

# MICHIGAN FARMER

AND  
*LIVE STOCK*  
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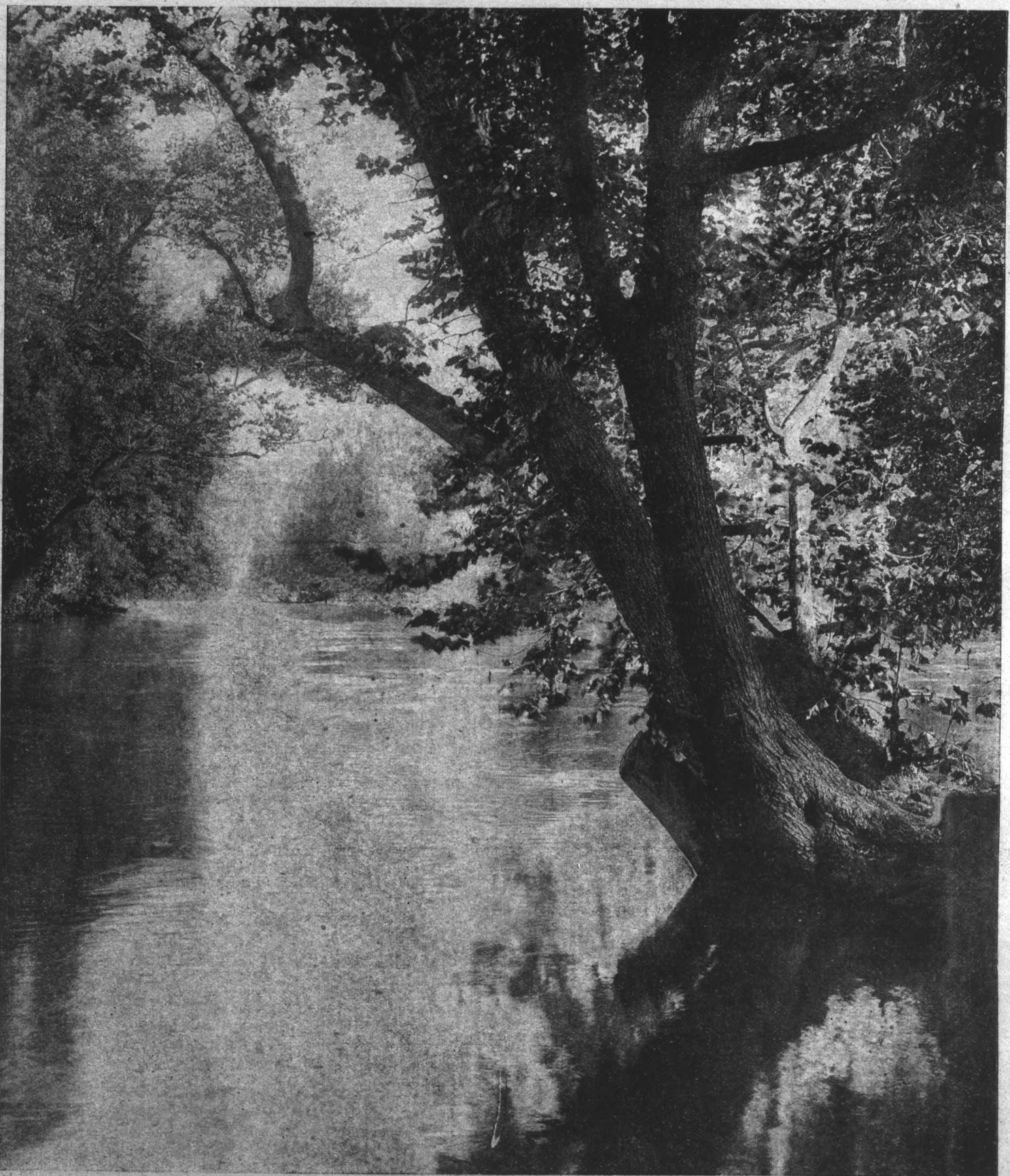
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DETROIT, JUNE 7, 1919



## CURRENT COMMENT

### Surplus Milk Problem

PERHAPS the most disturbing factor in the solution of the market milk problem in the Detroit Area has been the problem of surplus milk during the early spring months when production is at a high point and before consumption has been stimulated by hot weather. During the past two seasons the Detroit Area Milk Commission in fixing the price of market milk distributed in Detroit, has resorted to the expedient of making two prices during these months; one price applying to the milk actually distributed to the city trade, and the other and lesser price to the surplus product which was necessarily disposed of in the manufacture of other dairy products. During the season just passed, this surplus, as agreed upon between the Milk Producers' Association and the distributors, was twenty-five per cent for March and twenty per cent for April. The price fixed upon this amount of surplus for these months was \$2.50 per cwt. f. o. b. shipping station, as compared with \$3.60 for March and \$3.40 for April f. o. b. Detroit for that portion of the milk actually distributed to the city consumer.

It is but natural that this two-price system needed for a short period of time becomes confusing and unsatisfactory to the producer, although in the judgment of the commission this method of handling the surplus milk problem entailed less loss upon producers than any other method that might have been employed, particularly in view of the plan for reimbursement of winter and early spring losses to producers during succeeding months in order to avoid raising the price of milk to the consumer during these months.

At the last meeting of the Detroit Area Milk Commission at which prices were made for May, June and July the figures prepared by the secretary of the commission showing the losses which had been sustained by the producers during the first four months of the year, showed that an average price of \$3.25 per cwt. for all milk sold for the months of May and June would be

required to make up these losses and give the producers a moderate profit on their operations for the six months. This, however, did not provide for reimbursement for the loss sustained by producers on the surplus for the two months of March and April. Consequently after some discussion an average price of \$3.25 per cwt. for the three months of May, June and July was made for all market milk in the Detroit area, which in addition to making up the producers' losses on market milk for the four preceding months also made up all losses on the surplus for the months of March and April and gave producers the same profit on this milk which was figured on the average price for the two months of May and June, so that when the first seven months of the year are completed producers in the Detroit area will have been fully compensated for the cost of production as scientifically determined by our experiment station authorities, together with an added ten per cent for managerial ability and an added percentage for profit during the entire period.

While there is apparent dissatisfaction with the result of the Milk Commission's work among the producers of certain restricted areas, particularly with regard to the handling of the surplus problem, it would appear that this must be the result of a misunderstanding of the manner in which this problem has been worked out, hence the explanation contained in this comment. Certain it is that the milk producers of the Detroit area are getting and have gotten a better average price for their product during the current year than producers of any other similar area of the country and have sold their product for perhaps the first time in the history of agriculture, at a price based on the cost of production plus a reasonable profit. Perhaps a better method of handling the surplus milk problem may be devised in the future but progress along this line cannot well be built on a misunderstanding and consequent misrepresentation of facts regarding its present solution.

### Cut the Rye from the Wheat

THERE is an excellent prospect for a large wheat crop on most Michigan farms. As is usual, much of this wheat contains a sprinkling of rye, which is unavoidable where the two grains are grown in any neighborhood and threshed with a common threshing rig. This rye should at once be cut from the wheat in order to avoid a cut in price for the grain when same is marketed. All that any farmer has to do to get the guaranteed government price, less freight and legitimate handling charges to the nearest primary market, is to have a standard grade of this grain to sell. If the wheat contains an added mixture of rye in any quantity it will fail to meet the standard grades and be subject to dockage in proportion to the judgment of the miller or elevator man.

Under the tentative rules which have been proposed by the Food Administration Grain Corporation for the enforcement of the price guarantee, the dealer will be required to use his best and honest judgment to determine the proper grade or dockage under the fixed standard on all wheat bought by him from the producer, and pay therefor, the proper price based on such determination of grade and dockage. He will also be obliged to keep a record showing all purchases, name of the seller, date, quantity, grade and dockage fixed and price paid. On all wheat graded lower than No. 3 Federal Standard the dealer will be required to retain a sample properly identified for a period of sixty days, which sample will be held open to inspection by the Grain Corporation at any time. Thus an avenue of appeal will be open for any farmer who feels that he has not had

a just grading of his product. This will avail him nothing, however, provided the product itself does not come up to the prescribed federal standard grades. Hence the desirability of removing the rye from the wheat at the present time in order to avoid dockage from this cause.

The tentative plans of the United States Food Administration Grain Corporation for the enforcement of the guaranteed price on wheat for the 1919 crop will be discussed at a meeting to be held in New York next week, after which the regulations will be issued by the Grain Corporation and fully explained in these columns. In the meantime the rye should be removed from the wheat, as no matter how great the labor shortage on the farm, no work will be more productive of profitable results than an immediate precaution of this kind.

### Americanism in Rural Schools

Gov. SMITH, of New York, has signed a bill giving school teachers of the state a generous increase in pay. In doing so he wrote: "Neglect the school-houses and you provide a fertile field for the spread of the doctrines of the discontented, who, without a proper understanding of the benefits and blessings of our free country, cry out from the street corners of our important cities for the downfall of our state and the dissolution of our union."

The general movement throughout the country to secure better teachers and pay more liberal salaries is sure to result in the making of better citizens and spreading the light of Americanism in every heart and in every home in the United States. The men and women who play so important a part in the development of our boys and girls should be given more consideration than common laborers. No class has assumed so much responsibility with greater willingness than our school teachers. Their devotion to the cause of Americanism during tempestuous times of war, helping the young people, and even the parents, to see the struggle in its true light has made the nation their everlasting debtors. Had they performed less efficient service during the war period this republic would have had great difficulty in coming through the war so thoroughly united.

It is time for us to stop and think just what these loyal American men and women have received in return for their devoted service to our country. They have prospered less than other classes who, through powerful organizations, have secured high wages and more favorable working conditions. Instead of coming out and organizing to secure living wages they have been training citizens that may be capable of solving some of the greatest problems the people of any country ever faced. In every rural district in Michigan there are men and women of vision and foresight who should take the lead to urge higher salaries for their teachers. Compare the salary of your rural teachers with the wages of ordinary farm hands and stir your community into action.

Are you willing to have the men and women who train your boys and girls receive less pay than those who stomp your hogs and work in your kitchens? The men and women who are training our citizens of the future are entitled to more consideration than common hobo laborers. No wonder that many rural districts are employing weak men and women to teach their schools when they only pay a salary of from \$500 to \$600 a year. The future of America depends upon safeguarding our schools. And this cannot be done unless we pay more generous salaries and secure more capable teachers to drive home the lessons of the times in the minds of our future citizens.

## News of the Week

Wednesday, May 28.

LIEUT. A. C. READ, of the United States navy, completes his epoch-making flight across the Atlantic when he landed safely in the harbor of Lisbon, Portugal. The total flying time required for the journey from Newfoundland to Lisbon was twenty-six hours and forty-one minutes.—Alien soldiers are now in control of Petrograd, while allied forces are heavily bombarding that city and Kronstadt. Admiral Kolchak, the anti-Bolshevist commander in Russia, is again advancing against the enemy who is falling back on the Volgan line.—Six persons are killed and twenty hurt in strike riots at Lima, Peru.—Rioters attack students of Yale University, following remarks derogatory to soldiers believed to have been made by the students.—The American Woman's Legion of the great war is organized at Washington.

Thursday, May 29.

ITALY agrees with allies on a settlement of the Adriatic question, making Fiume a free port.—The Austrian treaty pact is being prepared for submission at Versailles.—Ships are waiting in northern Russian ports to bring American soldiers home.—The Red Cross has undertaken to fight typhus epidemic in Poland.—Greek troops advance in the eastern part of Thessaly with the Turks retiring before them.—The first official report of army authorities who investigated the record of welfare organizations in France give special praise to the work of the Y. M. C. A.—National leaders of the democratic party meet in Chicago to consider issues for the forthcoming presidential campaign.

Friday, May 30.

PRESIDENT WILSON is arranging to leave France June 6.—Germany delivers counter-proposals to the peace conference in which she asks that Alsace assist in paying the war indemnities and that all ceded territories share in war obligations.—General Angeles is proclaimed president in the revolutionary government of Mexico.—London is anticipating a new revolt in Ireland.—The Canadian cabinet fails to check the general strike in Canada.—Colonel Robert Bacon, ex-secretary of state, dies in New York city at the age of fifty-nine.—Switzerland decides to refuse the proposal of the Allies to blockade Germany, should the latter reject the peace treaty.

Saturday, May 31.

REPRESENTATIVES of revolutionary movements in all parts of Mexico are called to form a general insurgent action against the Carranza government. General Angeles is leader of the movement.—Germans have published the allied peace terms in a pamphlet and are selling it at thirty-five cents per copy throughout that country and in neutral states.—During the day 14,014 troops arrive in New York, of whom ninety are Michigan men.—At a meeting of the national executive committee of the socialist party in Chicago, 25,000 Slavic socialists of the Society variety and the Michigan socialist organization were reported to have been expelled from the party.

Sunday, June 1.

PREMIER PADEREWSKI of Poland decides to ask President Wilson to name a commission of Americans to investigate charges of mistreatment of the Jewish population of Poland.—London entertains American crew who drove the American seaplane over the Atlantic.—The Entente nations order German troops to quit the Baltic provinces.—President Wilson plans to visit the devastated areas of Belgium and northern France before his return to America.—Count von Brockdorff-Rantzau of the German peace delegation insists that his resignation from the commission be accepted.—The republican national committeemen favor St. Louis as the city for holding the next national convention of that party.—The general strike in the Dominion of Canada now promises to fail.

Monday, June 2.

THE allied nations are offering African territory to Italy for losses sustained by her in the settlement of the Adriatic question.—A republic is proclaimed by the German cities of the Rhine valley, with Dr. Borden as chief executive.—Plans for a German revolt in favor of former emperor William were to have been executed today.—A second battle between British and Bolshevik ships results in a defeat of the Red's fleet and their retirement to Kronstadt.—During a fire panic in a movie show at Valence-Sur-Rhone, France, eighty persons are known to

(Continued on page 874).

# A Good Doctor and Poor Babies



*A Story About Clean Milk*

ONCE upon a time there lived in a great city a young doctor who wanted to do something worth while. He was also a bacteriologist. As a doctor he came in contact with hundreds of babies who were dying of diarrhea and tuberculosis. As a bacteriologist he knew that the cause of these deaths was dirty milk.

One morning, while taking his usual walk he came to a fine farm with handsome buildings. Beautiful cows were eating grass in the fields. He found the farmer in the house sitting by the side of a great open fireplace and taking a proffered chair inquired, "Why do you keep so many beautiful cows in such splendid manner?"

"To furnish milk for rich people and their babies."

"Do not the tenement house babies get any of this milk?"

"No," said the farmer, "their parents have not enough money to pay for it."

The doctor saw the light. His work in life became that of bringing pure and safe milk to poor children. He studied milk, how it was produced, what made it dirty, and what had to be done to make it clean and wholesome. His conclusions were that dirt and disease in milk were due to the cow, to the man who did the milking, and to carelessness in handling the milk in its course from the cow to the milk user. With these facts in mind he perfected a plan. He was ready for action.

The doctor learned that for babies some clean milk is better than other clean milk. It was first necessary for him, to find a place where the best kind of milk could be had in abundance throughout the year. That place happened to be the village of Homer, New York, where David Harum, the noted horse trader, had lived and died. The next thing to do was to purchase a creamery, where this milk could be brought and shipped to the great city.

But this creamery was not like other creameries, for a laboratory was here installed, that the doctor might know exactly how clean, how good and how safe was every can of milk received. This meant something to the farmer as well as to the doctor. But the doctor helped the farmer. He told him

es. He knew the kind of dishcloths and dishtowels that were used by some farmers' wives. He saw that every milk pail and milk can was washed at the creamery in pure boiling water and sterilized by forcing steam into them. He not only did this for the farmer but paid him to use these ster-

money by adding to the usual price of milk a premium for cleanliness."

"To the farmer bringing the richest milk, I will pay the most money by adding a premium for cream."

"And to all others in proportion to the quality of the milk they bring."

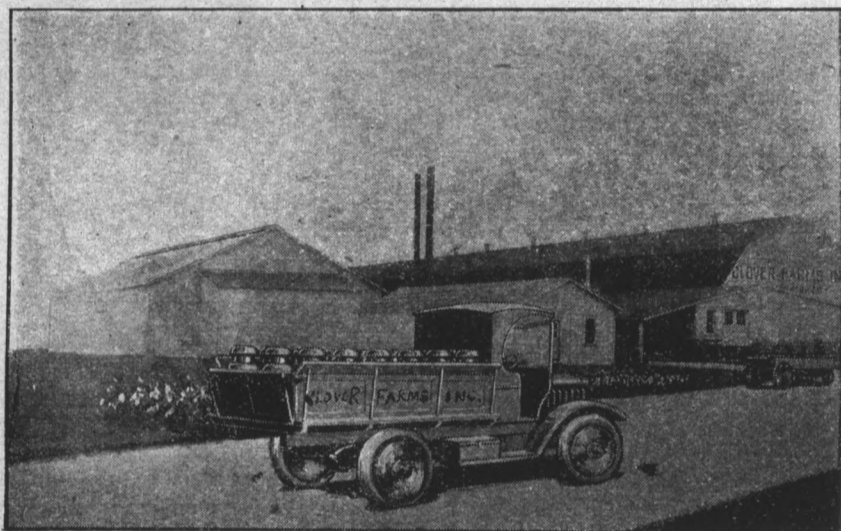
The farmers were very much pleased. They studied the doctor's methods. They used small-mouthed milk pails in their milking to prevent dirt dropping from the cows and ceilings of the barns into the milk. They also watched the bulletin boards at the creamery on which the bacteria counts and the degree of butter-fat were posted, to see how clean and rich was the milk that they were bringing to the creamery, like a crowd of baseball fans watch the scoreboard during a world series game. They took a pride and interest in their work. And the striving to excel their neighbors was great.

There was once a committee of philanthropists. They too had seen the poor little babies. They, too, knew the danger that lurked in bad milk. And they, too, wanted to do something worth while. The doctor showed them how. They accepted his plan. Then men of large means and larger hearts became interested. The poor babies must have good, pure milk. They got it, and these pictures show how they got it.

The committee then said, "Let us establish baby milk stations in the tenement districts of the great city, where the babies of the poor are dying and the milk is dirty. Let us show that it is dirty milk which makes sick babies, by letting them see what effect the use of the doctor's clean milk has upon some of the babies."

Kind hearted people gave the committee money. The milk stations were established and the babies were given

(Continued on page 872).



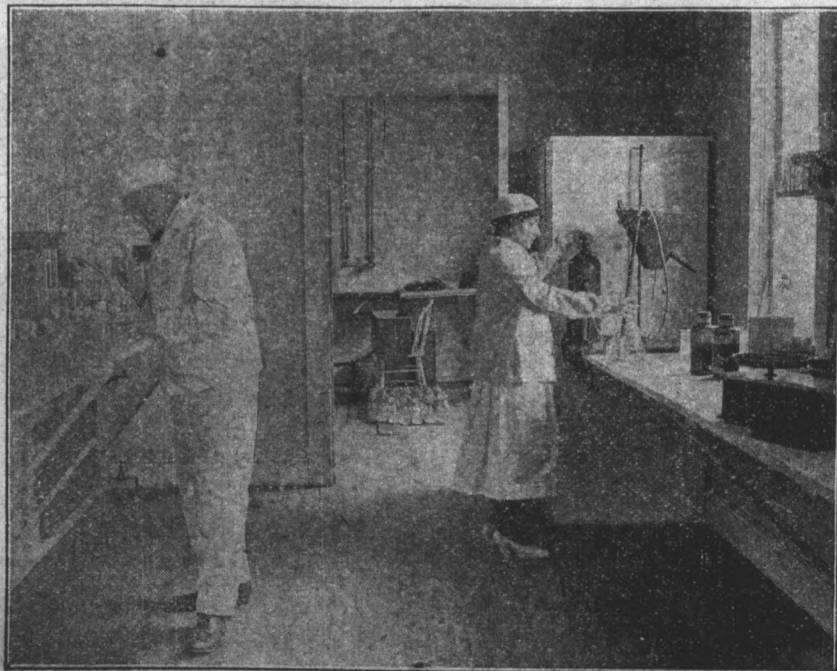
Clover Farms, Inc., Milk Plant at Homer, New York.

how he could make a clean, safe milk. First, he must dispose of every cow that was not in good health or had tuberculosis. But the doctor paid the farmer for his dead cows by giving him more money for every quart of milk that was brought to the creamery, from the healthy cows that were left. Next, he was shown the value of clean barns, clean barnyards, clean cows, clean clothes, clean hands, clean pails and clean milk cans as factors in producing clean milk. To prevent the growth of germs in the milk, he was shown the importance of using ice.

The doctor, however, could not make the farmer dig new wells in new plac-

ilized pails and cans. And better still, he brought to the farmer's door a laboratory with expert supervision of milk production. He knew and had control of the quality of every can of milk brought to the creamery. For the laboratory expert tested the milk daily and helped the farmers by investigating their high bacteria counts and teaching them better methods. The farmers knew their milk would not be received at the creamery if their bacteria count ran high, and so welcomed the expert.

Said the doctor to the farmer, "Whoever brings to the creamery the cleanest milk, I will pay to him the most



Testing the Milk for Butter-fat, Bacteria and Sediment.



Bottling the Milk for Shipment to New York City.

# News of the Agricultural World

## DAYLIGHT SAVING REPEAL.

THE matter of repealing the so-called daylight saving law came up the day congress met. The sentiment for repeal is in evidence to a very large degree, and the measure to repeal the law will be made a part, it is now believed, of the agricultural appropriation bill, which is being written by the house committee on agriculture, of which Congressman Haugen, of Iowa, is chairman. Mr. Haugen has decided to make a strong effort to bring this about.

## FIRE INSURANCE FOR FARMERS.

RAPID progress is being made by the committee appointed at the annual meeting of the Southeastern Underwriters' Association, held at Atlantic City early in May, for the purpose of devising plans for closer cooperation between the fire insurance and agricultural interests of the country. The committee, headed by F. C. Buswell, vice-president of the Home Insurance Company, and president of the National Board of Fire Underwriters, expects to make the plan adopted as comprehensive as possible.

The movement grew out of complaints filed with the Farm Loan Banks that the farming interests were unable to obtain adequate insurance upon their property. Insurance is essential for credit, and the farmers complained that they were unable to negotiate needed loans. They proposed that a system of insurance connected with the farm loan system be devised.

Underwriters who did not know of the situation until it was brought out in this agitation immediately undertook to supply the needs of the farmers, and the appointment of the committee at the Atlantic City meeting was the result. The committee will investigate all phases of the subject and render an early report, showing the plan that ought to be followed in meeting the demands of the farmers.

Farm property risks are not regarded with favor by underwriters as a rule. They are without the protection of fire apparatus and present difficulties in inspections. The expense of inspection is greater than a single company can bear and it is probable that some bureau, much like the urban bureaus, will be established for the inspection and rating of the risks.

The failure of a number of county mutuals to meet their obligations as the result of the big fires which occurred last year in the northwest has destroyed the confidence of the farmers in some sections of the country in this form of insurance. The losses incurred were made up to a large extent by contributions from other mutuals, but the farmers nevertheless feel less sure of the mutuals than before. The farm mutuals have formed the bulwark of the insurance facilities provided for the farmer, and in the event they lose the confidence of the rural districts other facilities will have to be supplied.

The committee proposes to go thoroughly into the subject and devise as liberal a policy towards the insurance of farm property as the conditions will justify.

## BEAN GROWERS WANT PROTECTIVE TARIFF.

IT seems highly probable that California bean growers, who still have a large percentage of the 1918 crop left on their hands, will appeal to congress to place a high tariff on beans in order to keep out the heavy importations from the Orient. The growers in this section of the state have asked bean men in other parts of the country to join them in their fight against the

importers, and it is believed by them that such action will be taken.

A statement issued by bean growers in part follows:

"There is great need of a protective tariff on the importation of Oriental beans. It is one way in which the government can assist the growers after the predicament they have been placed in following the country-wide plea for increased production.

## COLLECTIVE BARGAINING.

FARMERS who have organized to market their own products are being prosecuted in Illinois, and have been threatened with prosecution elsewhere, for violation of the anti-trust laws. The situation is acute in the Chicago milk district. Representatives of farm organizations, engaged in cooperative marketing enterprises have agreed that an amendment to the "Clayton amendment" is necessary to clarify the situation, and explicitly extend to farm interests the protection already extended to labor, which is specifically excepted from the law in collective bargaining as to the price of labor. The amendment is being drafted, which will state that non-profit organizations engaged in collective bargaining for the sale of their own produce shall be exempt from the opera-

basis of higher test weights than are provided in the federal grades, as, for example, "bid today for No. 1 white oats, 36 pounds or better," or, "No. 1 white thirty-eight pounds or better," etc., etc.

The Department of Agriculture calls the attention of farmers and grain dealers to this provision in the grades, since the assignment of the numerical grade of No. 1 or No. 2 does not always properly identify the condition of the grain with respect to weight, without a statement of the test weight per bushel.

## Condition and Appearance Important.

The condition and general appearance is one of the important grading factors in the new standards. Oats to grade No. 1 must be of good color (in the case of No. 1 white oats, they must be good white or creamy white color). No. 2 oats may be slightly stained, while No. 3 may be stained or slightly weathered, and No. 4 may be weathered or badly stained. It has been found impossible to describe more exactly the degree of stain to be allowed in each grade, but to establish uniformity among the grain inspectors, the Board of Review of the Bureau of Markets, located at Chicago, will issue type trays to federal grain supervisors and inspectors licensed by the Department of Agriculture. These official type



tion of the anti-trust law. This amendment is being considered now; it is urgently needed in the great farmers' cooperative movement. The matter should be rightly understood by our representatives in congress.

## FEDERAL OAT GRADES EFFECTIVE JUNE 16.

ONE of the features of the new federal oat grades, which will become effective on June 16, 1919, is that yellow oats are classed as white oats, and can take any numerical grade subject only to general appearance or the color requirements for each grade. This will permit yellow oats of good creamy white appearance to grade as high as No. 1, the United States Department of Agriculture states. The old standards in many cases prohibited yellow oats from grading higher than No. 3.

Another feature of the grading rules is that a statement of the test weight per bushel is required on all inspection certificates. Because the minimum weight per bushel for No. 1 oats is thirty-two pounds for the national standards, which is six to eight pounds lighter than much of the oat crop produced in the Pacific Northwest and in certain other intermountain and central western areas, grain dealers and buyers in those parts of the country will probably place their bids on the

trays will show the lowest limits of discoloration allowed in the Nos. 1, 2 and 3 grades.

## Guide on Coloration.

While the lines of distinction as to discoloration were formerly rather distinctly drawn by each local inspector or market, no type trays were used as a definite interpretation of the local grades, and in many cases these local grades were interpreted differently. However, in order that the general scheme for the grading of white oats, with respect to general appearance, may be more easily understood by persons not having access to the official type trays the following is suggested:

Oats which were good enough for No. 1 white and the better quality of No. 2 under old grades, with respect to general appearance (discoloration), will grade No. 1 white oats under federal standards. The lower quality No. 2 white oats and practically all standard white under old grades will in so far as general appearance (discoloration) is concerned, grade No. 2 white oats under federal standards. Poor quality standard whites and No. 3 under formal grading rules will grade No. 3 white oats under federal standards where general appearance (discoloration) is the grading factor. The No. 4 grade remains practically the same with respect to the factor general appearance.

Any interested person who desires information relating to the requirements for general appearance of the new oat grades may see the official type trays by visiting an office of federal grain supervision or any inspector licensed by the Department of Agriculture to grade oats. These offices are located in all large markets. A person mailing a sample of oats approximately two quarts in size in a clean cloth sack to any grain inspector in the United States licensed to inspect oats will receive an inspection certificate showing the grade of the sample according to the federal grades. A small fee is charged by the inspector for this service.

## MILK AND CREAM STANDARDS.

DEFINITIONS and standards for milk and cream adopted by the joint committee on definitions and standards, and approved by the Association of American Dairy, Food and Drug officials and the Association of Official Agricultural Chemists, to be used as a guide for the enforcement of the food and drugs act, have been published by the United States Department of Agriculture in a circular, "Food Inspection Decision 178."

Milk is defined as the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, or such longer period as may be necessary to render the milk practically colostrum free.

Pasteurized milk is milk that has been subjected to a temperature not lower than 145 degrees Fahrenheit for not less than thirty minutes. Unless it is bottled hot, it is promptly cooled to fifty degrees Fahrenheit or lower.

Skimmed milk is milk from which substantially all of the milk fat has been removed.

Buttermilk is the product that remains when fat is removed from milk or cream, sweet or sour, in the process of churning. It contains not less than eight and five-tenths per cent of milk solids, not fat.

Cream, sweet cream, is that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force. It is fresh and clean. It contains not less than eighteen per cent of milk fat and not more than two-tenths per cent of acid-reacting substances calculated in terms of lactic acid.

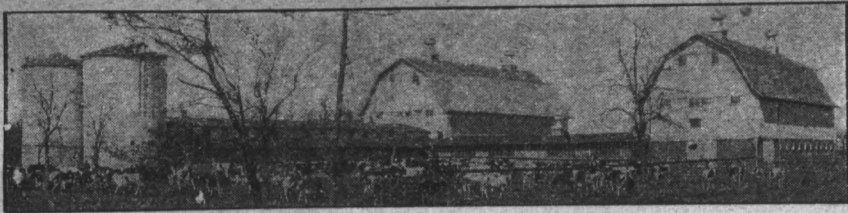
Whipping cream is cream which contains not less than thirty per cent of milk fat.

Homogenized milk or homogenized cream is milk or cream that has been mechanically treated in such a manner as to alter its physical properties with particular reference to the condition and appearance of fat globules.

The composition of the milk produced by different breeds of dairy cows varies so greatly, say the food officials that it is not practicable to fix a standard which is applicable in all localities in the United States and its territories. It is, therefore, left to the state and municipal authorities to adopt such standards as their local production conditions may warrant.

## LAUNCHING ANOTHER INTERNATIONAL SHOW.

THE Chicago Board of Trade, desiring to stimulate and improve grain and forage production, offers ten thousand dollars in premiums to exhibitors of grains and hay at the International Live Stock Exposition of Chicago, during the first week in December.



## A By-Product of Our Cow Testing Associations

**T**HE advantages of a cow-testing association are many, such as ascertaining feed costs of milk and butter-fat, finding the monthly product of each cow in milk and fat, noting variations in the test from month to month, and associating them with different conditions, learning more and more about adapting the ration to the production of the cow, increasing or diminishing it until we have learned to know just how much we can feed her and expect to get our money back, and finding out the "robber cow" that will not pay for her feed and care under the most favorable circumstances. Patience now, reader, we are not going to discuss all these various advantages in this article. We simply wish to tell of a single by-product of our association, and do it in as few words as possible.

We have been organized but a short time as yet, and already we are beginning to profit from this one advantage. I refer to the matter of the cow's ration. We are beginning to study it closer than ever before, and some who never studied it before at all, are getting interested now, and are going to find it much easier to balance the cow's allowance of feed than they have thought.

When the tester reaches the home of one of the members, he has with him records of the performance of all the cows that are being tested, together with the kinds and amount of feed they are receiving. Perhaps one may not be interested in all the herds in the association, but he is sure to want to know about some of them, and these are likely to be owned by our better dairymen.

As he studies the record of the performance of these fine herds, and sees perhaps that they have outstripped the cows in his herd by a long way, he wants to know what they are being fed, and how much. These are proper questions always, and the answers lead to better practice on his part.

Articles on feeding are all right. I am sure they are all right, for I have written lots of them, and so should dislike to hear anyone try to discount their value, but demonstrations are what counts. A lesson in feeding that carries with it the evidence that it will work out, is apt to be heeded and put in practice. We are going to have a meeting of our association to study rations. We are coming together to spend as much of the day as we can spare from our homes, just to compare methods, and results of feeding, and to get what we can out of the discussions.

