged in price from \$1@2.50; cabbage, red \$1.25@1.50; white \$1@1.50 per bushel; onions 90c@1; carrots 40@50c; eggs 45c

## GRAND RAPIDS

The potato market continues very draggy with quotations at country loading points at 60@65c per cwt. as against 65@90c a week ago. The Greenville market is quoting at 75c. Carlot shipments from all sections, which have been considerably below the shipments from Maine, Wisconsin and Minnesota all along, are now more nearly on a par. Detroit is the leading consuming center for Michigan potatoes. Fresh eggs are quoted at 34@35c and buying for storage is beginning at these figures. The city market has reopened with light offerings of old vegetables and greenhouse stuff.

## LIVE STOCK

### BUFFALO.

April 1, 1918.

#### Cattle.

Receipts 3250. good grades steady; common 25c lower, best shipping steers \$13@13.75; fair to good \$12.75@13.25; plain and coarse \$11.75@12.50; native yearlings \$12.50@13; best handy steers \$11.50@12; fair to good kinds \$10.50@11.50; handy steers and heifers \$11@12; state heifers \$8.50@9.50; best fat cows \$10.50@11.50; butcher cows \$8.50@9.50; cutters \$6.50@7; canners \$5@6; grazing cows \$6.50@7.50; fancy bulls \$10.50@11; butcher bulls \$8.50@9.50; common bulls \$7@7.50; best feeders \$9@10; medium feeders \$8.50@9; light common \$7.75@8.50; stockers \$8@9; best milkers and springers \$10@15.00.

#### Hogs.

Receipts 13,000; market 15c lower; heavy \$17.75@18; yorkers \$18.25@18.50; pigs and lights \$17.75@18.

#### Sheep and Lambs.

Receipts 5000; market 25c higher; wool lambs \$20@20.50; clipped \$17@17.25; yearlings \$17@17.50; wethers \$15@15.50; ewes \$14@14.50. Calves \$7.50@19.75.

### CHICAGO.

April 1, 1918.

Our special representative at the Chicago Stock Yards reports:

#### Cattle.

Monday, this week.....19,000  
Last week, total.....66,288  
Preceding week, total.....82,160

Trade opens in an active manner today, with small offerings for Monday and a lively general demand, prices being anywhere from 10@20c higher, some choice heavy steers going at \$14.75@14.85. For a week past steers sold at \$10@14.65, not counting a few insignificant sales at \$9 and upward, with the bulk selling at \$12.25@14. Cattle at \$14 and over have classed as choice, with a good kind taken at \$13.60 and over, medium grade steers at \$13 and upward and fair light weight steers at \$12.25 and over, only inferior little steers selling at \$10 and under. Yearling steers have sold at \$10.25@14.15, and butchering cows and heifers went at \$7.30@11.50 for the former and \$8@12.25 for the latter, with cutters at \$6.80@7.25, canners at \$6.40@6.75 and bulls at \$7.50@10.75. Calves have been good sellers at \$15@16.50 for light vealers, with heavies selling down to \$7.25@14. Stockers and feeders are active sellers at \$8.50@12, few going anywhere near the top, and \$11.60 being usually an outside price. Much reduced receipts of cattle last week caused an average raise of 40c.

#### Hogs.

Monday, this week.....57,000  
Last week, total.....228,702  
Same wk, 1917, total.....144,037

Today's market was a lively one, the prices averaging 15c higher and most of the hogs bringing \$16@17.75. Pigs are bringing mostly \$13@16.75, feeding pigs going highest. Top hog prices are paid for light weights, with the prime weight hogs selling 50c below the top. The market last week was a weak one on the whole, with the best closing on Saturday at \$17.50, a decline of 50c from the high day.

#### Lambs.

Monday, this week.....12,000  
Last week, total.....57,204  
Same wk, 1917 total.....79,196

Lambs advanced 75c@1 last week under small offerings, the best landing at \$19.50, and the commonest kind bringing \$16. Today saw prime lambs bring \$19.60, with prospects of a further advance soon. Prime clipped lambs sold up to \$16.75.

## HAPPENINGS OF THE WEEK.

(Continued from page 450).

of hostilities.—President Wilson entrusts to five prominent government officials the responsibility of determining a national policy toward the big packing houses of the country.