We are not going to ask anyone from outside to help us. Our county agent will probably be there, as we always like to have him on hand. But the important thing about this meeting as we see it is, that we should come together and do the talking ourselves. Among our members are a few dairymen who probably understand these matters as well as anyone we could get from outside, and they will come and help—not to impress upon the others their superior knowledge, but to help, because we are all in it together, and are united in a strong purpose to learn more about the business of dairying. We are going to get practical results from this meeting, I am sure. Many of our

members are feeding expensive rations, without getting the best results. These men are going to learn more from this coming together than they could by studying books on the subject of feeding, for a long time. The need of better roughage is going to be emphasized. Hay is very scarce and high in price. Out of our studies in feeding is going to grow the purpose to produce more and better hay. Some of our people are going after alfalfa with a stronger determination. It may take liberal applications of lime in many cases to get a good stand, but we have the marl and I confidently expect to see much of it drawn and applied whenever weather conditions are favorable.

Sweet clover, too, has a future in Michigan. It is growing in favor all the time. In this locality it has never been grown, but it will be tried out in the near future.

Present high prices of grains tend to turn our attention to the matter of roughage. And good roughage is necessary if the amounts of grain are to be cut down. Cows will eat timothy hay and corn stover with a relish, but alone they will produce but little milk. If we add corn ensilage we can keep the cows looking fairly well, but our cream checks will be small unless we feed a liberal grain ration, and that costs heavily now.

"Good clover hay in sufficient amounts will lessen the need for grain, and alfalfa will enable us to do away with all of it in the case of the light milker, half of it when feeding the average milker, and quite an amount of it, even when feeding the great producer.

Personally, I regard the earnest and intelligent study of rations for the cows, as a by-product of our cow-testing association which in itself will pay for the money and time spent in this important work. W. F. TAYLOR.

### SEEDS IN GREAT DEMAND.

**T**HERE is a good demand for American seeds in Scandinavia, according to consular reports made to the Department of Commerce, Consul Hale of Copenhagen, Denmark, writes:

"There is a very great demand in Denmark for the following American seed: 'Red clover, alsike, timothy, white clover, Kentucky blue grass, and other grass seeds. There is demand also for cocksfoot, Canadian blue grass, carrot, onion, parsley, cucumber, melon, beans and peas, beet, celery, chicory, leek, and tomato seeds.

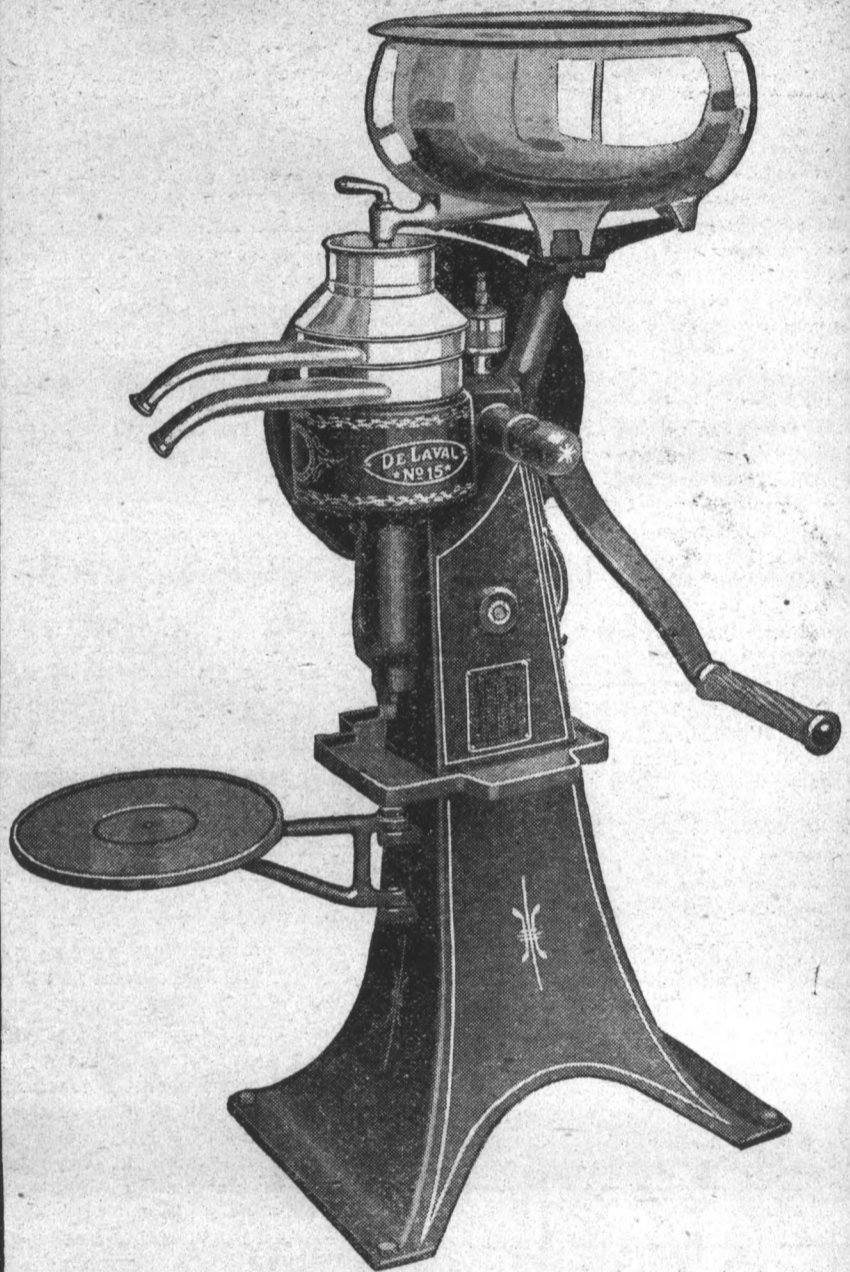
"It is safe to say that if the United States can supply the demand the larger portion of Denmark's imported seeds in the next few years will come from America."

Consul General Fletcher, Christiania, Norway, says:

"I am informed by a Norwegian seed expert that American seeds can be readily sold in this country. The varieties used in Norway do not differ materially from the seed placed on the market in the United States.

"It would probably be most advantageous in entering this market to establish an agency in Christiania for the whole country. The usual terms of sale before the war were sixty to ninety days' credit with a small discount for cash."

## Now is the best time to buy a **DE LAVAL** CREAM SEPARATOR



**T**HESE are the days when the farmer is getting the most milk, and with butter-fat at its present high price he should be sure to get all the cream.

Many "claims" are made for various cream separators, but the most convincing proof that the De Laval is the cleanest skimming machine is the fact that 98% of the large creameries of the world over use the De Laval.

Even if you do not separate as much cream as the large creameryman, you can no more afford to waste cream than he can.

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# Handy Suggestions for Busy Farmers

## TO UNLOAD BRUSH.

It frequently becomes necessary for the farmer to haul brush. Here is a method of unloading that we have found saves much time. The brush should be unloaded with some butts sticking out over the rack on either side or where it is possible to unload from one side only the side opposite the wagon from the brush pile. Secure a rope from seventy-five to one hundred feet long, pass it up over the middle of the load from the side where

from lower end as follows: Nine by thirteen by nineteen inches. Foot pieces are bolted or riveted on one end of each upright piece and then a fourteen-inch top or cap is bolted or riveted on the other end. Two cross rods sixteen inches long, threaded at both ends, are supplied with two nuts at each end and are run through the holes in the uprights and the nuts adjusted to make a rigid frame of uniform width. A roller twelve inches long and seven inches in diameter is secured and a shaft securely fastened in its center. This roll-

binding same to the shape of a letter U. The threaded ends are run through the top or cap piece.

Small coil springs are placed on the

ened to suit the work by turning down the thumb-nuts. In operation the seed heads are placed on the upper surface of the cylinder. The discharge of threshed seed falls into a box placed at the base of the machine.—E. W. G.

## KEEPING THE CROWS AWAY.

An old farmer told me of a method of frightening away crows that has never failed. In the middle of the corn field he placed a pole. Around this he constructed a rude wigwam by using poles or old boards. He fastened all securely. Then he made a scare-crow like a person and hung it inside the hut, so that it could be seen from the outside.

About the time the crows were suspected to be around, he would go to this wigwam and fire a gun. About once a week he would repeat the shooting. The idea was to give the crows an impression that he was in there watching. He never had any bother from crows when he used this means to scare them.

Another way that scares crows, although not as effectually, is to make a scare-crow of a man with a gun in his hands. But, unless a gun is fired at times near it, the crows get so that they do not care for it. Still, many times it does keep them away, until the corn is up so that it is safe.

Sometimes if one can shoot a crow and hang its body near the corn field, it will scare the crows. Or an imitation crow's body made out of an old stocking with hen's wings attached, will do the same.—C. E. R.

## THREE HORSE-TEAM LINES.

It is easy to make a set of lines and checks suitable for three horses merely by adding two long checks to the ordinary double lines shown in the

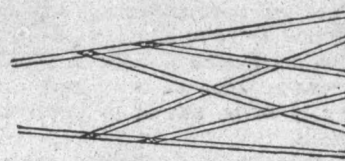
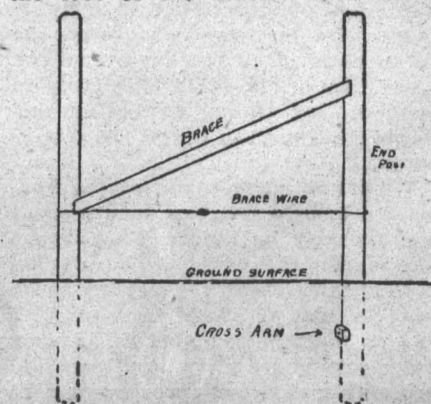


illustration. Make the checks plenty long, because you will need more room for three horses than for two. Often in hot weather, when working in the fields, you want to spread the horses as much as possible, and you must have long checks in order to do this.

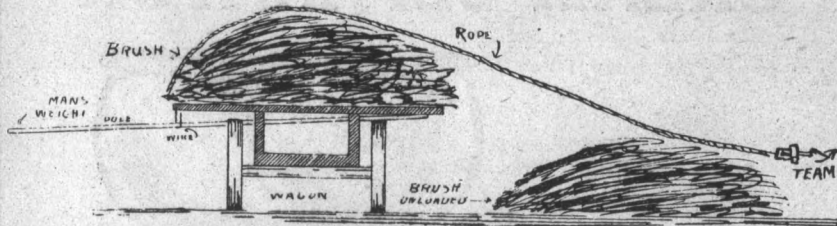
E. W. G.

## TO BRACE AN END FENCE POST.

USE good sound posts eight feet long and notch them for the brace. Twist brace wire of four strands at right angles with posts on a level with the foot of the brace. In a notch



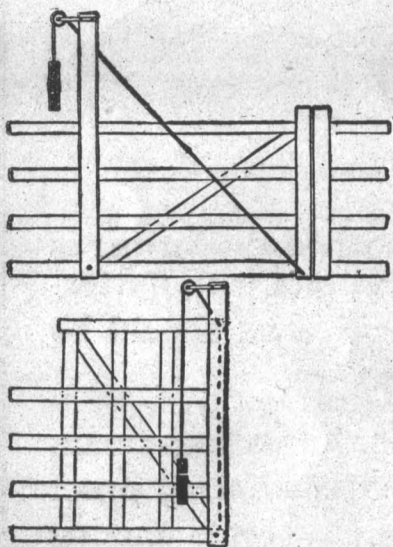
made one foot under ground on end post nail a cross-arm three feet long. Brace wire prevents pulling up and cross-arm resists forcing of the post through ground during wet weather. With properly planted end posts it is possible to anchor the wire fence so that it can be kept in condition to turn stock at all times.



the brush is to be dumped thence forward, down and along next to the rack underneath the butts of brush, bringing it up the back end of the load and then forward to the center to the point of beginning where a bowline or non-slip knot is tied. The team is then hitched to the other end of the rope. To prevent the wagon or rack tipping during the process a wire loop is fixed to the side of the rack and a pole inserted and allowed to extend several feet beyond the rack; a man holds down on the end of this pole while the team is started. In a jiffy the load will be on the ground beside the wagon. The illustration will aid in giving a clear idea of the method.—I. Pattengill.

## HANDY LIFTING GATE.

It oftentimes happens that there is no space to swing a gate, or for some other reason, it is not desirable to do so. This drawing shows a solid gate that may be easily lifted because the pulley weight takes part of the lift and holds the gate open so there is no danger of it dropping unexpectedly to do damage. A barred gate is built in the usual way with a diagonal brace to keep it in shape. The high gate post



is made double and the gate is fastened between by one bolt at the bottom, as shown in the illustration.—E. W. G.

## HOME-MADE SEED THRESHER.

It is quite easy to make a hand vegetable seed thresher in the farm work shop, which will separate the seeds of various vegetables from their pods or husks.

Pieces of wood one by two inches, or iron one-quarter by one and a half inches, and twenty-four inches long, are first secured and shaped to become the upright portion of frame. Quarter-inch holes are bored through these two pieces of iron or wood at distances

or cylinder, preferably of wood, is covered with corrugated rubber floor matting, the corrugations running parallel to the top of the frame.

On the end of the shaft a small handle is placed, this being used to give a rotary motion to the cylinder. The apron holder is made by threading the ends of a twenty-six-inch rod and then

threaded ends and then a thumb-nut for adjustment is put on. The apron is made of heavy, rough canvas, turned and stitched at ends, so that a rod may be run through. The apron is suspended from the U-bar and drawn tightly against the surface of the rubber-covered cylinder and held in position by a rod resting in brackets that are bolted to the upright portion of the frame. The canvas apron is tight-

## Rural Schools and Citizenship

THE world war has revealed to American people the importance of an education in the spirit of American ideals. That our leading educators have not been slow to realize the value of public schools in the making of better citizens is evident from the unusual interest they are taking in the new methods of training school children. We believe that there is a wonderful opportunity here in Michigan for the leaders of our rural schools to adopt a course of citizen making along with present courses of study.

Such a course, under the guidance of a well-posted teacher, may well consist of plain discussions of current history, news of the day and facts of interest about men and women prominent in public life. Along with diligent, hard work, poring over dog-eared text books, must come a simple course of training that will shift the school-motive from the individual advantage of the boy or girl to the larger purpose of making a desirable citizen. So long as our schools are supported from public funds we have an unchallenged right to demand of our directors that they furnish us with a class of citizens, rather than vote-shirkers, profiteers and civic bandits. To produce such a class of young men and women the leaders of our rural schools must have a broad understanding of citizenship and how to develop that characteristic, at all times, making this, and not mere scholarship the guiding idea.

Some of our educational leaders would have us put citizenship classes in the high schools, but in rural districts a large percentage of pupils never reach the high school, therefore the proper time for the subject to be emphasized is when all children must go to school. We must have democracy in our education as well as in our govern-

ment if we succeed in making both a real service to our people.

"Scholarship," says Superintendent Phillips, of the Birmingham, Alabama, schools, "is not the aim of American schools and never should be; the emphasis upon it has isolated schools from public service, promoted pedantry, aristocracy and snobbery. So long as subjects, not character, remain the aim, the schools will be antidemocratic. This crisis has forced upon the schools the salutary influence of doing things directly for the common welfare. That is the essence of citizenship. It should not perish from the schools." Then we hear from Principal Lewis that "the main thing a public school should do is to give its members consciousness of what is right and proper for a citizen to be; a habitual will to do what is right and proper for a citizen to do. Unless the school exemplifies Americanism at its source, and is a seed-bed and nursery of democracy, why should democracy support it?"

American schools have been a big factor in developing civic virtues and training our boys and girls for service. Not only have the boys and girls benefited from such training, but in thousands of homes fathers and mothers, who could speak only foreign languages, have been made to understand real Americanism, through the messages carried home from public schools by their children. Is it any wonder that we had so many anarchists and the like here in America when so many of our foreign people had no conception of our ideas and ideals other than that formed by reading foreign language publications and listening to socialists denounce everything American. It would be the greatest educational blunder we could make to neglect to make continuous the revival of Americanism in our public schools.



## Cooperation the Big Problem

*But Our Marketing Organizations Must be Built Upon Solid Business Principles.—E. H. Porter*

SOME of the matters that are forcing themselves upon our attention at the present time, and which concern not only dwellers in the city but those who live in rural districts, are questions, it seems to me, primarily belonging to the domain of economics. They are, in a large sense of the word, marketing problems, and if we are to attempt any solution of these vexed questions, it should be, it seems to me, after we have become possessed of the essential facts and the underlying principles that dominate the science of economics as applied to marketing.

We speak glibly enough of the science of marketing. There is no such thing today as a scientific knowledge of marketing operations. It is one of those matters that have been delayed as to investigation and decision.

In the largest sense of the word, marketing is a part of the costs of production, because to the consumer the cost of production on the farm—which may be said, in a general way, to be indicated by the price paid to the farmer—is increased to the consumer by the cost of distribution, or the real cost of marketing. Those two costs added together are the real costs of marketing, and they apply with ever-increasing force to the purse of the consumer.

The question in New York, as it is elsewhere, is a better distribution of food. How is that to be achieved? The wholesale business of New York, or the wholesale quarters, are those located downtown near the wharves, near Fourteenth street, in the Bronx, in Harlem, and at Wallabout Bay.

It is a question whether some of these wholesale centers are at present adequately located. In fact, we know they are not. But around these centers, and particularly in the lower part of the town are gathered all the wholesale markets for all commodities, and the tendency of all these interests is to gather together in some one place.

I have established in New York a market news report, so far as the appropriation at my disposal would allow, and I am issuing that report weekly, and it has grown so that it includes the leading commodities on sale in the New York markets.

I have also established a service of grievances. What the farmer in the country dreads most and, perhaps, has the most fear of is what is to befall the goods that he ships to an unknown party in New York.

When they leave his hands in the car in the country, as a general rule he has no knowledge of the man to whom they are consigned; he has never seen him and knows little about him, and he feels that this man at the other end of the line has the absolute power to dispose of them as he will, make such report as he pleases, and return such amount of money as he sees fit to him.

He wonders whether the honesty of that man is beyond reproach. And I am sorry to say that sometimes the honesty of the gentleman in question has not been what it should be.

So I am sending out notices to the farmers of the state, and all other shippers for that matter, that if they

will send to my New York office an account of the transaction, the date of its shipment, the number of the car, character of the goods, the quality, the name of the man to whom they are consigned, and all the data that go with the shipment of the particular commodity involved, I will have an inspector present when those goods arrive, to determine their condition, to find out what is done with them, to know what they are sold for, to ascertain the date of sale, and to be ready to make a report on that transaction to the shipper in the country if he desires it.

I have established a bureau of transportation, which investigates the non-arrival of cars when demanded by shippers, delay in transit, mishandling of goods—all those matters that pertain to transportation, for which I have a specially trained corps of inspectors.

I have established a bureau of service with the information bureau, which is prepared to answer all inquiries that farmers may make.

I might say in regard to market reports that the question is one of the vexing problems of the systems now existing.

Market reporting has been a thorn in the flesh for years. It has been done by committees of exchange; it has been done by making a record of sales; it has been done by committee meetings behind closed doors, and it has been done by independent and private reporters of markets.

The objections to sales lists made up by commission houses are natural enough, that they are the most interested parties. If they are wholesalers, it is to their interest that commodities should be underquoted. If they are jobbers, selling to retailers, it is to their interest that the prices should be overquoted.

And while it does not necessarily follow that self-interest will betray every man into a dishonest statement, the temptation is here and should be removed.

To pass from that to a bureau of cooperation: I will only refer to my last bulletin, 'Foods and Markets.' There is a 'Foreword' in this bulletin from which I quote a line or two:

"Cooperation is the keynote of twentieth century activity. In cooperation with our allies, the world war has been won. Cooperation in the industrial world has led to the successful operation of gigantic enterprises and it has brought about collective bargaining and the improvement of the condition of industrial workers.

"Cooperation is the keynote of twentieth century activity. In cooperation there are a large number of enterprises that have been conspicuously successful. The main and ultimate purpose of cooperation is to make the producer master of his own business. For many weary years he has received the wages of a laborer. The time has come when he may secure the profits that justly belong to him, through a proper grading and marketing of his products. In order to bring this about the producer must become a business man and learn how to do business along cooperative lines. The cooperative organizations that he creates must be built upon those solid principles of coopera-

## Cletrac

TANK-TYPE TRACTOR

*The logical successor to the horse and mule*

MR. F. H. JOHNSON of New Augusta, Ind., reports that last July he used the Cletrac in loading hay and got in the crop from 140 acres at the rate of about 35 tons a day. "Besides getting the hay into the barn in such good time," says Mr. Johnson, "I made a substantial saving by not having to work my draft stock on this hot, horse-killing job."

Just another example of Cletrac adaptability and efficiency—just another case of doing *more work more days in the year* with the Cletrac.

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It is small enough to be used economically on light jobs, yet powerful enough to handle the majority of the so-called *heavy work* about the farm.

It plows, harrows, plants, reaps, binds, threshes, hauls, cuts ensilage, fills silos, saws wood, and does practically all the work done by animal and stationary engine power.

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tive business effort that experience has proved absolutely reliable."

Now just a word as to markets: There is so much to say about markets that it is hard to determine what points to take up. Let us take up, for example, the country points of sale and the defects.

Now, the farmer can sell his goods directly to the consumer; he can sell to the country store; he can sell to shippers at his local marketplace. If he undertakes to sell direct to the consumer in these days, it means that he must either establish a connection between himself and certain people in the nearest city or truck his goods in.

It is apparent, upon a survey of the situation, that such a method as that is only applicable to a comparatively few farmers. It is impossible for all the farmers surrounding any city to establish points of marketing contact with the consumers in a satisfactory way. That, of course, leads up again to the consideration of so-called farmers' markets, which have been advocated by a great many as one of the main solutions of this marketing problem.

Well, let us see how that works out. Let us take, for example, a good-sized city of a million or two of inhabitants. Let us take New York. Now, only ten per cent of the food consumed in New York City comes from New York state. To say the least, I was astonished when I discovered that fact.

As to prices of farm products: It has been stated that the farmer receives thirty-five cents on a dollar. Is it true? Is it true that the farmer only receives thirty-five cents out of every dollar that has been paid for the commodities that he sells?

Only thirty-five cents? Well, true or not, you and I have read that in agricultural papers, and in the daily press and in magazine articles, by men who are supposed to know. We have read that for years. And we have believed it. I did; I believed it. And I got very hot under the collar about it, too.

And I am not sure yet but what that heat was somewhat justified. But as I stated at the beginning of this little discussion, as I have gone into the matter, the statement that the farmer receives only thirty-five cents out of every dollar is not justified by facts. And it is the facts of the case that we are after. Now it is true that the farmer, for certain commodities, certain of his products, receives only thirty-three and one-third per cent.

To give a concrete illustration. Out in Minnesota, where lettuce is raised, only ten miles from Minneapolis, the farmer receives only thirty-three and one-third per cent of the retail price, and it goes through only one middleman. But in butter, figured in butter-fat, the farmer receives seventy-seven cents on the dollar; live stock, fifty-eight cents on the dollar; wheat, ninety cents on the dollar.

The butter sent from Minnesota goes through the hands of four middlemen, including the transportation company, and brings back to the creamery, the original seller, seventy-seven per cent of the butter price.

So in general I may say, in passing, that the presence of one or two or more middlemen seems to have very little influence on the final cost to the consumer or the percentage of the price that the farmer receives!

In my studies of this question, I have been obliged to go to men much wiser than myself; to retailers and wholesalers, farmers and milk men, and butter men, and wheat men, to

find out when and how I could better the situation. The question is, what is to be done? How are you going to do it? The consumer thinks that somebody, some time, somewhere, somehow, is going to reduce the retail price of the articles that he buys. I can tell the consumer that that is never going to be done in any such way as that. It is going to be when the consumer himself rises to his duties; it is when the transportation companies face the difficulties, when the system of commercialism in New York faces the difficulties, and when the producer himself takes hold of it in a scientific way—then we will begin to come to a new era and a new method of distribution of commodities.

### GETTING OUT MARL.

**S**OMETIME ago the United States government in cooperation with the Department of Farm Mechanics began an investigation of the possibilities of the marl deposits at the bottom of a great many small lakes in Michigan. These deposits are a formation of a sticky jelly-like lime deposit, said to have been made by a type of lime forming plant which grows in these lakes. The marl analyzes very high in available lime content and is claimed to be equal, yard for yard, with ground limestone for agricultural purposes.

This year Prof. Musselman, head of the Agricultural Engineering Department at the Michigan Agricultural College, hit upon a scheme for pumping the material out with a type of pitcher pump that is used for pumping sand. He placed Prof. D. H. Flower, of the college staff, in charge of a series of experiments in this pumping work. In the looser types of the material very promising results were secured, but the majority of the material would not pump without some sort of agitation. Every possible kind of mechanical agitator was tried but none proved worthy of adoption. In doing some explosive work with Prof. Musselman, he and the writer hit upon the idea that dynamite might prove the solution of this problem.

A short time ago Mr. Flower and myself tried this out with twenty per cent dynamite. We were extremely successful and came to the definite conclusion that it was possible and economical to use low-grade explosives for this work. The dynamite was waterproofed with marl itself.

While varying features have to be worked out, yet the writer feels sure that the lime problem for Michigan is well on the way to a very successful solution. This is especially important at the present time because of the very greatly increased possibilities of food production from the use of lime on nearly all farms in Michigan. The work on these experiments is being rushed as a war preparedness measure. The deposits of this material are enormous and every farm in this state is said to need lime. The material is already being marketed after being excavated with a drag-line bucket, but this equipment is more expensive than the pump method promises to be. This material is we are told, excavated with the pump in a large operation near Chicago, where the material is used in the manufacture of Portland cement. The outfit planned is such as can be purchased at very small expense and operated by a farmer on his own farm or by a group of farmers, and as these lakes are to be found in almost all parts of the state the transportation costs will be very low. **G. G. MEANS.**



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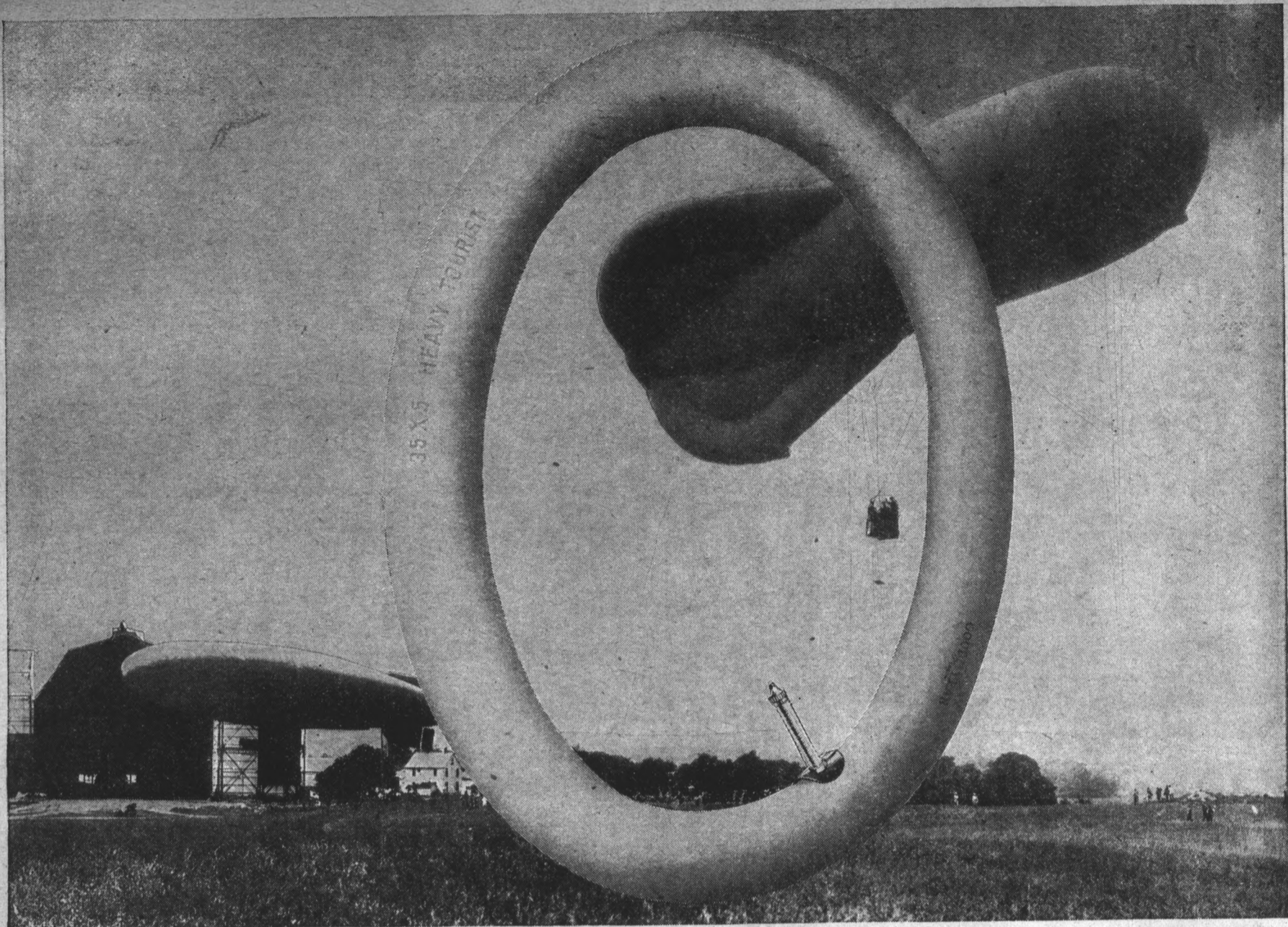
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**J**UST how important is the *layer-upon-layer* construction which Goodyear employs in the manufacture of tubes?

Does it make them stronger—longer-lived—better containers of air?

Well, for nine years we have been building balloons and dirigibles, in the construction of which our first and most complex problem was that of inflation. For gas is volatile, much more elusive than air, harder to capture and hold.

It was finally demonstrated, however, that rubberized fabrics, built up *layer-upon-layer*, formed the most practical container for this gas.

Once this fact was established, it seemed quite logical that the same principle should prove even more successful when applied to tubes. For a tube's sole function is to hold air. We thus evolved the Goodyear Heavy Tourist Tube, making it of pure gum strips, building them up, *layer-upon-layer*, then curing them

together, after which the valve-patch was vulcanized in.

The soundness of this method was immediately established.

The thin layers of rubber cured one upon the other enabled the elimination of all defects, such as sand holes and porousness. This construction also gave the body of the tube a criss-cross grain which prevented splitting if punctured. Finally, by vulcanizing the valve-patch securely into the tube we prevented all leaks at this source.

There is an observable tendency among motorists everywhere to use Goodyear Heavy Tourist Tubes exclusively.

They have learned that the slightly added cost of these thick, grey tubes is more than justified by their longer life and by the protection which they undeniably give to casings.

More Goodyear Tubes are used than any other kind.

**GOODYEAR**  
AKRON

## IT PAYS TO FEED COWS WHEN ON PASTURE

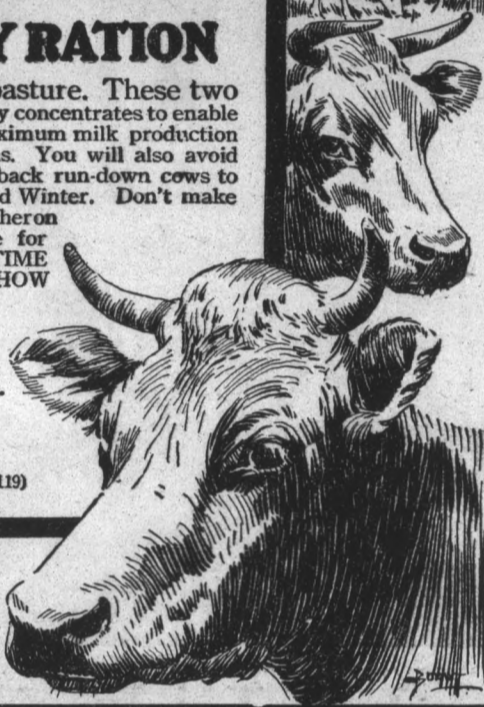
Pasture alone does not supply the required nutrients for maximum milk production and bodily maintenance. Grain feeds are just as essential in summer as in winter. U. S. Government Bulletin No. 743 says: "The bulky nature of pasture grass places a positive limit upon the capacity of the cow to take feed. The cow's stomach cannot hold grass enough to supply the required nutrients for maximum milk production, therefore a part of her ration should be of a more concentrated nature." You will find it PAYS BIG to feed

### SCHUMACHER FEED AND BIG "Q" DAIRY RATION

when your cows are on pasture. These two ideal feeds furnish the necessary concentrates to enable your cows to keep up their maximum milk production during the hot summer months. You will also avoid the difficult task of bringing back run-down cows to normal production next Fall and Winter. Don't make the mistake of depending altogether on pasture this summer. Write for interesting folder, "LONG TIME MILK PRODUCTION, AND HOW TO GET IT." It's FREE.

**The Quaker Oats Company** Address: Chicago, U.S.A.

(119)



## Your Part of the Billion Bushels of Wheat

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

### Grain-Saving Stacker

Write Today to Any of These for Grain-Saving Stacker Information  
**LIST OF MANUFACTURERS**

**United States**  
Aultman & Taylor Mach. Co., Mansfield, O.  
Avery Company, Peoria, Illinois  
A. D. Baker Company, Swanton, Ohio  
Banting Manufacturing Company, Toledo, O.  
Batavia Machine Company, Batavia, N. Y.  
Buffalo Pitts Company, Buffalo, New York  
Cape Mfg. Co., Cape Girardeau, Missouri  
J. I. Case Threshing Mach. Co., Racine, Wis.  
Clark Machine Co., St. Johnsville, N. Y.  
Ellis-Keystone Agricultural Works, Pottstown, Pennsylvania  
Emerson-Brantingham Co., Rockford, Illinois  
Farmers Independent Thresher Co., Springfield, Illinois  
A. B. Farquhar Co., York, Pennsylvania  
Frick Company, Waynesboro, Pennsylvania  
Harrison Machine Works, Belleville, Illinois  
Huber Mfg. Co., Marion, Ohio  
Keck-Gonnerman Company, Mt. Vernon, Ind.  
Minneapolis Threshing Machine Co., Hopkins, Minn.  
Port Huron Engine & Thresher Co., Port Huron, Michigan  
The Russell & Company, Massillon, Ohio  
Russell Wind Stacker Co., Indianapolis, Ind.  
Sawyer-Massey Co., Ltd., (U. S. Agency), Moline, Illinois  
Swayne, Robinson & Co., Richmond, Ind.  
The Westinghouse Co., Schenectady, N. Y.

**Canada**  
Robt. Bell Engine & Thresher Co., Ltd., Seaford, Ont.  
Dominion Thresher Co., Ltd., New Hamburg, Ont.  
Ernst Bros. Co., Ltd., Mt. Forest, Ontario  
John Goodison Thresher Co., Ltd., Sarnia, Ontario  
Herget Bros., Ltd., Mildmay, Ontario  
MacDonald Thresher Co., Ltd., Stratford, Ont.  
Sawyer-Massey Company, Ltd., Hamilton, Ont.  
Stewart Sheaf Loader Co., Ltd., Winnipeg, Man.  
Sunset Mfg. Co., Ltd., Sussex, New Brunswick  
Waterloo Mfg. Company, Ltd., Waterloo, Ontario  
R. Watt Machine Works, Ltd., Ridgeway, Ont.  
George White & Sons Co., Ltd., London, Ontario

The Grain-Saving Device Originated With The Indiana Manufacturing Company, Indianapolis, Ind., Who Also Originated the Wind Stacker

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

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

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



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

## Our Service Department

### LOCATION OF SILT BASINS IN TILE DRAINS.

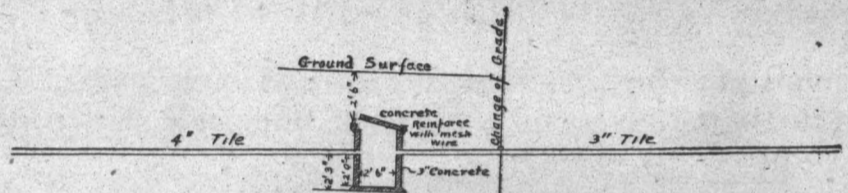
Could you give us information on the need of silt basins in the drains and where they should be located, the size to make and how to construct? Gratiot Co. I. H.

Silt basins are constructed at places in a system of underdrainage where several tile lines converge into one larger tile for the purpose of intercepting earth or light substances from lodging some place in the line and obstruct the flow of water and serve a similar purpose as the catch basin in the gutter line. Of course, nothing can enter the tile from the surface of the ground, but it is the mud, sand and clay (particles) that enter at the joints in the tile line. Such basins are also

one does it by hand this can be done just as it should be.

I advise you to get soy bean culture and inoculate the beans before you plant them. Medium green soy beans is probably the best variety for you to plant where you are going to hog the crop down. If you have trouble in getting this variety the mammoth yellow will probably be the next best variety. This mammoth yellow I think is better for ensilage than the other variety, although it doesn't mature as early, and if you want the beans to mature at about the time the corn does the medium green is better, although I think the seed costs considerable more this year than the mammoth yellow.

Two or three pounds of rape seed per acre at the last cultivation of the



Locate the Silt Basin Just Below where the Grade Changes.

constructed where the fall is decreased in the direction of the flow.

Engineers and laymen alike locate the basin at the point of the break of grade. The writer prefers the location in a place where the velocity begins to harmonize and the current in the tile, so to speak, is meeting with resistance and the substances are getting to rest a few feet below the break. Another reason for the location at this point is, that if the basin is filled the accumulation will take place up stream and the cleaning out of the tile would be better and easier accomplished.

The construction of the basin as shown in accompanying illustration, is large enough to admit a man for cleaning and will answer for all ordinary purposes. It should be made from strong concrete, thirty inches in diameter, and if square, thirty inches. A concrete cover three inches thick reinforced with light wire one and a half-inch mesh, should be furnished. The bottom of the basin should be twenty-four inches below the bottom of the tile and the cover should be safely below frost line.

The location should be carefully noted from permanent markers in the field so as to be easily found and examined. Such examination should be made two weeks after the first heavy rain after the tile is laid and at least once in the spring and again in the fall. If the tile is properly jointed and covered carefully there should be very little substance enter the tile.

J. H. B.

### SOY BEANS WITH CORN.

Will you please advise me in regard to the following: I have a field which I am going to plant to corn in check-rows. It is hilly so will have to plant by hand, but want to plant soys with the corn. What is the best way to get the soy bean seed in and the variety to use? Wish to pasture this field later in the summer with sheep and turn in hogs when the corn is mature. How much rape seed per acre should I use at the last cultivation? C. M. D.

As you must plant this field by hand I see no other way to plant the soy beans only to go over the field again and plant the beans by hand. The beans could be planted close by the side of the corn so that it would not interfere with the cultivating. I think you could do a much better job in planting the beans by hand than by machinery. They ought to be planted quite shallow and, of course, where

corn would be a sufficient amount to seed. This plant does full better if it is given a little room. If it is sown too thickly it doesn't develop as good a plant as when it is given more room.

C. C. L.

### NAME FOR THE FARM.

I would like to name my farm. Can you help me find an appropriate name? I keep about fifteen head of cattle and sell milk. The land is level and a brook flows through one end of farm. Van Buren Co. L. C. K.

More than one person besides L. C. K. has been puzzled by this same question—what name shall I give my farm? Of course, it is purely a personal matter, one for the owner himself to decide, yet it may be of some assistance to state in a general way what has influenced some people to select the name which they did for their farm.

Many times some natural object or distinguishing feature of the farm suggests the name. For instance, a nice spring brook that can be seen by passers-by suggests the name of Spring Brook Farm, or a grove of oak trees suggests the name of Oak Grove Farm or Oak Lawn, or Maple Crest because of a grove of maples which are on a rise of ground, or Orchard Grove, Hillside Farm, etc. In fact, any individual characteristic of the farm can well be used.

Again, any characteristic of the buildings can be used. For instance, Green Gables when the gable of the house are painted green, and especially if the house is so built that the gables are a prominent feature. Then the particular kind of farming can be embodied in the name with good effect, like Hillside Stock Farm, or Rochester Stock Farm, or Sunnyside Dairy, etc.

Still again, one can use his own name with the name of his farm as Porter Estate or Klingman Hill Farm, Lillie Farmstead, etc. This last name I selected for my own farm because the number and arrangement of the buildings seemed to fit in well with Prof. Robert's definition of a farmstead and then I would like to have the name also go on down through the generations.

C. C. L.

To poison grasshoppers mix one pound of Paris green or one and one-half pounds of white arsenic, twenty-five pounds of sawdust, two quarts of cheap feeding molasses, six cut-up lemons or oranges, and one or two gallons of water. Sow mixture broadcast.

Mention The Michigan Farmer When Writing to Advertisers

# This Handy En-ar-co Oiler FREE To Automobile and Tractor Owners

Send the coupon for a long, slim can with a long spout that reaches all hard-to-reach places on your machine.

This oiler is intended to remind you that when you buy

## En-ar-co Brands

you get the best that money can buy. Made by graduate workmen, trained to their tasks and skilled in Scientific Refining. For this reason En-ar-co brands, for nearly forty years, have enjoyed a reputation for dependability.

## En-ar-co National Motor Oil For Automobiles and Tractors

An oil of the right body to protect the moving parts with a soft, velvety cushion or film, strong and tenacious, so as to permit that necessary smooth movement of the motor to develop its greatest strength and power.

## En-ar-co National Motor Oil

goes through a Scientific Refining Process, wherein it is distilled many times, vaporized and filtered until a clear, clean oil, containing no free carbon, is produced. An oil that will prolong the life of your motor, giving it increased power and save, in cold cash, many times its cost in preventing lubrication trouble.

## National Light Oil

The most economical fuel for oil-burning tractors, best for lamps, insuring a bright, clear light without charred wick or sooted chimney. No soot or smell when used in oil stoves. Its uniform heat makes it most desirable for incubators, as it emits no fumes to clog egg shell pores or kill live chicks in the brooder. Buy it by the barrel.

## Black Beauty Axle Grease

for the wagon. Insures a friction-free axle, as it contains no compounds to clog and gum.

## Buy of Your Local Dealer

If he cannot supply you, write us for prices and location of nearest distributing point.

## The National Refining Company

Branches in 82 Cities

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**For  
Better  
Service  
Use**

## White Rose Gasoline

Pure and Dry  
Develops Greater  
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## En-ar-co Motor Grease

One Grease for  
All Friction Points

**The National  
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I own.....  
(Give name above)  
automobile or tractor and  
enclose two 3-cent stamps.  
Send me handy oil can  
FREE. Please give nearest  
shipping point and quote  
prices on items I have  
marked. I will be in the mar-

ket about.....  
(Give date above)

I use.....gals. Gasoline per  
year.

I use.....gals. Motor Oil  
per year.

I use.....gals. Kerosene per  
year.

I use.....gals. Tractor Oil per  
year.

I use.....lbs. Motor Grease per  
year.

I use.....lbs. Axle Grease per year.

My name is.....

R. F. D.....

Postoffice.....

County.....

State.....

NOTE—This can will not be sent unless you  
give make of your auto or tractor.

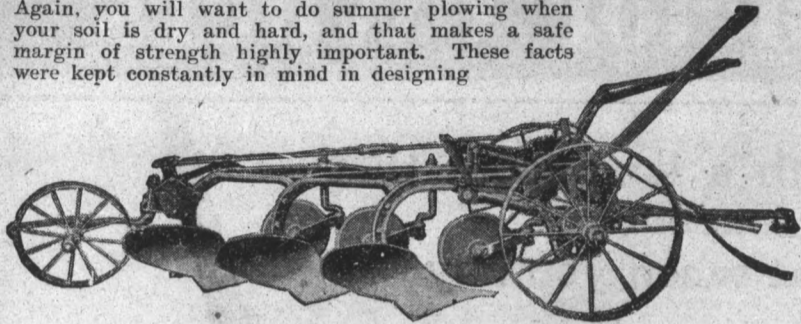
**Tear or Cut Out—Mail Today**



## Strength is Vital in a Tractor Plow

In order that money invested in a power-plowing outfit may return satisfactory dividends, every precaution should be taken to avoid interruptions during the plowing season. Choosing a safe plow is just as important as getting the right tractor, for if the plow goes wrong, your entire outfit is "hung-up."

For that reason reserve strength is more necessary in a tractor plow than in one drawn by horses. Again, you will want to do summer plowing when your soil is dry and hard, and that makes a safe margin of strength highly important. These facts were kept constantly in mind in designing



### B. F. AVERY AND SONS Tractor Gang Plows

Every part subject to strain was made "a little stronger than seemed necessary"—axles, beams, beam braces, coulter stems. For example, front axles on most tractor plows are 1½ inches in diameter. Those on the Avery measure 1¾ inches—36 per cent heavier.

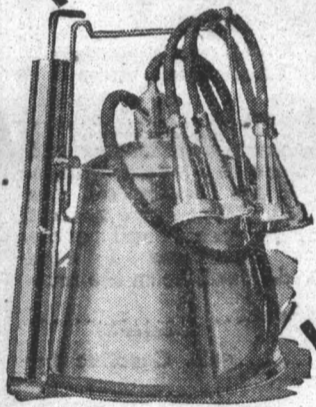
The beam braces, besides being of extra size, have an unusually long bearing on the beams, giving great strength where strength is needed. The beams are 2½ inches wide by 2½ inches deep, with a high curve at the throat that gives plenty of clearance for deep plowing in trashy fields.

Building extra strength into a tractor plow in these times of high-priced steel costs money, but it pays in added years of service and freedom from costly delays. Furnished with two or three 12- or 14-inch bottoms, stubble, turf-and-stubble, mixed land and blackland shapes.

See these plows before buying. If there is no B. F. Avery agent near you, write

FOUNDED 1825 **B. F. Avery & Sons** Incorporated 1877  
LOUISVILLE, KY.  
Stock Carried at Saginaw, Michigan

## Milk Faster, Easier, Better with a Success Open Valve Milker



Don't keep on milking your cows in the old-fashioned hard, disagreeable way. Save time, labor and money by using the Success Open Valve Milking Machine. Simplest, easiest-operated, most sanitary milking machine made. Milks in Natural way. Twelve-year-old boy can milk 20 to 26 cows in hour with 3 units, 1½ H. P. Gas Engine or ½ H. P. Electric Motor operates 2 to 6 units. Get full details and our mighty interesting prices.

### Book on Milking Free

Tells all about the Success way of making milking easy. Answers the 15 leading questions farmers ask about milking machines. Write for it today.

Salesman wanted—wonderful opportunity—act quick.

**SUCCESS MILKING MACHINE CO.**  
711 Chestnut Street, Milwaukee, Wis.

SOPHIE'S AGNES JUST  
BROKE THE WORLD'S  
JERSEY YEARLY  
BUTTERFAT RECORD.

## BUFFALO CORN GLUTEN FEED

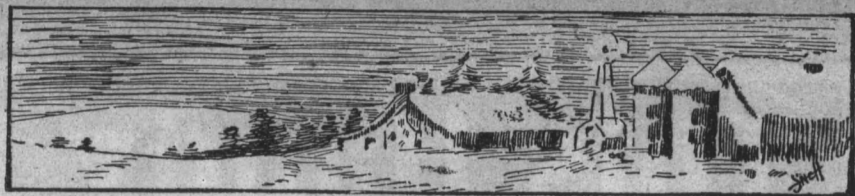
Write to H. CHRYSTAL, Selling Representative, 909 Ford Building, Detroit,  
for sample, feeding formulas, etc. Who is your dealer?

BUFFALO GLUTEN,  
½ HER GRAIN RATION,  
WAS ONLY HIGH-PRO-  
TEIN FEED SHE WAS FED



Winter Problem solved by the Hive with an Inner Overcoat. 11 Wintered 100% perfect, no loss of bees winters of 1916-17-18. The Inner Overcoat did it. Send for free 48 page catalog of bee keepers supplies. **BEES WAX WANTED** A. G. WOODMAN CO., Dept. M. F., Grand Rapids, Michigan

Please Mention this Paper When Writing to Our Advertisers



## Lillie Farmstead Notes

I AM unusually glad to see the grass grow again this year. We never vest the best crop of wheat in years.

were so completely cleaned out of forage for live stock in the history of my farming as this past winter. Before the grass grew again we were entirely out of silage and finally out of hay, and I did something that I have advised farmers a good many times not to do, and that was to allow dairy cows to go without hay, even when they had to pay a big price for it, but the old saying, "circumstances alter cases," proved true. There was no hay to be had anywhere in our country; it was all cleaned up. Hay sold on the Grand Rapids market as high as \$35 a ton and in Muskegon I understand it was sold for \$40 per ton this spring. This simply means that there was no hay to be bought and that was a fact in our particular neighborhood. We had lots of good straw and so we took the cows through for several days on simply straw and grain. Of course, we put them on the pasture earlier than we usually would under the circumstances and by feeding grain liberally they haven't done so badly, yet I am confident that had the hay been available it would have paid me in the long run to have purchased it even at a high price, but when money won't buy it one must do the next best thing—learn to get along without it just as we did with some things during the war.

### Wheat.

In our particular neighborhood I don't think wheat ever looked any more promising than it does this spring. I don't know of one poor piece of wheat and the most of it is excellent. Of course, the farmer never knows what the crop will amount to until he gets it harvested but under or

dinary conditions we are going to have a good crop of wheat in years. **Grass.** New-seeded meadows are not as promising as last year owing to the fact that there isn't as good a stand. The dry season last year killed some of the young clover and many fields are thin and spotted, but the warm weather of the past few days is booming it and I know from past experience that clover plants, like other plants, will develop wonderfully when they are not crowded if conditions are right.

### Spring Cereals.

The prospect is none too good for oats and barley. Excessive heavy rains came after most of these crops were sowed. They packed the ground down so firmly that some of it could not come up at all and most of it was somewhat injured. You never can get a maximum crop on our rather heavy land if we have a hard rain after the grain is sown before it germinates because of the effect of this heavy rain in packing the ground excludes the air and prevents the young plants from developing normally.

### Peas.

This same criticism applies to the pea crop which is quite an important one in our county now. The ground was packed down so firmly that in places the peas are not more than half a stand. On lighter portions of the same field there is a good stand. In some of the lower places the seed actually rotted and did not germinate at all. It is too early to predict what the harvest will be because there are so many conditions that cannot be controlled but prospects are fair, taking everything into consideration, to say the least.

C. C. L.

## Striped Cucumber Beetle

THIS insect is well known to the growers of cucumbers, melons, squash and pumpkins. The bright yellow colored beetle is a little less than half an inch long with three black stripes on its wing-covers. It is a native of this country and is listed as one of the most serious of the insects attacking the cucurbits.

Just about the time that the cucumber or melon plants come through the ground they are attacked by these hungry beetles. They feed ravenously on the young plants, often making reseeded necessary. A little later the adult beetles eat holes in the leaves or attack the fruit. The larvae are the slender, white, boring grubs that are so often found tunneling in the roots. Severe attacks of these larvae often cause the plant to wilt and die.

### Life History.

The beetles spend the winter under trash, in the ground, or wherever suitable shelter can be found. In the spring they usually appear shortly before the plants are up and feed for some time on the pollen of flowers, or other plants, until their favorite food is handy. The female beetle lays about a hundred eggs which are deposited in any convenient place on or near the plants. These eggs hatch in eight or ten days and the young larvae burrow into the stem or root. Sometimes they are found under the fruit as it lies on the ground which often results in rotting. When full grown these larvae go into the soil to pupate and the new-

### Control Measures.

Inasmuch as the beetles spend the winter under rubbish, clean culture will be an important step in the control of this pest. Gather and burn, or otherwise destroy, all remnants of the season's crop, and if possible burn the dry grass along the fence rows. If these hibernating places are destroyed this pest and many others will be deprived of their usual winter quarters.

When the plants are young a covering of wire screen or netting will keep the beetles off. A frame may be made by cutting a barrel hoop into halves and fastening them together in the middle so that they are at right angles to each other. Screen or netting can be fastened to this frame. If mosquito netting is used better results will be had if used double thickness as these beetles can work their way through the mesh. These covers should be kept on until the plants are quite large. Injury may be prevented if the plants are sprayed with Bordeaux mixture or arsenate of lead. This renders the plants distasteful to the beetles, acting as a repellent. A dust made of one part of flour of sulphur and mixed with five or six parts of hydrated lime dusted on the plants is a good remedy. Some growers prefer arsenate of lead powder mixed with nine parts of hydrated lime.

DON B. WHELAN.

## The Growing Pigs

WITH all kinds of grain and by-product feeds at present prices it is evident that the farmer who plans to make maximum use of forage crops and grasses in carrying his spring pigs along in a thrifty and growthy condition until his 1919 corn crop is fit for feeding will make good profits from his business. Some grain will be needed to enable the pigs to make economical use of the pasture crops, but care must be taken to guard against feeding more dollars' worth of grain feeds than the pigs will be worth by the time the new corn is ready for conditioning them for market.

Experiments prove conclusively that gains made on grasses and forage crops are always cheaper than gains made on grain or by-product feeds. During ordinary years a saving of about thirty-five per cent may be made in the cost of producing the first one hundred and twenty pounds of growth by providing good pastures for the pigs. Under present conditions a skillful feeder should be able to make a saving of more than fifty per cent in carrying his pigs along in good condition until his corn crop is matured sufficiently for fall feeding. By making a more general use of pasture crops the pigs may not attain heavy weights, but if they are fed limited quantities of grain feed they will be thrifty and capable of making economical use of the corn crop when it is fit for feeding.

Alfalfa, clover and bluegrass are the ideal crops for pastures but the hog grower who has failed to provide an abundance of these valuable crops can do the next best thing and sow oats and peas, soy beans, cowpeas, rape, corn and mixed crops. The kind of grain to feed in connection with pasture crops will depend largely upon the quality of the pasture crops and the prices of the various grains and by-product feeds. When the pasture crops are legumes, such as alfalfa, cowpeas, soy beans or clovers, corn will be the most economical grain feed. But when the pastures are made up of bluegrass, oats and peas, rape and mixed grain crops it will pay better to feed linseed meal, tankage, and other rich protein feeds in connection with the corn. In comparing the results of feeding experiments reported by several of the leading stations we find that the amount of grain fed with grass and forage crops is of greater importance than the kinds in making up economical rations.

On pasture crops alone the pigs will just about hold their weight, so if gains are to be obtained it becomes necessary to feed some grain feeds in addition to the pasture crops. At present prices of grain feeds it will probably pay to feed from one to one and one-half pounds of grain daily to each spring pig that has the run of suitable grass and forage crops. If the pasture crops fail to make satisfactory growth more grain must be supplied, for there is no economy in allowing the pigs to become unthrifty before the corn crop is ready.

Still further economies in feeding may be made by planting soy beans in the corn rows of a portion of the crops and turning the pigs on the field as soon as the corn is fit for "hogging down." This will save a number of days' time and more feeding value will be obtained from the field than by husking the corn and feeding it to the pigs later in the season. The soy bean crop, being rich in protein, helps to balance up the corn crop and makes an ideal ration for conditioning the pigs for market. The green feed counteracts the effects of the new corn so that the practice is safer than that of waiting until later in the season and changing the pigs suddenly to a diet of new corn. Many farmers would find this an ideal way of adding fertility to their land.

C. B. F.

# Moline System of Power Farming



## MOLINE UNIVERSAL TRACTOR

By using the Moline-Universal Tractor and Moline Tractor implements, you can farm more land, better, easier and at less expense than you ever did before. Farmers in all parts of the country are now making more money through the use of the Moline-Universal Tractor and Moline Tractor Implements. Unsolicited testimony from owners is the best proof of satisfactory performance. Read the following expressions from Moline owners:

"The Moline-Universal has done for me what two men and twelve horses would have done at less expense than one man and six horses." Jesse L. Bonsall, Scotia, Nebr.

"It saved me the price of seven horses. It has created a greater desire for farming." Arthur Weis, Reddick, Ill.

"I have been able to dispense with two men and some hired help in the house because of the Moline-Universal Tractor." Wm. P. Johnson, Lovington, Ill.

"It has saved me hiring one man and keeping five extra horses." Henry Hilbert, Charlotte, Ia.

"Earned me \$1,700 in 60 days and established me in a good paying business." C. J. Hawley, Sergeant Bluff, Ia.

"I accomplished about three times as much as I would had I not had the Moline-Universal. For me to go back to horse power would be the same as doing without my automobile." F. N. Miller, Marysville, Mo.

"It has spoiled me because I do not care about driving horses any more." S. R. Moben, Westphalia, Kans.

"A big time saver and makes hard work a pleasure." Millard Belt, Rockville, Md.

"It has accomplished just 100 per cent more than I expected it. As a hill climber there is no equal." O. H. Barkledge, Washington, Mo.

"I can't work horses any more as I do my work so much easier with the Moline-Universal." Henry Shatz, Sheridan, Ore.

"During my ownership of the Moline-Universal Tractor my farm work has been made more pleasant and profitable." S. M. Pinckney, College Farm, Orangeburg, S. C.

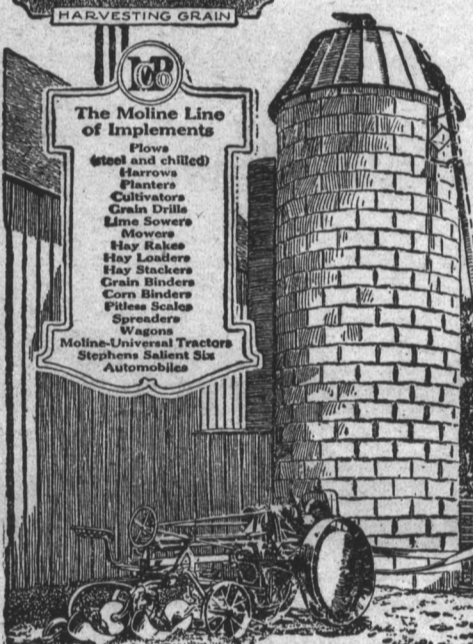
"My wife and I have farmed this year by ourselves—something we never did before." H. E. Hartzell, New Weston, Ohio.

"It has saved me \$600 in labor this season." Ira Brinkman, Shades, Ind.

If space would permit we could fill up this entire paper with letters from satisfied owners of Moline-Universal Tractors. Write for full information and large list of farmers who are making more money with less hard work by farming the Moline way.

**Moline Plow Co., Moline, Ill.**

"Moline Service Satisfies"



**The Moline Line of Implements**  
Plows (steel and chilled)  
Harrow  
Planters  
Cultivators  
Grain Drills  
Line Sowers  
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Grain Binders  
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Stephens Salient Six  
Automobiles



THRESHING

Silage is the cheapest form of wintering feed and therefore every farmer should have a good silo. The question of which kind to buy is fully and completely answered in the dependable

## Kalamazoo

**TILE and WOOD SILOS** The World's "Standard"

Whether you decide on Tile or Wood you are guaranteed the utmost silo value and satisfaction in a Kalamazoo. Both styles have the famous Kalamazoo Galvanized Steel Door Frames and Continuous Doors.

**GLAZED TILE SILOS**—fire-proof, frost-proof, storm-proof, sun-proof, rot-proof, vermin-proof. "Permanent as the Pyramids." Require no painting or repairs.

**WOOD STAVE SILOS**—reasonable priced, durable, easy to erect. Your choice of four time-defying woods.

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**Kalamazoo Tank & Silo Co.**  
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### "B-V-T" Silo

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

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**Brazil Hollow Brick and Tile Company**  
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of 45 pounds. Bags extra 50c. Germination 90%  
**YOUNG-RANDOLPH SEED CO., Owosso, Mich.**

**MICHIGAN GROWN SEEDS**  
for Michigan growers. Ask for catalog. Harry E. Saler, Seedman, 115-119 E. Ottawa St., Lansing, Michigan.

## The Everlasting Silo

Was designed and tried out by a farmer and found to be a success. Then re-designed by that farmer and a civil and construction engineer with a view of making it the best, simplest and easiest to construct of any silo on the market, and one that could be constructed with the least possible skilled labor.

Our EVERLASTING SILO is constructed of vitrified, salt-glazed blocks of the famous Brazil clay. The method of reinforcing is simple and efficient. The price is right.

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## FREE

**Our Big Silo Book**  
We have just completed the biggest and most interesting book on silos ever published. We want to send every farmer a copy of this book free and postpaid, because it tells all about

### NAPPANEE SILOS

and their 25 points of superior merit, such as our Perfect Splice, Storm Proof Anchors, Hip Roof that gives more room, safe and sure ladder, real man sized doors, etc. If you want to know more about the most serviceable and economical wood silos made, get this FREE book.

**Nappanee Lumber & Mfg. Co.**  
Box 61 Nappanee, Ind.



### ELECTRIC BLASTING WITH AN ENGINE MAGNETO.

THE advantages of electric blasting are many and are well known to those familiar with the use of explosives. However, the cost of a blasting machine makes it impractical except on large jobs.

I am writing this in the hope that the suggestion herein contained will prove of value to those having a few stumps to blast or a small job of ditching on hand.

I find that the current generated by the magneto of an automobile engine will range in capacity from fifty caps up. I have not tested out the various engines with a rheostat but am satisfied that the current from a magneto will be amply sufficient for a dozen or so of caps, which is about what is generally required.

It naturally follows that the current from any magneto-driven engine will answer the purpose and it only remains that a means of diverting a part of the current must be found. This is readily answered in the case of an automobile whose magneto current is used for lighting as is the case with the Ford: Disconnect the first light from the magneto wire and to this wire attach your blasting lead-wire, ground the other blasting lead-wire to the frame of the motor, start your engine and turn on your lights with the light-switch and the trick is turned. I may say parenthetically that an electric blasting cap is in effect a miniature electric light and it is the heating of the filament-wire by the current

It must be borne in mind that several that causes the detonation.

hundred feet of leading wire must be used in order that the car may be kept at a safe distance; however, this is much more economical than a blasting machine when there is only a limited use for it.

G. F. DELAMATER.

### FAT STOCK SHOW FOR MICHIGAN.

A FAT stock show and public auction is to be inaugurated at the 1919 Michigan State Fair, as a new feature of the exposition. Cattle, sheep and swine entries will be received, and any entry may be placed on the public auction block by the exhibitor.