Tuesday, April 2.

The French foil all attacks by the enemy before the town of Grivesnes. The Germans are massing troops for a drive on Amiens and are bringing up heavy artillery since the infantry is now unable to make gains against the Allied line. The British have captured additional territory near Moreuil. British are considering the withdrawal of troops from the Salonika front to aid in France.—Marine workers at the port of New York vote to strike unless their demands for an increase in pay are granted.—A bill to empower the President with authority to rearrange and coordinate executive departments of the government is before the senate.—The United States Senate votes for a day of prayer for the safety and welfare of our cause in the present war.

# One Million Dollars Saved

## In Comparison with Stock Insurance Rates

Michigan is one of the states that has a large and successful mutual automobile insurance company with over 28,000 members with 780 claims paid, and still has a surplus fund of about \$56,000.

The Company is well located in a small town and makes a specialty of insuring the automobiles of farmers and the business men of the small towns in Michigan. It started at the right time and is now starting its fourth season of success.

It is the only mutual automobile insurance company that publishes the amount of money on hand to take care of its members and the number of members.

The responsible and active agents are acting for the Company as they do not wish to represent a small company. Why take chances on a small company when you can insure in the big and well established mutual. It is the only mutual company in Michigan that can stand the shock of serious losses and pay the claims promptly with money now in the treasury.

Cost only \$1.00 for policy and 25c per H. P. covering fire, theft, and liability.

**Citizen's Mutual Auto Ins. Co.,**  
Howell, Mich.

## Good Tires Mighty Cheap

They come from a well-known factory—but just didn't measure up to factory requirements. A little blemish here and there that might take a keen eye to see. Chances are that they'll give you as big mileage as any tire you ever bought. But the factory calls them "seconds"—so we do, too, even though they are built for good, hard service.

At the prices we ask for them there's two dollars value to you in every one dollar you spend!

Size	Plain	Non-Skid	Size	Plain	Non-Skid
30x3	\$ 8.50	\$ 9.50	33x4	17.00	18.50
30x3 1-2	10.75	12.00	34x4	17.50	19.00
32x3 1-2	12.65	14.25	34x4 1-2	23.75	25.50
31x4	16.00	18.00	35x4 1-2	25.00	27.00
32x4	16.25	18.25	36x4 1-2	25.50	27.50

2 percent off for cash with order.  
10 percent deposit required with all C. O. D. orders.

**Ar Kay Tire Company**  
837 No. Broad St., Philadelphia, Pa.

## Farm Machinery FOR SALE

One 10-20 Horse Power International Harvester Tractor Kerosene Motor, and one set of 3 blade Oliver Plough, \$750, terms. Inquire W. F. Krueger, San Souci, Harsens Island, or Campbell & Harding, 2938 Jefferson Ave. E., Detroit, Mich.

## Cash For Old False Teeth

Don't matter if broken. I pay \$2 to \$15 per set, also cash for old gold, silver, platinum, dental gold and old gold jewelry. Will send cash by return mail and will hold goods 10 days for sender's approval of my price. Mail to MAZER TOOTH SPECIALTY, 2007 S. 5th St., Philadelphia, Pa.

## EGGS

Production well started, general quality fine. For a few months it will be hard to get any premium. Will do best we can although may have to stop paying premiums until loss off season sets in. Keep shipments coming.

AMERICAN BUTTER & CHEESE COMPANY, Detroit, Mich.

**HAY** Ship To The Old Reliable House  
Daniel McCaffrey's Sons,  
623-625 Wabash Bldg., Pittsburgh Pa.

**Potatoes** Early Rose—Irish Cobbler \$1.75 per bushel. Rural Russets \$1.10 early or late—small potatoes cheap.  
**Dahlias** 20¢ good mixed \$1. 10 best mixed \$1. Gladiolus fine mixed 40¢ per \$1.00. Iris very fine mixed 20¢ per \$1.00.  
F. A. SHOWERMAN, Jackson, Mich.

**VERBEARING STRAWBERRY**  
Our free Catalog describes and illustrates a full line of choice small fruit plants. Send for it.  
J. N. ROKELEY, R. 6, Bridgman, Mich.