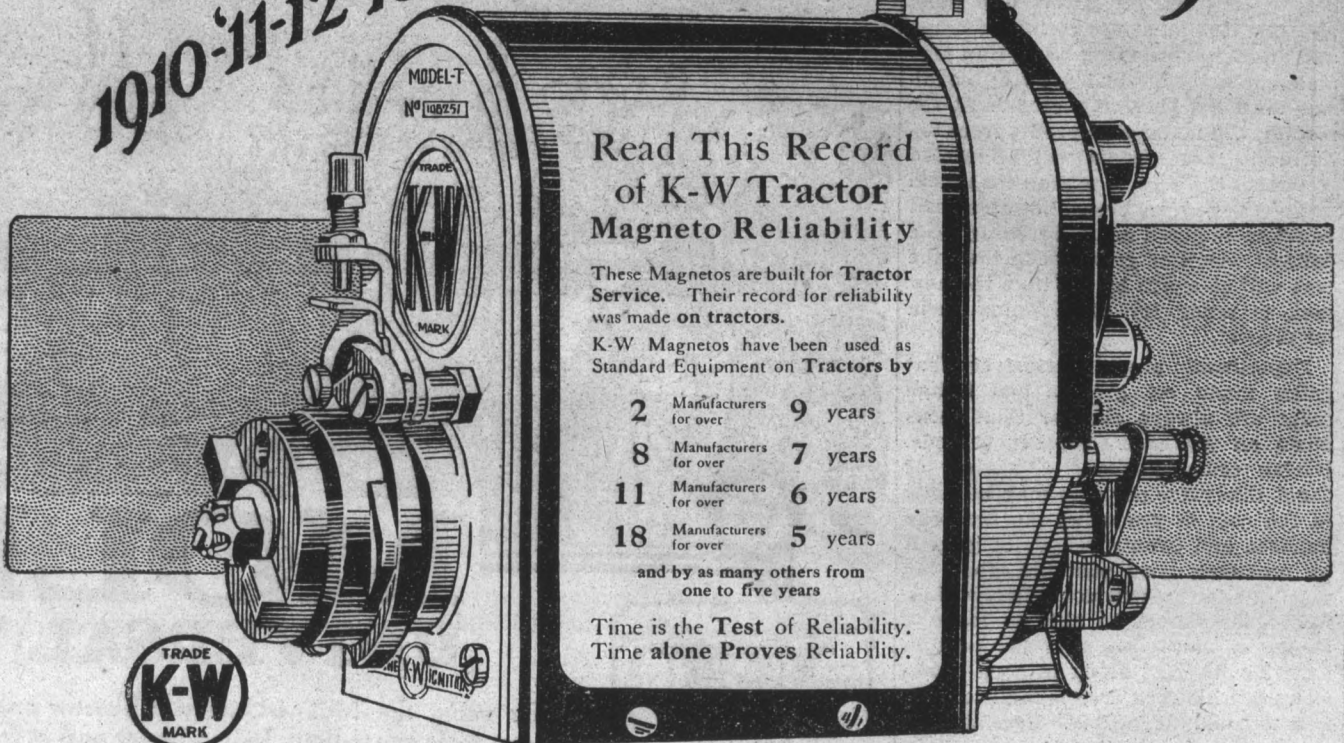
Though the official announcement of this new department has just been made by G. W. Dickinson, Secretary-Manager of the Fair Association, a number of full car exhibits have already been entered, and the enthusiasm aroused indicates that the fat stock show will become one of the outstanding features of the fair.

In installing this department, the fair executive is not only opening the exposition to the commercial field, but is also enlarging the educational scope of the fair.

The inauguration of this new feature resulted from demands made by stock buyers, packing men, and stock raisers of the state. These men are desirous of a great central market where the best stock of the state will be exhibited and offered for sale on the auction block.

At the 1918 exposition the prize fat steer was put up at auction by Charles Prescott, of Tawas City, the owner; and after spirited bidding among the packers, was sold to Thomas E. Newton, of the Newton Packing Company, Detroit, for seventy cents a pound on the hoof. This price established a record in the state, but Mr. Dickinson believes a new record will be hung up when a large auction, attracting bidders from other cities, is held this fall.

1910-11-12-13-14-15-16-17-18-1919



### Read This Record of K-W Tractor Magneto Reliability

These Magnetos are built for Tractor Service. Their record for reliability was made on tractors.

K-W Magnetos have been used as Standard Equipment on Tractors by

2	Manufacturers for over	9	years
8	Manufacturers for over	7	years
11	Manufacturers for over	6	years
18	Manufacturers for over	5	years

and by as many others from one to five years

Time is the Test of Reliability. Time alone Proves Reliability.



### High Tension MAGNETOS — have stood the Test of Time on TRACTORS

Back in the early days when big tractors pulling large gangs of plows first broke prairie soil and the tractor manufacturers yearly took part in competitive plowing contests, two tractor manufacturers adopted K-W Magnetos as standard equipment. Then year after year other manufacturers, recognizing the importance of "Reliable" ignition came to K-W for Magnetos.

These K-W Magnetos have stood the gaff of tractor service in every state in the union and in fifty-seven foreign countries. They have done their work year after year in all climates from torrid Africa to frigid Russia. They have worked in rain storms, snow storms and sand storms. They have made good in every draw-bar and belt service under every conceivable working condition. Because they have stood the test of time they are recognized today as the standard magneto for tractors the world over.

The K-W Magneto has been developed by keeping in close touch with tractor development and an accurate knowledge of the conditions under which a tractor must operate. It owes its reliability to the patented K-W construction and the fact that K-W Magnetos have always been made up to a quality and never down to a price.

curate knowledge of the conditions under which a tractor must operate. It owes its reliability to the patented K-W construction and the fact that K-W Magnetos have always been made up to a quality and never down to a price.

K-W "Inductor" design eliminates all internal sparking and trouble due to sliding contacts and poor connections, because in K-W construction all internal connections are permanent. There are no moving wires, revolving windings, troublesome commutators and brushes, current collector rings, etc.

And K-W Magnetos are just as efficient as they are reliable—they cut fuel bills to the bone. Make sure the tractor you buy is K-W equipped. Look for the K-W trade mark—the symbol of Reliability. Write for a list of K-W equipped tractors.

THE K-W IGNITION CO.  
2815 CHESTER AVE. CLEVELAND, OHIO, U.S.A.



### High Tension MAGNETOS

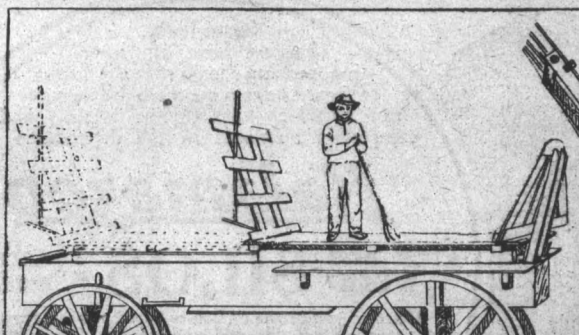
Fire Any Kind of Fuel and Get Maximum Power Out of Every Drop Used

### HAY IT ALONE

WITH THIS

### ONE MAN HAY RACK

You work no harder and save the expense of an extra man.



#### HOW IT WORKS

1. Front half of rack moves back and locks over rear half where it is easily loaded.
2. Tripping a lever at the standard permits the loaded half to move forward by gravity where it is locked at the front of box.
3. The operator then loads the rear half.

#### NOTE THESE FEATURES

Rack may be used on any wagon box of the right length.

One can use either slings or fork.

Operator remains on load until it is completed.

Hay loaded on this rack mows away easily as it is not tangled.

Rack being flat it is suited to every job that hay racks are useful for.

One man can put on as large loads as two men with the old style rack.

The price of the rack and box complete, is \$65.00 or rack complete at \$50.00, f. o. b. New Haven for either 14 or 16 foot lengths.

For particulars hustle a postcard to

SCHEUNEMANN & CO.

New Haven, Mich.

### Shoo-Fly THE ANIMALS' FRIEND



For keeping flies and many other insects off animals. Used and endorsed since 1885 by leading dairymen. Cows give 25% to 35% more milk during fly season if sprayed with Shoo-Fly.

\$1.25 worth saves \$20

in milk and flesh on each cow in a single season. Excellent for galls. Allays itching. Aids in healing cuts and sores. Excellent for lice and mites in poultry houses.

Send \$1.25 for enough Shoo-Fly to protect 10 cows 2 weeks, also our 3-tube gravity sprayer. Money back if not satisfactory. Name Express Office. Booklet FREE.

SHOO-FLY MFG. CO., 1334 N. 10th St., Phila.

Only \$2 DOWN ONE YEAR TO PAY

\$38 Buys the New Butterfly Jr. No. 2.

Light running, easy cleaning.

NEW BUTTERFLY

Separators are guaranteed a life-time against defects in material and workmanship. Made also in four larger sizes all sold on

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and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money.

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at World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught. Write today for free catalog.

JONES NAT'L SCHOOL OF AUCTIONEERING, 28 N. Sacramento Blvd., Chicago, Ill., Carey M. Jones, Pre.

Please Mention The Michigan Farmer When Writing to Advertisers

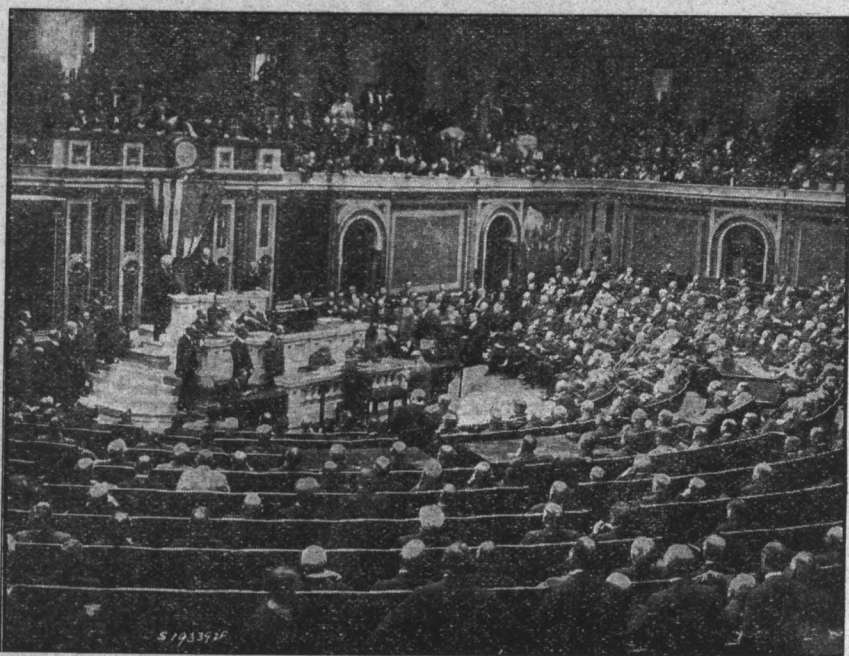
# WORLD EVENTS IN PICTURES



Latest, unpublished photograph of General John J. Pershing, Commander-in-Chief of American Forces in France and Germany, inspecting troops of the 89th Division at Trier, Germany. This photograph has just arrived in the United States.



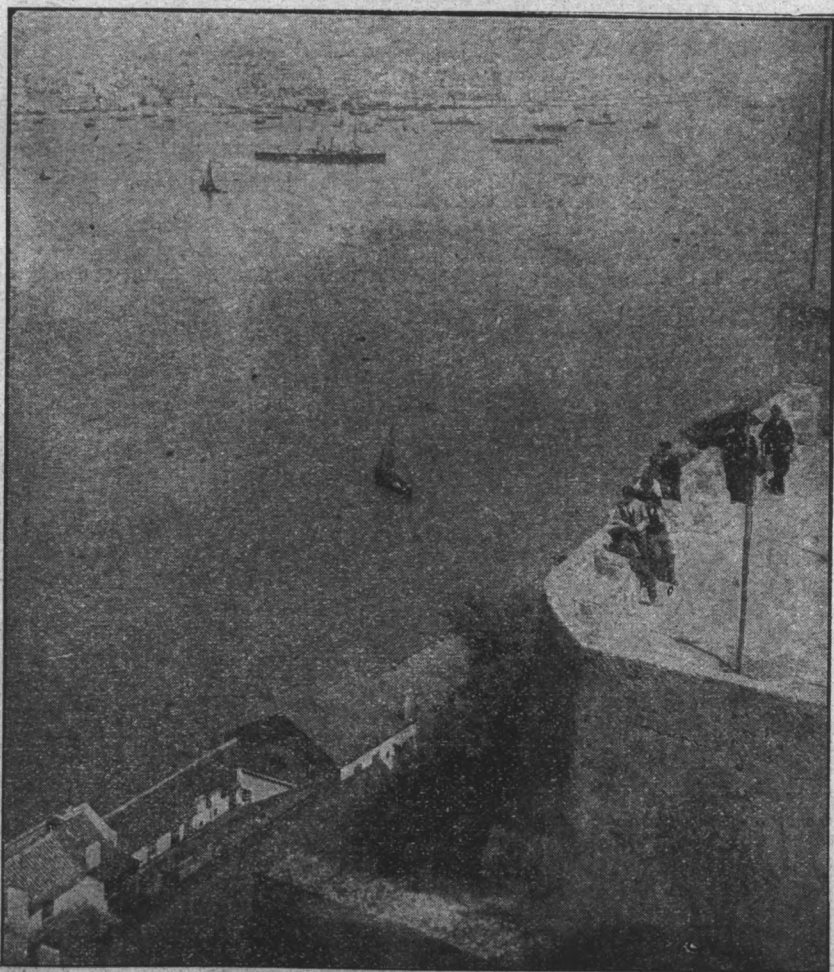
This picture shows a section of the once famous Hindenburg Line, believed by some to have been the strongest battle line of defense in history, but which finally gave way under the valiant attacks of the allies.



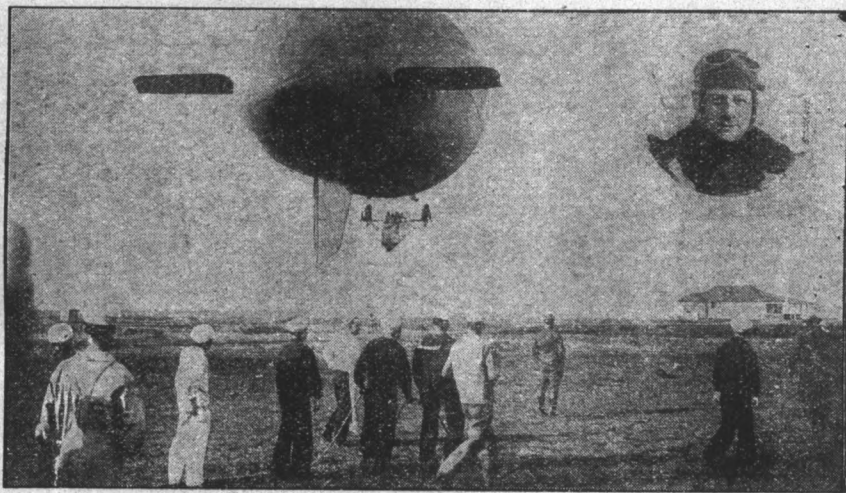
View of the opening of the Sixty-sixth Congress, with Representative Gillett of Massachusetts, the new speaker, presiding. This is the Peace Congress, which will pass on the Peace Treaty to come up for ratification.



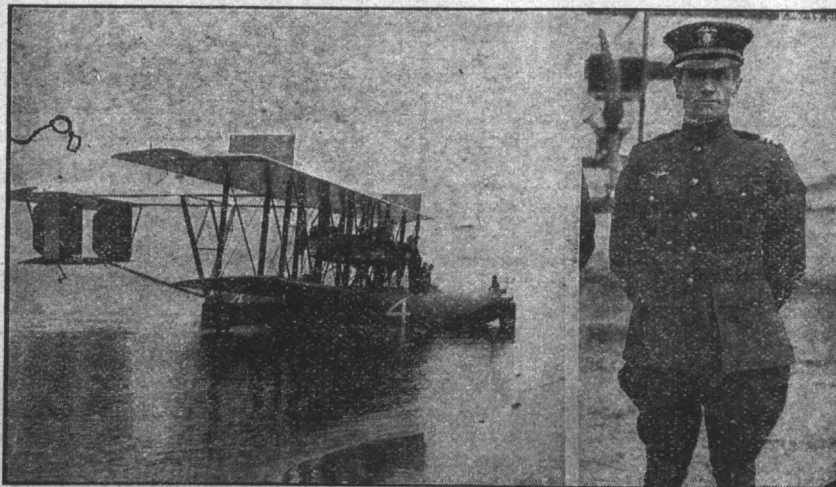
They say that women are always kicking at something or other, and in this picture one of those instances are shown. The affair was a ladies' football match at Farnborough, England when the girls of the Gaiety Chorus played the girls of the Aircraft Factory.



This is a panoramic view of Lisbon, Portugal, as seen from Fort Almada, across the Tagus River, where the NC-4 terminated its flight across the Atlantic. In the right upper portion of the photograph can be seen the mouth of the river emptying into the Atlantic ocean.



The U. S. Navy Dirigible C-5, and Commander Lieut. E. W. Coil, which met with disaster in the attempt to join the seaplane trans-Atlantic trip. The huge craft broke from its moorings in a heavy gale and was blown to sea.



Picture of Lieutenant A. C. Read, U. S. N., and the NC-4, which he successfully piloted across the Atlantic. Read ended his trip May 27 in a nine-hour dash from the Azores to Lisbon, a distance of eight hundred miles. The total elapsed flying time from Newfoundland to Lisbon was twenty-six hours and forty-one minutes.

## Order Ahead

You will need a supply of Solvay's Three Essential Plant Foods this fall.

We sincerely advise you to order far enough in advance to insure getting your full share at the time you need it.

During the Spring, so many orders for Solvay Pulverized Limestone were placed at the last minute by farm owners that it was impossible to supply them all.

While this is a substantial endorsement of Solvay's Products, we would much rather have been notified in advance by our customers.

Notifying us in advance—a month or two in advance—guarantees your supply at the exact time you want it.

### Three Products

Remember that we have three essential plant foods for you now—Solvay Pulverized Limestone—Arcadian Sulphate of Ammonia (20.75% Nitrogen)—and "U-S" Potash (50.54% Potash).

**THE SOLVAY PROCESS COMPANY**  
2091 Jefferson Avenue Detroit, Mich.



### Farms and Farm Lands For Sale

**295 Acres \$12,700 with Pr. Horses, 9 Registered Cows,**  
3 bulls, 9 heifers, 4 calves, brood sows, pigs, complete line farm implements, including manure spreader, reapers, etc., on state road, only mile to R. R. town, 8 miles manufacturing city, no better markets. 175 acres strong loam tillage, clay subsoil, cuts heavy hay, raises big crops, 50-cow creek-watered pasture, estimated 150 cords wood, 100,000 ft. timber, splendid fruit. Beautiful 12-room house, slate roof, barns, complete working buildings. Owner made well-to-do on this farm wants to retire now, so quick buyer gets everything, \$12,700, easy terms. Details and picture page 42 Catalog Bargains 19 States, copy free.  
STROUT FARM AGENCY, 314-BO Ford Bldg., Detroit.

**We Have For Sale** the following lands and unimproved lands, well located, easy terms. 150 acres situated 5 miles from Gladwin, on daily mail route, close to school, all fenced with woven wire, 20 acres under fine state of cultivation, 6 acres in fruit, 70 acres more of same tract brushed logged and burned; Sheep ranch of 300 acres, all fenced, living water, 70 acres of this ranch cleared, 30 acres of which is under fine state of cultivation with fruit orchard, House 26' x 28'. Sheep sheds and Barn 64x50. Tool house 16x32. 170 Sheep, 110 this seasons Lambs. We have 3 fine Stock Ranches, well grassed, well fenced, living water. McClure Stevens Land Co., Gladwin, Michigan.

**WANTED** 5 to 40 acres of high, well drained, gravel loam, sloping to south or west, close to shipping point, not more than 50 miles from Detroit. Will deal with owners only.  
N. Grant Currie, 153 Harrison Ave., Detroit, Mich.

**FORD, GOVERNMENT BONDS OR \$300.** balance easy, buys 80-acre farm, 60 plowing, best soil, Central Michigan, fair buildings, main road, near railroad town. Owner 238 N CEDAR ST., LANSING, MICH.

**Rainy Lake Settlement.** Farm & Ranch Land. 160 Acres up. \$10 to \$15 per acre, \$1 an acre down—balance long time. 6% Time payments can be made with clover seed. John G. Krauth, Millersburg, Mich.

**Rich Michigan Farms.** Low prices. Easy terms. STAFFELD BROTHERS, 15 Merrill Building, Saginaw, Michigan

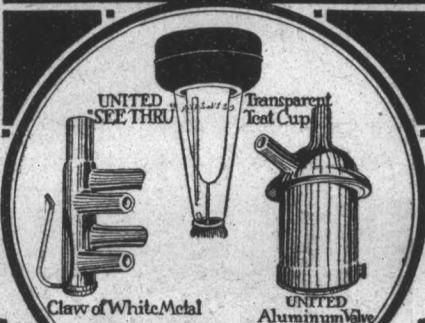
**IF YOU WANT** to sell or exchange your property write me.  
JOHN J. BLACK, 105th Street, Chippewa Falls, Wis.

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Use your spare time profitably by representing the Michigan Farmer in your neighborhood. You can work up a pleasant and profitable business taking care of new and renewal subscriptions for us. You will be interested in our special literature and attractive subscription rates. Address,

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Keenest Inspection of Sanitary Experts

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UNITED Claw of nickel-plated WHITE METAL, smooth and non-corrosive.

UNITED Patented Valve of Aluminum with only ONE working part makes for 100% sanitation.

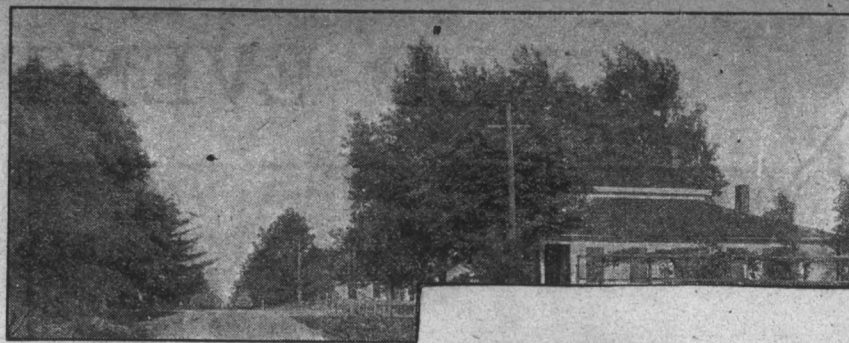
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**BARN PAINT \$1 PER GALLON**  
Get factory prices on all paints. We guarantee quality. We pay the freight.  
Franklin Color Works, Franklin, Ind.

**Milking Machine B-T-K,** at a bargain 2 Model "D" partition pail milkers. Complete with pulsators. Also extra milker. Address Box C-67, Michigan Farmer, Detroit, Michigan.

**Will Exchange** for good farm worth \$12,000. Brick two story building on Main Street Kalamazoo. 4 stores, 22 room hotel well furnished on second floor, steam heat, running water and Electric lights in each room, baths and showers. Buyer should operate hotel.  
SANFORD WILTSEY, Kalamazoo, Michigan.



## Vitalized Agriculture--- What Is It?

By Mary Eleanor Kramer

**W**HAT is this rotation plan of Vitalized Agriculture that is creating so much discussion in educational circles?

It is teaching the farm boy and girl the essential things of farm life—teaching them in terms of their own life.

We have long assumed that the rural teacher and the rural child were well informed regarding farm matters and farm problems, this is not true. The rotation plan of teaching vitalized agriculture has been devised to bring this about.

The teacher ought to be a part of the life of every rural community, but she is not.

In fifty-three per cent of the cases she goes out to her school on Monday mornings and back to town on Friday nights, or out each morning and back each night.

At present the rural schools exert little influence on the social or business life of the community, schools being regarded as something apart from real life.

The success of all teaching depends upon the appeal to the child. Dull repetition of stale text-book matter dulls the perception of the child rather than awakening enthusiastic response, this applies in the teaching of agriculture as well as other branches of study.

We must remember that in rural schools the younger children learn much by listening to the recitations of the older ones. If the same dull text be used year after year, the children hear the recitations over and over, and so become tired of them even before reaching the age to take up the work. It has become stale.

It is this repetition year after year that has killed all interest in the work. Under the vitalized plan the lessons are always new and interesting each year. It is not mere text-book repetition. The children learn by doing. After completing a year's work the child uses the knowledge obtained.

For instance: The first year's work is confined to growing things. The child learns how to select and plant seeds, how to cultivate and finally to harvest and store his crop. The second year he enters into the mysteries of making things, but what of the knowledge obtained in the first year. He is yet planting, cultivating, harvesting, according to the knowledge gained the preceding year, and so for all succeeding years. This knowledge becomes a practical working basis for all time.

By this rotation plan the interest is kept alive and keen.

Just how does the teaching differ from that of the "text-book teaching?" During the first year the children go into the fields and make a survey of the growing crop. They select the seed corn directly from the fields, carry it to the school room and test it. Each step is of direct personal interest. Each child keeps a note-book record of all work accomplished. By this method all branches of study are vitalized—spelling, language, geography, arith-

metic. A boy is much more interested in figuring out how much ensilage Mr. Brown's new silo is going to hold than he can possibly be in any text-book arithmetic problem. In the first case he is intensely interested in the problem, in the second he is working for an "answer." In fact, has learned just how to build a silo, whether of lumber, concrete or what-not. He has learned just what farm crops in his locality should be utilized for ensilage, and why. He knows the relative value of different grains as food stuff for farm animals—he has learned a thousand-and-one interesting things in which he had no interest until agriculture was vitalized for him.

For many, many years the tendency has been to educate the country boy and girl away from the farm. If Johnny manifested an unusual interest in things, thereby proving an active brain teacher said, "Johnny, you must learn all you can, then go to the city and fit yourself for some profession; you have too many brains to waste on the farm." We are beginning to awaken to the fact that it is on the farm that unusual brain power is most needed. Vitalized agriculture makes the work so interesting that Johnny prefers to stay on the farm.

When we teach a boy how to survey the live stock on his father's farm, how to select stock that bring up the standard, how to test milk, how to renew overworked, worn-out soil, we are teaching him the most vital lessons of life—for all life is dependent upon the soil and its fertility.

It is most essential that the teacher follow the outlined plan in presenting vitalized agriculture. Over-reaching into the work of the following year defeats the plan. It leads to "skimming," that is, selecting the most interesting things and doing them rather than teaching each subject thoroughly.

The outlined plan provides ample work for the given year. Every child studying agriculture in the one-room rural school is doing the same work. When a class enters upon the first year's work, it completes that work; the second year it and the class of new beginners take up the work of the second year, and so for successive years until the four-year rotation is completed. The first-year class is then graduated, and the work begins over again.

It is not proposed that every teacher in the rural schools of a state begin the teaching of vitalized agriculture at the same time. Teachers, in order to do the work well, must have special training in how to present it.

In one state some twelve county superintendents, all of whom are live, wide-awake characters, are selected by the state superintendent of public instruction to present the work in their respective counties. Each superintendent in turn selects from four to a dozen of his most efficient, up-to-date teachers—preferably those who have had some experience in teaching of agriculture. These superintendents and teachers meet at some cen-

tral point and are there given special training for the work.

Vitalized agriculture has been proven a practical, constructive plan. Educators are thoroughly awake to its value, as proven in the fact that five states have or will have adopted the plan at the opening of the coming school year, namely, Oklahoma, Arkansas, South Dakota and Texas. It is a matter of time until the work will become universal.

## "By the Way"

### UP TO YOU!

It's a gloomy day, a tomby day,  
A blue and dismal rainy day,  
A sad, forlorn and tearful day,  
If you would make it so.  
A lonesome day, a sighing day,  
A cheerless and a crying day,  
A "what's the use in trying" day—  
It's up to you, you know.

It's a glorious day, a happy day,  
A joyous and a buoyant day,  
A merry, laughing, snappy day,  
If you would make it so.  
A brilliant day, a sunny day,  
A rare, a fair, a funny day,  
A "good for making money" day—  
It's up to you, you know.

### NOT THAT KIND.

"Griggs and his wife are not getting along very smoothly, I hear," said Brown to Smith.

"No," replied Smith, "and you can't wonder at it. He married a girl that looked like a magazine cover, and then expected her to work like a cook book."

### THE CAUSE.

"Were you a slave, Uncle Tarr?"

"Nussah, Cuhnel; but 'bleeged to yo' for de 'terrygation, dess de same, sah. I isn't old enough. I's been mar'd four times; dat's what makes me look all disintegrated dis-uh-way, sah."

"I'm troubled with a buzzing noise in my ears all the time."

"Have you any idea as to the cause?"

"Yes, my wife wants an auto."

### LUCKY ADAM.

The day Adam was condemned to work for a living was the luckiest day of his life. He had all the world given him to work in, no rent to pay, the whole crop for himself, no landlord or middleman to divide profits with, and every lick of his hoe was a lick for himself. Every drop of sweat he shed upon the land watered his own crop, and he did not have to fence against his neighbor's chickens. He was condemned to sweat, but he found, as his sons have since found, that sweat is the best medicine in the world's drug store. Adam was a lucky dog to get off of Easy Street as soon as he did.

### A NEW GAME.

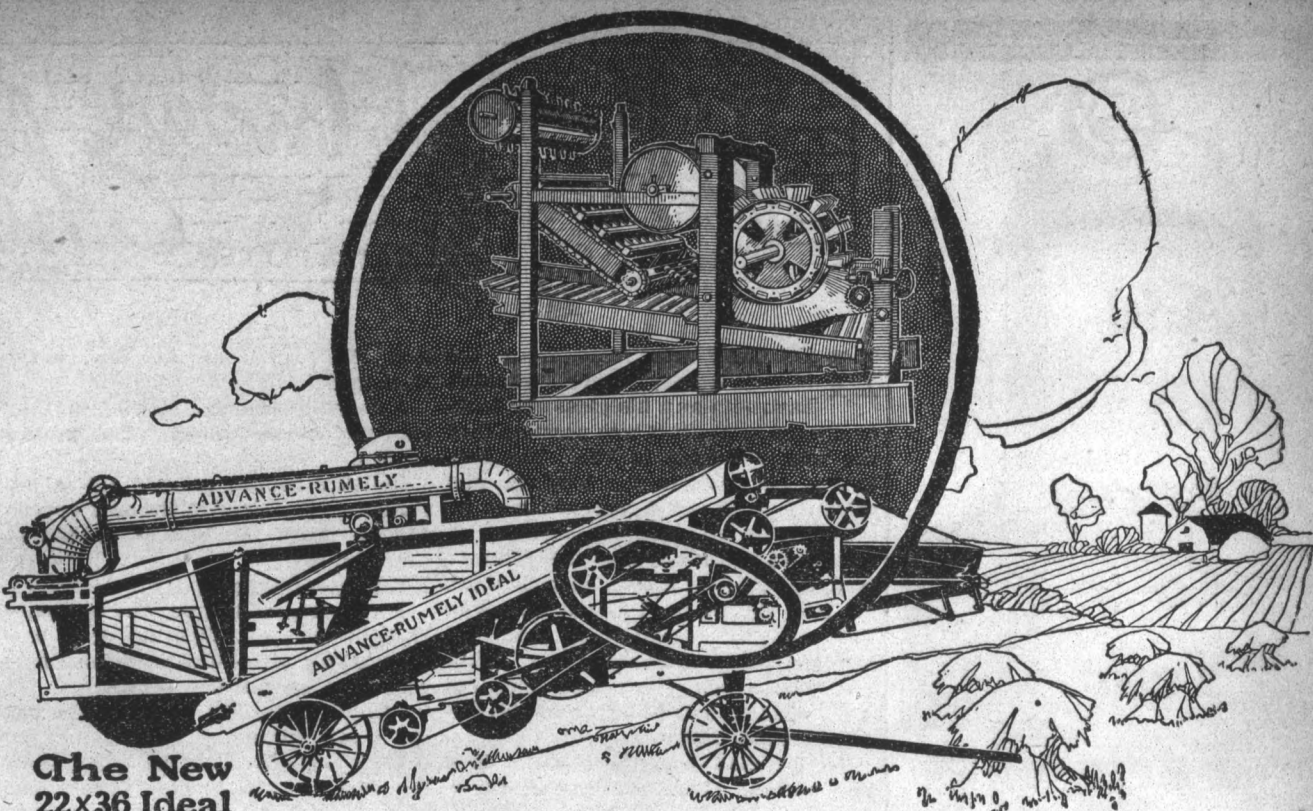
Uncle Jack and Uncle James had come to see their sister and her sweet little children, and, like the good-natured fellows they are, they were soon inveigled into the nursery.

For a while there was nothing more than the usual amount of uproarious riot which denoted that the little ones were perfectly happy; but at last the noise increased to such a terrific extent that mamma hurried up to find out the cause of it.

"Why, children, children!" she cried, "whatever is all this noise about?"

But little Freddy only smiled.

"It's all right, mummy," he said, "we are playing a new game; we've locked Uncle Jack and Uncle James up in the cupboard, an' when they get a bit angrier I'm going to play going into the lions' den. Will you stop and see us play?"



The New  
22x36 Ideal  
Separator

## The Greatest Grain Separating Device Ever Invented

THE first principle of capacity and thorough clean work in a thresher is to keep the straw moving. We knew that and built the Ideal around that principle—with the result that the straw is on the move every minute and moving in the right direction—in a steady even flow.

First of all, the Rumely cylinder is called upon to do one thing only—to knock the grain from the heads. Notice the position of the grates in the Ideal—not half way up the cylinder but right behind and beneath, where they allow the cylinder to relieve itself of the straw at the most natural point—the bottom, before the cylinder starts on its upward turn.

Then comes the Ideal travelling rake or revolving grate, devised to carry the straw from the cylinder and deliver it to the straw rack in a constant even stream.

Briefly, the action is this. When the straw reaches the cylinder the greater part of the grain is shot through the open grate immediately—the straw and whatever grain remains in it shoots over into the jaw between the travelling rake and the first winged beater. This beater forces the straw with a thud hard against the travelling rake which is slatted. This agitation means still more separation. Then the travelling rake, moving constantly, delivers the straw to another beater at the top of the rake, which further agitates it and delivers it to the straw rack in a constant even stream.

This combination of features in the Ideal is without doubt the greatest grain separating device ever

invented. It is an absolute guarantee against bunching of the straw, winding of the cylinder, choking up.

But the grain isn't all saved even when the straw is properly delivered, unless it is handled in the right manner after it gets onto the straw rack. Most straw racks merely agitate the straw. That is not enough.

In the Ideal, no sooner does the straw drop onto the rack than a set of lifting fingers picks it up. The lifting fingers tear the straw open, rake it, beat it from beneath—compelling complete separation. There are several sets of these lifting fingers on the Ideal straw rack and each set means a complete break in the straw.

The extra chaffer area, together with the adjustable sieves in the shoe and the Ideal system of wind control, guarantee a perfect job of cleaning without waste, no matter what the conditions may be.

There's probably an owner of an Ideal thresher in your neighborhood—ask him his opinion.

The Ideal is built in four sizes—22 x 36; 28 x 44; 32 x 52 and 36 x 60, each built on the standard Ideal design—the smallest as well as the largest. The special Ideal catalog is yours for the asking.



The guaranteed  
oil-burning  
oil-cooled  
OilPull Tractor is  
built in sizes to fit  
every size Ideal.

ADVANCE-RUMELY THRESHER COMPANY, Inc.

La Porte, Indiana

Battle Creek, Mich.

# ADVANCE-RUMELY

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The Auto Center is the Logical Place To

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Trained men are needed everywhere to test, repair and give expert advice on care and handling of automobiles, trucks and tractors. Big money for M. S. A. S.—Detroit trained men. Good jobs or independent businesses await our graduates. Opportunities unlimited.

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Our Course will teach you how in a few short weeks. Most complete, comprehensive and up-to-date Course known. Wholly practical. No job too hard for our graduates. Every phase of work covered. Actual experience given on dozens of different cars. Entire equipment best obtainable. Instruction includes complete Tractor Course. Brazing, Welding and Tire Repairing taught separately.

### Learn in Detroit—Start Any Time—Our Graduates in Demand

Here you get the benefit of finest co-operation of our Course and gladly help our students in every way possible. Almost daily we have calls for graduates to all responsible positions. School open all year. Enter classes any time. No need to waste or lose a moment.

### MONEY-BACK GUARANTEE

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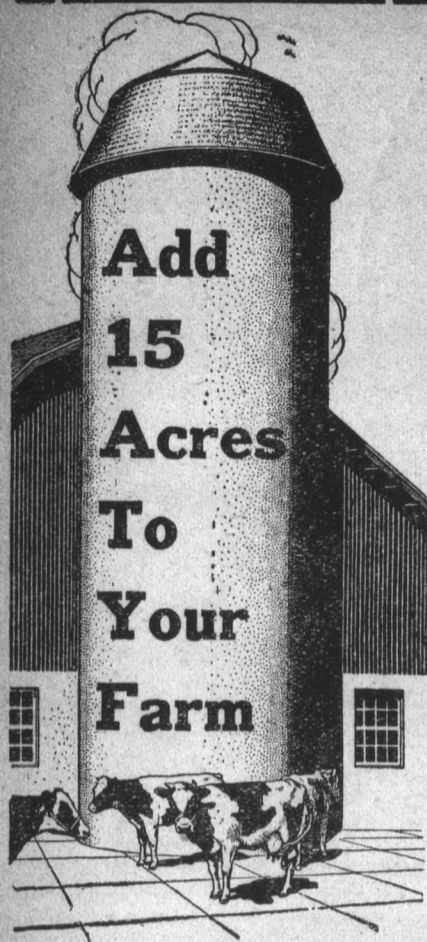
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HALLIDAY was fresh from the farm. Otherwise he wouldn't have set down his glass and looked around to see if it was possible that she was motioning to him. The bartender, his back to the window, was polishing glasses. A wrecked man at the far table was sleeping noisily.

Back to the window sped Halliday's eyes, and then—his eyes opened wide; his foot slipped off the railing. Was this the girl, fascinatingly beautiful, who had been beckoning to him? This girl with ashy, yellow face, pleading eyes, shaking hand—all speaking terror, horrible terror.

He watched her, fascinated. Her lips moved. Was she saying something?

And then a shriek—short, agonizing—cut off by a claw-like, yellow hand being jammed across her mouth—and then she was gone.

Halliday rushed across the saw-dusted floor, and jerked open the door. A closed taxicab was moving away. It passed through a path of light from the window. Pressed against the side glass for an instant was a face, yellow, sneering nostrils—then it slipped into the darkness.

Halliday looked around. The street was deserted, absolutely. The red light on the back of the taxi got small—smaller. Halliday thought—thought hard, thought fast. There wasn't a second in which to give the alarm. Something must be done, done quick. Wildly he looked everywhere. Not a thing in sight—yes, half hidden in the shadows leaned a bicycle.

A few seconds and he was racing after the red speck, which luckily for him kept straight on. The taxi was not going fast. In four blocks he had come up to within a hundred feet of it. He began looking for a policeman—looking, but seeing none in the dead street.

And then he commenced to feel uneasy. What if she wasn't in the taxi? He rode up alongside the car. They passed one of the infrequent street lights; and he got a glimpse of two terrified eyes, a pug nose, a rag drawn between teeth.

He felt easier. Those within must also have found out something, for the taxi shot past the cyclist, down the asphalt. His short breath and aching legs told him that he could not stand the pace for long. Perhaps he could get hold of the car in some way, and let it pull him along. He bent over the handle-bars. At last he caught up, and reaching out grabbed a rod.

After they had gone several blocks he saw that they were getting near the curb—dangerously near for him—and kept getting nearer. And then he saw the purpose; to crowd him into the curb.

To let go, at the speed at which they were racing along, meant to give up. His eye fell on the running board on the side of the car. Could he get from the wheel to it—in the darkness?

The bicycle was nearly touching the curb. He was afraid—not of hurting himself, but of failing—and what it meant.

And then—with his two hands he grabbed the rod, tight; he swung his feet high; a cutting jerk on his shoulders; the bicycle swung crashing into the curb; his feet landed. He crouched

low. The speed of the taxi never slackened.

A dozen blocks, and slowing up they cut into a black alley. The brakes ground.

Halliday hopped off and hid in the shadows. The door of the taxi opened and he heard the soft pat-pat-pat of slipped feet.

Tap-tap-tap—tap-tap. On the wall. A scraping of boards, and a square of light shot out—lighting up a one-eyed yellow face—with a hideous hole where the eyeball had been.

"Tinka Rinka Kee." He of the one eye was speaking.

With a sharp click the panel opening shut. And darkness. Then a loud clanking of chains; squeaking of a door \* \* \* Clanking chains—then silence. The automobile hummed away through the night.

Halliday was alone in the blackness. He slid his hand along the wall—absolutely smooth, no sign of a door.

He leaned against the wall, think-



ing. He had done all in his power. Nothing more could he do except go for the police.

That he might be able to find again the spot where they had gone into the building, he threw down his hat to mark the place, then ran to the nearest street. Half-way down the block he saw the lights of a cab, coming so slowly that it seemed to be standing still. He ran to meet it. Hurriedly, and anxiously, he told the sleepy driver what had happened, and begged him to get the police.

"Aw right. Get ap." And the cab rattled on at the same trotting walk.

Halliday looked after it, anxiously. The driver probably considered him insane or drunk, and had already put the incident out of his mind.

"I'd better hunt up an officer myself, and then I'll—" He stopped quick. What were the words the Chinaman had used to get in? They had been running in his ears ever since.

"Tinka Rinka—" what? \* \* \* \* "Kee."

Back he raced, and groped around till he touched his hat. His hands were shaking—from excitement, not fear.

Tap-tap-tap—tap-tap.

His face was flooded with light.

"Tinka Rinka Kee." His voice sounded shrill, and a block away.

He stood waiting, eyes nearly closed; heart pounding fiercely; hoping—fearing. He felt—could not see—two pig eyes searching him.

The light burned his face as an August sun. He wet his dried lips. The pass-word—he had probably got it wrong; or perhaps—

Darkness. He stepped back. Then a clanking, squeaking, then a black opening outlined itself on the dark wall.

Halliday did not hesitate. The whole thing seemed prearranged.

He stepped in. The door shut behind him; the chains clanked into place. It was black, inky black.

He took a few uneasy steps. Then stopped. He put out his arms sideways. The tips of his fingers barely touched the side walls.

He started walking slow, hands in front of him. The boards groaned dismally as he stepped on them. A vague uneasiness began to force itself on him. He walked on his tip-toes—so as not to hear the ghastly echoes of his own footsteps.

Strange noises came from nowhere—from everywhere; now like a shrieking December blast; now like a death dirge—unknown, mysterious, they filled him with a new terror. Faster and faster did he walk—then he ran.

Suddenly and unexpectedly his foot came down on—nothing. He pitched forward, throwing out his hands. Down, down—then he struck, crashing, rolled over and over, and down, down, down—then stopped abruptly.

Carefully he felt around. He had rolled down a flight of stairs—stopping in scant time to keep from going down another flight.

At the bottom a passage stretched, damp and dripping. Smoking lamps, which hung irregularly, cast snaky shadows. As he hurried along his footsteps echoed hauntingly—or were they his? He went on \* \* \*

Suddenly he stopped, turned, and listened. He could see nothing; and yet—? He turned around. He almost shrieked.

Not twenty feet away were three yellow men, black-robed, coming toward him. He must meet them. His heart pounded furiously.

They stopped. By will power he made his shaking legs keep moving.

Now he was up to them. They stepped to one side, and stood backs to the wall. He felt their eyes full on him, but he kept his face straight ahead. Something that burned like a hot cinder touched his hand. And then he was past. He wanted to look around. No. He must look around—must, must. He did. The three had turned. Five eyes met his. The yellow man in front had a round hole where an eye had once been.

Fifty feet farther and the passage turned. Halliday ran, and ran. He stopped quick. A bamboo door blocked the way.

Halliday pushed the door open a little, and cautiously peeked in. The room was large. In the center sat a circle of Chinamen. Over them swung a swaying lamp, striped red and green, lighting the room in patches. Jabber-

ing they were aplenty. He listened eagerly, hoping to catch a word of English.

Then mingled with the jabbering there came another sound—a velvety pat-pat-pat—far away at first; but coming closer.

He shivered with a realization of what he knew he would see if he looked back—and what a hurried glance showed him. A hundred feet away they were, the one-eyed man first.

Halliday looked into the room, wildly. Could he slip in unnoticed, and hide in the shadows? Improbable. But was it impossible? Anyway he had no choice.

Flat on stomach he pushed the door open with his head, and with his body through, he lay there trembling. The jabbering continued. Ten feet away lay a gigantic vase which he could hide behind, if—

He started again dragging himself along. He could feel his heart beating against his rib—yet he had lost the fear of a few minutes before. He crawled several feet, then stopped. He was on the edge of a broad light patch through which he must go to reach the vase.

Halliday looked at the Chinamen again. A fellow with a red scar across his nose sat with his eyes toward the lighted spot. Halliday watched him, hoping, yes, praying—that he would look away. The seconds passed.

Abruptly the door was given a shove and the three yellow men walked in, and spoke a few words. The others jumped up, and started out.

A slipped foot came within two inches of Halliday's face. For what seemed hours it rested there. Then it lifted and passed out after the others.

Halliday got up, and took a rush glance about the room. No doors, no windows could he see. And yet there must be some way of getting out other than the bamboo door. Perhaps the wall draperies concealed an opening. He ran along, jerking them back, finding nothing.

What was that? He stopped. The wind? In these underground chambers? Improbable. Could it be—he laid his ear against the wall. In the corridor the velvety pat-pat-pat was getting louder. Were they returning?

And then he heard the strange sound again. This time there could be no mistake. It was the muffled moaning of a gagged person.

The footsteps seemed just outside the door.

Halliday looked about wildly. He felt sure that the girl was on the other side of the wall—but how to get to her? Surely there was an entrance from the room he was in to where she was? But where? How? Sign of opening there certainly was none.

The pat-pat-pat had ceased. Everything was silent—ominously silent.

A grimy spot on the wall—what was that? And those finger marks. A breath of damp air struck his face—the bamboo door was open.

Halliday stepped close to the wall, in a green shadow; he pressed with his thumb on the grimy spot—once, twice. And then a panel, two feet square, slid to one side, slowly. He crawled through the hole. His fingers shook so he could scarce close the panel.

Then he listened. Were they whispering, or did the wall deaden sounds. He stood up, and looked around.

With a thrill of delight he flew across to a little figure huddled against the wall. It was she. Chalky-faced, gagged, ankles bound together, hands tied behind her back.

He put his fingers to his lips. The despairing wild eyes told that she understood. He pulled out the cloth, and untied the ropes.

Back to the secret panel he tip-toed. He would have been glad to hear even a whisper—but he didn't. What did it mean?

He looked about the room. In the



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twilight darkness there seemed no other way to get in—or out. But what was that? He hurried over eagerly, the girl following. It was an opening, as high as his shoulders, and narrow.

"I'll go ahead," he whispered. "Stoop down. Stay a little behind me."

Through the cramped passageway they moved—slowly. Once he stopped and listened for the terrifying pat-pat-pat, but could hear nothing except the ticking of his watch, which sounded loud. She gripped his arm.

"There, did you hear it?" she whispered jerkily. "It sounded like—O, I'm afraid. I can feel those long yellow claws reaching out for me."

He would have permitted her to go ahead, but he feared another flight of stairs or a trap. They saw a light.

"Hurry, hurry!" Her voice pleaded. "I know that—"

Preferring anything to the terrors of darkness, they rushed into the room from which the light was coming—a long narrow room, not unlike a Pullman sleeping car. On each side of a long dark passageway were curtained bunks, upper and lower, with bamboo pillows. The whole was filthy. Their nostrils were filled with an odor—sickeningly sweet. Here and there lay long metal tubes with a cup-like arrangement near one end.

There were two heavy doors, iron studded, one at each end of the room. To the nearer Halliday rushed. It was locked.

"Oh! Oh!" The girl stifled her shriek. He turned. She, wild-eyed, was looking down the passage that they had just come through.

Halliday rushed for the other door, she after him. The man threw his weight on the door. Slowly it gave in. He pulled the girl in after him, and jammed the door shut. He felt around till he found the bolt—then threw it.

Then he turned. All was darkness. She took hold of his hand. He could feel her shaking—jerking.

He shivered. He didn't know why. Though the door was bolted, he felt the danger to be greater than before.

He took a step forward. She gripped his hand tighter. He wanted to yell—to run—to do something—anything. He strained his eyes, but saw nothing.

Of what was he frightened? He tried to laugh, but instead gave a death-like gasp. The girl was shaking horribly—he could hear her teeth clicking together.

He took a step forward, hand stuck out in front of him. It struck something smooth, something damp. He moved his fingers over it.

Back he leaped, with a shriek. It was a man's nose.

And then the lights went on. Directly in front of Halliday stood a gigantic Chinaman. Other yellow men were scattered about the room, standing or sitting.

The giant grunted. A great round-headed fellow trotted up to the girl and seized her around the waist. Halliday rushed at him. The giant stuck out his foot. Halliday jumped over it, and smashed the round-headed fellow square on the jaw. He dropped.

Pat-pat-pat. Halliday whirled. They were on him—the whole pack. He hit out straight from the shoulder, rights and lefts. Screams of pain, and anger, the shrieks of the girl—filled the air.

One slipped in low and grabbed Halliday by the leg. He struck him again and again. He tried to shake him loose. The fellow hung on. Down Halliday went, and they on top. He was jerked over on his face, his wrists brought together behind his back, and fastened; his ankles tied together, his teeth pried open with a knife, and a cloth jammed in, and knotted behind. Halliday heard loud pounding on the

door; sharp commands in English. Then he was dragged into a corner, and a heavy rug thrown over him. The pounding and cries "open this door" continued.

The door was opened.

"Got a white girl in there?" The voice was commanding.

A chorus of "No, no, no."

"Well, I'll have a look anyway."

Halliday could scarce realize what was happening.

Then a tramp of heavy shoes, accompanied by a velvety pat-pat-pat. The footsteps came nearer. Halliday wriggled. He tried to make a noise through his nose. If the officer would only lift the rug—

And then—Halliday almost doubted his eyes. The rug was lifted, and he saw a white face not two feet from his own.

The rug dropped. What was the officer saying?

"All right. Sorry to have bothered you, but you know—"

Halliday lay gasping. So the officer was in with the Chinamen. It didn't seem possible, but then—He closed his eyes. He couldn't groan.

A sudden rush of feet, the door slammed; the bolt was shot, a noisy clamor outside, blows on the door. Before the puzzled Halliday could grasp what was going on, the rug was pulled off



him, the gag slipped out of his mouth, and his hands loosened.

"Here's a knife. Cut your feet loose. Then see to the girl. These devils—." And the officer rushed for the door, revolver in hand.

Halliday found the girl under another rug.

Crack! Crack! The officer was firing through the door. Cries of rage—possibly pain. Then quiet. The officer turned his head a little.

"Got a gun?"

Halliday shook his head.

"Well, you'd better look around and see if you can find anything. The Chinks know what'll happen to them if we ever get out of here. See if there's any other way out of this hole. I'll stay here. They may try to bust in. Say, Miss, you'd better get over in the corner, so if—yes, that's better."

Halliday walked around the room. In a far corner hung two great swords, crossed ornamentally. He pulled one down. It was extremely heavy, with a straight, two-edged blade—surprisingly sharp.

"Better'n nothing," commented the officer. "Find any way to get out?"

Halliday told him that he had not.

"Come over here to the door, and listen. Hear anything?"

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"No"

"I wonder what they're up to."

The silence became oppressive.

"Think I was throwing you down?" asked the officer at length.

Halliday admitted that for a few minutes it had looked that way.

The officer, revolver in hand, kept an eye on the door.

"Well, when I come in two of the devils stuck right to me, one on my right and one on my left. Each had a hand under his blouse. Oh, I saw you all right; but if I'd have let on there'd be fourteen inches of steel sticking in my back right now.

"When we got out in the hop joint, I told 'em I'd dropped something, and I started back. I got about ten feet and then they got wise and started after me. I ran and just beat 'em."

"The old cab driver told you did he?"

"Yes. Kelly and I had just left the station on a hurry-up call, when we met the driver. I told my partner to go on, I would come over here. The Chinks all swore there was no white girl in the place. I was a little suspicious though, and decided to look around. I was just ready to leave and I heard some yelling down here, and I ran down, and then—"

"Oh! Look! Look!" the girl was screaming. Halliday whirled around.

The air was full of slipped feet, of baggy trousers, of loose blouses, of yellow faces, of long knives—all dropping from a hole in the ceiling.

A tall fellow with a knife that looked a yard long, came screeching at Halliday, who grabbed up his sword and backed into a corner.

The yellow man stopped, just out of range of the sword and crouched, all ready for a spring.

Fascinated, Halliday watched the narrowed eyes, and the horrible knife, creeping closer, inch by inch. He was powerless to move.

Crack-

The yellow head jerked to one side. Like tissue paper the body crumpled—a jagged hole in the head.

Halliday looked about the smoke-filled room. On the floor lay bodies. Two yellow faces dropped from the ceiling and rushed at the officer.

Crack-

Neither stopped.

Snap!

An empty shell. The officer hurled, with all his might, the now useless pistol. It struck the foremost one in the mouth, square. With an awful yell the fellow dropped, and lay writhing—his face one bloody mass.

Halliday turned, instinctively, and dodged a long sweeping slash.

Halliday raised his sword.

The yellow man, over-balanced, pitched—the heavy sword came down with all the strength of the country boy's arms—the blood spurted high in his face.

Yelling, Halliday rushed at two more who had just struck the floor. He swung at the nearest. The fellow leaped back.

At the same instant there came echoing blows on the door—hoarse yells—then a killing pain in his shoulder. He swung half-way around, and saw the officer, back to the wall, fighting three yellow men—and then blackness.

When Halliday opened his eyes she was holding his head.

Later in the day the officer came to see him.

"You're all right, Halliday; you've the stuff in you. But she saved us. The Chinaman knifed you in the shoulder. Three of 'em had me cornered—fighting them with a chair. They would have got me in a minute. She slips over to the door and lets Sergeant Lee and ten men from Central in. It would have taken them half an hour to break the door in.

"Then the sergeant cleaned out the place. It's the Le Foy Tong headquarters, you know. They have been smuggling—"

(Continued on page 867).

## Will Dr. Lavendar please write?

Mr. Buck has something to tell him

Just a year ago Mr. W. Buck of Berien Springs, Mich., reported on two Empire Tires which had run more than 21,000 miles on a heavy seven-passenger Kissel Kar. His testimony was brought forth by the famous record of 25,000 miles obtained by Dr. C. B. Lavendar, of Reform, Ala., on his Ford.

And now, Mr. Buck comes through with an up-to-date bulletin on the same tires as follows:

Empire Rubber & Tire Co.,  
Trenton, N. J.

Today I met Mr. W. Buck, about whose experiences with Empire Tires the ad was written. He informs me that the tires purchased in 1914 and those purchased in 1916 are now on a Cadillac, still doing service, while the car they were on is scrapped. Mr. Buck is very loud in his praises of our line. Told me he didn't see why all dealers didn't stock Empires. Two of the last trips he made with his car were one in which he carried 11 passengers, and the other in which he carried 68 bushels of peaches. In all that time he had but one blowout and one tire ran 3 years without being deflated.

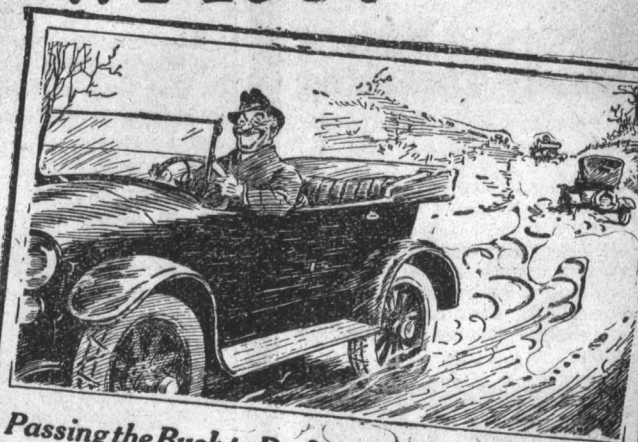
Very truly yours,

A. D. BRUSH.

This looks like the low record on punctures as well as a high record on mileage.

It stands to reason that not every car owner will have such good luck as this.

But these figures do have their meaning when you realize that the average Empire in average



Passing the Buck to Dr. Lavendar and Mr. Jones

When we recently printed a letter from Dr. C. B. Lavendar, who got 25,000 miles from one Empire, and got 34,000, several of our old friends rose to a point of order.

They reminded us that, whereas both of the above records were made on Ford cars, the original reputation of Empires was won on the big, high-powered cars that give a tire the hardest test.

Which leads us to print the following letter:

"EMPIRE RUBBER & TIRE CO.,  
Trenton, N. J.  
Three years ago, Altmendinger & Closson purchased two Red Non-Skid 37x5 tires for their heavy seven-passenger Kissel Kar. These tires have been subjected to the hardest of tests, all kinds of roads, all kinds of weather, and all kinds of loads. The car was sold about a year ago to Mr. W. Buck and, while in one sense of the word still going, and Mr. Buck has purchased two more for the front. These tires have run more than 21,000 miles and are not ready to be 'scrapped' yet."

HALE MOTOR COMPANY,  
Benton Harbor, Mich."

There is a record made by two Empires, both on the same heavy car, and both not only running up a huge mileage, but lasting through three seasons.

As we have said before, there is some danger in quoting such experience, as not every car owner can expect to get a tremendous mileage like this.

Yet these big records do have significance when you take into consideration that the average Empire in average running is delivering to the average owner a tremendous surplus of extra miles.

For 30 years the Empire Rubber & Tire Company of Trenton, N. J., has been making rubber goods of all kinds that have been famous for their long life. They have never turned out a better product than the Empire tires, and tubes of today.

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 possible.

## The Empire Tire Dealer

running is delivering to the average owner a big surplus of extra miles.

Step in and see any Empire dealer 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 possible.

## The Empire Tire Dealer

### GALLOWAY'S VICTORY SALE SEPARATORS



Buy a late model 1919 Galloway Separator on this special limited sale and save enough to buy other implements you need. Note these new low prices below—good only until July 15th. Buy your Galloway Separator now and take advantage of this great cut price offer.

Remember, this sale applies to all the four good sizes on the famous Galloway Sanitary Separator that is unsurpassed for close skimming, easy running, easy washing, durability, simplicity, and all-round efficiency.

Note These Reduced Prices:

Old 1919 Catalog Prices	Good only until July 15	New Victory Price
No. 4, \$48.00		\$46.90
No. 7, 55.00		51.80
No. 9, 61.00		56.90
No. 11, 72.75		65.75

Over 300,000 satisfied users. Separators shipped from points near you to save you freight. Write today—order direct from this ad.  
Wm. Galloway Co., Box 183, Waterloo, Iowa



### Be Our Agent!

Big profits easily made selling tires. Work spare time or full time. Every auto owner a prospect. Save your customers 30% and still make large profits for yourself. We have contracts with factories for big supply standard make "seconds" and "firsts." Write today.  
Dept. 74 Sterling Tire & Supply, 1335 Mich. Av., Chicago

### SAFEGUARD YOURSELF BY KEEPING RECORDS

If you don't, the tax man will figure your income tax in his own way. But don't keep incomplete records of your income and expenditures. It gets you in, bad with the Income Tax Collector, and may cost you money in increased taxes. Well-kept records will not be disputed. It is easy to keep accurate records by using

### The Michigan Farmer Account Book

This book requires no special book-keeping knowledge, but provides for a complete record of all transactions, such as receipts and expenditures, interest, breeding, and planting dates, complete farm inventory, and all other daily information; complete summary of Income Tax Law; and other essential information.

A few minutes a day will provide a record that will be acceptable to the Tax Collector, and valuable, too, because of the interesting information it gives you.

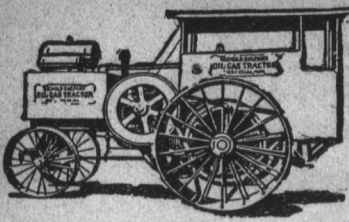
It provides for a year's complete record, and is the most simple farm account book devised. It is better than other systems costing from \$3.00 to \$5.00. It is endorsed by bankers and tax collectors.

Michigan Farmer Account Book  
Michigan Farmer (New or Renewal) 1 Year } Only \$1.25

You need this book. Send for it now. If you are now a subscriber your subscription will be extended.

THE MICHIGAN FARMER

Detroit, Mich.



## Reserve Power Steady Threshing

The little, light, fast running tractors may be all right for plowing but they will not do for threshing. To run a thresher you want a power plant with a heavy reserve power. Power that not only runs the thresher when conditions are ideal, but that does not stall when bothered with wet bundles or over feeding. You get the right power for threshing when you get the

## Nichols-Shepard Oil-Gas Tractor

It is designed as a power plant for threshing. It works like a steam engine when attached to the thresher.

It has two cylinders with a strong main shaft and a heavy fly wheel which stores the power to pull through those unexpected overloads. It has a strong, sturdy frame with enough weight to hold it in place. It burns kerosene and distillate and is economical as a gas engine can be made.

It is also a good power plant for plowing and other heavy farm work.

Write for Circulars

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

## Tire Trouble?



Practically all tire trouble is due to under-inflation.

Unless you maintain the air in your tires to the right pressure you cannot expect them to last.

Tires with not enough air in them not only wear out before their time, but they cause a tremendous waste of gasoline.

Cut down on your tire and gasoline bill by measuring the air in your tires with a

**SCHRADER UNIVERSAL TIRE PRESSURE GAUGE**

Price in U. S. \$1.50

Ask your dealer to show you the **SCHRADER UNIVERSAL PUMP CONNECTION** also. It makes tire-pumping and tire-testing easy.

## FORD RADIATORS

**of Highest Efficiency**  
**\$28.00**  
**F. O. B. Detroit**  
Finished in either nickel or black enamel and packed in strong cartons—Weight complete only 35 pounds.

### NATIONAL ZIG ZAG RADIATOR

The new Ford National ZIG ZAG Radiator is equal in material, workmanship and finish to those installed upon the world's most expensive cars. One on your sturdy Ford will add greatly to its appearance and efficiency. It will prevent overheating under the hardest driving conditions. Flexibility, allowing unusual expansion and contraction, eliminates ordinary radiator freezing troubles. A National ZIG ZAG Radiator ensures greater driving comfort and economical motor efficiency.

Ask Your Dealer or Write Us Direct

**NATIONAL CAN COMPANY**  
Radiator Division Detroit, Mich.

**INSYDE TYRES Inner Armor**  
for Auto Tires. Double mileage, prevent blowouts and punctures. Easily applied in any tire. Used over and over in several tires. Thousands sold. Details free. Agents wanted.  
American Accessories Co., Dept. 712 Cincinnati, O.

# Our Boys' and Girls' Department

## Boys' and Girls' Club Notes

At the annual meeting of the Manistee County Farm Bureau, it was decided that boys and girls have the right to belong to the County Farm Bureau and be a part of it. Boys' and Girls' Club members in Manistee county therefore, have the opportunity of coming in direct touch with the County Farm Bureau, of which they will be the members a few years hence.

The executive committee of the Washtenaw County Farm Bureau, recognizing the importance of Boys' and Girls' Club work, as a part of the Farm Bureau, pays the expenses of its county club leader, Mr. E. F. Lyons, to the Monthly Training Schools for Club Leaders, conducted by the Boys' and Girls' Club Department of the Agricultural College. This is a step in the right direction which it is hoped will be followed by farm bureaus of other counties in which a county club leader is employed.

Mr. Clayton R. Garlock, Assistant County Club Leader of Bay County, is the author of some very usable garden club lessons to be used by the members of Boys' and Girls' garden clubs in Bay county.

Club members and club leaders from Menominee county, Wayne county and Iron county, are the authors of a large number of club songs and club yells used in connection with club work in their particular counties.

The Lake Odessa Hot-lunch Club has completed its project and has been discontinued for the rest of the year. During the twelve weeks in which the club carried on its work one thousand six hundred and sixty-eight hot dinners were served to club members and others. The club is planning to continue its work next winter and a four-burner oil stove has been purchased for next year's work.

George Porter, of Blissfield, Michigan, has recently returned from Kansas City, where he has been to buy calves for the Lenawee County Calf Club. About fifty calves are expected to be in the car and the Lenawee County Farm Bureau have orders for all of them. Mr. Porter is a thoroughly capable stock man and will buy the best calves to be bought in the Kansas City markets.

In Ann Arbor the park board of the city hall plows and drags the plots which are to be used as community

gardens by Boys' and Girls' Club members.

Under the direction of Mrs. S. H. Wightman, of Birmingham, the garden club members recently presented a very attractive nature study play dealing with the beautifying of Birmingham.

Club members at School No. 10, Battle Creek, wrote and presented a most attractive garden play at one of their recent club meetings. Miss Charlotte Ernst is local club leader.

Mr. C. W. Waid and Mr. Henry C. Moore, extension specialists in gardening, of M. A. C., are to give considerable time in connection with gardening to Boys' and Girls' Club members throughout Michigan during the coming months. Mr. W. E. J. Edwards, extension specialist in animal husbandry, will conduct the follow-up work with the pig and calf clubs.