100 Ev'g Best Kinds, Postp'd. Why pay more? Have other small fruits and trees.  
Straw'y 95c GOBLEVILLE, MICH. NURSERIES.  
P. S. Ask for Free Catalog.



## 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.

April 4, 1918.

## Cattle.

Receipts 1229. Market strong; all grades are 50c higher than last week; canners wanted.

Best heavy steers \$12@12.50; best handy weight butcher steers \$11@11.75; mixed steers and heifers \$10@11; handy light butchers \$9.50@10.50; light butchers \$8.50@9; best cows \$9@10; butcher cows \$7.50@8.50; cutters \$7@7.25; canners \$6.50@7; best heavy bulls \$9.50; bologna bulls \$3.25@8.75; stock bulls \$7.50@8; feeders \$9@10; stockers \$7@9; milkers and springers \$60@100.

Bishop, B. & H. sold Bresnahan & K. 3 canners av 900 at \$6.75, 6 cutters av 891 at \$7, 5 do av \$7.5 at \$7; to Ratner 6 cows av 925 at \$9.25, 9 steers av 844 at \$10, 2 do av 615 at \$7.50; to Kamman, B. Co. 15 do av 806 at \$11.40, 4 do av 1100 at \$12; to Sullivan P. Co. 2 cows av 870 at \$8.25, 2 do av 815 at \$7.25, 1 heifer wgh 750 at \$9.50; to Hyman 4 butchers av 705 at \$8.50; to Hammond, S. & Co. 3 do av 700 at \$8, 6 steers av 953 at \$11.50, 20 do av 994 at \$11.60; to Sullivan P. Co. 7 cows av 990 at \$8.50, 3 do av 950 at \$8.25; to Bresnahan 1 do wgh 1080 at \$8, 7 canners 857 at \$6.75; to Parker, W. & Co. 19 steers av 857 at \$10.50, 3 bulls av 1133 at \$8.50, 3 do av 1393 at \$8.75, 1 do wgh 1190 at \$8.50, 4 cutters av 925 at \$7.25, 6 steers av 958 at \$10, 4 cows av 807 at \$9.75; to Rattkowsky 8 steers av 1087 at \$11.90; to Goodgold 22 butchers av 590 at \$8.35; to Walk 1 bull wgh 1650 at \$10.35; to Rattkowsky 1 do wgh 1210 at \$9.50; to Parker, W. & Co. 7 butchers av 731 at \$9, 10 do av 974 at \$10.50; to Sullivan P. Co. 5 do av 1120 at \$8.65, 1 bull wgh 1250 at \$8.25, 10 cows av 1000 at \$8.50, 2 steers av 940 at \$10.25, 2 do av 920 at \$11.25; to Newton P. Co. 32 do av 1190 at \$12.20, 28 do av 1101 at \$12.20, 4 do av 970 at \$11.50, 5 do av 816 at \$10.

Sandel, S. B. & G. sold Sullivan P. Co. 2 cows av 910 at \$8.75, 4 do av 725 at \$9.25, 1 bull wgh 1220 at \$8.25, 1 do wgh 1200 at \$8.25, 1 do wgh 1430 at \$8.50, 3 cows av 1024 at \$9, 3 butchers av 775 at \$9.25; to Hammond, S. & Co. 14 do av 870 at \$11, 3 steers av 935 at \$10.50, 3 do av 1095 at \$12, 1 cow wgh 990 at \$8, 4 heifers av 798 at \$10, 1 cow wgh 930 at \$8.75; to Thompson 1 do wgh 890 at \$10, 3 do av 804 at \$9.50, 9 steers av 1040 at \$11.75, 5 do av 1158 at \$12; to Hammond, S. & Co. 14 do av 975 at \$11.75, 1 do wgh 1270 at \$11.75.

## Veal Calves.

Receipts 684. Market slow and 50c lower than last week. Best \$16.50@17; others \$8@15.