The board of supervisors of Houghton county, recently appropriated two thousand dollars toward the employment of a full-time county club leader for Houghton county.

Round-ups, and achievement days, closing the work of the clubs engaged in winter projects, have been held in various counties recently. Branch county, Saginaw county, Cheboygan county and Delta county are those which have more recently brought to a formal close club work for the winter season. At these times, reports and stories were filed with local and county club leaders. Certificates of achievement presented to those Club members who completed project requirements, local and county club champions announced. In most cases clubs engaged in winter or project work at once reorganized to continue the work through the summer.

Miss Anna B. Cowles recently attended the meeting of extension workers at Purdue University, Lafayette, Indiana. One of the leading publishers in Michigan recently made this statement: "We feel that Boys' and Girls' Club work is one of the big things in our state. It is going to do much toward eradicating the Bolshevist spirit in the generation to come." A superintendent of schools in one of the largest cities in Michigan made the following statement recently while addressing a round-table of superintendents of high schools: "There is no phase of educational work which is meeting the actual needs of boys and girls and in giving to them the training which they should have, than is Boys' and Girls' Club work."



JUNE AND A BOY.

BY L. W. SNELL.

The old world wakes from its winter's nap,  
And the tree veins pulse with the sweetening sap,  
Seems as if all nature held out her lap,  
Just for June and a Boy.

The sun shines clear and the clouds float by  
In a lazy race cross an azure sky,  
And the shade gets thick where the grass grows high,  
All for June and a Boy.

The song of the lark and the oriole,  
The willows down by the swimming hole,  
The angleworm and the fishing pole,  
Gladden June and a Boy.

The marbles round and the soaring kite,  
The whippoorwill and the stars at night,  
A sunburned cheek and an appetite,  
June's gift to a Boy.

## Our Prize Letter Contest

### FIRST PRIZE.

#### The Best Teacher I Ever Had.

The best teacher I ever had was the one who taught me when I was in the eighth grade.

She was a well educated teacher and taught cleanliness and honesty as well as the regular subjects.

She always kept good order and the children were ready and willing to obey her.

The year before I went to her I didn't take any interest in my studies, but when I started to school to her, everything seemed easy and I could understand things better.

She was always very polite and kind and when she wanted you to do something for her she asked you in a nice way.

Anything you didn't understand she would readily explain.

She took an interest in the scholars and wanted them to pass and tried to

make them see that they should be present every day and if they could find anything elsewhere pertaining to their lessons she wanted them to find it.

We had current event notes which were happenings and events of the great war, and then lots of civil government mixed in with it. In this way we learned many good ideas and answers to questions we otherwise would not have gotten from our books.

She was never shy in company, although she wasn't rude, she knew just how to treat everyone and everyone liked her.—Audrey Wood, Hope, Mich. Age fourteen years.

### HONORABLE MENTION

#### The Best Teacher I Ever Had.

The best teacher I ever had was when I was in the fourth grade. The first day of school we thought we would never like her. She was old,

had small features, and wore glasses, but behind these we noticed a pair of loving eyes. She gave easy lessons and expected us to have them well. The ones that had their lessons good for a week could teach a class a day for the same duration of time. There were none excused from the room. All politely went when they wished.

Politeness and cleanliness were our records. The pupils abided by these. If Mary went in front of Clara she always said, "Pardon me." If anyone forgot to clean their teeth, finger nails, or polish their shoes, they were shunned. We had a garden. Everyone had a spot, and all tried to get better than the other. An hour a day was given to the girls for cooking or sewing and manual training for the boys. The teacher gave music lessons. Mothers flooded her with thanks for what she had done on the last day of school. We had a long program and we girls cooked and served dinner. There was

never a more sad lot of pupils as when she left. She showed that working and showing were two good slogans in the world.—Lillian Akans, Inkster, Mich. Age fourteen years.

#### HONORABLE MENTION.

##### The Best Teacher I Ever Had.

I think that the best teacher I ever had is the one who is teaching my school now. Her name is Vesta Enyart.

During school hours the children are kept in behavior, although she is not above laughing if there is a good reason behind it. For example, one day the class which was just learning to add and subtract, was reciting. Miss Enyart asked them, (a little boy and girl was the class), "If you had twelve apples and ate two, how many would you have?"

Soon the little boy raised his hand. As she nodded to him he said, "Ten."

"How did you get that answer?"

"Fingers and legs," was the reply.

Who wouldn't laugh?

Although she has no very strict rules she expects everyone to obey those which she does make. The examinations which she gives us are fair and cover something which we have studied. If we are going to have a very hard lesson, she gives us more time to prepare it. When we recite she gives each the same chance of proving whether we have our lesson or not.

In the morning she reads to us, or we sing for about fifteen minutes.

Out of school hours she talks and laughs with us. Very often, if we are playing a game, she will join us. She seems to be just a friend of ours out of school time.—Florence Waldron, Big Rapids, Mich. Age eleven years.

Next week we will publish the winning letters entitled:

"Why I joined our Boys' and Girls' Club."

#### Contest Letter Subjects.

Letter to be mailed by June 9:

"Why I think mother the best woman on earth."

Letter to be mailed by June 16:

"The job I would like."

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

#### UNDER CHINATOWN.

(Continued from page 865).

gling in a lot of the Le Foys from China—landing the Chinamen in Mexico and then getting them over the border.

"The girl's father is one of the Assistant District Attorneys, and the Le Foys blame him for getting all their friends sent back to China as fast as they are smuggled in here. They have been writing him letters saying they'd fix him if he didn't let up.

"Last night the girl's folks went to the theater and left her alone. About eleven o'clock, so she says, somebody called her up and said her father and mother had been run over by a street car, to come right down to a certain address. Of course she went.

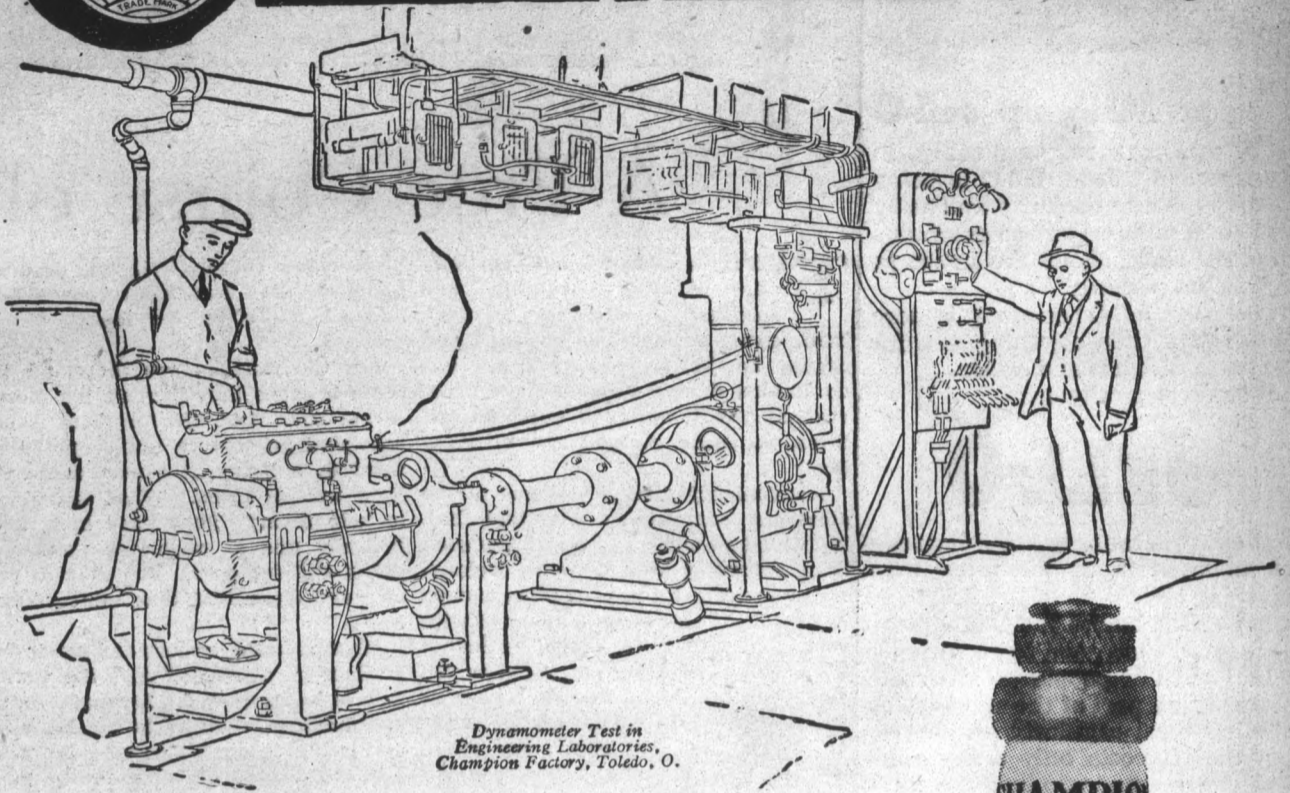
"Two Chinamen met her there on the corner, and told her that her parents had just been taken away. Of course she wanted to go to them. One of the Chinks said he would go and call a taxi for her. She fell right into their trap, and begged him to hurry. While she was waiting she became frightened—"

"And motioned to me through the window. Then the taxi came up, and they grabbed her, and then—"

Halliday shuddered.



# Champion Dependable Spark Plugs



## Dynamometer Test Guarantees Dependability of Champion Spark Plugs under all Service Strains

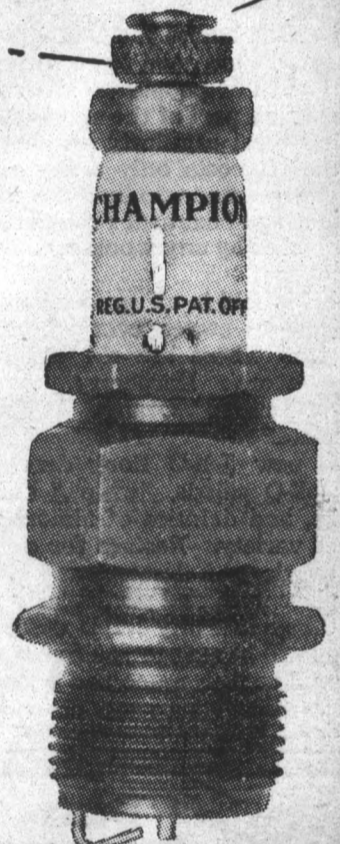
**N**O MATTER what type of automotive engine you have, nor under what service conditions you put it, the Champion Spark Plugs recommended for that particular type of engine have already shown a 100% efficiency record under exactly similar service strains.

In the Dynamometer Department of our laboratories various types of engines equipped with Champion Spark Plugs are being run at all times under the most severe conditions.

The greater resisting power of our famous No. 3450 Insulator together with our patented asbestos gasket construction and coupled with extreme care in manufacture, close inspection and rigid production tests enable Champion Spark Plugs to stand up and keep going better and longer.

There is a Champion Spark Plug for every type of motor car, motor truck, tractor, motorcycle and stationary engine.

Champion Spark Plug Company, Toledo, Ohio  
Champion Spark Plug Company, of Canada, Ltd., Windsor, Ontario



Champion 7/8-18 A44, Price \$1.00

**THE BRUSHES OF THE WAR**  
**WHITING-ADAMS**  
**BRUSHES**

DO THEIR PART TOWARD CONCEALING THE BIG GUNS

Their own bang-up goodness cannot be concealed. Quality sticks out all over them. Call for them at any dealer in brushes. Send for illustrated literature.

**JOHN L. WHITING-J. J. ADAMS CO., Boston, U. S. A.**  
Brush Manufacturers for Over 108 Years and the Largest in the World

**Write for Silver's**  
**New Book on**  
**Silo Fillers**

**SHOULD OHIO AND ILLINOIS FILLERS**

**Increase Your Dairy and Stock Profits**

New folder tells how "Silverized Silage" brings maximum yield from dairy cows—puts weight on fat stock. "Ohio"—Cut silage is better feed—cut clean—packs air-tight in the silo—avoids air pockets—mold-proof. Get the facts about Silver's "Ohio" Silo Fillers and Feed Cutters, used by Experiment Stations everywhere. Send for printed matter FREE.

**The Silver Mfg. Co.,**  
390 Broadway,  
SALEM, OHIO

**GET A WITTE**  
**At Reduced Price**

Buy on your own terms. Save \$15 to \$200. Catalog FREE.

**WITTE ENGINE WORKS**  
2190 Oakland Ave., Kansas City, Mo.  
2190 Empire Bldg., Pittsburgh, Pa.

**BINDER TWINE**

Farmers, we are a Farmers' Organization, buying for farmers. We can supply you with the best guaranteed binder twine at 2 1/2 cents per lb. in 50 lb. lots. Write us for prices and terms on shipments of 10,000 lbs. and larger. All prices are all f.o.b. Kansas City, Omaha, Council Bluffs and Chicago. Farmers' Clubs, Granges and other farmers' Organizations. Write for carlot prices. We will ship C. O. D.

**CHICAGO EQUITY UNION EXCHANGE**  
58 W. Jackson Boulevard, Chicago, Illinois

**"Fodder Sweet Corn" \$3.00 per bu.**  
of 45 pounds. Bags extra 50c. Germination 90%  
**YOUNG-RANDOLPH SEED CO., Owosso, Mich.**

**MEN WANTED with Ford Cars**

to sell gasoline saver, guaranteed to save from 25 to 50% and practically eliminates all carbon; should easily earn from \$10 to \$20 per day. Write for territory, \$500 required for necessary equipment. Red Hawk Gas Saver Co., 202 Owens Bldg., Detroit, Mich.

**50 Belgian Hares,** all ages, good, utility stock. Some selected breeders, cheap.  
**W. E. LECKY, Holmesville, Ohio.**

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

## A Special Clubbing Bargain

No. 1.	
Michigan Farmer .....	\$1.00
Cloverland Magazine .....	1.00
Power Farming .....	1.00

Regular price, one year.....\$3.00

**OUR PRICE ONLY \$2.10**

No. 2.	
Michigan Farmer .....	\$1.00
Hoard's Dairyman .....	1.00
Woman's Magazine .....	1.00

Regular price, one year.....\$3.00

**OUR PRICE ONLY \$2.50**

No. 3.	
Michigan Farmer .....	\$1.00
Swine Breeders' Journal.....	.50
Today's Housewife .....	1.00

Regular price, one year.....\$2.50

**OUR PRICE ONLY \$1.85**

No. 4.	
Michigan Farmer .....	\$1.00
People's Home Journal .....	1.00
American Boy .....	2.00

Regular price, one year.....\$4.00

**OUR PRICE ONLY \$3.15**

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



## Easy to Make up Jell-O

For making the newest things in desserts and salads, Jell-O is being used by the best cooks as well as by women in millions of homes who do all of the work about the house as well as the cooking.

Cooks use Jell-O because it is more satisfactory than anything else for the finest desserts and salads.

Women generally use

## JELL-O

first of all, because better things can be made of it, at the price, than anything else.

In wealthy homes Jell-O is popular because it is too good to go without.

In homes of people of moderate means it is a part of the noon-day or evening meal regularly for the reason that it costs only a few cents and can be made up into the most delicious and beautiful desserts and other dishes by any woman, cook or no cook.

Jell-O is sold in all grocery stores and general stores everywhere in America. There are six different fruit flavors: Raspberry, Strawberry, Lemon, Orange, Cherry, Chocolate.

The new Jell-O Book describes new Jell-O salads, "whips," knick-knacks, and dainties of almost unlimited variety. Recipes for everyday salads and desserts are given first place in it, and particularly the new things in fruity Jell-O desserts. A copy will be sent to you free if you will send us your name and address.

THE GENESEE PURE FOOD COMPANY  
Le Roy, N. Y., and Bridgeburg, Ont.



**Don't  
tear your  
house  
to pieces**

by putting in a pipe furnace!  
Install a Homer Pipeless  
Furnace instead. Can be  
installed in a day without  
tearing up floors and walls.  
Heats every nook and corner of  
any size house.

Used also in stores, churches,  
halls, etc.

Only one register needed—  
directly above furnace.

No pipes.

Does away with messy stoves.  
Loses no heat as with expensive,  
dirt-catching piping.  
Saves 35% to 50% of fuel.

**Homer Furnace Company**  
Dept. F-6 Homer, Michigan

**HOMER FURNACE**  
THE ORIGINAL PATENTED PIPELESS FURNACE



## Bee Supplies

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

## Berry Baskets

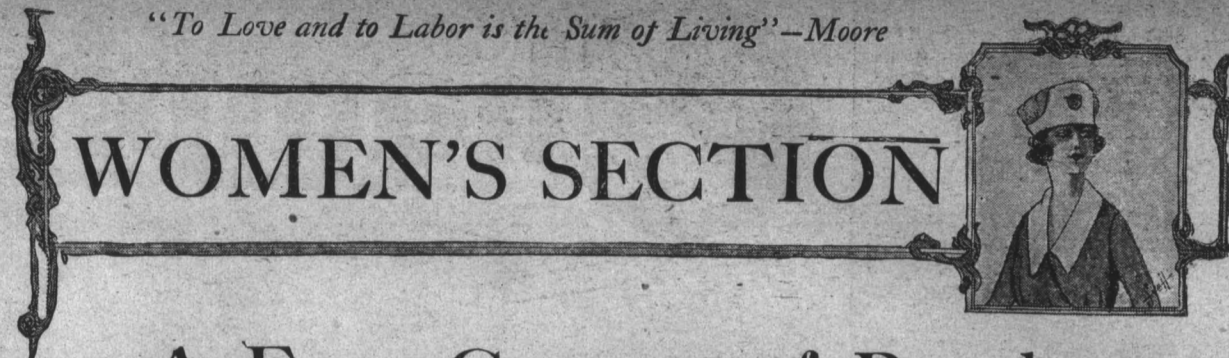
Standard quart, wood berry bas-  
kets, and wax-lined paper baskets.  
16 quart crates in lot. 200 wax  
lined paper baskets postpaid for  
\$1.70 to points within 150 miles of  
Lansing. Send for price sheet.



**M. H. HUNT & SON**

Box 525 - Lansing, Michigan

"To Love and to Labor is the Sum of Living"—Moore



## A Free Course of Reading

**T**HE farm woman is only partially alive physically, mentally and spiritually. She "has to work hard, away beyond her strength and against her better judgment. She has no leisure during pregnancy, no conveniences with which to work, no luxuries, no social outlook and no reading."

I am mighty glad it was one of the aforesaid farm women who said that. If I dared so much as hint at any such thing regarding even the most isolated and overworked group of farm women in America I should be lambasted with verbal cudgels from every section of the state. And I am not going to tell you who the farm woman was that took her life in her hands and got right up in meeting and spoke her mind, lest she meet a similar fate.

That her words are all too true regarding some of the farm women of Michigan, every honest person who knows state-wide conditions will admit. And if they are true only of one or two women they show a state of things which is fundamentally wrong and should be righted.

We are accustomed to thinking of Michigan as well up in the list of prosperous agricultural states. But we forget that Michigan soil is rather diversified. We who live in the fertile southern counties either forget or will not admit that to the north of us are acres and acres of cut-over pine lands where the sand is not so nicely calculated to produce large yields as is the land we are lucky enough to own. But the fact still exists, and these small barren farms are inhabited by people, lured there all too often from other states by the glowing literature of land sharks. In many cases the land might be made

to give fair returns if it was properly handled. But fertilizers cost money and all too often the money is not there.

But the families are there, all too often because they haven't the money to get out. And life for them is one continual grind with not even the reward of a living, if I may quote the farm woman again. What can we do to help them? They need help, need it badly and at once, for their own sakes and for ours. For it is in poverty and discontent that bolshevism is bred.

"Sympathetic understanding is one of their great needs," says the woman who is being quoted. Sympathetic understanding is all right so far as it goes. But it doesn't go very far when you are dead tired, tired to the point of being only half alive. It doesn't help make your work lighter nor solve the question of how the children are to be fed and clothed and educated. We want practical suggestions.

Reading might help them in a way. Many an indifferent farmer has got an idea from a stray bulletin which changed his entire methods of farming and made him well-to-do. These people have no reading matter, we are told. One county has solved that problem by making arrangements with the city library to send books out into the different centers, the books to remain for a limited time and then be returned to pass on to another center.

I do not know what books the librarian selects, but I hope she makes it a point to include for the women the latest knowledge about care during pregnancy and confinement, and all she can find on the proper care and treatment of children. Not simply babies,

but children right up to manhood. If the next generation can be started right they should prove the help the fathers and mothers need. They should be the salvation of the women who are now too tired from overwork to be really alive.

The men, too, should be given something which will help them to make the most of what they have. If the soil of their farms can give them a living when rightly handled, let's tell them how to take care of it. Suggest the crops best suited to it and advise them in every way possible.

Every county has not its traveling library—though every section of the state may get books by writing to the state librarian in Lansing. But every man and woman in the United States of America who can scare up a sheet of paper and three cents for a stamp may get a bulletin by writing to the Department of Agriculture in Washington, D. C. And those bulletins tell you how to do everything under the sun. I can not think of a thing pertaining to farming or housekeeping that hasn't a bulletin compiled by one of our Uncle Sam's experts to tell us just how to do it right. They are yours for the asking. A very few cost five cents, but I have never written and asked for one that had to be paid for.

To my mind the best way to help people is to show them how to help themselves. And nothing will show us more quickly than reading. We often say of certain individuals that their brains never save their heels. Here is an opportunity for every man and woman, no matter how remote, to get light on that all important subject of making work easier by brushing up our brains. Let's utilize it. **DEBORAH.**

## 1,500,000 Farm Children Laborers

**D**OES the compulsory school attendance law protect children from heavy work and long hours in the fields? There are interested and vigorous school officers who do their best to enforce the law; but even at best the period of attendance required is meager. There is always a loophole through which children may be piped to work.

In ten states the period of attendance is below five months. In Alabama children must attend school for eighty days and even this short term may be reduced to sixty days; in Florida the attendance required is eighty days; in Georgia four months; in Mississippi sixty days, but the school board may reduce this to forty days; in North Carolina four months; in South Carolina four months in agricultural districts for child laborers; in Tennessee outside of cities of five thousand scholastic population eighty days, or entire session if this is less than eighty days; in Texas one hundred days or entire session if less than one hundred days; in Utah outside of first and second-class cities twenty weeks; in Virginia sixteen weeks. Delaware has a required attendance of five months which may be changed by vote to three.

A few states definitely require attendance for less than the entire ses-

sion and even where attendance during the entire session is required there is often no assurance that it will be long enough to enable the child to get adequate schooling. Fourteen states will excuse a child from school solely for "satisfactory," "sufficient," or "urgent" reasons, for "domestic necessity," or "for cause." Two of these states specify that the "urgent rea-

son" shall be "strictly construed." In Georgia the school officers are definitely authorized to consider need for agricultural labor in excusing children in rural districts.

The back-to-the-school and stay-in-school drives of the children's bureau were started to arouse both parents and children to the realization that school is better than work for children until they are sixteen. It pays. As the bureau says: "The more you learn, the more you'll earn."

Most of us think of the farm as an ideal place, and no one can question the wholesomeness of much in farm life. But we have learned that it is not wise to take it for granted that all country life in America makes a child happy and healthy. It must be admitted that too much farm labor interferes shockingly with the child's schooling, overtaxes his strength, and impairs his future usefulness.

Almost one and a half million children between the ages of ten and fifteen are listed as "farm laborers" in the 1910 census. Most of these were reported as working on the home farm; the rest "worked out." There is no report of the children below the age of ten at work in cotton, tobacco, and beet fields, and on thousands of small farms.—U. S. Children's Bureau.



Black maline and lace was used in fashioning this hat; blue daisies and pink roses are veiled in the maline on the brim.

## AGAIN—THE FLY.

BY L. M. THORNTON.

WITH Germany disposed of, our thoughts can again turn to the at-home problem of disposing of that ever present menace—the fly.

The swatter—to be sure, no house is home without a fly swatter and a baby and where there's a baby there ought to be two swatters, one for father and the other for mother to use.

Poison—any kind and all kinds, but it should be kept high enough to be well out of the reach of children and domestic animals. If insect powder is used be careful not to scatter it about the room and then close the doors, forgetting Dickie the canary. Birds are very susceptible to anything that shuts off their supply of pure air.

Tanglefoot—plenty of it. Hang the kind that comes in rolls from the gas jet and if sister runs against it and carries the ball off attached to her backhair, never mind. You are waging a great war, and who can stop to think of trifles. The kitten may wrap herself in it, to her terror, and father may sit on the sheet you have laid, for just a moment, in his favorite chair, but it catches flies as well, and that is the real issue.

Formaldehyde—that is perhaps best of all. In an old saucer put a mixture composed of ten parts of formaldehyde, eighty-eight parts of water and two parts of sugar in the center of the dish put a small sponge and set where it will not be disturbed. The flies drink the mixture and die almost immediately. With this as with all other poisons be very careful to keep well out of the reach of domestic animals, children and careless people. It's the fly you are after.

## HOW TO HANG PICTURES.

Hang large pictures with two wires and two hooks. Small sizes need a single wire run from center of picture to hook at moulding, or may be fastened with push tacks.

Let picture rest flat against wall, by attaching wire near top of frame instead of one-third the way down.

Hang about on eye level, usually with lower edges on a line.

Don't hang too many. One medium-sized picture to a wall space is enough.

Large pictures in heavy frames should not be hung in the house of ordinary size.

Don't hang on figured wall paper, it detracts from effect of picture.

Hang similar pictures together, for example, a water color doesn't look well next to a photographic print.

Dark pictures are better hung in darker parts of the room.

## WORK FOR A KINDERGARTEN.

For the mother who lives in a neighborhood without a public kindergarten there is this message. Try to get all the mothers in your vicinity to petition the school board for one. Interest influential men and women of the community in your plans. Write to the United States Bureau of Education for a petition form and leaflets. Keep in touch with modern kindergarten literature; this is listed in the free catalogs of the kindergarten supply houses: Milton Bradley Co., Springfield, Mass., and E. Steiger & Co., 49 Murray street, New York.

"Home Nursing" is the title of a bulletin, No. 78, by Miss Laura Patch, of Purdue University. The leaflet gives many valuable hints on the home care of the sick, such as preparation of proper foods, changing bed linen without removing the patient, making a bed with the patient in it, and on many topics of like character. It may be obtained by writing to the Extension Department, Purdue University, Lafayette, Indiana.

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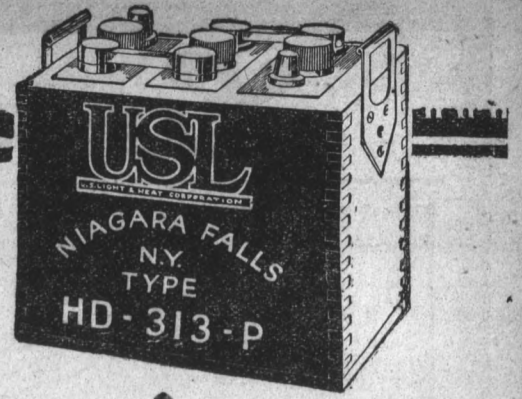
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No. 2833. Ladies' Negligee. Cut in four sizes, small 32-34; medium 36-38; large 40-42; extra large 44-46 inches bust measure. A medium size requires 3¾ yards of 36-inch material. Price 10 cents.



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No. 2845—Girls' Dress. Cut in three sizes, 12, 14 and 16 years. Size 14 re-



quires five yards of 44-inch material. Price 10 cents.

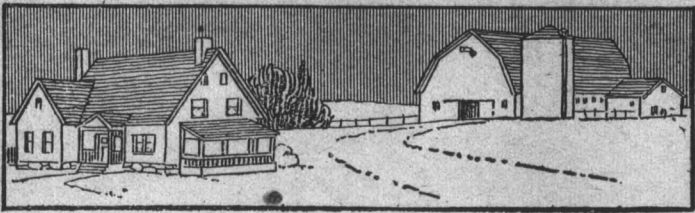
No. 2525—Girls' Dress with Bloomers. Cut in five sizes, 4, 6, 8, 10 and 12 years. Size 10 requires three yards of 36-inch material for the dress, and 1¾ yards for the bloomers. Price 10 cents.



No. 2477—Ladies' Work Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 4½ yards of 36-inch material. The dress measures about 2½ yards at the foot. Price 10 cents.

No. 2446—Ladies' Apron. Cut in four sizes, small 32-34; medium 36-38; large 40-42; extra large 44-46 inches bust measure. Size medium requires 4¾ yards of 36-inch material. Price 10c.

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

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## Laybilt S. C. W. Leghorn

Large, great layers, pure whites, strong day-old chicks March 25c each; April 15c each. Parcel postpaid. Lots of 25 or over, guaranteed delivery alive and lively. Hatch every week after March 17th. No circular. Please book order direct from adv. and send orders early. **V. A. MORSE, Ionia, Mich.**

## June Poultry Reminders

**O**N a farm where some of the hens were sick it was found that the birds were pecking out kernels of spoiled corn from the floor of the crib. Kernels which were green with mould were eaten by the hens and some of them died. The mortality rate among farm poultry flocks can be reduced by keeping the farm as free as possible from mouldy grain and spoiled material of any kind.

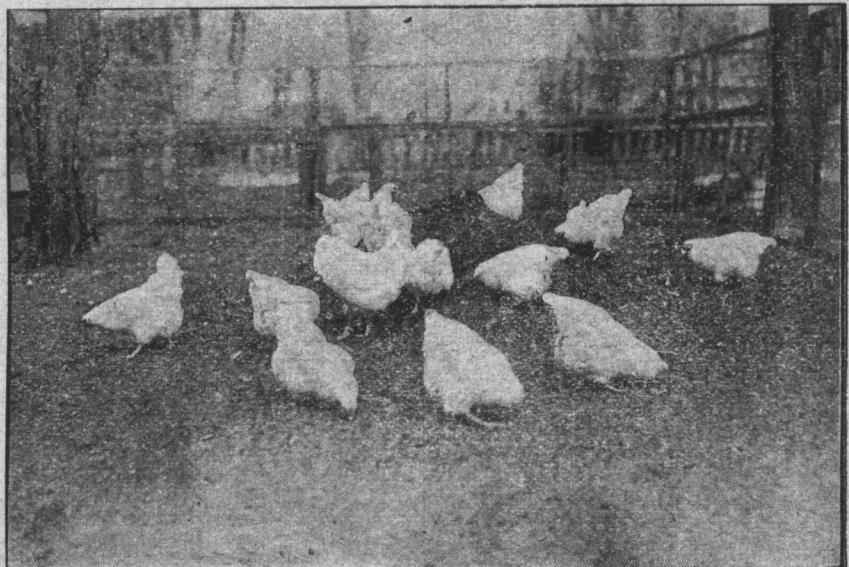
A poultryman carefully swept down the walls of a poultry house which had been whitewashed with lime and then placed young chicks in the house without placing any litter on the floor. The chicks ate some of the white bits that scaled from the wall and some of them died. It always pays to keep young chicks where they have no access to foreign material that may cause injury and then give them plenty of straw or clover litter to keep them busily scratching.

As coal is becoming quite expensive we have changed two coal burning brooders to oil burners by simply purchasing the small heaters and using them under the deflectors that came

when they should be laying eggs. Often incubators and old hens can both be used to advantage. Then carefully watch the brooders and try to keep the brooder chicks looking as sleek and growing as rapidly as the hen-hatched and brooded chicks. Usually the hen-hatched and brooded stock will look a little more glossy because of the oil which they receive from the feathers of the old hen. However it is remarkable how much good work with poultry can be done with artificial brooding if the poultryman uses modern methods and stays very close to the job at all times.

Bare poultry yards increase the cost of raising poultry and on the farm the conditions can be made ideal for the range flock by giving them plenty of clover pasture. Green food acts as a regulator for young chicks and the mortality rate is reduced when they have an abundance of it in the ration.