Sandel, S. B. & G. sold Thompson 7 av 130 at \$17, 4 av 115 at \$12, 20 av 130 at \$16, 3 av 110 at \$12, 2 av 145 at \$16.50, 2 av 160 at \$16, 2 av 135 at \$11; to Sullivan P. Co. 3 av 140 at \$16, 3 av 135 at \$16, 2 av 145 at \$13, 20 av 150 at \$17, 25 av 125 at \$16, 20 av 135 at \$16.50, 14 av 130 at \$16; to Nagle P. Co. 3 av 175 at \$10, 2 av 145 at \$13, 12 av 150 at \$17, 5 av 110 at \$13.50, 11 av 150 at \$15.

## Sheep and Lambs.

Receipts 760. Market strong and 50c higher. Best lambs \$20; fair lambs \$18@19; light to common lambs \$15@16.50; clip lambs \$15.50@16.50; fair to good sheep \$12@13.50; culls and common \$8@9.

Erwin, S. & J. sold Mich. B. Co. 14 lambs av 75 at \$18, 21 clip lambs av 65 at \$15; to Parker, W. & Co. 229 wool lambs av 82 at \$20, 10 do av 64 at \$17; to Sullivan P. Co. 25 do av 88 at \$19; to Mich. B. Co. 232 do av 75 at \$20, 15 do av 65 at \$18.

Bishop, B. & H. sold Sullivan P. Co. 53 clip lambs av 75 at \$15.65, 34 do av 55 at \$17.65; to Mich. B. Co. 16 clip lambs av 70 at \$16, 37 do av 85 at \$19.

Sandel, S. B. & G. sold Nagle P. Co. 13 lambs av 85 at \$18.75, 2 sheep av 180 at \$11.

## Hogs.

Receipts 3022. Market strong and 25c higher than early week's opening. Mixed grades \$17.75@18; good pigs \$17@17.50.

## SHEEP

## KOPE-KON FARMS.

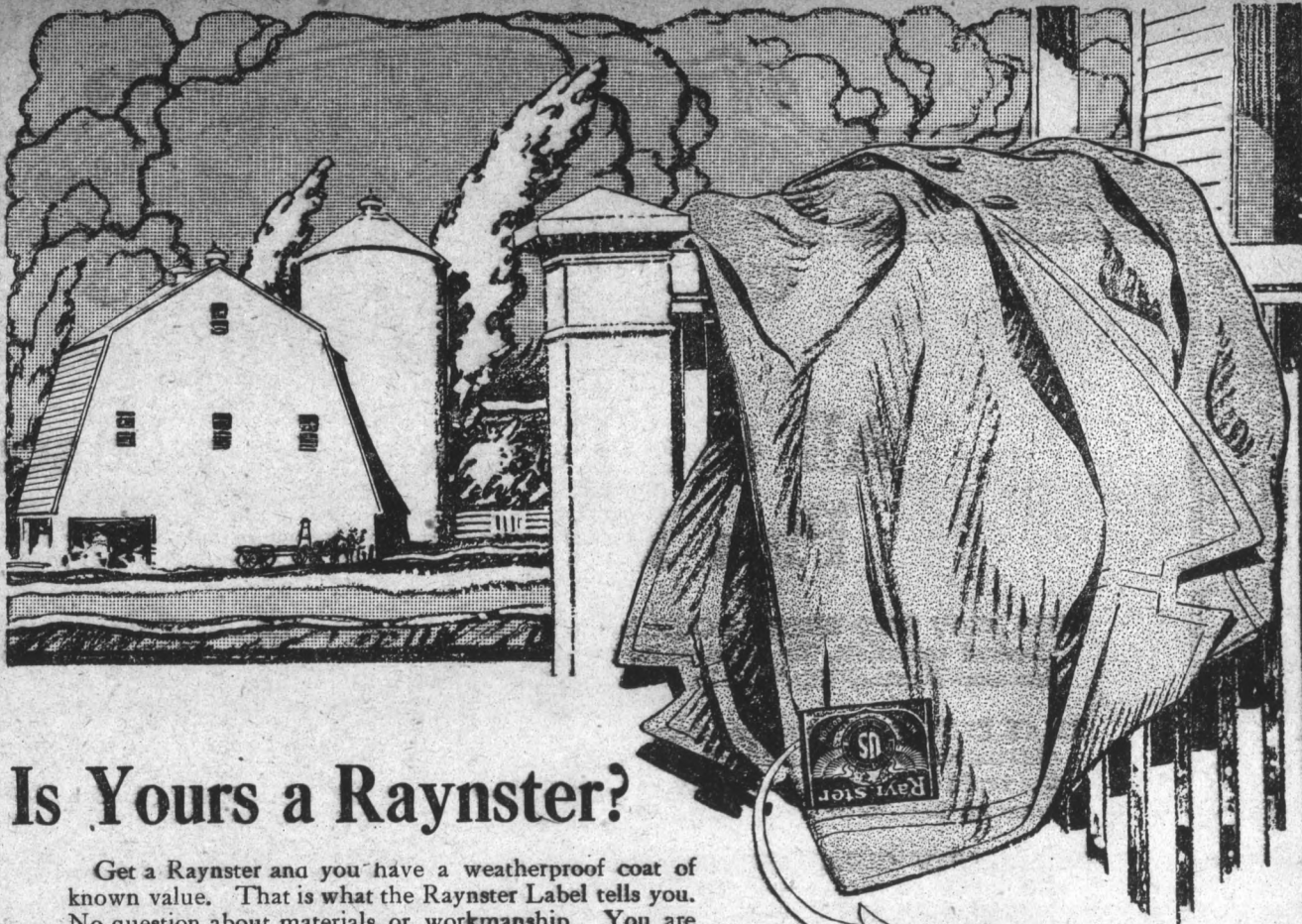
Coldwater, Mich.