Old hens in brood coops need plenty of green food during the hot weather and it pays to pull fresh clover and throw a handful into each brood coop every day if possible, and at least



Hens Need Plenty of Green Feed During the Summer.

with the coal burning equipment. These oil burners keep an even heat and require less attention than the coal stoves and they are more economical to operate. The flow of oil can be regulated very accurately and the amount of heat controlled so that no more oil will be burned than is necessary to keep the chicks comfortable.

Late hatching of chicks is not usually considered as profitable as early hatching but in some sections it has been a cold and backward spring and it has been difficult to raise the usual number of early hatched birds. In such cases it pays to hatch in June. The fine weather is then almost a sure thing and the chicks can enjoy free range and they are not much handicapped by cold winds and rains as in April and early May of this year.

When feeding sour milk to chicks it is necessary to keep the dishes clean by frequent scalding. In this connection it pays to note one of the advantages of the artificial brooding of large flocks. A brooder in a colony house will care for two hundred chicks and one or two sanitary feeders will furnish sour milk to the entire flock. That means only two dishes to scald. It will take fifteen or twenty hens to brood two hundred chicks and this means fifteen or twenty dishes of sour milk and each dish will need frequent cleaning and if the old hens can reach the dishes and the chicks walk through them, they will soon spoil the sour milk.

Most poultrymen are willing to admit that there is nothing as good as the old hen for rearing chicks but the incubator and brooder make the production of large flocks possible without taking up the time of the hens

three or four times a week. The old hens will then call the chicks to the feast and in that way teach them to eat more green food than they will eat if left to learn for themselves.

If the brood coops are on board floors covered with earth, the earth should be changed about once each week. The dirt removed makes fine fertilizer for the garden and the clean soil replaced improves the living conditions for both the old hens and the chicks. During the summer it is best to occasionally spray the inside of the brood coops to keep down the mites. Painting the inside of the coops with kerosene oil will be satisfactory. If a hen is protected from lice with blue ointment it seems to protect the chicks at the same time.

As soon as the early hatched chicks are feathered out and weaned they can be managed more easily if they roost in colony houses at night. It is often difficult to make them leave their small brood coops but if they are fastened in the colony house for about two days and the brood coops are removed most of the chicks will soon learn where to spend the night. When they roost on the floor it means overcrowding and a danger of the floor becoming infested with mites so it pays to teach them to roost as soon as they show an inclination to hunt for a perch at night. Then the roosts can be painted with kerosene oil and the birds will have no trouble from mites. Too early roosting is considered a cause of crooked breasts but if the birds are from vigorous stock and they are well fed, very few of them will develop this trouble.

If the large chicks are left in brood coops the evening work is increased.

It takes less time to close a colony house door and lock in one hundred chicks than to close eight or ten brood coops. When the chicks are in the colony houses they are more protected from storms and thieves of all kinds. On rainy days the colony house chicks have a warm place to stay and there is plenty of chance to serve them with clean rations, both in hoppers and in the litter. When the days are rainy it is difficult to give chicks in brood coops good care, as the floors of the coops become more or less muddy and there is no scratching place where the grain can be scattered.

Keep plenty of fresh water before the growing stock at all times. Note the thirst of a house full of broilers after they have been denied water for a few hours. It proves that their systems needed water and their owner lost poultry money by feeding a thirsty flock. Clean water is the cheapest element in the poultry ration and should never be neglected.

#### SMALL LEGHORN EGGS.

Can you tell me why my one and two-year-old Leghorns lay eggs about the size of a robin egg? They are fed oats, barley and corn on free range, plenty of water, grit and oyster shell, and look fine and fat. I can find no lice or mites in the coop. Mrs. B. M.

The laying of dwarf eggs is more prevalent in the spring and early summer than at any other time. It seems to be caused by certain disturbances in the functions of reproduction. It is not unusual to find some of these dwarf eggs in the best managed poultry houses, especially in the spring when the birds are laying heavily. If a large proportion of the birds are continually laying dwarf eggs, it would naturally be an unprofitable flock and the birds would be better marketed. If only a few hens are laying dwarf eggs they might be located with the trap nest, and if it continues such birds should be sold as meat. Often a hen that lays a dwarf egg will be a good layer and will have produced a large number of normal eggs, both before and after the production of the dwarf. If a large number of the birds produce dwarf eggs it will be best not to use any of their eggs for hatching but obtain eggs from vigorous bred-to-lay flocks and thus obtain an abundance of new blood for the home poultry flock. R. G. K.

#### HONEY BEES AND SPRAYED FRUIT TREES.

EACH spring there is considerable discussion among practical fruit growers, many of whom also keep bees, regarding the possibility of poisoning the honey bee with spray preparations. From general practice it is safe to say orchards sprayed as they should be for controlling fruit insects will in no way injure bees which may visit the orchard. The bee comes for pollen and nectar and these two products are found in the blossoms only at the time when the individual blossoms are ready to be pollinated, and this occurs when the blossom is out in full. Fruit should not be sprayed when in blossom and no fruit grower who understands his business will spray in full blossom. The bee, therefore, accomplishes his work of cross-pollination in the orchard and carries home the fruits of his labor, pollen and nectar, before the orchard is sprayed.

On the other hand, should a fruit grower make the mistake of spraying when the trees are in full bloom, if he uses arsenate of lead as a poison for apple worms and chewing insects, combined with sulphur solution for controlling fruit diseases, the bees will be driven from the blossoms by the foul odor of the lime sulphur. If the entire orchard is treated in this way and no other flowers are available there might be a possibility of the bees being forced to visit the sprayed trees in spite of the foul odor of the lime-sulphur solu-

tion. But there is no proof that bees have been poisoned in collecting nectar from sprayed trees.

New York.

E. W. GAGE.

#### A PROFITABLE SIDE LINE FOR FARMERS.

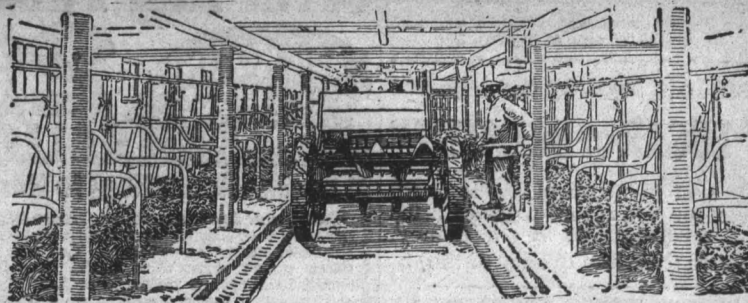
A SIDE issue which can be developed much more than it is, is the huckleberry swamp. Generally the owner pays little or no attention to his swamp, regarding it as waste land and accepting the rather meager small amount it generally does pay him in much the same manner as one who finds money. If it pays him anything, he's glad—if it produces nothing he's not very much disappointed. This is all wrong. The huckleberry swamp should be regarded just as the corn or wheat field is and should earn its quota of the farm profits.

First of all, land upon which huckleberries grow is not very good land and probably the most profitable thing you can produce on it are the huckleberries themselves. Therefore everything that promotes their growth should be done. With a little care and business management the swamp can be made to pay well, provided it has a fair number of healthy bushes.

One ninety-acre farm in Michigan consists of forty acres of huckleberry swamp and fifty acres of upland and the owner has often said that he wished the whole farm was swamp, for his forty acres of huckleberries earns him more than his fifty acres of upland. And the upland is good gravelly loam soil, too. He runs his swamp on business principles. He does not allow anyone and everyone to run into the swamp indiscriminately and pick free of charge. He rightly considers it as a part of his capital and has all pickers come to his house and notify him that they intend going into the swamp. In this way he keeps track of who has entered the swamp and discourages a tendency of the few to leave via the back end of the farm without paying for their berries. The pickers return to his house with their berries, where they are measured and paid for at the rate of five cents per quart. People come from far and near and during July when the berries are ripe he measures thousands of quarts each picking day and his collections run as high as \$100 per day. This measuring is not so formidable as it sounds for most people pick in pails and all he has to do is to add up the number of pails a picker has. For instance, if a picker comes up with a twelve-quart pail and a ten-quart pail both filled he knows at a glance that the total is twenty-two quarts, price one dollar ten. Twice a week—Tuesdays and Fridays—he allows pickers in the swamp. This gives the green berries a chance to ripen and insures the largest returns from the swamp.

While the swamp requires but little attention, the little it does need should be given it. All trees are cut down, and also high bushes. Trees and high bushes afford some protection from the frost but they also sap the ground and shade the huckleberries, eventually killing out all the berry bushes around them. All blackberry brush around the swamp's edge should be cut down for this is an enemy both to huckleberries and pickers. A good path should be made to the center of the swamp to afford easy access to all parts of it. The ditch draining the marsh has a small dam in it by which the water can be regulated. Ordinarily the swamp is kept wet until the berries are ready to be picked—then it is drained. Gates are provided in all fences between the house and the swamp for the convenience of the pickers.

There are thousands of huckleberry marshes throughout the country and if the owners will apply a few business principles and give them the little care they require they will pay handsome dividends. C. H. SMITH.



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IN 1916 two 40-acre fields of corn grew side by side in Illinois. On one an International spreader had been used consistently for three years. The other had seen no manure for seven years.

That was the only difference between those two fields. One produced a matured crop running just over 80 bushels to the acre, the other averaged barely 30 bushels of soft corn. If both crops sold at the same bushel price, the fertilized field produced \$2,000 more than the unfertilized one.

Was that spreader worth \$500? Yes, because just scattering manure on a field will not accomplish the same results. That field of 80-bushel corn was properly fertilized by a man who knows his business. He feeds his crops a balanced ration. He feeds just the right amounts at the right time and that cannot be done without a good, wide-spreading manure spreader. A Low Corn King, Cloverleaf or 20th Century will do it. That is one reason why we sell so many of them.

It pays to study fertilizing, to know what to do and to practice what you know. See the local dealer or write us for a copy of "Feed Your Hungry Crops" and full information about our spreaders, or about any other machines in the list below.

#### The Full Line of International Harvester Quality Machines

Grain Harvesting Machines	Haying Machines	Corn Machines
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Tillage Implements	Planting & Seeding Machines	Other Farm Equipment
Disk Harrows Tractor Harrows Spring-Tooth Harrows Peg-Tooth Harrows Orchard Harrows Soil Pulverizers Cultivators	Corn Planters Corn Drills Grain Drills Broadcast Seeders Alfalfa & Grass Seed Drills Fertilizer & Lime Sowers	Cream Separators Feed Grinders Manure Spreaders Straw Spreader Attachments Farm Wagons Farm Trucks Stalk Cutters Knife Grinders Tractor Hitches Binder Twine
Power Machines		
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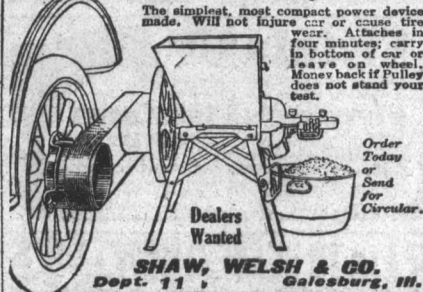
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Pay for themselves many times over drying fruits and vegetables for yourself and others.



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

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

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This goes to show the quality of the

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that Mr. Scripps is breeding. He enjoys see-  
ing good stock on "Wildwood" and believes that  
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"Edgar of Dalmeny" won the Michigan Grand  
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We have a few females with calves at foot and  
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**Cloverly Angus** Bred cows, heifers and bull  
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TRAJAN-ERICAS and BLACKBIRDS (Blackcaps).  
Breeders and feeders of many Interna-  
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Write For 1919 Bull Sale Catalogue

WOODCOTE STOCK FARM, Ionia, Mich.

Breeders of Registered Aberdeen Angus cattle.  
Several choice bulls for sale.  
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## GUERNSEYS

Just two young yearling bulls left,  
ready for service. Come and look them  
over quick, or write. They are the  
good ones. Priced to sell.

**AVONDALE STOCK FARM,**  
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Rose Bull Calf, sired by St. Austell Drednought  
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Miss Bess of Yellowdale, A. R. 583 lbs. B. F., and  
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viceable age. BALLARD BROS., R. 4, Niles, Mich.

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Yearling bull—\$150. Bull calf, three months—\$100;  
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J. M. WILLIAMS, North Adams, Mich.

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**GUERNSEYS** must reduce herd, so offer  
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Glenwood breeding also bulls, all stock of A. R. breed-  
ing, herd tuberculin tested.  
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Holsteins in Canada have far surpassed  
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## "Top-Notch" HOLSTEINS

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

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### Hustles Heavy Hogs to Market

Cuts your feeding costs. Have bigger  
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Prove at our risk that Milkoline is the  
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**Guaranteed Trial Offer** We will ship you  
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**Milkoline** has a base of Pure Modified Buttermilk  
to which essential fats and acids are  
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sour or rot. Flies will not come near it.

**2c a Gallon** For feeding mix one part Milkoline  
with 50 parts water or swirl and  
feed with your usual grain feeds. It helps keep hogs  
healthy, their appetites keen and makes more pork per  
bushel of grain. Stop buying buttermilk of uncertain  
quality. Use Milkoline and you will always be sure  
of uniform acidity, and at a cost of 2c a gallon or less  
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day feed. He made an actual test of this lot of hogs  
in comparison with another bunch. We could quote  
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5 Gals. at Creamery \$1.50 per gal.	\$7.50
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Doing good service for 34 years, positively guar-  
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is what Bickmore's Gall Cure stands for. Success-  
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Cure the horse while he works. Bickmore's works better  
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Or send 10c for liberal trial sample and very useful Farm  
Account Book giving helpful pointers to farmers and  
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Valuable for its information upon diseases of horses  
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Cures Heaves by correcting the  
cause—Indigestion. Prevents  
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**THE NEWTON REMEDY COMPANY, Toledo, Ohio**

### The Traverse Herd

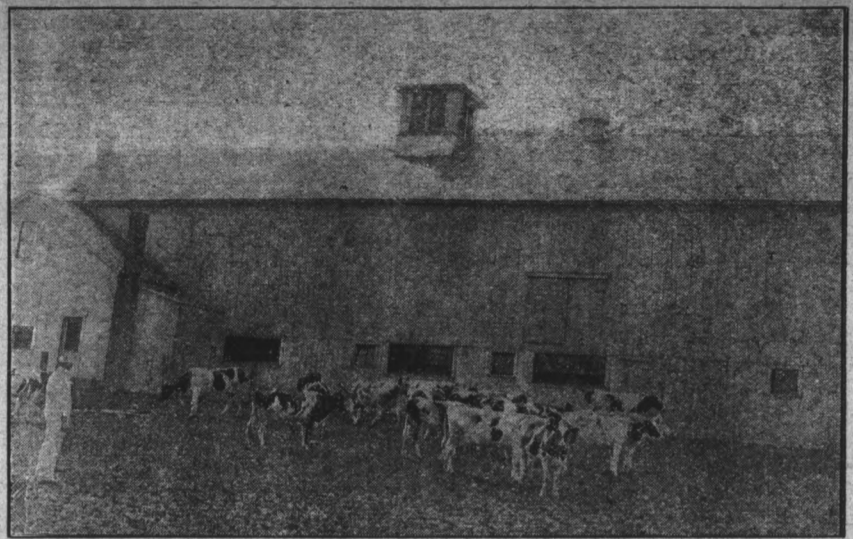
We have what you want in **BULL CALVES**, the  
large fine growthy type, guaranteed right in  
every way. They are from high producing A. R.  
O. ancestors, Dam's records up to 30 lbs. Write  
for pedigrees and quotations, stating about age  
desired.

**TRAVERSE CITY STATE HOSPITAL**  
Traverse City, Mich.

### THE HOLSTEINS

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

L. E. CONNELL, Fayette, Ohio



He Proved that Good Milk Can be Produced in Ordinary Barns.

## A Good Doctor and Poor Babies

(Continued from page 847).

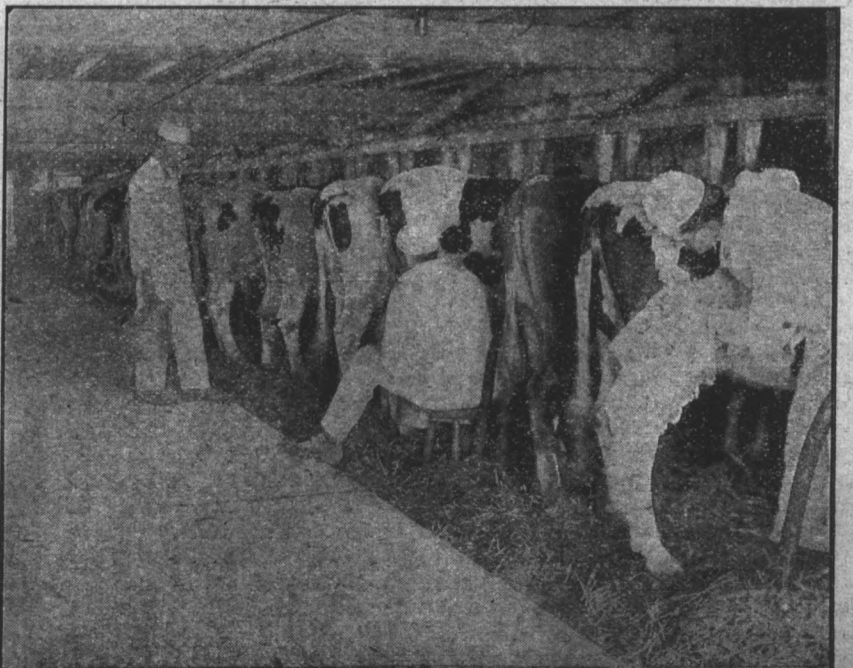
the doctor's milk at a low cost. The  
results were studied. Never in the his-  
tory of the great city had so many bab-  
ies' lives been saved, nor had so few  
babies died. The newspapers of the  
city rang with the praises of the  
doctor.

The doctor's investigations prove  
conclusively that while sanitary stab-  
ling is conducive to the physical well-  
being of the cow, as well as to the  
esthetic satisfaction of the owner, yet,  
by itself it is no guarantee of pure-  
milk production. To prove this state-  
ment let us trace the usual operation  
of milking the cow and handling the  
milk. We will assume that the out-  
ward conditions are perfect.

The milker enters the barn. He has  
not changed his clothes since he brush-  
ed his horses, cleaned the stables or  
did other work about the barns. He  
carries two wide-mouthed milk pails.  
He may, if he desires to be careful,  
bring a little tepid water to wash the  
cow's udder. After pouring out this  
water, he stands that pail in the alley-  
way and proceeds to milk into the oth-  
er, which rests upon the dirty floor.  
Having filled this first pail he exchang-  
es it for the other, and proceeds with  
the milking. Meanwhile the milk in  
the first pail is absorbing dust, stable  
odors, bacteria and flies. Having filled  
his second pail, the milker leisurely  
carries both to the milk house or to  
the cans which stand at the end of the  
alleyway or just outside of the stable  
door. When he pours the milk into  
the can one hand touches the bottom  
of the pail that stood on the floor of  
the stable. He overlooks this, unless  
the result is too obvious, takes his  
pails and goes back to repeat the per-  
formance. It is very plain to see that  
the most perfect stable sanitation is of  
little avail with such slovenly methods  
practiced.

The following rules for producing  
clean milk are laid down by Doctor  
Charles E. North, the man who has  
made such a success producing clean  
milk at Homer, New York, for the bab-  
ies of New York City. These rules  
will apply with equal force to any oth-  
er dairying community where the ob-  
ject of the farmers is to produce clean  
milk. All of these things may be re-  
solved into one word—cleanliness—in  
the cow, in the milker, in the utensils,  
in the stables. That is the whole situ-  
ation in a nutshell. None of these  
things are expensive, except the ice.

1. Brush the udder and wipe with a  
clean cloth; wash with clean water  
and dry with a clean towel.
2. Milkers should wash their hands  
with soap and water and dry with a  
clean towel.
3. Whitewash the cow stable at least  
twice yearly.
4. Feed no dusty feed until after the  
milking.
5. Remove all manure from cow sta-  
ble twice daily.
6. Keep barnyard clean and have the  
manure pile at least one hundred feet  
from the stable.
7. Have all stable floors of cement,  
properly drained.
8. Have abundant windows in cow-  
stables to permit sunlight to reach the  
floor.
9. Arrange a proper system of ven-  
tilation.
10. Do not use milk from any cows  
suspected of garget or of any udder in-  
flammation. Such milk contains enor-  
mous numbers of bacteria.
11. Brush and groom the cows from  
head to foot as horses are groomed.
12. Use no dusty bedding; wood  
shavings or sawdust give the least  
dust.
13. Use an abundance of ice in wa-  
ter tank for cooling milk.



Cows Are Washed and Dried Before Milking.



CATTLE PRICES DECLINE.

FOR a long period fat cattle of superior quality pursued an upward course in prices, with frequent new high records, and it really seemed as though there was no limit to the advance. In recent weeks, however, conditions have been changed radically, and highly sensational declines in values have taken place until cattle are selling on the Chicago market at from \$2.00 to \$4.00 per hundred pounds below the highest time of the present year. Much the greatest reaction has been made for prices on the better class of cattle with heavy steers catching the full force of the decline the switching over in the demand from heavy to fat light cattle being earlier than usual. Light and heavy cattle are selling much closer together than they did a month or so ago and most of the time there are no prime beeves on the market so that quotations are no more than nominal. In every important cattle feeding district there is a strong desire to get holdings marketed as quickly as possible and so long as this is kept up there will be a slim chance for higher prices. Many cattle feeding districts report unfavorable conditions for retaining stock, as corn has to be brought in from elsewhere, while roughage is scarce. Heavy shipments are taking place of cattle from the vast territory lying west of the Missouri river, that region being long on beef, and in numerous instances owners are facing losses of from \$50 to \$60 a head the cattle having been purchased some months ago at high prices, as their buyers counted upon a continuance of the high prices then paid for finished beeves. Looking ahead, it is certain that the only chance for a recovery in prices is to ship stock to market more conservatively. The government is no longer a buyer of beef, and conditions in Europe are too unsettled to permit of a large export trade.

## TALKS WITH STOCKMEN.

REPORTS from Washington say the sheep and yearlings are fat and ready to be marketed, this being very early for such shipments. Most of the Colorado woolled lambs are now marketed, and markets have to rely on clipped flocks of lambs and increasing supplies of spring lambs from California and the south. The southern crop of spring lambs is said to be twenty per cent larger than last year. Farmers are going into the sheep industry in numerous parts of the country, and high-grade breeders are in demand. Stockmen living in parts of the country where land is extremely high priced are in increasing numbers discovering that it is more economical to buy feeder pigs from other farmers or from the nearest market than to breed hogs themselves. Feed is dear, and many farms are valued at \$250 per acre or more. If brood sows are carried through the winter it is necessary to have well constructed hog houses, and they must be fed on high-priced corn. Then both sows and pigs must be given good clover pasturage for the summer, and this counts up on high-priced land. An Illinois stockman finds in counting up the shoats weighing 100 pounds by the first of September that their cost is much larger than if they were bought as stock pigs on market. Leo Dupree, of Helena, Montana, a prominent cattle breeder, has purchased recently twenty-one Polled Hereford bulls at an average cost of \$500 each, their ages ranging from eight months to three years. W. W. F.

## MICHIGAN LIVE STOCK INSURANCE COMPANY

INDEMNIFIES Owners of Live Stock — Horses, Cattle, Sheep and Hogs  
Against Death by Accident or Disease

SAGINAW

GRAND RAPIDS

## 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.

## "Winwood Herd"

REGISTERED  
Holstein - Friesian Cattle

Sire in Service  
FLINT MAPLECREST BOY

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

JOHN H. WINN, Inc.  
Lock Box 249, Roscommon Mich.  
Reference Roscommon State Bank.

615 lb. milk 26.97 lb. butter 7 days aver. for 2 nearest dams of 4 mo. 1/2 white bull calf. Gddam 831 lb. butter 19021 lb. milk 10 mos. Also heifers bred to 25 lb. son Atkin's Maplecrest. M. L. McLaurin, Redford, Mich.

HOLSTEIN BULLS  
READY FOR SERVICE

Grandsons of the \$50,000.00 bull with 18 and 20 pound dams. Prices reasonable. Write for extended pedigree and tell us what you want.

C. P. REED - Howell, Michigan

No more bull calves to offer until next fall. Place your order for one from next fall's crop. My herd is on the state and federal accredited herd list.

Holstein Bull dropped May 25-19, a beauty, 1/2 white, dam 21.44. Price \$100 del. & reg. Write for photo and breeding. J. Robt. Hicks, St. Johns, Mich.

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

REGISTERED heifer and bull calves, of the best breeding in Holsteins for sale. Special price on 2 heifers and bull. C. H. GIDDINGS, Gobleville, Mich.

TO MAKE ROOM for our registered stock, will sell 14 head good grade Holstein milk cows, some lately fresh and some due to freshen very soon. Prices from \$75.00 to \$125.00.

SCOTT'S HOLSTEIN FARM, Sylvania, Ohio.

JERSEY BULLS  
Ready for service FOR SALE  
WATERMAN & WATERMAN, Ann Arbor, Mich.

BUTTER BRED JERSEY BULLS  
CRYSTAL SPRING STOCK FARM,  
Silver Creek, Allegan County, Michigan.

Maple Lane R. of M. Jersey herd. Bull and heifer calves sired by a nephew the new World's Champion, Sophie's Agnes. Also R. O. Red eggs and chicks. IRVIN FOX, Allegan, Mich.

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

For Sale Jersey Bull, Goldie Foxhall Lad No. 170446, Sire Pogue Foxhall No. 129549 Dam Goldie Sophia No. 352753, this bull is solid color, black tongue and switch, dropped Mar. 10th, 1918, an extra fine individual, good enough that I will ship him O. O. D. Also a few bull calves. Address NEWMAN'S STOCK FARM, R. 1, Marlette, Mich.

The Wildwood Jersey Farm.  
Bulls for sale by Majesty's Oxford, Fox 134214 and Eminent Lady's Majesty 150934, and out of R. of M. Majesty dams. ALVIN BALDEN, Capac, Mich.

For Sale Registered Jersey bulls ready for service and bull calves. SMITH & PARKER, R. 4, Howell, Mich.

FOR SALE 20 head registered Jersey cows and 6 head November and December heifers cheap. H. A. WHIPPLE, Augusta, Mich.

Registered Jersey Bull For Sale 3 yrs. old. B. O. Thomas, 84 Michigan Ave., Detroit, Mich.

## HEREFORDS

8 bulls from 7 to 10 months old, Prince Donald and Farmer breeding for sale.

ALLEN BROS., Paw Paw, Mich.

## Harwood's White Faces

KEEP ON 508019  
A Ton Bull Heads the Herd  
The beef cattle of the day. Only 2 yearling bulls left. My 1918 crop of bulls ready for sale. Will spare a few females. You can not make a better investment. I wish to thank my customers for past favors.

JAY HARWOOD, Ionia, Mich.

Herefords Polled and Horned blood lines embrace Fairfax. Polled Perfection and Prime Lad 9th breeding. Prices reasonable. COLE & GARDNER, Hudson, Mich.

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

## BIDWELL SHORTHORNS

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

BIDWELL STOCK FARM  
Box B, Tecumseh, Mich.

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

## Richland Stock Farm

SHORTHORNS

HOME OF THE MICH. CHAMPIONS  
We offer for sale a few good dual purpose cows with calves at foot. Also two three year old bulls suitable for range purposes. We invite inspection.

C. H. PRESCOTT &amp; SONS,

Office at Tawas City, Mich. Herds at Prescott, Mich.

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

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

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

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

WANTED Two young White Shorthorn bulls, rugged and beefy; to produce commercial cattle from native cows. Must be priced reasonably. SIPPY FARMS, Bitley, Mich.

Shorthorns New list, 27 bulls; 28 females. Feb. list all sold. Central Mich. Shorthorn Breeders' Ass'n., Oscar Skinner, Sec'y., Gowen, Mich.

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

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

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

For Sale: Registered Shorthorn bull calf 6 months old, well grown & thrifty. Sire, Sultan; Dam Sanspareil families. John T. Sheridan, R. 1, Jenison, Mich.

Scotch and Scotch-topped Shorthorn bull calves 5 to 8 months old. Dch's of Glosters and Crimson Flower. Chas. Bowditch & Son, Osseo, Mich.

Red Polled Cows and Heifers York Calves, Oxford Rams. E. S. CARR, Homer, Michigan.

## HOGS

Registered Berkshire Boars: ready for service. A few gilts and sows bred for May and June farrow. Also spring pigs. CHASE STOCK FARM, Marlette, Mich.

Registered Berkshire boars from 8 mo. to 12 mo. old at market price. No sows for sale.  
B. B. REAVEY, AKRON, MICHIGAN.

## Duroc Opportunity

What would the earning capacity of a Brookwater Boar be in your herd? A mid-west breeder states that the Brookwater boar he used added from \$75 to \$100 to every gilt bred to him. It paid this man to use one of our boars it will pay you.

We have several that we are offering at prices which appeal to the small breeder who must of necessity be a conservative buyer. We have a few that are good enough to be used in high class herds at prices in keeping with their individuality and breeding. Money invested in a good herd boar very speedily increases the value not only of what you sell but what you keep. Send for price list or better, visit the farm.

BROOKWATER FARM, Ann Arbor, Mich.  
HERBERT W. MUMFORD, owner.  
J. BRUCE HENDERSON, Manager.

## OAKWOOD FARM

Nothing for sale at present booking orders for spring pigs (Durocs). Tax Payer and Gold Medal breeding.

Duroc Jersey Spring Pigs for sale. I also have Draft Colts to offer. Chas. Bray, Okemos, Mich.

## DUROC JERSEYS

Fall pigs either sex also spring pigs pairs not akin. Sired by the Grand Champion and Junior Champion boars.  
F. J. DRODT, R. 1, Monroe, Mich.

REGISTERED DUROC BOARS—We have a choice lot of spring boars, sired by Michigan Cherry Col. No. 118479, Top Cherry King J. No. 102829, and Col. Defender 26th, No. 125706. Make your selection at weaning time and raise according to your own ideas. Write for pedigrees. The Jennings Farms, R. 1, Bailey, Mich.

## SEVERAL GOOD

Duroc sows bred to Orion's Fancy King. Boar pigs ready for service.  
NEWTON BARNHART, St. Johns, Mich.

## DUROC-JERSEYS

E. D. HEYDENBERG, Wayland, Mich.

## DUROC JERSEYS

Nothing but spring boar pigs for sale.  
CAREY U. EDMUNDS, Hastings, Michigan.

Duroc gilts bred for August and September farrow, sired by Orion Cherry King Col. 2nd. Write for description and prices. W. C. TAYLOR, Milan, Mich.

8734 Hampshires recorded from Jan. 1 to Apr. 1 '19. Did you get one? Boar pigs only for sale now.  
JOHN W. SNYDER, R. 4, St. Johns, Mich.

Breed The Best  
THE WORLD NEEDS LARGE  
FAT HOGS

Why lose money feeding and feeding scrub hogs?  
Two of our O. I. C. Hogs Weighed 2806 Pounds.

We are the most extensive breeders and shippers of pure bred hogs in the world. Write today for the true story of the real O. I. C. Hogs. All foreign shipments.

U. S. Government Inspected  
We have bred the O. I. C. Hogs since 1863 and have never lost a hog with cholera or any other contagious disease.

WRITE  
—TODAY—  
FOR FREE BOOK

"The Hog Born to Rule"  
THE L. B. SILVER CO.  
196 Heights Temple Bldg.  
CLEVELAND, OHIO

## THE WORLD'S CHAMPION

big type O.I.C.'s. Stock of all ages for sale. Herd headed by Calloway Edd, the World's Champion O. I. C. boar assisted by C. O. Schoolmaster, Grand Champion boar of Michigan, New York and Tennessee state fairs. Also, C. O. Giant Buster, undefeated Senior boar pig wherever shown and Grand Champion of Oklahoma state fair. Get our catalogue of Orandell's prize hogs, Cass City, Michigan.