## 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. S., Fowlerville, Mich.



## Is Yours a Raynster?

Get a Raynster and you have a weatherproof coat of known value. That is what the Raynster Label tells you. No question about materials or workmanship. You are buying on the solid foundation of knowing what you are getting.

Equip your family with Raynsters. They furnish protection to health as well as comfort and appearance. The children need Raynsters to wear to school.

The Raynster line includes heavy, rubber-surfaced coats for outdoor work; featherweight silks; smart cloth coats and heavy ulsters that are splendid for driving in any weather—all styles for men and women, boys and girls. They may be had at prices to fit every pocketbook.

You can find Raynsters in good stores throughout the country. If you write for it we'll gladly send you a Style Book showing all the Raynster models.

United States Rubber Company  
Clothing Division, New York and Boston

# Raynster

Reg. U. S. Pat. Off.

## 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.

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

R. D. HEYDENBERG, Wayland, Mich.

## Choice Duroc Jersey Gilts For Sale.

CAREY U. EDMONDS, Hastings, Mich.

Duroc fall boars sired by Crimson 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 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. GALKINS, Anna 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, write for description and prices. J. D. ORANE & 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 breed 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.

## 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 O. I. C. D. NEWMAN'S STOCK FARM, R. 1, Marietta, 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. Clover 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 farrow also last fall pigs either sex and not akin. Good growthy stock 1/4 mile west of Depot, Citizens phone 124. Otto B. Schulze, Nashville, Mich.

O. I. C. Gilts weighing about 180 lbs. bred for April farrow 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 10 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 herds. Special prices on spring boars. 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 yearling sows at bargain prices. C. E. Garnant, 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 booked 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 May farrow and fall pigs. L. W. BARNES & SON, Byron, Mich.

BIG TYPE POLAND CHINAS. Booking orders for spring pigs. G. W. HOLTON, R. 11, Kalamazoo, Mich.

Large Strain, P. C. A few gilts left bred for June farrow and 2 nice boars ready for service at farmers prices. H. O. SWARTZ, Shoolcraft, Mich.

Yorkshire Gilts Bred for spring farrowing. Bacon is high in price. Yorkshires make Waterman & Waterman, Packard Road, Ann Arbor, Mich.

Hampshire Boars at a bargain. Booking orders for Spring pigs. JOHN W. SNYDER, R. 4, St. Johns, Mich.



# REO

"THE GOLD STANDARD  
OF VALUES"

## All the Former Excellence Plus Many Refinements

THIS NEW REO LIGHT FOUR is, in all mechanical essentials, the same as its famous predecessor—Reo the Fifth, "The Incomparable Four."

THAT IS TO SAY, those principles of design and of construction which made that great Reo famous the world over for dependability and low upkeep, have all been retained.

WHEN YOU CONSIDER that that Reo Four remained standard in practically the same form for eight seasons (longer than any other automobile ever built save one);

IT MUST HAVE BEEN wonderfully right at every point; must have been. For during those years an host of rivals and imitators came and went.

AND ALWAYS REO maintained its supremacy.

SO WE FEEL that the best possible recommend for this latest Reo—this new Light Four—is to say that all those principles of design and that same quality have been retained.

REFINEMENTS have been made at many points however.

WE PREFER THE TERM "refinements" rather than improvements. For, truth to tell, no owner of a Reo Four could suggest an improvement in that great car.

REO ENGINEERS, at the same time the most experienced and the most progressive, are always seeking opportunities to refine details of Reos.

AND THEY FOUND WAYS to make parts of this chassis, always the most accessible ever built, still more accessible.

ALSO MORE POWER has been developed in the same motor by refinements of valve mechanism; better balance of reciprocating parts.

THE OILING SYSTEM has not been improved—no use trying to improve on what was already perfection.

ODDLY ENOUGH when we begin to talk about this new Reo Light Four, we feel an inclination to emphasize rather those features in which no changes have been made, than those where they have!

SUCH WAS THE QUALITY—such the dependability—such the low upkeep—such the satisfaction of 100,000 owners, that a better could be made only by refining details of the original model.

AND THIS ONE IS BETTER only because it is the latest, the most refined edition of that Reo Four.

YOUR REO DEALER will show and explain to you the points wherein these refinements have been effected—and he'll tell you the reason for each.

IN A WORD, for your convenience—in every case. For still greater accessibility. For still longer life. And for still lower cost of upkeep.

ASK HIM about these things.

WHEN YOU SEE THIS REO you will say the body lines, the finish, the upholstering are the finest Reo has ever turned out.

A LUXURIOUS EQUIPAGE; as handsome in appearance as it is excellent mechanically; yet at a price less than you had planned to pay for such a car.

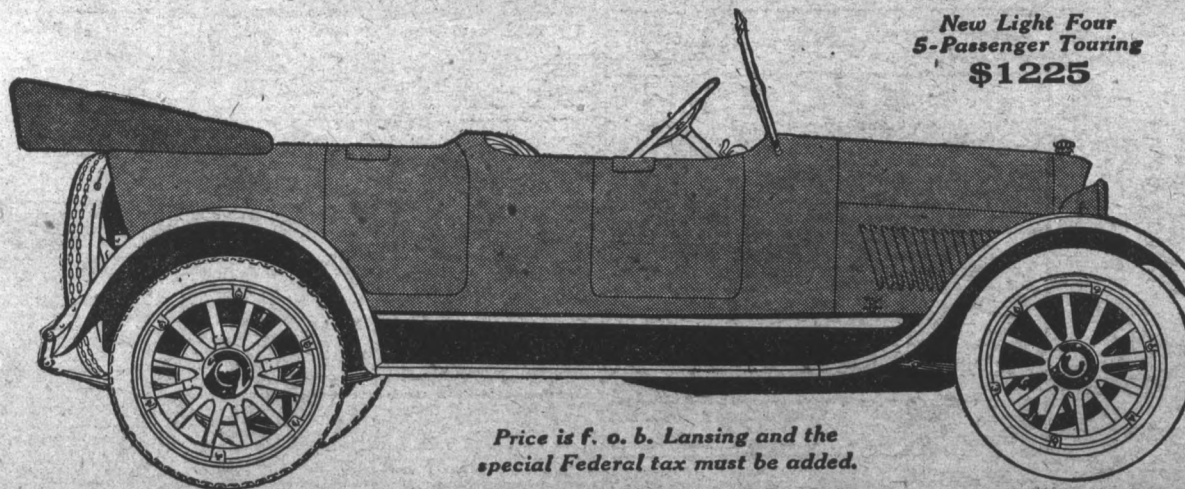
DEMAND SEEMS unlimited. At present, almost hopelessly in excess of factory output.

SO ONLY THOSE who decide now and order at once can hope to obtain a Reo Light Four for spring delivery.

TODAY won't be a minute too soon.

### Reo Motor Car Company, Lansing, Michigan

New Light Four  
5-Passenger Touring  
\$1225



Price is f. o. b. Lansing and the  
special Federal tax must be added.