## Shadowland Farm

O. I. C.'s

Bred Gilts 200 to 300 lbs. from prize winning stock. A few fall yearlings and 2 yr. old sows, big type, growthy boars of all ages, guaranteed as breeders. Everything shipped C. O. D. Express, paid and registered in buyer's name. J. CARL JEWETT, Mason, Mich.

O. I. C.'s. Big type serviceable boars and gilts bred for July and August farrow.  
G. P. Andrews, Dansville, Mich.

O. I. C. For Sale—Spring Pig's  
H. W. MANN, DANVILLE, MICHIGAN.

O. I. C. gilts bred for summer farrow and spring pigs of all ages, guaranteed to ship. C. O. D.  
F. C. BURGESS, R. 3, Mason, Mich.

O. I. C.'s 2 Choice Yearlings Boars and Spring pigs.  
Clover Leaf Stock Farm, R. 1, Monroe, Mich.

O. I. C.'s One very good yearling boar, and this spring pigs to offer, registered free. 1/4 mile west of Depot. Citizens Phone 124.  
OTTO B. SCHULZE, Nashville, Mich.

O. I. C.'s One August boar and a few March pigs single or pairs not related.  
C. J. THOMPSON, Rockford, 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

For 25 Years We have been breeding Big Type Poland Chinas. One of the most approved blood lines. Our herd boar "Michigan Buster" is a mighty good son of the great "Giant Buster", dam "Mow's Miss Queen 2". Some breeding! We are all sold out except a few fall pigs.  
J. C. BUTLER, Portland, Mich.

Big Type Poland Chinas. A litter by Gerstdale Jones (Carter); one by Gerstdale King (Gerst). A Big Bob sow booked for service to the Clansman. Pigs by Mammoth Ben, herd boar, unexcelled. Mammoth Ben at 12 mos. weighed 450 lbs. Nothing for sale. Visitors welcome.  
WESLEY HILE, R. 6, Ionia, Mich.

LARGEST Type P. C. in Mich. Nothing at present. L Spring pigs too young to ship. Have 60 the best I ever raised which I will offer later. Come and see two greatest boars in state: L's Big Orange 291847 and Lord Clansman 330297. W. E. Livingston, Parma, Mich.

THE OLD FASHIONED SPOTTED CHINA HOGS  
Gilts due to farrow JUNE OR JULY—\$100 up. Spring pigs \$25 weaning time.  
J. W. WILLIAMS, North Adams, Mich.

S. P. C. Bred sows all sold. 2 boars ready for service. L also 1 fall boar, and fall gilts to breed for fall farrow.  
H. O. SWARTZ, R. 1, Schoolcraft, Mich.

Big Type Poland Chinas with quality. Bred for pigs. Ask any questions about my breeders. G. A. BAUMGARDNER, R. 2, Middleville, Michigan.

Big Type Poland-Chinas pigs, sired by C. A. King Joe by Luken's Big Bob 237777, Buster Half Ton 288225, by Great Big Half Ton 261243. Out of sows, whose pedigree, individuality and quality are of equal merit as my herd boars. Can furnish pairs and trios, not akin.  
C. A. BOONE, Blanchard, Mich.

MICH. Champion herd of Big Type P. C. Nothing for sale but fall pigs; orders booked for spring pigs.  
E. R. LEONARD, St. Louis, Mich.

Big Type P. C. boars all sold. Nothing now until fall. I thank my customers for their patronage. Spring pigs coming fine. C. E. GARNANT, Eaton Rapids, Mich.

Large Type P. C. Nothing for sale now. Will be in market with better than ever this fall. If herd stuff counts.  
W. J. HAGELSHAW, Augusta, Mich.

Big Type P. C. boar and bred gilts. Choice Aug. pigs at a bargain.  
A. A. WOOD & SON, Saline, Mich.

Big Type P. C. Choice bred sows from Iowa greatest herds, the big bone prolific kind with size and quality.  
E. J. MATHEWSON, Burr Oak, Mich.

Big Type Poland's all sold out, nothing for sale at present. Booking orders for spring pigs. Thanking my customers. L. L. Chamberlain, Marcellus, Mich.

Mammoth Poland Chinas all sold. General Jones No. 317249, son of Gerstdale Jones heads our herd. Clyde Weaver, Ceresco, Mich.

Big Type P. C. Will have better males than ever for fall trade. Gilts in season.  
JOHN D. WILEY, Schoolcraft, Mich.

# LATEST MARKET REPORTS

## SECOND EDITION.

The markets in this edition were revised and corrected on Thursday afternoon, June 5.

### WHEAT.

Wheat prices hold steady at the lower levels reached last week. The local market is firm and quiet with only a small amount of business being done in flour, but a more active trade in mill feeds. The Oklahoma June crop report makes the condition of winter wheat in that state 92, as against 95 a month ago, and 73 for the corresponding month of 1918. Generally speaking, the crop over the country is little changed, and former estimates are more strongly insured as the date for harvesting approaches. One year ago No. 2 red wheat sold on the local market at \$2.17 per bushel. Present Detroit prices are:

No. 2 red .....	\$2.55
No. 2 mixed .....	2.53
No. 2 white .....	2.53

### CORN.

Favorable corn weather and a lack of demand forced prices to lower bas is last week. Early this week, however, manufacturers were in the market for supplies and the trade took on a decidedly bullish tone, due largely to the small stocks of available grain. When the recent high prices failed to move the corn from the farms and country elevators, dealers became more convinced that the supplies at producing points were less than had been estimated. Planting the new crop is being completed under very favorable conditions. The warm weather is giving the plants a splendid start. One year ago No. 3 corn was quoted on the local market at \$1.40 per bushel. The present prices at Detroit are:

No. 3 corn .....	\$1.80
No. 3 yellow .....	1.83
No. 4 yellow .....	1.80
No. 5 yellow .....	1.77
No. 3 white .....	1.85

Rivalry for supplies is not so keen and a slightly easier feeling exists. Present prices at Chicago are: No. 3 yellow \$1.74½; July \$1.70½; September \$1.61½.

### OATS.

On Wednesday 1,000,000 bushels of oats were reported to have been taken for export; steady demand with deliveries limited. The new crop is progressing under favorable weather conditions. One year ago standard oats were quoted on the local market at 75c per bushel. Present price in Chicago for that grade is 69½¢@70¼¢, and for No. 3 white 68½¢@69½¢. Detroit quotations are:

Standard .....	73
No. 3 white .....	72½
No. 4 white .....	71½

### RYE.

Rye advanced over two cents on Monday's Chicago market. The local market is doing a very limited volume of business with the quotation advanced to \$1.52 per bushel.

### BARLEY.

There is practically nothing doing in this grain on the Detroit market. At Chicago quotations were marked up three cents on Monday, partly in sympathy with the upward trend in prices for other grains.

### SEEDS.

The market continues firm with the quotations for October delivery quoted at 50c. Detroit prices are: Prime red clover \$27; October \$21.50; timothy at \$5.50. At Toledo October is quoted at \$21.60.

### FEEDS.

A few changes are noted in feed values. Bran is now quoted at \$43; standard middlings \$50; fine middlings \$55; coarse corn meal \$66.50@67.50; cracked corn \$71@72; coar and oat chop \$55@57 per ton in 100-lb. sacks to jobbers.

### HAY.

Timothy hay is scarce and higher, while an easier tone prevails in clover lines. Detroit quotations are: No. 1 timothy \$38.50@39; standard and light mixed \$37.50@38; No. 2 timothy at \$36.50@37; No. 1 clover \$32@33.

Pittsburgh.—Hay receipts are very light and quite insufficient to meet the

local demands. Many traders are entirely sold out. No. 1 timothy is quoted at \$40.50@41; No. 1 light mixed \$38.50@39.50; No. 1 clover mixed \$36@37; No. 1 clover \$35.50@36.

### BEANS.

Except in some localities, beans are pretty well cleaned out of farmers' granaries. The market is steady. At Detroit choice hand-picked pea beans are quoted by the exchange at \$7.75. In New York the movement is slow with the best pea beans quoted at \$8; red kidneys \$12.50@12.75 and Michigan White Marrows at \$11.75. A moderate demand obtains in Boston where Michigan choice pea beans are quoted at \$7.75@8. The Philadelphia trade is firm with Michigan pea beans selling at \$7.50@8. A good demand and movement is noted in Chicago, where Michigan choice hand-picked beans are changing hands at \$8.45@8.65 per cwt. Over 200 tons of beans were exported from New York City last Wednesday and Thursday.

### POTATOES.

With the new crop moving in increased volume, the sales of old potatoes have been slower. Prices are also declining. At Detroit U. S. grade No. 1 is now selling to jobbers at \$3.40@3.70 per 150-lb. sack. In Pittsburgh the same grade brings \$3.40@3.50; in New York \$3@3.50; in Cleveland \$3.50

@3.75 per 150-lb. sack. The Buffalo market is quoted at \$2.45@2.60 per cwt; the Philadelphia market at \$2.50@2.60; Cincinnati \$2.25@2.60; Chicago \$2@2.10.

### WOOL.

The trade has been well represented at recent auctions of wools owned by the government. Fine and half-blood wools are eagerly sought. At the last auctions fine delaines showing shrinkage estimated at 59 to 64 per cent sold in the grease at 63@68c per pound, while one-half blood combing with an estimated shrinkage of 56@60 per cent sold at 55@64c. Medium and coarse wools are in less demand, while defective and inferior grades are to some extent neglected. In the English market finer grades of cross-bred are selling at prices fully five per cent above the closing values of the April sales. Medium descriptions were unchanged while the coarser kinds ruled slightly lower.

### CHEESE.

The cheese markets are being conducted on virtually the same level as prevailed a week ago. There are enough buying orders coming in to take care of increased production. An unusually large amount of these orders are for supplying current requirements, and only about 25 per cent is being put away for later use. At Detroit Michigan flats are quoted at 30½¢

and single daisies at 31c. In Chicago single daisies bring 30½¢@31c, and the young Americas 31c. The New York trade is paying 31½¢@31¾¢ for flats and 31½¢@32c for twins. In Philadelphia full milk offerings bring 32@32½¢.

### BUTTER.

All butter markets report lower prices, and an easier feeling. At Detroit fresh creamery butter is jobbing at 49@50c a pound. In Chicago range on creamery stock is 48@51½¢. The New York prices are from 50@53c while in Philadelphia western creamery extras are quoted at 53c.

### EGGS.

Further reductions are noted in egg prices. Packers hesitate to load up heavily at present prices, and there is a lull in the export business. At Detroit fresh firsts are jobbing at 37c, extra firsts in new cases at 39c, storage packed firsts in new cases at 40c. Lower values prevail at Chicago with firsts at 37@38c; storage packed firsts at 38@40c. New York quotations for nearby western stock range from 40@46c. In Philadelphia western extra firsts and firsts are quoted at \$11.70@12.30 per case.

### CANNED GOODS

All varieties of canned goods are meeting with a steady demand for spot offerings and the undertone is firm throughout the trade. Holders of canned peas, tomatoes, corn, and beans are in a strong position and can keep prices up. Even in the case of future delivery the sellers appear to have the upper hand.

### GRAND RAPIDS

Reports from correspondents in many sections of western Michigan fruit belt the past week show the "blow" to have been 90 per cent full. Based on this estimate, and the trees are well sprayed, the crop will be the largest in many years. Curl leaf has appeared in a few peach orchards but just how much it will affect the crop is a problem. The freeze during the early cherry "blow" did very little damage. Potatoes sold higher at \$1.20@1.30 per bushel on the city market the past week. At a few points in western Michigan they were a shade higher. Movement at all points is light. There was no change in the price of beans \$6 per cwt. to the farmer, the past week and what little hay was marketed sold at \$38@40 per ton according to the quality. Local market for green hides is 50 per cent higher than a year ago.

### GUERNSEY BREEDERS' MEETING.

A joint meeting of the Michigan and Berrien County Guernsey Breeders' Association will be held at the Ballard Farm, one and a half miles southwest of Niles, Michigan, on the Chicago road, Saturday, June 14, 1919.

You and your family are invited to this meeting that we may prove to you by your observing the stock that will be exhibited that Berrien county has more and better Guernseys than any other county in Michigan.

Mr. E. A. Onsrud, who is extension service man for the American Guernsey Cattle Club, will be present to address you. County agents from Indiana and Michigan will also contribute to the program. Pot-luck dinner at noon. —Glen Clark, President Berrien County Guernsey Breeders' Association.

### NEWS OF THE WEEK.

(Continued from page 846). have been killed.—Six persons are killed when an automobile is hit by a trolley car near Albion, New York.

Tuesday, June 3.

A **NOTHER** attempted reign of terror against public officials has been launched by American radicals, according to findings in several cities of the country where bombs have been found or were exploded, endangering the lives of leading public officials.—Norway joins Switzerland in refusing to aid in the blockade of Germany, should the latter refuse to sign peace treaty.—The Austrian treaty terms as submitted to the Austrian delegates provide for the division of that country into eight nations.

## Live Stock Market Service

### Reports for Thursday, June 5th

#### BUFFALO.

Hogs ruled 25c lower on this market today. Pigs brought \$20.25@20.50; mixed hogs \$21.50; calves \$16.50; lambs \$16.50. Cattle trading was dull, 40 cars going over unsold.

#### DETROIT

##### Cattle.

Receipts 1,487. Market very dull at \$1@1.25 lower than last week's close. Best heavy steers ..... 13.00  
Best handy wt bu steers... 12.00@12.25  
Mixed steers and heifers... 11.50@12.00  
Handy light butchers.... 10.00@11.00  
Light butchers ..... 9.00@ 9.50  
Best cows ..... 9.50@10.25  
Butcher cows ..... 8.50@ 9.00  
Cutters ..... 7.00  
Canners ..... 6.25@ 6.75  
Best heavy bulls ..... 9.00@ 9.75  
Bologna bulls ..... 8.00@ 8.50  
Stock bulls ..... 7.50@ 8.00  
Feeders ..... 10.00@11.00  
Stockers ..... 8.00@ 9.00  
Milkers and springers...\$ 65@ 125

##### Veal Calves.

Receipts 1,879. Market steady at Wednesday's close.  
Best .....\$16.00@16.50  
Culls ..... 10.00@13.00

##### Sheep and Lambs.

Receipts 948. Market is very dull. Heavy sheep and grass lambs almost unsalable.  
Best dry-fed lambs .....\$ 15.00  
Fair lambs ..... 12.00@13.00  
Light to common ..... 10.00@11.00  
Spring lambs ..... 17.00@17.50  
Fair to good sheep..... 8.00  
Culls ..... 4.00@ 6.00

##### Hogs.

Receipts 6,147. Pigs 25c lower and hogs 10c lower.  
Pigs .....\$19.50  
Mixed ..... 20.40

#### CHICAGO.

##### Hogs.

Estimated receipts today are 50,000; holdover 7,254. Market slow and 15@20c lower than yesterday. Bulk of sales \$20.10@20.30; tops \$20.45; heavy 250 lbs up, medium, good and choice \$20.15@20.25; medium 200 to 250 lbs, medium, good and choice \$20@20.35; light 150 to 200 lbs, common, medium, good and choice \$19.70@20.30; light lights 130 to 150 lbs, common, medium, good and choice \$18.75@20; heavy packing sows 250 lbs up, smooth at \$19.60@19.90; packing sows 200 lbs up rough \$19.25@19.50; pigs 130 lbs down medium, good and choice \$18@18.75.

##### Cattle.

Estimated receipts today are 12,000. Beef steers slow and about steady; butcher stock and calves steady; feed-

ers weak. Beef steers, medium and heavy weight 1100 lbs up, choice and prime \$14.75@15.25; do medium and good \$11.75@14.75; do common \$10.75@11.75; light weight 1100 lbs down, good and choice, \$10.25@14.85; do common and medium \$9.75@12.40; butcher cattle, heifers, common, medium, good and choice \$7.75@12.75; cows, common, medium, good and choice \$7@12.25; bulls, bologna and beef \$8.25@11.50; canners and cutters, cows and heifers \$5.75@7; do canner steers at \$7.50@9.50; veal calves, light and handyweight, medium, good and choice \$14@15.50; feeder steers, common, medium, good and choice \$10@13; stocker steers, common, medium, good and choice \$7.75@12.50; stocker cows and heifers, common, medium, good and choice \$7.75@9.75.

##### Sheep and Lambs.

Estimated receipts today are 15,000. Lambs steady and sheep slow. Lambs 84 lbs down, medium, good, choice and prime \$12.75@15.50; do 85 lbs up (medium, good, choice and prime \$12.50@15.35; do culls and common \$9@12.50; spring lambs, medium, good, choice and prime \$16.50@19; yearling wethers, medium, good and choice \$10.50@13; ewes, medium, good and choice \$8.25@10; ewes, cull and common \$4@8.

#### BUFFALO.

Wednesday, June 4, 1919.

##### Cattle.

Receipts 30 cars. Steers 75c@1 lower; cow stuff 50c lower; prime heavy steers \$15.50@16; best shipping steers \$13.50@14; medium shipping steers \$12.50@13; best yearlings, 950 to 1000 lbs \$13.50@14.50; light yearlings, good quality \$13@14; best handy steers \$12@13; fair to good kinds \$11@12; handy steers and heifers, mixed \$12@12.50; western heifers \$10@12; state heifers \$9@9.50; best fat cows \$10.25@11.10; butchering cows \$8@9; cutters \$7@8.50; canners \$5@5.50; fancy bulls \$10.50@11; butchering bulls \$9.50@10; common bulls \$7.50@8.50; best feeding steers, 950 to 1000 lbs \$10.50@11.50; medium feeders at \$9.50@10; stockers \$9@10; light common \$7.50@8; milkers and springers \$7.50@150.

##### Hogs.

Receipts five cars; market steady. Heavy and yorkers \$21.75; pigs \$20.50@20.75.

##### Sheep and Lambs.

Receipts 5 cars; market is steady; top lambs \$16.50@16.75; yearlings \$13@14; wethers \$11.50@12; ewes \$10@11.

##### Calves.

Receipts 4,202; market weak; steers \$10@16.50; bulls, grassers \$5@8.

## BIG FALL IN HOG PRICES.

THE sensational boom in hogs to the highest prices ever paid has been followed recently by a great decline in values for all descriptions, and there is much discussion regarding where the decline will stop. All along there has been a movement on the part of owners to let their hogs go to market as rapidly as possible, this being interrupted by corn planting and other spring farm work and by declines in prices, owners hoping for a reaction. It is now thought that the former high prices will not be restored, the prevailing opinion being that the yearly break in summer prices is a little ahead of time. The hog crop was a fine large one, and up to a late date the 1919 receipts in eleven leading markets aggregated 14,612,000 hogs showing an increase of 455,000 head over the receipts for the corresponding time last year. Recent Chicago receipts averaged in weight 231 pounds, being five pounds lighter than a year ago and two pounds less than the average weight for the corresponding weeks during the past eight years. The eastern shippers have made larger purchases in the Chicago market but their operations failed to increase proportionately with the larger supplies offered.

W. W. F.

## THE NEW YORK PRODUCE MARKET.

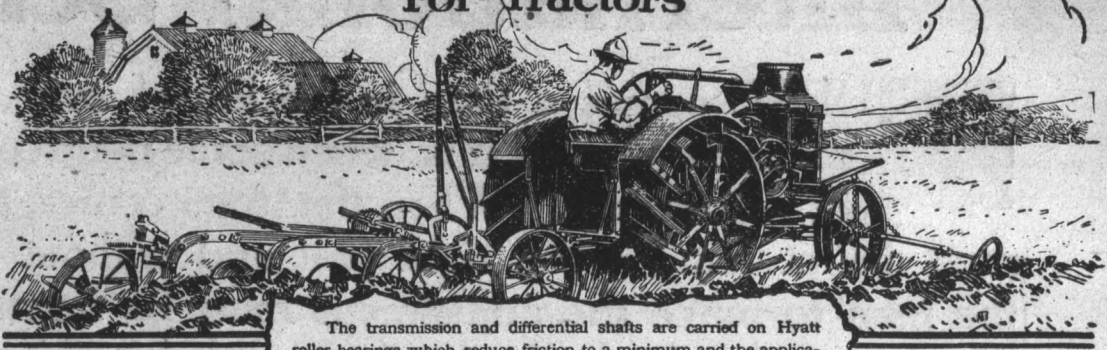
Butter.—Receipts of butter are running very much above normal for this season of the year and all indications point toward a marked increase in production throughout the summer. May of this year shows an increase in production of over twenty-five per cent over that of May, 1918. During the week there has been absolutely no export demand and speculators were busy for only one day. As a result of the increased receipts and the absence of more than normal buying there has been a tendency for the price to decline. On last week Saturday the price broke two cents. That was followed by declines of half a cent on both Monday and Tuesday but Wednesday, however, because of speculative demand the price recovered a half cent and on Thursday there was a further recovery of a half cent. Thursday afternoon witnessed a very weak market and many receivers were inclined to shade the price on their butter. Friday being a holiday there was no business transacted. Established quotations at the close Thursday were as follows: Extras 56½@57c; higher scoring than extras 57¼@58c; firsts 55@56½c; seconds 52@54½c.

Cheese.—The cheese market has been somewhat irregular all the week. However, there has been no marked decline in price as receivers have been unwilling to sell goods at lower prices, with few exceptions. On the whole, there has been very little activity during the week, although some full grass cheese has been purchased by speculators for storage. There has been some export demand but none of any material consequence. Reports from the interior show that warehouse holdings are increasing rapidly. Average run cheese is quoted at 31½@31¾c, and special at from ¼@½c higher.

Eggs.—Receipts of eggs are running very high and are above normal for this season of the year. Reports indicate that interior points are paying lower prices for eggs but this market has not been affected. Trading started out briskly the first part of the week as jobbers and retailers were in low supply and the market gained some strength. During the latter part of the week values have remained steady but there is an unsettled and irregular tone to the market. Established quotations are as follows: Firsts 44½@45c; extra firsts 46@47c; extras 49@49½c per dozen.

Poultry.—Receipts of live poultry have been heavier this week but the demand has continued strong. There was a slightly weaker feeling at the outset but that was eliminated later in the week. There has been some uneasiness at different times during the week because of the irregularity of shipments. Broilers are in heavy supply but the market is well sustained because of the heavy demand. Following are established quotations: Broilers, White Leghorns 50@55c; broilers, colored 60@65c; fowls 39c; old roosters 25c; ducks 30c; geese 20c.

## HYATT

ROLLER BEARINGS  
For Tractors

The transmission and differential shafts are carried on Hyatt roller bearings which reduce friction to a minimum and the application of Hyatt bearings in the transmission increases the draw bar pull of the tractor fully 15%. The entire transmission is housed in a dirt proof, oil tight case and all parts run continually in an oil bath. The lower half of the case can be quickly removed when necessary.

Reproduction of a clipping from a catalog of the Advance-Rumely Company, makers of OilPull tractors.

## More Power-Less Cost

It is the farmer himself who receives the direct benefit of Hyatt Bearings.

By cutting down power-consuming friction, they make possible the delivery of more power at the drawbar.

By saving this power, they also effect a saving in fuel cost.

They save much valuable time usually spent in oiling, because they need oiling but once a season. And, without ever requiring adjustment with the

consequent risks of breakage, they outlive the tractor itself.

Tractor makers know from experience as old as the industry itself that Hyatt Bearings add to the value of a tractor. They make possible the delivery of greater power at lower cost of upkeep.

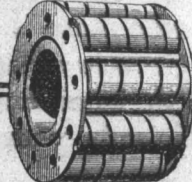
This is why you should ask if the tractor you plan to buy is Hyatt equipped, and for the same reason, you should look for Hyatt Bearings in your plows, threshers, grain binders and other farm machines.

## HYATT ROLLER BEARING COMPANY

Tractor Bearings Division, Chicago

Motor Bearings Division, Detroit, Mich.

Industrial Bearings Div., New York City

ROUGE REX  
SHOES

Pronounced Rooj Rex

FOR THE MAN WHO WORKS

HIRTH-KRAUSE COMPANY

Tanners and Shoe Mfr's  
Grand Rapids, Mich.

## WHO AM I?

I am the fellow that milks with  
"MEHRING'S MILKER"

It makes me smile when I see poor guys pulling away by hand. GO WAY BACK AND SET DOWN! You have made no progress since the days of Noah! You are a back number sure! Ha! Ha! There is more truth than nonsense in the above words. A dairyman is certainly foolish who does not avail himself of one of Mehring's Milkers. It will milk one or two cows at once. 20 cows per hour. A child 12 years old can operate it. Price \$50 cash or \$85 on trial. Also engine power milkers.

W. M. MEHRING Keymar, Maryland

## CULOTTA &amp; JULL

Eastern Market, Detroit, Mich.

Headquarters for fancy fruits and produce. We make a specialty of berries, cherries, peaches, pears, asparagus, celery, etc., and need your shipments to supply our trade. We want your shipments of eggs, veal and poultry. We handle only on commission and give you the benefit of our market, large or small shipments have our every care and attention.

Reference Peninsula State Bank.

## Mr. POULTRY FARMER:

We make a specialty of White Henery Eggs and have created a profitable market for your eggs the year around. We pay the highest premium for your Henery Whites—We remit same day shipments arrive.

Ship Often—Ship by Express

GEO. R. ELDRIDGE CO.

494-18th Street, Detroit, Mich.

Remember! We guarantee you satisfaction with every shipment.

**EGGS** Express shipments fresh laid, direct from farmers will bring a premium above the market. Ship to us.

AMERICAN BUTTER & CHEESE CO.  
Detroit, Michigan

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

**Molasses** Richest Feed. Low Ton Cost  
Write today for lowest price  
TOLEDO MOLASSES CO., TOLEDO, OHIO

**CULL BEANS FOR FEED**  
Car lots or less. Ask for prices.  
YOUNG-RANDOLPH SEED CO., OWOSSO, MICH.

Wanted position as farm manager. Agricultural college graduate. Experience practical farming, county agricultural agent, superintendent public institution including farm. Box 354, Marinette, Wis.

**CORN HARVESTER** One man, one horse, one row. Binder. Sold direct to Farmers for 22 yrs. Only \$25 with fodder binder. Free Catalog showing pictures of Harvester. PROCESS CORN HARVESTER CO., Salina, Kans.

## HORSES

Pure Bred  
Belgian Draft Horses

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

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

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

## SHEEP

## TO THE KIDS

Over 300 have written me about the sheep I am giving away. I would like to send one to each of you but two is my limit. Three disinterested judges are picking the winners. If you are not one of the lucky kids, why not save your money and buy one next December. I will contract to buy the produce back at a splendid price.

KOPE-KON FARMS, S. L. Wing, Proprietor  
Coldwater, Michigan

## SHROPSHIRE SHEEP

We have about 50 ewes in lamb for sale, of best breeding. Registered.  
HARRY E. SAIER, Seedman,  
109-111 E. Ottawa St., Lansing, Mich.

Shropshire Sheep Nothing to offer  
before June 1-1919.  
ARMSTRONG BROS. R 3, Fowlerville, Mich.

## BUY A SHEEP

Wait a minute, buy Hampshires. The American Hampshire Sheep Association wants to send you a dandy little booklet with list of breeders. Some near you. Write COMFORT A. TYLER, Secretary, 22 Woodland Ave., Detroit, Mich.

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

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The Michigan Farmer

# International Service

**T**HERE comes a time in the life of every motor truck, no matter how good it is, when some part requires replacement or adjustment. When that time comes, the necessary part must be at hand—the right part and without loss of time. Or the man to make the adjustment must be immediately available. The International organization is unrivaled in this respect.

When these things are to be had, that is *service*. When the motor truck performs well, that, too, is *service*.

## International Motor Trucks

are built with *service* as the foundation. These trucks will serve you well because they are "factory built" all the way through—not assembled—and because the Company that makes them has at stake an enviable reputation for building high-grade machinery—a reputation which has endured for nearly a century and which is bound to be maintained.

"Built—not assembled." That statement carries weight with men who have had experience with motor trucks. It means that every part of the power plant is designed and built to work smoothly and efficiently with every

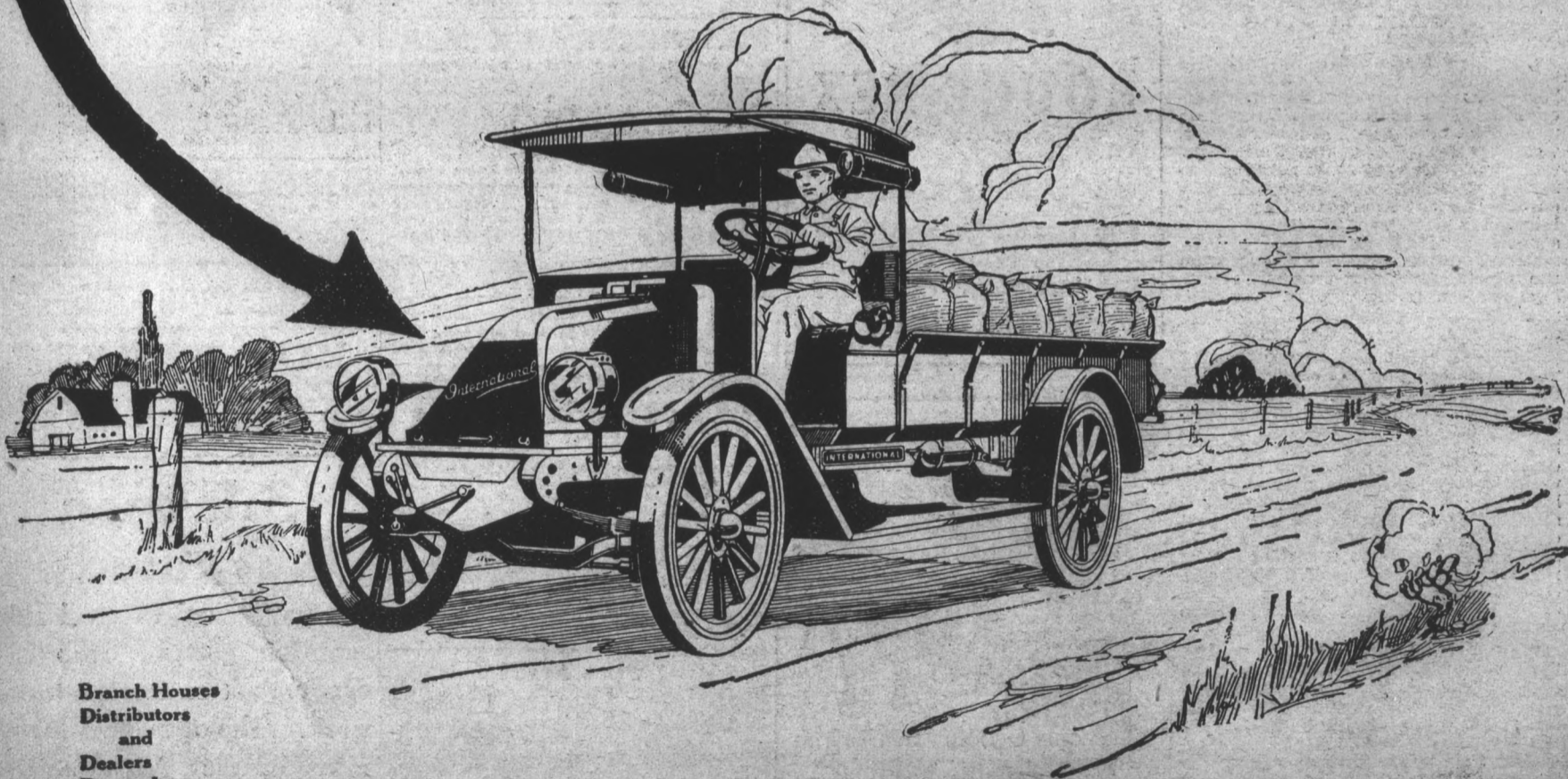
other part. In the International, it means a simple, powerful, heavy-duty engine and a transmission and internal gear rear axle that converts the power of the engine into mileage without waste of fuel and without unnecessary strain and friction losses. These are the units on our truck that you will want to become familiar with and compare with the same units on other trucks, because they are responsible for its performance.

There is a style of body and size of truck to meet practically every hauling requirement. Write for descriptive literature.

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